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Youths' Access and Usage of Financial Products in Agricultural Production: A Principal Component Analysis

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Abstract: The study analyzed the financial inclusion on youth's involvement in Agricultural Production in North-Central, Nigeria. Specifically, the study examined the perception of youths to financial products and financial product providers; ascertained the degree of access and usage of financial products by youths in the study area; identified the financial inclusion indicators affecting the level of youths' involvement in agricultural production in the study area, and identified constraints to financial inclusion that hinder youths' involvement in agriculture production in the study area. This study, conducted in North-Central Geopolitical Zone of Nigeria, focuses on financial inclusion on youth involvement in agricultural production across three selected states. The state, with its abundant land mass that is suitable for arable purposes. Using a multi-stage and stratified random sampling, 300 youth farmers were purposively selected from 2 states. Data was collected through structured questionnaires addressing various aspects of financial inclusion on youth's involvement in agricultural production, including perception, constraints, socioeconomic characteristics, degree of financial access and of usage, and financial inclusion indicators. Data analysis involved Principal component analysis. Eight components were identified, explaining 64.41% of the overall variation, with component one explaining 15.882% of the total variability and having an Eigen value exceeding 3. The Scree plot indicated stability after eight components. The Kaiser-Meyer-Olkin (KMO) measure was 0.658, and Bartlett's test was significant ($p < 0.05$), confirming data suitability for PCA. The varimax rotation revealed significant loadings for the first component, named the "quality, delay, convenient, young and collateral factor". This component included statements about dissatisfaction with loan quality, delays in processing, the convenience of mobile money, and barriers due to age and collateral requirements. These were the reported significant barriers and issues that push youth towards informal financial solutions and limit their economic potential. Furthermore, Principal component analysis (EFA) was also used to examine 27 statements on the usage of financial products by youths. Twelve components were identified using Kaiser's criterion, the Scree test, and total variance explained, which accounted for 56.80% of the overall variation. Component one explained 5.896% of the total variability and had an

Eigen value exceeding 2. Twelve components had eigenvalues over 1. The Scree plot indicated stability after twelve components, with the Kaiser-Meyer-Olkin (KMO) measuring 0.699, and Bartlett's test significant at ($p < 0.05$), confirming the data's suitability for PCA. The varimax rotation revealed significant loadings for the first component, named the "borrow and policy factor." As the findings indicate, many youths prefer borrowing from friends or informal money lenders due to the ease of access, while banks' complicated procedures and collateral demands discourage them. By making formal financial services more accessible and less intimidating, youth borrowers will be more likely to engage with formal institutions.

Keywords: Youth, Access, Usage, Financial Products, Agricultural Production, Principal component analysis

Introduction

Agriculture is a cornerstone of African economies, contributing over 32% to the Gross Domestic Product (GDP) and employing more than 65% of the workforce (Abdelradi et al., 2021; IFAD, 2019). In Nigeria, the agricultural sector provides more than 80% of trade in values and supplies over 50% of raw materials to industries (Babu et al., 2021). The government has launched several initiatives like the Anchor Borrowers Programme (ABP) and Youth-in-Agriculture to boost investment in food and agricultural production (Mueller & Thurlow, 2019). However, despite these efforts, access to formal financial products remains limited for many farmers, particularly youths, which hinders agricultural growth (Aceli Africa, 2020; Babu et al., 2021). Youth access to financial products is critical for sustaining agricultural production. With nearly 70% of young people in Nigeria facing financial exclusion, especially in regions like North-Central Nigeria, there is a pressing need to address the barriers preventing youth from utilizing financial services for farming activities (Afande, Maina, & Maina, 2015; Muthomi, 2017). Studies have shown that financial inclusion can transform agricultural practices by empowering youth with the resources to adopt new technologies, expand agribusinesses, and increase productivity (Dupas et al., 2012; McKnight, 2021). Yet, many youths remain outside formal financial institutions due to regulatory barriers and societal biases that favour older, more established individuals (World Bank, 2018).

Inclusion in financial services offers a pathway for young farmers to improve their livelihoods through access to credit, savings, and insurance (Kosciule, 2020; Rocca & Schultes, 2020). The absence of youth-specific financial products limits their ability to start or scale agribusinesses, restricting the overall potential of the agricultural sector (Sudarkasa, 2019; Yeboah & Jayne, 2020). Addressing the gaps in financial inclusion for youths will help unlock new opportunities, enhance agricultural production, and contribute to food security in Nigeria (Bullock et al., 2020; Huyer et al., 2021). This study aims to explore the financial inclusion of youths

in agricultural production in North-Central Nigeria using Principal component analysis to examine access and usage of financial products.

Objectives of the Study

The broad objective of this study is to examine youths' access and usage of financial products in agricultural production using a Principal component analysis. The specific objective is to ascertain the degree of access and usage of financial products by youths.

Methodology

The study was conducted in the North-Central Geopolitical Zone of Nigeria. It is made up of six states (Benue, Kogi, Kwara, Nasarawa, Niger, And Plateau) and the Federal Capital Territory (FCT). The zone is situated between latitude $6^{\circ}.431$ and $6^{\circ}.451$ North and Longitudes $6^{\circ} 601$ and $6^{\circ}.801$ East with River Niger flowing along Kwara, Kogi and Niger State and River Benue in Benue State. The Zone is dominantly agrarian and its main employer of labour is Agriculture. Crops produced in the zone includes yam, rice, sorghum, maize, acha, bene seed, fruits, vegetables, etc. Every State in the zone is endowed with an abundant land mass that is suitable for arable purposes. Artisanal fisheries production is much favoured in this North - Central part of Nigeria as a result of numerous tentacles of inland water and streams as well as flood plains of the river Niger that stretch from Niger State [Borgu Local Government Area, (LGA)] through Kwara State (Edu LGA) to Lokoja in Kogi State. River Benue also cuts across Benue State with prominence in Makurdi and adjacent towns in the State. The fishing activities are usually carried out by traditional fishing methods such as canoes with paddlers, gill nets, cast nets, long lines, hook and line sets, traps and more recently few motorized boat and outboard engine canoes have been introduced.

. Using a multi-stage sampling technique, 300 youth farmers were purposively selected from two states. In the first stage, two out of the seven states in the study area were purposively selected based on the predominance of farmers—Benue and Kogi States. In the second stage, three agricultural zones were purposively selected from each of the two states. In the third stage, one local government area (LGA) was selected from each agricultural zone. In the fourth and final stage, five communities were selected from each LGA, and ten youth farmers were randomly selected from each community, resulting in 50 farmers per agricultural zone. This process produced a total of 150 farmers per state and 300 farmers from the two states combined, as shown below.

Summary of sampling procedure

State	Agricultural Zones	LGAs	Communities	No. of Farmers per Community	Total Farmers
Kogi	A	Idah	5	10	50
	B	Kotonkarfe	5	10	50
	C	Aiyetoro-Gbede	5	10	50
Benue	A	Makurdi	5	10	50
	B	Okpokwu	5	10	50
	C	Vandekiya	5	10	50
Total	6	6	30	60	300

Source: Authors' computation (2024).

Data for this study was exclusively collected from primary sources. Semi-structured questionnaires and interviews were utilized for data collection. The data collection instruments were validated by experts from the Department of Agricultural Economics, who provided independent evaluations regarding the adequacy and relevance of the research tools, ensuring both face and content validity. Their feedback was synthesized, and necessary revisions were made to the instruments before final copies were prepared for data collection. The reliability of the instruments was assessed through Cronbach's alpha, which measures internal consistency, to determine how closely related the items in the questionnaire were as a group. The Objective was achieved through Principal component analysis.

Results And Discussion**Degree of access of financial products by youths in the study area**

The utilization of principal component analysis was employed as a method of data reduction in the examination of 20 statements pertaining to the degree of access of financial products by youths in the study area. This analysis was conducted with the objective of either grouping these statements or identifying the most appropriate component(s). This information is presented in Tables 4.4 to 4.8. The number of components was determined using Kaiser's criterion, the Scree test, and total variance. Table 2, denoted as the total variance explained, clearly indicated that only eight components satisfied the predetermined cut-off point criterion. The column displaying percentage variance provides information on the extent to which any of the summary scales or components can explain the overall variability.

Table 1: Principal Component Analysis (KMO and Bartlett's Test) of the degree of access of financial products by youths in the study area

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.658
Bartlett's Test of Sphericity	Approx. Chi-Square	1018.115
	Degree of freedom	190
	Significance level	0.000

Source: field survey, 2024

In Table 5, it was seen that component one explained 15.882% of the total variability observed in the 20 variables under consideration, and possessed an Eigen value exceeding 3. Furthermore, Table 2 indicates that there were eight components that had eigenvalues exceeding the threshold of 1. The aforementioned components accounted for 64.41% of the overall variation. The eight extracted components are displayed in Table 4, which included the presentation of the component matrix. The initial solution is displayed prior to rotation, without exhibiting the individual loading of each component variable. Each numerical value denotes the degree of correlation between the specific item and the unrotated component. The presence of items with substantial loadings on many factors in the unrotated solution poses challenges for interpretation. In this particular instance, it was necessary to analyse a solution that had undergone rotation, resulting in the generation of Table 5.

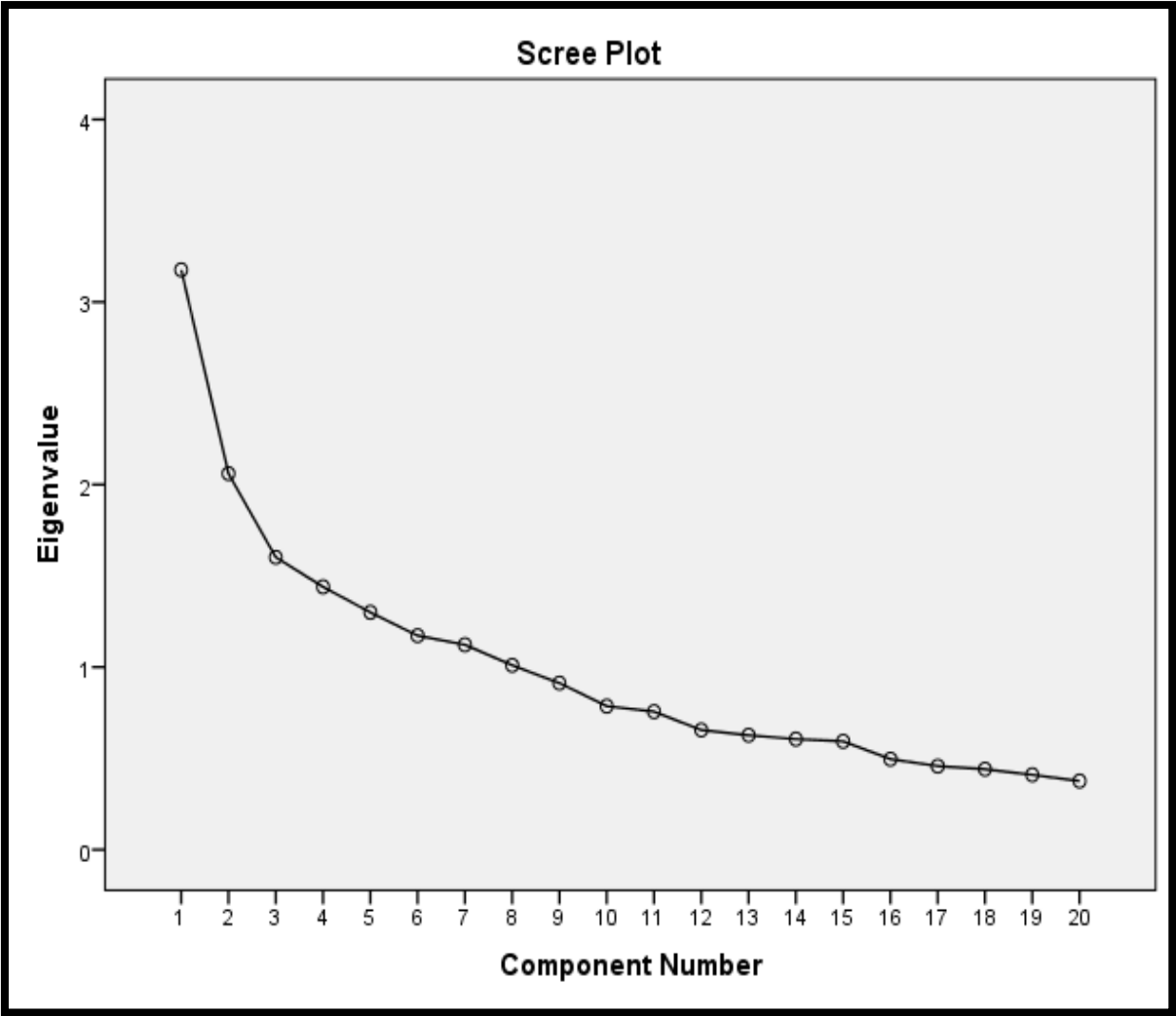


Figure 1: Scree Plot of Principal Component Analysis of the Degree of Access of financial products by youths in the study area; Source: Field Survey (2024).

Table 4 presents the component matrix, which displays the rotated components that exhibit stronger loadings (equal to or greater than 0.4). The scree plot (Figure 1) was constructed using the eigenvalues to identify the point of inflection in the curve, hence facilitating the determination of the optimal number of components. Upon examining the scree plot, it was observed that the curve exhibited a tendency to stabilize following the inclusion of 8 components, specifically those with eigenvalues equal to or exceeding 1.

Table 2: Principal Component Analysis (Total Variance Explained) of the degree of access of financial products by youths in the study area

Table 2 shows the distribution of respondents according to their degree of access of financial products by youths in the study area

Compon ents	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.176	15.882	15.882	3.176	15.882	15.882	2.551	12.754	12.754
2	2.060	10.300	26.182	2.060	10.300	26.182	1.654	8.271	21.025
3	1.602	8.009	34.191	1.602	8.009	34.191	1.583	7.914	28.939
4	1.440	7.198	41.388	1.440	7.198	41.388	1.469	7.344	36.283
5	1.300	6.501	47.889	1.300	6.501	47.889	1.434	7.172	43.456
6	1.172	5.861	53.750	1.172	5.861	53.750	1.431	7.155	50.610
7	1.123	5.613	59.363	1.123	5.613	59.363	1.382	6.909	57.520
8	1.010	5.050	64.413	1.010	5.050	64.413	1.379	6.893	64.413
9	0.913	4.563	68.975						
10	0.786	3.931	72.906						
11	0.756	3.781	76.687						
12	0.655	3.277	79.964						
13	0.627	3.136	83.100						
14	0.606	3.028	86.128						
15	0.593	2.967	89.095						
16	0.496	2.479	91.574						
17	0.458	2.289	93.863						
18	0.441	2.206	96.069						
19	0.410	2.050	98.119						
20	0.376	1.881	100.000						

Source: Field Survey (2024).

Moreover, the findings presented in Table 1 indicate that the orthogonal solution was employed. Additionally, both the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test were utilized as indicators of sample adequacy, revealing the presence of multicollinearity issues, wherein the components exhibit significant levels of correlation. Based on the findings from the principal component analysis (PCA) as presented in Table 2, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy is determined to be 0.658, surpassing the recommended threshold of 0.6. Additionally, Bartlett's test yields a statistically significant value of 0.000, indicating significance at a significance level of $p < 0.05$. The findings of this study demonstrated the factorability of

the data set, therefore confirming the suitability of principal component analysis for the analysis. In the varimax with Kaiser Normalization, the rotated component matrix was examined. It was seen that only subsets corresponding to the first component exhibited significant and robust loadings, with Eigen values exceeding three. Consequently, these subsets were assigned a specific name.

Factor one: credit quality, delay, convenience and collateral factor

The results from Table 5 indicate that a one-component solution was suitable for analysing the 20 statements regarding youths' access to financial products in agriculture. This conclusion was based on the factor analysis, which revealed that all the key statements clustered under a single, dominant component. In factor analysis, a one-component solution suggests that the majority of the variance in the data is explained by one underlying factor, reflecting the primary concerns or experiences of the youth in the study (Abdelradi et al., 2021; IFAD, 2019). By adopting this one-component model, the analysis ensures simplicity and clarity in interpreting the results, focusing on the central themes affecting youth financial inclusion in agriculture.

The primary component identified was characterized by key statements reflecting the challenges youth face with formal financial institutions. These statements reveal significant dissatisfaction with the quality of financial services offered by banks. For instance, the youth expressed frustration over the quality of credit and loans provided by banks, with a strong factor loading (0.672), indicating that dissatisfaction with these services was a major concern. This aligns with findings from other studies, where young farmers often report difficulties in accessing adequate financial services that meet their needs (Muthomi, 2017; Babu et al., 2021). Financial institutions tend to prioritize more established borrowers, leaving youth underserved and disillusioned with formal banking systems (McKnight, 2021).

Another major concern was the delay in receiving funds when their parents applied for credit and loans (0.603). This reflects how the youth are indirectly affected by the inefficiencies within the financial system. When older family members face delays, it discourages younger generations from seeking out similar services, which in turn hampers their ability to invest in agricultural activities (Dupas et al., 2012; World Bank, 2018). Such delays create a perception of unreliability within the banking sector, driving youth toward alternative financial tools. One of the key reasons for the youth's preference for alternative financial tools was the convenience of mobile money services, which had a significant factor loading (0.405). Mobile money has gained widespread acceptance among young people in Africa due to its accessibility, speed, and convenience. In Kenya, for instance, mobile money has revolutionized access to

financial services, particularly for the youth and rural populations, offering a more inclusive financial environment (Afande, Maina, & Maina, 2015; Aceli Africa, 2020).

Moreover, many youths were denied access to credit because they were perceived as too young or lacked a qualified guarantor (0.673). This reflects the systemic barriers that prevent young farmers from securing financial resources, even when they have viable business ideas. Financial institutions typically require guarantors or substantial collateral, which young people often cannot provide, further exacerbating their financial exclusion (Kosciule, 2020; Babu et al., 2021). Without these guarantees, youth are often left with no access to formal loans, pushing them toward informal financial systems or limiting their agricultural activities (Yeboah & Jayne, 2020). Finally, insufficient collateral was another significant barrier, with a high factor loading (0.692). The inability to meet collateral requirements prevents youth from accessing loans, as they often do not own sufficient assets such as land or property that could serve as security (Muthomi, 2017; Huyer et al., 2021). This issue is particularly prevalent in rural areas, where youth may have limited ownership over valuable assets, further marginalizing them from formal financial systems (Sudarkasa, 2019).

Table 3: Principal Component Analysis (Component Transformation Matrix) of the degree of access of financial products by youths in the study area

Component	1	2	3	4	5	6	7	8
1	0.812	0.385	-0.261	0.178	0.108	0.213	0.189	0.022
2	0.192	-0.217	0.603	-0.230	0.507	0.469	-0.151	-0.001
3	0.206	-0.139	0.014	-0.590	-0.181	-0.157	0.329	-0.651
4	0.113	-0.711	-0.144	0.450	0.294	-0.167	0.372	-0.077
5	-0.245	0.208	-0.017	-0.320	0.287	-0.019	0.712	0.453
6	-0.372	0.395	-0.157	0.239	0.530	0.086	0.018	-0.580
7	0.197	0.253	0.522	0.146	0.172	-0.757	-0.024	0.010
8	-0.111	0.128	0.500	0.428	-0.469	0.319	0.433	-0.168

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Source: field survey, 2024

Table 4: Principal Component Analysis (Component Matrix) of the degree of access of financial products by youths in the study area

Degree of access of financial products by youths	Components							
	1	2	3	4	5	6	7	8
My account ownership gave me access to other financial services in bank.	0.226	-0.045	-0.559	0.120	-0.114	0.277	0.208	0.267
My house closeness to bank makes it easy for me to open and operate my bank account.	0.310	-0.178	-0.105	-0.532	0.084	0.340	0.208	0.051
Inconsistent govt. policy on banking discourages my having many banks account.	0.541	0.084	-0.236	-0.403	0.300	-0.053	0.045	0.182
Easy access to loans, financial help from friends, neighbors than banks	0.501	-0.102	-0.113	0.294	0.479	-0.062	0.167	0.031
I could not operate my bank account without assistance because of my low educational status.	-0.029	0.338	0.435	-0.505	0.344	-0.101	-0.100	-0.269
I reduce my savings in bank because I don't want banks to steal my money.	-0.057	0.562	-0.158	-0.098	0.161	-0.140	0.443	-0.252
As a youth, I'm not satisfied with quality of credit/loans given in bank.	0.509	0.241	0.161	0.089	-0.228	-0.186	0.023	-0.360
When my parents applied for Credit/loans, the delay in getting the money put me off banking	0.646	0.243	0.036	-0.074	-0.301	0.088	0.024	0.117
Bankers don't have youth tailored finance. I have tried many times.	0.024	0.509	-0.185	0.282	0.209	0.479	0.072	-0.330
I can't afford the Interest on loans it's too much for me, also my annual income is too small.	0.594	0.099	-0.009	0.280	0.067	0.377	-0.115	-0.124
The documentation I went through was stressful in opening my bank account.	0.325	0.444	-0.118	0.090	-0.183	-0.221	-0.467	0.202

I am not aware of micro insurance in my locality and I don't know banks can insure my farm also.	0.058	0.459	-0.008	-0.315	0.171	0.280	-0.490	0.150
Using mobile money is more convenient for me (phone).	0.530	-0.071	-0.342	0.165	0.115	-0.279	-0.240	-0.107
I have never attended any training on money management.	-0.422	0.502	-0.234	0.266	0.005	-0.167	-0.164	0.005
I prefer the short time notice I give informal money providers to that of bank delays (self-help, cooperative)	0.133	-0.191	0.372	0.234	0.585	-0.017	-0.140	0.334
I tried getting credit but was denied because am a female.	-0.218	0.586	-0.052	-0.140	-0.120	-0.119	0.282	0.499
I prefer to save my money at home for security reasons.	-0.191	0.344	0.439	0.407	0.185	0.070	0.253	0.231
I was denied access because I was too young and has no qualified guarantor.	0.551	0.144	0.192	-0.035	-0.078	-0.261	0.244	0.015
I was denied access to loan because I lack collateral asset.	0.645	-0.057	0.228	0.076	-0.089	-0.231	0.122	0.068
I could not get insurance because I can't afford the premium I was given loan because I belong to cooperative.	0.251	0.068	0.571	0.070	-0.379	0.394	-0.018	0.071

Source: Field Survey (2024).

A strong dissatisfaction among youths with the quality of credit or loans provided by banks could stem from high-interest rates, unfavorable terms and conditions, inadequate loan amounts, or poor customer service. Dissatisfaction with credit quality could lead to lower engagement with formal banking institutions; as youths may become reluctant to apply for loans, which can stifle their ability to invest in agriculture or other business ventures, thereby limiting economic growth and personal development. And without access to adequate credit, young entrepreneurs and farmers cannot invest in productivity-enhancing inputs, leading to slower economic growth. Lengthy and complex procedures within banks can delay loan approvals and

disbursements. Delays in loan processing can discourage youths from pursuing financial products from banks, leading them to seek alternative funding sources, which may be less reliable or more expensive. It can also erode trust in formal financial institutions.

Table 5: Principal Component Analysis (Rotated Component Matrix) of the degree of access of financial products by youths in the study area

Degree of access and usage of financial products by youths	Components							
	1	2	3	4	5	6	7	8
My account ownership gave me access to other financial services in bank.	0.010	0.261	0.089	0.682	0.162	0.048	-0.055	0.105
My house closeness to bank makes it easy for me to open and operate my bank account.	0.025	0.761	-0.034	0.026	0.022	-0.026	-0.064	-0.049
Inconsistent govt. policy on banking discourages my having many banks account.	0.296	0.586	0.082	0.010	0.006	0.273	0.152	0.333
I easily get loans, financial help from friends, neighbors than banks	0.332	0.143	-0.132	0.181	0.228	-0.104	0.531	0.311
I could not operate my bank account without assistance because of my low educational status.	0.037	0.186	0.114	-0.831	0.096	0.143	0.027	0.013
I reduce my savings in bank because I don't want banks to steal my money.	0.146	0.006	0.490	-0.219	0.445	-0.138	-0.192	0.309
As a youth, I'm not satisfied with quality of credit/loans given in bank.	0.672	-0.103	-0.133	-0.142	0.183	0.037	-0.176	-0.036
When my parents applied for Credit/loans, the delay in getting the money put me off banking	0.603	0.236	0.051	0.175	0.074	0.291	-0.093	-0.211
Bankers don't have youth tailored finance. I have tried many times.	-0.068	-0.067	0.051	0.040	0.858	0.103	-0.015	-0.028
I can't afford the Interest on loans it's too much for me, also my annual income is too small.	0.365	0.127	-0.318	0.213	0.456	0.206	0.202	-0.171

The documentation I went through was stressful in opening my bank account.	0.348	-0.236	0.063	0.090	-0.036	0.683	-0.047	0.083
I am not aware of micro insurance in my locality and I don't know banks can insure my farm also.	-0.162	0.190	0.079	-0.228	0.191	0.721	0.025	-0.084
Using mobile money is more convenient for me (phone).	0.405	-0.011	-0.347	0.202	0.026	0.227	0.096	0.451
I have never attended any training on money management.	-0.237	-0.534	0.314	0.004	0.211	0.249	-0.127	0.219
I prefer the short time notice I give informal money providers to that of bank delays (self-help, cooperative)	-0.028	-0.003	-0.091	-0.115	-0.103	0.042	0.827	-0.040
I tried getting credit but was denied because am a female.	-0.017	-0.041	0.847	0.059	-0.041	0.198	-0.077	-0.027
I prefer to save my money at home for security reasons.	0.000	-0.339	0.439	-0.096	0.219	-0.131	0.435	-0.315
I was denied access because I was too young and has no qualified guarantor.	0.673	0.123	0.128	-0.060	-0.038	-0.040	0.073	0.005
I was denied access to loan because I lack collateral asset.	0.692	0.105	-0.075	0.048	-0.137	-0.026	0.193	-0.057
I could not get insurance because I can't afford the premium	0.277	0.034	-0.056	0-.033	0.043	0.062	0.020	-0.784

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations; Source: field survey, 2024

The preference for mobile money as more convenient could stem from the fact that the services can be easily accessed via phones, which are widely owned and used by youths. Transactions through mobile money are often faster compared to traditional banking processes, and mobile money services might have lower transaction costs compared to bank fees. Mobile money can significantly enhance access to financial

services for youths, particularly those in remote or underserved areas. However, banks might face increased competition from mobile money providers, pushing them to innovate and improve their services. Hence, the adoption of mobile money highlights the need for improved digital financial literacy to ensure youths can use these services effectively and safely. The convenience of mobile money can enhance financial inclusion by providing an accessible, user-friendly platform for financial transactions. Youths may prefer mobile money for its ease of use, speed, and lower transaction costs compared to traditional banking.

Youths are often more willing to take innovative risks, but lack of access to credit stifles this potential, impacting overall economic dynamism. The requirement for a guarantor, often difficult for young people to meet, exacerbates financial exclusion; for banks require collateral to mitigate the risk of default, but many youths lack substantial assets to pledge. The collateral requirement prevents many young people from accessing necessary credit, limiting their ability to invest in business opportunities or expand their agricultural activities. This can perpetuate cycles of poverty and limit economic mobility. There is a clear need for financial products that do not rely on traditional collateral, such as unsecured loans, peer-to-peer lending, or community-based financing models. Furthermore, Financial institutions may be particularly risk-averse when lending to young people, who are perceived as less stable or experienced, many youths may not have access to individuals who meet the stringent criteria set by banks to act as guarantors. Youths unable to meet age and guarantor requirements are effectively excluded from formal credit markets, limiting their economic opportunities. Being denied access to loans because of age and lack of a qualified guarantor is a significant barrier for youths. This restriction limits youths' ability to secure necessary funding for their ventures.

The variables collectively indicate significant barriers to financial access for youths, primarily stemming from dissatisfaction with loan quality, procedural delays, stringent requirements for guarantors and collateral, and a preference for more convenient mobile money solutions. These barriers suggest several overarching implications: High levels of dissatisfaction and procedural delays can erode trust in formal banking institutions, pushing youths towards informal financial services or mobile money solutions. Stringent requirements like collateral and guarantors disproportionately affect youths, many of whom lack substantial assets or networks to meet these criteria, leading to financial exclusion. The inability to access credit means that many potentially productive ventures do not receive the necessary investment, leading to suboptimal economic outcomes. The barriers identified therefore, will lead to a significant portion of the youth population being excluded from formal financial services, limiting their economic potential.

4.4: Degree of usage of financial products by youths

The utilization of principal component analysis was employed as a method of data reduction in the examination of 27 statements pertaining to the degree of usage of financial products by youths in the study area. This analysis was conducted with the objective of either grouping these statements or identifying the most appropriate component(s). The number of components was determined using Kaiser's criterion, the Scree test, and total variance. Table 7, denoted as the total variance explained, clearly indicated that only twelve components satisfied the predetermined cut-off point criterion. The column displaying percentage variance provides information on the extent to which any of the summary scales or components can explain the overall variability.

Table 6: Principal Component Analysis (KMO and Bartlett's Test) of the degree of usage of financial products by youth

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.699
Bartlett's Test of Sphericity	Approx. Chi-Square	356.635
	Degree of freedom	351
	Significance level	0.006

Source: field survey, 2024

It was seen (Table 7) that component one explained 5.896% of the total variability observed in the 27 variables under consideration, and possessed an Eigen value exceeding 2. Furthermore, Table 7 indicates that there were twelve components that had eigenvalues exceeding the threshold of 1. The aforementioned components accounted for 56.80% of the overall variation. The twelve extracted components were displayed in Table 8, which included the presentation of the component matrix. The initial solution is displayed prior to rotation, without exhibiting the individual loading of each component variable. Each numerical value denotes the degree of correlation between the specific item and the unrotated component. The presence of items with substantial loadings on many factors in the unrotated solution poses challenges for interpretation. In this particular instance, it was necessary to analyse a solution that had undergone rotation, resulting in the generation of Table 9.

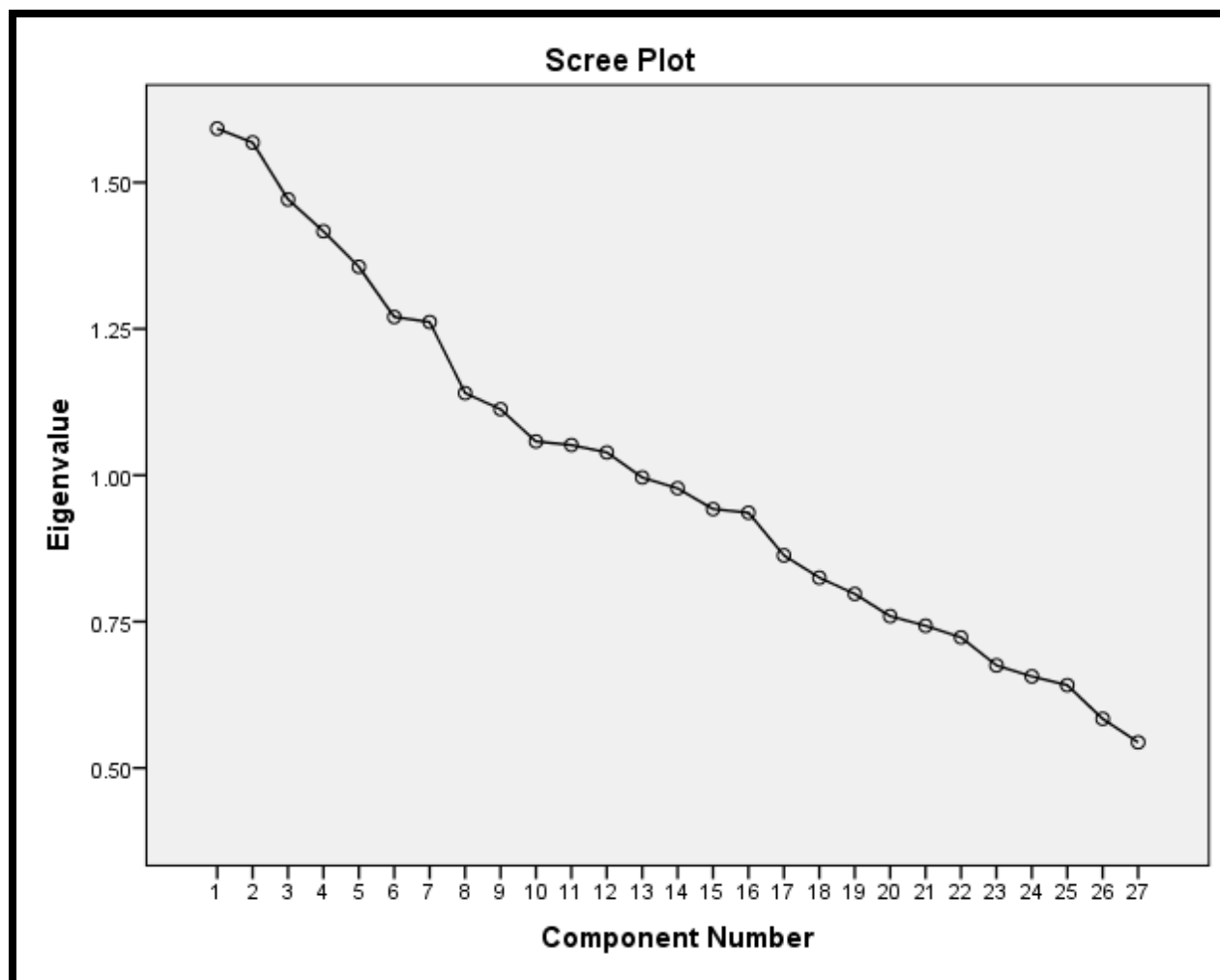


Figure 2: Scree Plot of Principal Component Analysis (Total Variance Explained) of the degree of usage of financial products by youths.

Table 8 presents the component matrix, which displays the rotated components that exhibit stronger loadings (equal to or greater than 0.4). The scree plot (Figure 2) was constructed using the eigenvalues to identify the point of inflection in the curve, hence facilitating the determination of the optimal number of components. Upon examining the scree plot, it was observed that the curve exhibited a tendency to stabilize following the inclusion of 12 components, specifically those with eigenvalues equal to or exceeding 1.

Table 7: Principal Component Analysis (Total Variance Explained) of the degree of usage of financial products by youth

Table 7 shows the distribution of respondents according to their degree of usage of financial products by youth

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.592	5.896	5.896	1.592	5.896	5.896	1.375	5.093	5.093
2	1.568	5.808	11.704	1.568	5.808	11.704	1.370	5.076	10.169
3	1.471	5.448	17.152	1.471	5.448	17.152	1.369	5.070	15.239
4	1.417	5.247	22.399	1.417	5.247	22.399	1.351	5.004	20.243
5	1.356	5.022	27.421	1.356	5.022	27.421	1.321	4.894	25.137
6	1.270	4.705	32.125	1.270	4.705	32.125	1.290	4.778	29.915
7	1.262	4.673	36.798	1.262	4.673	36.798	1.269	4.700	34.614
8	1.140	4.223	41.021	1.140	4.223	41.021	1.251	4.633	39.247
9	1.113	4.121	45.143	1.113	4.121	45.143	1.226	4.539	43.786
10	1.058	3.917	49.060	1.058	3.917	49.060	1.184	4.384	48.170
11	1.052	3.895	52.955	1.052	3.895	52.955	1.176	4.355	52.525
12	1.039	3.848	56.803	1.039	3.848	56.803	1.155	4.278	56.803
13	0.996	3.690	60.492						
14	0.978	3.621	64.113						
15	0.942	3.490	67.603						
16	0.936	3.466	71.069						
17	0.863	3.197	74.266						
18	0.825	3.055	77.321						
19	0.797	2.953	80.274						
20	0.759	2.812	83.086						
21	0.743	2.752	85.838						
22	0.723	2.678	88.516						
23	0.675	2.501	91.017						
24	0.656	2.431	93.448						
25	0.641	2.376	95.823						
26	0.584	2.162	97.986						
27	0.544	2.014	100.000						

Source: Field survey, 2024

Moreover, the findings presented in Table 6 indicate that the orthogonal solution was employed. Additionally, both the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test were utilized as indicators of sample adequacy, revealing the presence of multicollinearity issues, wherein the components exhibit significant levels of correlation. Based on the findings from the principal component analysis (PCA) as presented in Table 6, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy is determined to be 0.699, surpassing the recommended threshold of 0.6. Additionally, Bartlett's test yields a statistically significant value of 0.000, indicating significance at a significance level of $p < 0.05$. The findings of this study demonstrated the factorability of the data set, therefore confirming the suitability of principal component analysis for the analysis. In the varimax with Kaiser Normalization, the rotated component matrix was examined. It was seen that only subsets corresponding to the first component exhibited significant and robust loadings, with Eigen values exceeding two. Consequently, these subsets were assigned a specific name.

Factor one: borrow and policy factor

Factor one, labeled as the "Borrow and Policy Factor," highlights key challenges faced by youths in accessing formal financial services, particularly regarding borrowing and government policy. The findings presented in Table 9 demonstrate that a one-component solution was suitable for the 27 statements assessed, leading to the decision to adopt this one-component solution as the final model. The component was characterized by two significant statements: "As a youth, I borrow from friends or money lenders; it is much easier for me than in banks" (0.661), and "Government policy on interest rate discourages me from using bank services" (0.720). The first statement underscores the reality that many youths prefer informal borrowing channels, such as friends or money lenders, over formal institutions like banks. This preference can be attributed to several factors, including the accessibility and convenience of informal lending options. Banks typically have more stringent requirements, such as the need for collateral, a credit history, or a guarantor, which can be difficult for young people to provide, especially those from rural areas or low-income backgrounds (IFAD, 2019; McKnight, 2021). Furthermore, the paperwork and time-consuming procedures involved in securing bank loans make borrowing from friends or money lenders a more attractive option for youths, who may need quick access to funds for business ventures or personal emergencies (Babu et al., 2021; World Bank, 2018).

The reliance on informal borrowing channels can have both positive and negative implications. On the positive side, youths may have faster and easier access to funds without the bureaucratic hurdles associated with banks. Informal lenders or friends may not require strict repayment terms or charge interest rates, which can ease financial burdens in the short term. However, the negative consequences can be

significant. Informal loans often come with higher interest rates when money lenders are involved, and the absence of formal contracts can lead to disputes or misunderstandings (Dupas et al., 2012; Rocca & Schultes, 2020). In some cases, borrowing from friends or family may also strain relationships if repayment is delayed or impossible, further complicating youths' financial situations. Additionally, by relying on informal sources, youths miss out on the opportunity to build a formal credit history, which could limit their access to larger loans or financial products in the future (Afande, Maina, & Maina, 2015). The second statement—"Government policy on interest rate discourages me from using bank services"—illustrates the significant role that policy decisions play in shaping youths' financial behaviors. High interest rates imposed by government policy can deter youths from borrowing through formal channels, as the cost of servicing the loan becomes too burdensome. Government-controlled interest rates often reflect broader macroeconomic policies aimed at controlling inflation or stabilizing the financial system, but these policies can unintentionally exclude young borrowers from the credit market (Huyer et al., 2021; Yeboah & Jayne, 2020). Young entrepreneurs and farmers, in particular, may be discouraged from taking out loans when they perceive the interest rates as unfavorable, especially if the expected returns from their investments do not justify the high cost of borrowing (IFAD, 2019). This discouragement from formal financial institutions not only reduces youth participation in the banking sector but also limits their ability to invest in productivity-enhancing activities. For instance, young farmers who are unable to secure affordable credit may struggle to purchase seeds, fertilizers, or machinery, resulting in lower yields and reduced income (Muthomi, 2017; Aceli Africa, 2020). In the long run, this dynamic can contribute to slower economic growth in rural areas, where agriculture is a primary economic activity. Furthermore, the exclusion of youth from formal financial systems means that government efforts to promote financial inclusion are undermined. Policies aimed at fostering youth entrepreneurship or agricultural investment may fall short if young people cannot access affordable credit (Afande, Maina, & Maina, 2015; Babu et al., 2021).

Table 8: Principal Component Analysis (Component Transformation Matrix) of the degree of usage of financial products by youth

Component	1	2	3	4	5	6	7	8	9	10	11	12
1	-0.234	0.520	-0.156	0.377	0.283	0.366	0.346	0.203	0.178	-0.146	0.283	-0.024
2	0.064	-0.445	-0.192	0.512	0.209	0.258	-0.245	-0.378	-0.322	-0.119	0.256	0.051
3	0.797	0.282	0.202	-0.164	0.212	0.271	0.146	-0.180	-0.172	0.118	0.030	0.028
4	-0.091	-0.067	0.623	0.325	-0.483	0.298	0.155	-0.258	0.246	0.132	-0.036	-0.023
5	-0.196	-0.073	0.615	-0.059	0.479	-0.044	-0.207	0.245	-0.208	-0.004	0.138	-0.421

6	0.016	0.380	0.188	0.226	0.247	-0.474	-0.329	-0.416	0.294	-0.218	-0.090	0.248
7	-0.183	-0.018	0.030	0.235	0.245	-0.294	0.534	-0.154	-0.378	0.407	-0.363	0.120
8	0.111	0.037	-0.106	0.207	0.019	-0.123	-0.296	0.191	0.240	0.796	0.316	0.028
9	-0.246	-0.207	0.186	-0.405	0.260	0.188	0.097	-0.076	0.120	0.080	0.279	0.694
10	0.048	0.171	0.156	0.264	-0.159	0.133	-0.323	0.510	-0.373	-0.072	-0.285	0.492
11	0.258	-0.431	-0.003	0.194	0.355	0.089	0.101	0.285	0.538	-0.084	-0.433	0.027
12	0.289	-0.197	0.156	0.200	-0.166	-0.498	0.357	0.278	-0.038	-0.260	0.497	0.133

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Source: field survey, 2024

Table 8: Principal Component Analysis (Component Matrix) of the degree of usage of financial products by youths

Degree of usage of financial products by youth	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Since am aware of available banking services (loans, insurance), I make best use of the products.	0.004	0.064	-0.512	-0.121	-0.231	0.185	0.203	0.412	0.024	-0.033	-0.016	-0.128
I make deposit, payment through POS though I am not financially educated.	0.237	-0.280	-0.035	0.206	-0.095	0.291	-0.130	0.188	0.068	-0.463	0.374	-0.043
I believe in banking, (loans, micro insurance), that is why I take loan to expand my farm business, make transfers to my suppliers.	-0.188	0.117	0.106	-0.004	-0.299	0.244	0.120	0.010	0.555	0.411	-0.047	0.136
I Borrow from friends or money lenders; it is much easier for me than in banks.	-0.141	-0.094	0.576	-0.204	-0.313	0.029	-0.164	0.143	-0.062	-0.012	0.107	0.022
As a youth I save my farm income in bank, pay my customers through bank cheque.	0.385	-0.267	0.166	0.119	-0.096	0.350	0.068	0.035	-0.221	0.075	-0.204	-0.090

Being able to transact business on my phone, through ATM has made my usage of bank products easier?	-0.114	-0.193	0.017	0.527	0.384	0.216	0.039	-0.046	0.086	0.148	-0.043	0.014
I don't know how to operate my bank account.	0.201	-0.169	0.089	0.113	-0.174	-0.250	0.392	-0.226	-0.002	-0.392	0.021	0.310
Average time spent on processing insurance claims is one of the reasons I don't use the product.	0.244	-0.152	-0.076	-0.126	0.272	-0.124	-0.387	0.376	0.118	0.260	0.008	0.261
I would have taken insurance policy for my farm, but the attitude of the bank staff is not friendly.	0.121	0.260	-0.271	-0.065	-0.375	-0.153	-0.167	0.056	0.321	-0.109	0.037	0.113
[prefer to take loan to maintain my farm	-0.222	-0.346	-0.018	-0.197	0.068	-0.091	0.229	0.040	0.106	0.213	-0.088	-0.295
The percentage of Interest charged on deposit is too small, that is why I stop saving in bank	0.374	0.221	0.251	0.091	0.082	-0.291	-0.095	-0.177	0.027	0.078	-0.087	-0.293
The quality of premium paid on insurance cover attracted me to use the products.	0.420	-0.347	-0.088	0.331	-0.130	-0.143	0.145	-0.079	0.216	0.167	0.244	0.164
The delay in payment of premium discourages me in uptake of micro insurance.	-0.238	-0.303	-0.131	0.356	-0.070	-0.388	-0.010	0.144	-0.247	0.048	-0.245	0.094
I have been making savings in financial bank in the last 12months	0.295	0.173	0.050	-0.076	0.165	-0.071	-0.188	0.249	0.218	-0.187	-0.419	0.381
I have not made any formal payment transaction in the last 12 months	0.129	0.142	-0.269	-0.126	0.093	0.132	-0.273	-0.611	-0.046	0.047	-0.036	0.129

I have used insurance cover in the last 12 months	0.228	-0.191	0.051	-0.234	-0.189	0.227	-0.072	-0.330	0.003	0.240	0.209	0.139
My savings help me to take agricultural loans in the last 12 months?	-0.139	-0.063	0.180	0.350	0.367	0.072	-0.008	-0.039	0.293	0.000	0.023	0.172
My financial literacy helps me to manage my accounts very well.	0.263	0.323	0.054	0.062	-0.117	0.144	0.259	0.103	-0.196	0.136	-0.024	0.104
Since I did not get sufficient loans, I did not bother to ask for other bank products.	0.135	0.159	0.174	-0.322	0.537	0.074	0.019	0.090	0.070	-0.207	0.270	-0.107
Government policy on interest rate discourage me from using bank services.	-0.225	0.215	0.506	0.054	-0.048	0.048	0.021	0.188	-0.241	0.134	0.278	0.315
I don't have a functional insurance policy.	0.083	0.413	0.155	-0.027	0.088	-0.070	0.418	-0.090	0.004	-0.036	-0.243	0.080
I prefer saving, making payments in bank to using informal facilities	0.033	0.355	-0.383	0.215	0.200	0.316	0.009	0.066	-0.246	0.145	0.148	0.052
Collateral demand affected my chance of insuring my farm, and getting credit/loan product.	-0.009	0.239	0.206	0.357	-0.161	0.401	0.011	0.014	0.210	-0.219	-0.236	-0.201
My Exposure to professional training on financial matter has improved my usage of financial products.	0.094	0.248	0.117	0.288	-0.088	-0.303	-0.272	0.008	0.222	0.040	0.170	-0.436
My house nearness to financial institution helps my frequent visit to bank and uptake of financial products.	0.322	-0.102	0.024	-0.230	0.249	-0.085	0.528	0.126	0.212	0.102	0.133	-0.114
The cashless policy made operating my bank account easy	0.428	0.254	0.018	0.256	-0.124	-0.193	-0.003	0.156	-0.247	0.267	0.134	-0.046

I spent few hours in bank doing my withdrawal.	-0.406	0.312	-0.185	0.156	0.032	-0.218	0.175	-0.054	0.083	-0.057	0.380	0.143
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Extraction Method: Principal Component Analysis

a. 12 components extracted; Source: field survey, 2024

The degree of usage of financial products by youths is profoundly influenced by accessibility, convenience, and government policies on interest rates. The preference for borrowing from friends or money lenders and the deterrence caused by high government-mandated interest rates have significant implications for financial inclusion and the involvement of youths in agricultural production. the findings suggest that informal lending is often more accessible and convenient than formal banking institutions; for friends and money lenders typically may not require extensive paperwork, making the process quicker and simpler. also, youths may need immediate access to funds for urgent agricultural needs, such as buying seeds or paying for labor, and informal sources can provide this without delay.

Table 9: Principal Component Analysis (Rotated Component Matrix) of the degree of usage of financial products by youth

Degree of usage of financial products by youth	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Since am aware of available banking services (loans, insurance), I make best use of the products.	-0.386	-0.043	-0.357	0.220	-0.015	-0.282	-0.168	-0.045	0.175	0.325	-0.026	0.153
I make deposit, payment through POS though I am not financially educated.	-0.007	0.105	0.043	0.013	0.131	-0.046	0.155	-0.127	0.772	0.074	0.022	-0.100
I believe in banking, (loans, micro insurance), that is why I take loan to expand my farm business, make transfers to my suppliers.	0.088	-0.058	0.078	-0.025	-0.018	-0.063	-0.071	-0.100	-0.117	0.015	0.002	0.819
I Borrow from friends or money lenders; it is much easier for me than in banks.	0.661	0.147	-0.188	-0.199	0.001	0.036	-0.032	-0.045	0.079	0.096	-0.029	0.100

As a youth I save my farm income in bank, pay my customers through bank cheque.	0.010	0.662	0.062	0.179	-0.038	-0.038	0.074	-0.082	0.100	0.008	-0.057	-0.019
Being able to transact business on my phone, through ATM has made my usage of bank products easier?	-0.125	0.071	0.711	0.051	-0.097	-0.030	-0.063	-0.039	0.058	0.039	-0.088	0.009
I don't know how to operate my bank account.	0.013	-0.038	-0.042	-0.026	-0.050	-0.079	0.775	-0.090	0.008	-0.004	0.053	-0.114
Average time spent on processing insurance claims is one of the reasons I don't use the product.	0.003	0.101	0.093	0.003	0.043	0.034	-0.221	0.602	0.130	0.047	0.426	0.050
I would have taken insurance policy for my farm, but the attitude of the bank staff is not friendly.	-0.156	-0.274	-0.374	0.033	-0.100	0.142	0.062	-0.038	0.173	-0.077	0.296	0.291
[prefer to take loan to maintain my farm	-0.143	0.115	0.010	-0.347	0.035	-0.078	-0.072	0.160	-0.194	0.267	-0.338	0.105
The percentage of Interest charged on deposit is too small, that is why I stop saving in bank	-0.014	0.143	-0.010	0.047	0.114	0.627	0.071	-0.023	-0.196	-0.076	0.060	-0.100
The quality of premium paid on insurance cover attracted me to use the products.	-0.168	0.122	0.186	0.132	-0.107	0.183	0.494	0.321	0.283	-0.017	-0.080	0.257
The delay in payment of premium discourages me in uptake of micro insurance.	-0.048	-0.040	0.137	-0.080	-0.634	-0.031	0.091	0.170	-0.079	0.270	-0.017	-0.227
I have been making savings in financial bank in the last 12months	-0.043	0.098	0.011	0.006	0.061	-0.016	0.045	0.026	-0.099	0.036	0.793	0.000

I have not made any formal payment transaction in the last 12 months	-0.217	-0.030	-0.022	0.008	0.015	-0.008	-0.053	0.000	-0.079	-0.748	0.030	-0.049
I have used insurance cover in the last 12 months	0.118	0.246	-0.117	0.011	0.104	-0.077	0.114	0.197	0.107	-0.447	-0.188	0.254
My savings help me to take agricultural loans in the last 12 months?	0.051	-0.122	0.613	-0.096	0.063	0.014	0.048	-0.041	0.030	0.021	0.129	0.085
My financial literacy helps me to manage my accounts very well.	0.065	0.120	-0.101	0.529	0.070	-0.012	0.086	-0.097	-0.148	0.044	0.035	0.074
Since I did not get sufficient loans, I did not bother to ask for other bank products.	0.061	-0.083	0.081	-0.044	0.711	0.029	-0.106	0.071	0.023	0.026	0.094	-0.246
Government policy on interest rate discourage me from using bank services.	0.720	-0.155	0.114	0.267	0.023	-0.083	-0.025	0.022	-0.063	0.088	-0.023	0.017
I don't have a functional insurance policy.	-0.014	-0.057	-0.007	0.225	0.188	0.023	0.217	-0.257	-0.490	0.070	0.130	0.006
I prefer saving, making payments in bank to using informal facilities	-0.217	-0.154	0.144	0.579	0.033	-0.145	-0.296	-0.036	0.068	-0.133	-0.050	-0.089
Collateral demand affected my chance of insuring my farm, and getting credit/loan product.	0.005	0.148	0.169	0.078	-0.018	0.122	-0.078	-0.677	0.112	0.078	0.118	0.184
My Exposure to professional training on financial matter has improved my usage of financial products.	-0.011	-0.177	0.000	-0.022	-0.035	0.722	-0.126	-0.091	0.142	0.085	-0.040	0.058
My house nearness to financial institution helps my frequent visit to bank and uptake of financial products.	-0.220	0.119	0.008	0.051	0.521	0.010	0.286	0.240	-0.154	0.298	-0.121	0.119

The cashless policy made operating my bank account easy	0.04 2	0.08 8	- 0.09 3	0.55 4	- 0.10 2	0.40 7	0.05 6	0.18 2	0.00 6	0.07 1	0.00 2	- 0.03 7
I spent few hours in bank doing my withdrawal.	0.02 1	- 0.72 1	0.08 1	0.12 0	- 0.01 9	- 0.04 4	0.07 1	- 0.03 3	- 0.02 2	0.03 8	- 0.15 7	0.02 9

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 20 iterations; Source: field survey, 2024

Informal lenders may offer more flexible repayment terms compared to the rigid structures of banks. This flexibility is crucial for youths with unstable or seasonal incomes, common in agricultural production. While informal borrowing might be easier, it often comes with higher interest rates and the potential for exploitative practices, which can trap youths in cycles of debt. The preference for informal borrowing over banks can lead to inefficiencies in the economy, as formal financial systems are better equipped to manage and allocate resources efficiently; and reliance on informal borrowing could prevent youths from building a formal credit history, which is essential for accessing larger financial products and services in the future.

Government policies that result in high interest rates make borrowing from banks expensive. Youths, who typically have lower incomes and higher sensitivity to borrowing costs, are particularly discouraged. High interest rates push youths to seek alternative financial solutions, such as informal borrowing, microfinance institutions, or even digital financial services that might offer more competitive rates. High interest rates lead to lower participation in the formal banking sector among youths, reducing their engagement with mainstream financial products and services. The policies can lead to financial exclusion, where a significant portion of the youth population is cut off from formal financial services. This exclusion perpetuates poverty and limits economic mobility. Discouraged by formal interest rates, youths may increasingly participate in the informal economy, which can be less regulated and more precarious, potentially leading to broader economic instability. The findings Therefore, highlight the need for policy reforms that consider the unique financial needs and circumstances of youths. Lower interest rates or targeted subsidies could encourage greater youth participation in the formal financial sector. These variables collectively highlight significant challenges that restrict youths' usage of financial products. Both influences suggest a need for improved financial literacy among youths. Understanding the implications of high-interest rates and the potential risks of informal lending can empower youths to make better financial decisions. Building trust in formal banking institutions through

targeted youth-friendly policies and education campaigns is crucial. Enhancing access to financial products for youths can significantly boost their economic participation, leading to increased entrepreneurship, higher employment rates, and broader economic development. Encouraging formal financial engagement among youths helps integrate them into the formal economy, promoting stability and growth.

Conclusion and Recommendations

In conclusion, the findings show that youth face substantial barriers in accessing formal financial products, primarily due to dissatisfaction with the services offered by banks, delays in loan disbursement, the preference for mobile money, and the lack of guarantors or sufficient collateral. Addressing these issues would help to unlock new opportunities for youth in agriculture, promoting financial inclusion and contributing to agricultural productivity and food security in Nigeria. Also, the "Borrow and Policy Factor" highlights the significant barriers that government policies and banking structures create for youths. The preference for borrowing from informal channels and the deterrent effect of high-interest rates imposed by government policy reflect the difficulties young people face in accessing affordable credit. Addressing these challenges requires more youth-friendly financial policies, including lower interest rates and streamlined borrowing processes, to promote greater participation in formal banking institutions. By improving access to credit, particularly for young entrepreneurs and farmers, there is potential to enhance economic growth, reduce poverty, and foster long-term financial inclusion. The study recommended among others that:

- i. As the findings indicate, many youths prefer borrowing from friends or informal money lenders due to the ease of access, while banks' complicated procedures and collateral demands discourage them. By making formal financial services more accessible and less intimidating, youth borrowers will be more likely to engage with formal institutions.
- ii. Also, the findings suggest that youths find informal lending easier and more convenient than traditional banking due to the complexity of bank processes. By promoting digital services, banks can provide an equally convenient and more secure option, thereby attracting more youth borrowers and increasing financial inclusion.

References

1. Abdelradi, F., Admassie, A., Adjaye, J. A., Ayieko, M., Badiane, O., Glatzel, K., Hendriks, S., et al. (2021). Policy options for food systems transformation in Africa. UN Food Systems Summit Brief. Bonn: United Nations Food System Summit.

2. Aceli Africa. (2020). Bridging the financing gap: Unlocking the impact of agriculture SMEs in Africa. Washington, DC.
3. Afande, F. O., Maina, W. N., & Maina, P. M. (2015). Youth engagement in agriculture in Kenya: Challenges and prospects. *Journal of Culture, Society and Development*, 7, 1–17.
4. Amwata, D. (2020). The role of the agricultural technical vocational education and training institutions (ATVET). Policy Brief. Nairobi: East Africa Institute.
5. Babu, S. C., Franzel, S., Davis, K. E., & Srivastava, N. (2021). Drivers of youth engagement in agriculture: Insights from Guatemala, Niger, Nigeria, Rwanda, and Uganda. IFPRI Discussion Paper 02010. Washington, DC: International Food Policy Research Institute (IFPRI).
6. Birch, I. (2018). Agricultural productivity in Kenya: Barriers and opportunities. K4D Helpdesk Report. Brighton, UK: Institute for Development Studies.
7. Bullock, R., Huyer, S., Shai, T., & Nyasimi, M. (2020). The CCAFS youth and climate-smart agriculture (CSA) strategy. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
8. Dupas, P., Karlan, D., Robinson, J., & Ubfal, D. (2012). Banking the unbanked? Evidence from three countries. NBER Working Paper No. 22463.
9. FAO. (2019). Rural youth employment and agri-food systems in Kenya: A rapid context analysis. Rome: FAO.
10. Huyer, S., Simelton, E., Chanana, N., Mulema, A., & Edwige, M. (2021). Expanding opportunities: A framework for gender and socially-inclusive climate resilient agriculture. *Frontiers in Climate*, 3, 718240.
11. IFAD. (2019). Rural development report. Rome: International Fund for Agricultural Development (IFAD).
12. International Youth Foundation. (2014). Promoting agricultural entrepreneurship among rural youth. Best Practice Note No. 2. Baltimore, MD.
13. Kising'u, J. M. (2016). Factors influencing youth participation in agricultural value chain projects in Kenya: A case of Kathiani subcounty, Machakos County, Kenya (Master's thesis, University of Nairobi, Nairobi, Kenya).
14. Kenya, Ministry of Agriculture, Livestock, and Fisheries. (2017). Kenya climate-smart agriculture strategy 2017–2026. Nairobi.
15. Kosciule, D. (2020). Strengthening youth participation in climate-related policymaking. Policy Briefing 225. Johannesburg: South African Institute of International Affairs.
16. Lukalo, D., & Kiminyei, F. (2019). Promoting structural transformation for high productivity jobs in Kenya. KIPPRA Policy Brief No. 53. Nairobi: The Kenya Institute for Public Policy Research and Analysis (KIPPRA).
17. Malabo Montpellier Panel. (2019). Byte by byte: Policy innovation for transforming Africa's food system with digital technologies. Dakar: IFPRI, Center

- for Development Research University of Bonn (ZEF), and Imperial College London.
18. McKnight, T. (2021). Empower youth, transform agriculture: An introductory guide to school-based agricultural education in Sub-Saharan Africa. Washington, DC: Movement for School-Based Agricultural Education and Agricorps.
 19. Mueller, V., & Thurlow, J. (2019). Youth and jobs in rural Africa: Beyond stylized facts. Washington, DC: IFPRI.
 20. Mugo, V. (2020). Hope or hype: The rise of youth engagement in agriculture during COVID-19. Future Africa Forum, October 21.
 21. Muiderman, K. (2016). Engaging youth in food systems. Utrecht, Netherlands: Netherlands Food Partnership.
 22. Mungai, C., Muchaba, T., Szilagyi, L., Radeny, M., Atakos, V., & Ntiokam, D. (2018). Youth engagement in climate-smart agriculture in Africa: Challenges and opportunities. Wageningen: CCAFS.
 23. Muthomi, E. (2017). Challenges and opportunities for youth engaged in agribusiness in Kenya. Nairobi: United States International University.
 24. Njeru, L. K., & Mwangi, J. G. (2017). Influence of gender differences on youth participation in agriculture in Kajiado North Subcounty, Kenya. *International Journal of Development and Sustainability*, 6(8), 851–861.
 25. Rocca, C., & Schultes, I. (2020). Africa's youth: Action needed now to support the continent's greatest asset. London: Mo Ibrahim Foundation.
 26. Sudarkasa, M. (2019). Why expanding value chain access is important for young agripreneurs. CTA Blog, February 19.
 27. World Bank. (2018). Population ages 65 and above (% of total population) – Kenya. World Bank Data. Accessed April 19, 2022.
 28. Yeboah, F. K., & Thomas, J. S. (2018). Africa's evolving employment trends. *Journal of Development Studies*, 54(5), 803–832.
 29. Yeboah, F., & Jayne, T. (2020). Is African agriculture becoming the preserve of the elderly? International Development Working Paper. Department of Agricultural, Food, and Resource Economics, Michigan State University, East Lansing, MI.
 30. YEDF (Youth Enterprise Development Fund). (n.d.). Youth enterprise development fund.