THE PREDICTIVE ROLE OF KNOWLEDGE ACQUISITION ON CASSAVA AGRIBUSINESS IN NIGERIA

Ohaegbu Awele Victoria, Covenant University
Adegbuyi Omotayo Adeniyi, Covenant University
Igbinoba Ebe Edith, Covenant University

ABSTRACT

Knowledge enables one to function advantageously. How this knowledge is translated into value is referred to as knowledge assets. This study examined the role of knowledge acquisition on cassava agribusiness in Nigeria. Several decades of neglect in non-oil sectors, especially in the agricultural sector, has adversely led people to leave the farms for alternative jobs leading to high rural-urban migration, yet the country has maintained its stance as the world's largest producer of the cassava crop with an insignificant export ratio. This study adopted survey design and data was collected using questionnaire. Using the Gill, Johnson and Clark sample determinant method, a sample size of 656 was derived through members of the Nigerian Cassava Growers Association in Lagos, Ogun and Oyo state chapters. However, 556 were retrieved and adjudged usable for analysis. The Structural Equation Modelling was used for analysis specifically the partially least square method. Knowledge acquisition had a strong degree of relationship with agribusiness. The study recommended the adaptation of modern technologies, improved skills acquisition of modern and alternative farming procedures and adequate government system support for a more robust value chain and trade stance of the cassava crop. Educational learning curriculum should also reflect modern and alternative forms of cassava farming.

Keywords: Agribusiness, Cassava, Capability, Knowledge Acquisition, Value.

INTRODUCTION

Knowledge is the cognitive ability to create, own and use capabilities or competencies. Knowledge is sought after because it is the practical ownership of how to create solutions to existing problems. Karamitri et al. (2020), describes knowledge as a cognitive structure which gives meaning, insight and judgment to information. According to Gonzalez & Martins (2017), knowledge acquisition refers to the absorption and facilitation of knowledge through a systemic process.

They drew a trajectory of acquisition through focusing on the learning process, recognition and assimilation of new knowledge, and the innovative degree to transform knowledge for improvement. It is the direct, indirect, tacit and explicit sources through which knowledge is obtained and absorbed for competitive advantage (Almuiet & Zawaideh, 2019).

Agribusiness was coined as a combination of Agriculture and Business. It is defined as the entire operation encompassing farm produce, production, processing, storage, sharing,

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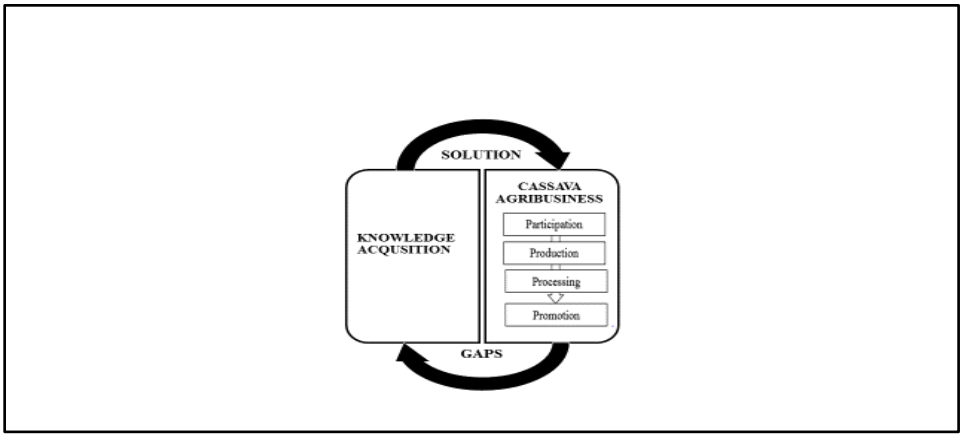
extension services and its trade within or across national borders. Agriculture has been the mainstay of the Nigerian Economy. Prior to the oil boom of 1973-1980, the country's export trade thrived on cash crops such as cocoa and rubber from the west, groundnut and cotton from the north, oil palm and its produce from the east (Salami, 2018).

Subsequently, many people have left the farms for white collar jobs leaving the country to grapple with negative economic implications. There is need for deliberate creation of value especially knowledge acquisition to enhance the country's agro innovative system to boost Nigeria's agribusiness capacity (Worlu et al., 2007). Hence, this paper examines the predictive role of knowledge acquisition on cassava agribusiness in Nigeria to address the gap of mass cassava produce without getting commensurate export yields from the crop.

Hypothesis

H_0: *Knowledge acquisition has no significant influence on agribusiness (agricultural participation, production, processing and promotion).*

Schematic Model



Source: Ohaegbu (2021).

FIGURE 1
ADAPTED FROM KNOWLEDGE MANAGEMENT AND CASSAVA AGRIBUSINESS CAPABILITIES IN NIGERIA: THE MODERATING ROLE OF EXPORTS ORIENTATION

This model illustrates the role of knowledge acquisition to cassava agribusiness with its variables of participation, production, processing and promotion.

LITERATURE REVIEW

Despite decades of neglect in the agricultural sector, Nigeria is the world's largest producer of cassava with an output of over 57 million tons (FAO, 2018). Nigeria beats Thailand, the second largest by more than one third of its output; yet, it holds a tiny cassava exports share of 0.055 far behind Thailand, the largest cassava exporters in the world. This transposition of Nigeria's cassava production versus export performance raises critical questions that points out clear gaps and likely reason(s) for such inverse performance.

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Studies have attributed the unattractiveness of agriculture and low participation of the active work force in Nigeria to very poor knowledge of contemporary farming processes, high demand of energy and degrading societal placement of farmers (Twumasi et al., 2019; Yunusa & Giroh, 2017). Furthermore, Africa's (by extension Nigeria) innovative process is still largely considered as 'a transfer of foreign technology', a copy and paste approach which negates the context of innovative knowledge and sustainability (Ortalani et al., 2017).

The Dynamic Capability Theory

This theory was propounded by David J. Teece in 2019. It stated that resources are not capabilities. He referred to capabilities as the manner through which resources are developed, integrated, managed and coordinated to develop and deliver expected performance. Beyond the factors of production, it was opined that the degree to which resources are managed is equally important to the firm's survival and success as the ownership of its resources.

Two types of capabilities were identified namely ordinary and dynamic capabilities. Ordinary capabilities is hinged on doing things right (efficiency), enough to produce and deliver set(s) of products or services. Ordinary capabilities is assessed based on measures of specific tasks such as inventory turns, completion times, productivity of labor and targets – all of which are embedded in one or the combination of skilled workers, technological equipment, processes/routines and administrative coordination. While this type of capability was recognized to be economically significant at the aggregate level, it is however insufficient at the level of the firm due to its high possibility of imitation, innovative complacency of firms who excel in it and a lesser basis of survival especially in a highly competitive environments.

Dynamic capabilities refer to the ability of a firm to build, renew and reconfigure resources in response to market changes. It is further broken on three basis namely; Sensing – this has to do with the identification/assessment of potential opportunities and threat as well as needs of both existing and potential customers; Seizing– resources mobilization in order to novel opportunities; and transforming–continual renewal of organisational values, culture and ability to adapt quickly. Overall, dynamic capability is built through conscious investment in learning, knowledge acquisition and discovery encompassed in sound strategy.

This theory addresses firm's survival, success, uncommon abilities, how technological and physical resources are put to use so as to gain competitive advantage. While firms may or may not have gaps in their resources, there are suggested ways through which a firm can assess and get a clear view of their capability gaps namely technology, market and business model gaps;

1. **Technology Gaps**: This refers to issues bordering around standard technology and its transfer, open innovation concerns, internal research and development or new product development.
2. **Market Gaps**: This refers to an understanding of the needs of prospective and existing customers. This gap relies on data analysis and experiential knowledge in order to be able to interact with multiple segments of the market.
3. **Business Model Gaps**: As the environment evolves, there will be need to adjust the way business is carried out i.e. the emergence of online sales due to increased use of internet.

In order to effectively close this gaps either as isolated or combined challenges; the firm must adopt learning and transformation as its strategy. To obtain capabilities, Teece (2019) proposed the application or combination of any of the following methods;

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1. **Create**: This is when a firm purposefully develops people, tools, teams or processes with the intention of entrenching different ways of getting things done. This option requires skills, effort and time.
2. **Purchase**: This is the acquisition of a novel capability by hiring individuals with the needed knowledge or the outright acquisition of an existing organization with the required knowledge. Teece (2019) states that it is the most commonly adapted option especially as regards hiring. He opined that this method should actually be the least ranked until there is precise clarity on what the firm needs and what capabilities it entails.
3. **Rent**: This option could actually speed up capability development. It requires a jump-start through the use of consultants to introduce and entrench best practices so as to achieve desirable results faster. A major resistance to this option is the existing firm because it entails the endorsement of the intended drive from the outside organization, as a part of own strategic vision and expectations of such change.

Away from physical assets, firms pursue core competencies and capabilities for their existence. Competencies refer to the collective learning of how organisations do their thing, accumulate new skills and transfer those values to their products/services for growth and survival. Capabilities refer to repetitive patterns of competencies in use of resources to create sustainable value in firm's product and services.

This theory is well situated in exploring knowledge issues underlying Nigeria's cassava agribusiness capabilities. To maintain its position as the largest producer of cassava in the world for almost a decade, despite not having a consistent strategy towards sustaining such position points to the country's ordinary capabilities. On the flip side, inability to convert such huge cassava production to huge export yields reflects knowledge inadequacies, a lack of dynamic capabilities therein.

Empirical Review

Zossou et al. (2020) evaluated knowledge acquisition drivers and how they affected rice farming in West Africa. Using Poisson regression and Mann-Whitney-wilcoxon test, their findings revealed that agricultural knowledge relies heavily on formal and informal sources such as training, existing farming community, and personal experiences. They recommended that innovation systems be strengthened through formal and informal sources in transmitting robust knowledge. Similarly, Okry used interviews and focus group discussions to gauge participants' interest through Farmers Learning Video (FLV). Findings revealed that farmers' interests were reduced by their non-participation in the FLV production planning. Inadequate communication between field officers and farmers was found to be a major reason for their limited contributions towards the production. They recommended that the right proficiency be ensured in selecting field actors, and interactive opportunities be incorporated with effective communication in order to capture participants' full interest.

Archibong & Etim (2020) in a comparative study of conventional teaching approaches in agricultural education versus prevalent modern production techniques in agriculture. While agricultural education uses approaches like lecture method, concept mapping, field trips, class projects, discussion, demonstration, and experimental methods; modern agricultural technologies includes crop sensing, genetic engineering/biotechnology, autopilot tractors and GPS spraying machines, crop irrigation monitoring through technology. The study recommended that agricultural education teachers especially in Nigeria should expand their teaching methods through skills acquisition in modern crop techniques. A similar study by Amaral et al. (2020) examined both teaching and learning applications for increased knowledge acquisition in agricultural production. Undergraduate microbiology students were clustered into two groups;

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one group followed the traditional teaching methods using theoretical contents, the other group adopted active instruction based methodology that offered them hands on opportunity. At the end of the study year, both groups scored high in perceived understanding but the group with instruction based methodology was rated higher in actual knowledge and overall understanding in best practices of microbial inoculants. It was strongly recommended that teachers should be responsible for facilitating students' search for information relevant to their practical application and understanding in their field of study. Adeyanju et al. (2020) assessed the impact of agricultural based programmes on youth involvement in Nigeria's agribusiness activities. They adapted youth perception of trainings as an identification factor. They argued that though perception can sway youths to participate in agricultural trainings, it may or may not translate into agribusiness engagement. Findings revealed that the decision to engage in training programs and agribusiness therein was positively influenced by participants' perception towards the training from the onset. They recommended that youths' perception of agriculture should be deliberately enhanced. Likewise, programs and trainings should be stimulatingly exciting and attractive.

Ukpe & Mustapha (2016) explored a conceptual knowledge model for cassava processing. They built upon Bandura's social learning theory of observation, modelling and imitation; a pilot plant processing flow chart was created. It was also recommended as software, in a bid to achieve some degree of ecosystem reform and knowledge engineering regarding this crop. Apata (2019) considered the gender perspective on the cassava agribusiness value chain. A study of 250 cassava growers revealed that more male farmers sold garden fresh crops without adding value while female farmers transformed their crops to some extent before trading it. This study recommended that women be motivated to do more and suitable modern technologies be adapted for value improvement. Odunze (2019) considered the role of horizontal linkages on agribusiness value chain of cassava, plantain and yam crops in Nigeria. A study of these crops' farmers and processors revealed that linkages were not popular amongst them. However, the few with horizontal link groups exhibited higher entrepreneurship levels and better access to inputs.

Gaps in Literature

There is extant literature regarding cassava crop in Nigeria. However, none was found to consider knowledge acquisition as a construct or its linkage to cassava agribusiness as a value chain. Studies such as Ukpe & Mustapha (2016) actually built a knowledge flow chart model, but this can only be applied in more advanced climes that have the possibility of running automated ecosystems. Hence, this study provides a domesticated approach to knowledge acquisition, based from the perspective of cassava farmers, and its influence (if any) on the agribusiness value chain.

METHODOLOGY

The study adopts quantitative method of data collection that involves the use of questionnaire as research instruments for data collection. Also, the study involved descriptive research design and convenience sampling technique. Likert scale was adopted for rating respondents ranging from 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A), 5=strongly Agree (SA) wherever appropriate. The population consists of only members of the Nigeria Cassava Growers Association (NCGA). Questionnaires were distributed to members

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within a subset of Lagos, Ogun and Oyo states, Southwest region, Nigeria. The Gill, Johnson and Clark sample determinant method was used to derive a sample size of 659 from a population of 38,849 members in these states. Ogun and Oyo states were selected because they are the largest cassava producers in the southwest and Lagos because of its proximity to both states. Five hundred and seventy-nine (579) copies of the questionnaire were retrieved out of six hundred and fifty nine distributed. Structural Equation Modeling (SEM) was adopted for this study because of its simultaneous testing of constructs; specifically the Partial Least Square (PLS) method was used. This implies a response rate of 87.9%, which is sufficient for drawing empirical inferences on the relationship between knowledge acquisition and agribusiness.

Table 1
RESPONDENTS' RESPONSE RATE

Items	Number	Percentage
Returned copies of the questionnaire	579	87.9%
Copies of the questionnaire not returned	80	12.1%
Total	659	**100%**

Source: Survey, 2021

Demographic Profile of Respondents

The respondents' demographic profile across the three selected states is presented in Table 2. This cut across gender, age brackets, marital status, number of dependents, educational qualifications, and educational fields as well as the respondents 'experience in cassava farming.

Table 2
RESPONDENTS DEMOGRAPHIC PROFILE

Items	Frequency	Per cent
Gender		
Male	338	58.4
Female	241	41.6
Total	**579**	**100.0**
Age Bracket		
Below 30	110	19.0
31-40	150	25.9
41-50	231	39.9
51 and above	88	15.2
Total	**579**	**100.0**
Marital Status		
Single	130	22.5
Married	391	67.5
Divorced	58	10.0
Total	**579**	**100.0**
No of Dependents		
Yes	349	60.3
No	230	39.7
Total	**579**	**100.0**
Academic Qualification		
O Level	96	16.6
ND/NCE	131	22.6
B.Sc/HND	227	39.2
Postgraduate Degree	125	21.6
Total	**579**	**100.0**

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Educational Field		
Agricultural Sciences	109	18.8
Social/Management Sciences	232	40.1
Physical/Life Sciences	64	11.1
Educational	103	17.8
Engineering	52	9.0
Others	19	3.3
Total	**579**	**100.0**
Experience in Cassava farming		
Less than 5 years	148	25.6
6-10 years	217	37.5
11-15 years	98	16.9
16-20 years	71	12.3
21 years and above	45	7.8
Total	**579**	**100.0**

Source: Survey, 2021

The gender sharing of the respondents indicates that out of 579 total numbers of respondents, 338(58.4%) were male, while 241(41.6%) were female. This implies that the cassava farming business in Southwest Nigeria is dominated by male. This could be attributed to the nature of the business that requires doggedness and tenacity for results.

The age classification showed that 110(19.0%) out of the total of 579 were less than 30 years. 150(25.9%) were within 31-40 years, 231(39.9%) within 41-50 years while 88(15.2%) were 51 years and above. Most respondents were within the age group of 41-50 years, followed closely by respondents within 31-40 years. This suggests that most of the respondents were within the economically active population.

In a related development, out of the 579 that participated in the survey, 130(22.5%) were single, 391(67.5%) were married while 58(10.0%) were divorcees. In a nutshell, most of the respondents were married. This implies that they used cassava farming as a means of livelihood for themselves and their family members. Also, data shows that most of the respondents, which represents 60.3%, had persons who depended on them. The educational fields revealed that 109(18.8%) of respondents were from agricultural sciences-related field, 232(40.1%) from social and management sciences fields, 64(11.1%) from physical and life sciences, 103(17.8%) from the educational field, 52(9.0%) from engineering field while 19(3.3%) were from other fields that were not captured. However, the top three with most respondents were social and management sciences, agricultural sciences and educational disciplines.

Table 3
KNOWLEDGE ACQUISITION

Description	**SA**	**A**	**U**	**D**	**SD**	**Mean**	**SD**
I had enough knowledge of cassava farming when I started	84 (14.5)	179 (30.9)	79 (13.6)	133 (23.0)	104 (18.0)	3.01	1.357
My knowledge of cassava farming was acquired through school, i.e. tertiary institutions	38 (6.6)	110 (19.0)	33 (5.7)	236 (40.8)	162 (28.0)	2.35	1.251
My knowledge of cassava farming was gotten through direct training by a government agency	19 (3.3)	84 (14.5)	79 (13.6)	204 (35.2)	193 (33.3)	2.19	1.145
Most of my knowledge on cassava farming was gotten through my guardians and relatives	273 (47.2)	176 (30.4)	14 (2.4)	71 (12.3)	45 (7.8)	3.97	1.299
I will benefit from more training/skills acquisition in line with cassava farming	391 (23.8)	162 (50.3)	26 (10.9)	0 (0.0)	0 (0.0)	4.63	0.569

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Source: Survey, 2021

Table 3 shows the descriptive statistics of knowledge acquisition. This was measured with five (5) items, as indicated in the table. One item used to measure knowledge acquisition was to find out if respondents had enough knowledge of cassava farming when they started the business. It was discovered that 263(45.4%) of the respondents strongly agreed and agreed that they had enough knowledge on cassava farming when they started the business while 237(41.0%) disagreed and strongly disagreed with the statement. However, most of the respondents agreed that they had enough knowledge of cassava farming when they started the business with a mean score of 3.01 and a standard deviation of 1.357, Erickson & Rothberg (2019).

It was also of interest to ascertain if respondents' knowledge of cassava farming was acquired through school, i.e. tertiary institutions, 148(25.6%) strongly agreed and agreed that their knowledge of cassava farming was acquired through school, i.e. tertiary institutions, 33(5.7%) were undecided while most of the respondents representing 68.8% disagreed and strongly disagreed with the statement with the mean score of 2.35 and standard deviation of 1.251. This suggests that their knowledge of cassava farming was not acquired within conventional higher institutions.

There was need to determine if cassava farming knowledge was gotten through direct training by a government agency, 103(17.8%) strongly agreed and agreed that their knowledge of cassava farming was gotten through direct training by a government agency while most respondents representing 69.5% disagreed and strongly disagreed with the statement. The mean score gotten was 2.19 with a standard deviation of 1.145. This suggests that their knowledge of cassava farming was not acquired through direct training by a government agency.

From the descriptive statistics, 449(77.6%) strongly agreed and agreed that their knowledge of cassava farming was gotten through their guardians and relatives, 14(2.4%) were undecided while 116(20.1%) disagreed and strongly disagreed with the statement with the mean score of 3.97 and standard deviation of 1.229. This emphasised that most respondents got their knowledge of cassava farming through their guardians and relatives.

In order to find out if respondents perceived any sort of benefit from more training/skills acquisition in line with cassava farming, 553(76.8%) strongly agreed and agreed that they will benefit from more training/skills acquisition in line with cassava farming. In comparison, only 26(10.9%) had a contrary opinion with the mean score of 4.63 and standard deviation of 0.569. This implies that most of the respondents believed they would benefit from more training/skills acquisition in line with new learnings in cassava farming.

Cassava Agribusiness

Table 4
CASSAVA PARTICIPATION

Description	SA	A	U	D	SD	Mean	SD
I have been fully engaged in cassava farming	264 (45.6)	221 (38.2)	58 (10.0)	30 (5.2)	6 (1.0)	4.22	0.900
I make my ends meet from cassava farming	138 (23.8)	291 (50.3)	563 (10.9)	74 (12.8)	13 (2.2)	3.81	1.012
Cassava farming is profitable enough for me to continue till retirement	123 (21.2)	182 (31.4)	64 (11.1)	107 (18.5)	103 (17.8)	3.20	1.423

Source: Survey, 2021

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Table 4 shows the descriptive statistics of agricultural participation as one of the elements of agribusiness. This was measured with three (3) specific items as presented in the table.

The researcher wanted to know if respondents make their ends meet from cassava farming, 429(74.2%) strongly agreed and agreed that they make their ends meet from cassava farming, 56(10.9%) were undecided while 87(15.0%) disagreed and strongly disagreed with the statement. A mean score of 3.81 and standard deviation of 0.012 suggests that most respondents make their ends meet from cassava farming.

In the same vein, there was need to find out if cassava farming was profitable enough for farmers to engage in till retirement. 305(52.6%) strongly agreed and agreed that cassava farming was profitable enough for them to continue till retirement, while 210(36.3%) disagreed and strongly disagreed with the statement. A mean score of 3.20 and standard deviation of 1.423 was derived which implies that most were of the opinion that cassava farming is profitable enough to hold till retirement.

Table 5
CASSAVA PRODUCTION

Description	SA	A	U	D	SD	Mean	SD
I have the capacity to produce more cassava than I do currently	261 (45.1)	162 (28.0)	27 (4.7)	59 (10.2)	70 (12.1)	3.84	1.404
Currently, my farming is done manually, i.e. use of labourers, traditional methods of planting or harvesting etc.	391 (67.5)	163 (28.2)	12 (2.1)	0 (0.0)	13 (2.2)	4.59	0.744
I am of the opinion that mechanised farming will be of benefit to cassava production in Nigeria	434 (23.8)	138 (50.3)	0 (0.0)	0 (0.0)	7 (1.2)	4.71	0.592
If I have the knowledge support, I will do (more of) mechanised farming	489 (23.8)	83 (50.3)	0 (0.0)	0 (0.0)	7 (1.2)	4.81	0.548
Mechanised farming will enable me to produce more	432 (74.6)	127 (21.9)	13 (2.2)	0 (0.0)	7 (1.2)	4.69	0.637

Source: Survey, 2021

Table 5 shows the descriptive statistics of agricultural production as one of the key elements of agribusiness. This was measured with five (5) specific items as presented in the table.

One of the items for the measurement of agricultural production was to find out expansion possibility to produce more than present capacity. 423(73.1%) of respondents strongly agreed and agreed that they can produce more than they do currently, while 129(22.3%) of the respondents disagreed and strongly disagreed with the statement. Results showed that majority have the capacity to produce more cassava than they do currently, with a mean score of 3.84 and a standard deviation of 1.404.

Critically, the researcher also wanted to find out mode of respondents farming, 554(95.7%) strongly agreed and agreed that their farming activities was done manually, i.e. use of labourers, traditional methods of planting or harvesting make their ends meet from cassava farming and 13(2.2%) strongly disagreed with the statement. The mean score of 4.59 and standard deviation of 0.744 was gotten. This posits that most farming activities was done manually, i.e. use of labourers, traditional methods of planting and harvesting cassava crops.

It was of keen interest to gauge perception towards mechanised farming, 559(96.5%) strongly agreed and agreed that mechanised farming would enable them to produce more, 13(2.2%) were indifferent about the statement while 7(1.2%) disagreed and strongly disagreed

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with the statement with the mean score of 4.69 and standard deviation of 0.637. This emphatically suggests that mechanised farming would enable more production.

Table 6
CASSAVA PROCESSING

Description	SA	A	U	D	SD	Mean	SD
I process my cassava traditionally, i.e. sun drying, fermenting through local ways such as sun drying, hand knife peeling, basin soaking and so on	388 (67.0)	178 (30.7)	13 (2.2)	0 (0.0)	0 (0.0)	4.65	0.523
I derive either gari, fufu or starch from my cassava produce	391 (67.5)	157 (27.1)	25 (4.3)	6 (1.0)	0 (0.0)	4.61	0.622
Asides food, I derive pellets, cassava chips, ethanol and adhesives (glue) from my cassava produce	140 (24.2)	121 (20.9)	33 (5.7)	87 (15.0)	198 (34.2)	2.86	1.637
I seal my cassava produce, weigh and indicate measurements on my cassava packages	73 (12.6)	71 (12.3)	53 (9.2)	189 (32.6)	193 (33.3)	2.38	1.381

Source: Survey, 2021

Table 6 shows the descriptive statistics of agricultural processing as one of the key elements of agribusiness. This was measured with four (4) specific items as presented in the table.

One of the items of measurement was the mode of cassava processing. It was discovered that 566(97.7%) of respondents strongly agreed and agreed that farmers still process their cassava traditionally, i.e. sun drying, fermenting through hand knife peeling, basin soaking and so on. Results showed that most of the farmers process their cassava traditionally, with the mean score of 4.65 and standard deviation of 0.523.

Similarly, there was need to know if other derivatives such as gari, fufu or starch was extracted, 548(94.6%) strongly agreed and agreed that they get derivatives from the cassava crop, while 6(1.0%) disagreed with the statement with the mean score of 4.61 and standard deviation of 0.622. This suggests that most of the farmers derive either gari, fufu or starch from my cassava produce.

The researcher also wanted to find out asides food, if industrial derivatives such as pellets, cassava chips, ethanol and adhesives (glue) was gotten, 261(45.1%) strongly agreed and agreed that asides food, they got either pellets, cassava chips, ethanol or adhesives (glue) from their crop, while 285(49.2%) disagreed and strongly disagreed. A mean score of 2.86 and standard deviation of 1.637 points out that asides food, farmers do not derive either pellets, cassava chips, ethanol or adhesives from their cassava.

Table 7
CASSAVA PROMOTION

Description	SA	A	U	D	SD	Mean	SD
I sell their products to local markets within Nigeria	381 (65.8)	172 (29.7)	13 (2.2)	7 (1.2)	6 (1.0)	4.58	0.697
I am aware of the National Agency for Food and Drug Administration and Control (NAFDAC) cassava requirement for international standard	260 (44.9)	248 (42.8)	33 (5.7)	0 (0.0)	38 (6.6)	4.14	1.118
I think the government is doing enough to boost cassava farmers in Nigeria	107 (18.5)	85 (14.7)	89 (15.4)	151 (26.1)	147 (25.4)	2.75	1.450

Source: Survey, 2021

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Table 7 depicts the descriptive statistics of agricultural promotion as one of the key elements of agribusiness. This was measured with three (3) specific items as presented in the table.

One of the items for the measurement of agricultural promotion was to find out if farmers sell their products to local markets within Nigeria. It was discovered that 553(95.5%) of the respondents strongly agreed and agreed that farmers sell their products to local markets within Nigeria, 13(2.2%) were indifferent about the statement while 13(2.2%) disagreed and strongly disagreed with the statement. However, the results show that most of the farmers sell their products to local markets within Nigeria with the mean score of 4.58 and standard deviation of 0.697.

Also, to find out the level of awareness on the National Agency for Food and Drug Administration and Control (NAFDAC) cassava requirement/standard, 508(87.7%) strongly agreed and agreed that their farmers are aware of the National Agency for Food and Drug Administration and Control (NAFDAC) requirement for cassava exports, while 38(6.6%) were unaware. The mean score of 4.14 and standard deviation of 1.118 suggests that most farmers are aware of the National Agency for Food and Drug Administration and Control (NAFDAC) cassava requirement for an international standard.

The researcher wanted to know if farmers perceived the government as doing enough to boost cassava farming in Nigeria, 192(33.2%) strongly agreed and agreed that farmers think the government was doing enough, 89(15.4%) were undecided while 298(51.5%) disagreed and strongly disagreed with the statement. A mean score of 2.75 and standard deviation of 1.450 emphasises that the government is not doing enough to boost cassava farmers in Nigeria.

Test of Hypothesis

For the test of hypothesis, the study investigated the influence of knowledge acquisition on agribusiness (agricultural participation, production, processing and promotion) in three selected State in Southwest, Nigeria. For the purpose of interpretation of the formulated hypothesis tested in the study, the path coefficients values, the t-statistics values, the R-square values and the p-values were used. The level and the degree of relationship between the knowledge acquisition and agribusiness (agricultural participation, production, processing and promotion) were determined by the path coefficient values. The r-square determines the level of variance in agribusiness (agricultural participation, production, processing and promotion) as explained by knowledge acquisition while the p-value measures the level of statistical significance. In addition, the t-statistics defines the calculated differences described in units of standard error which is depicted Rome (2020).

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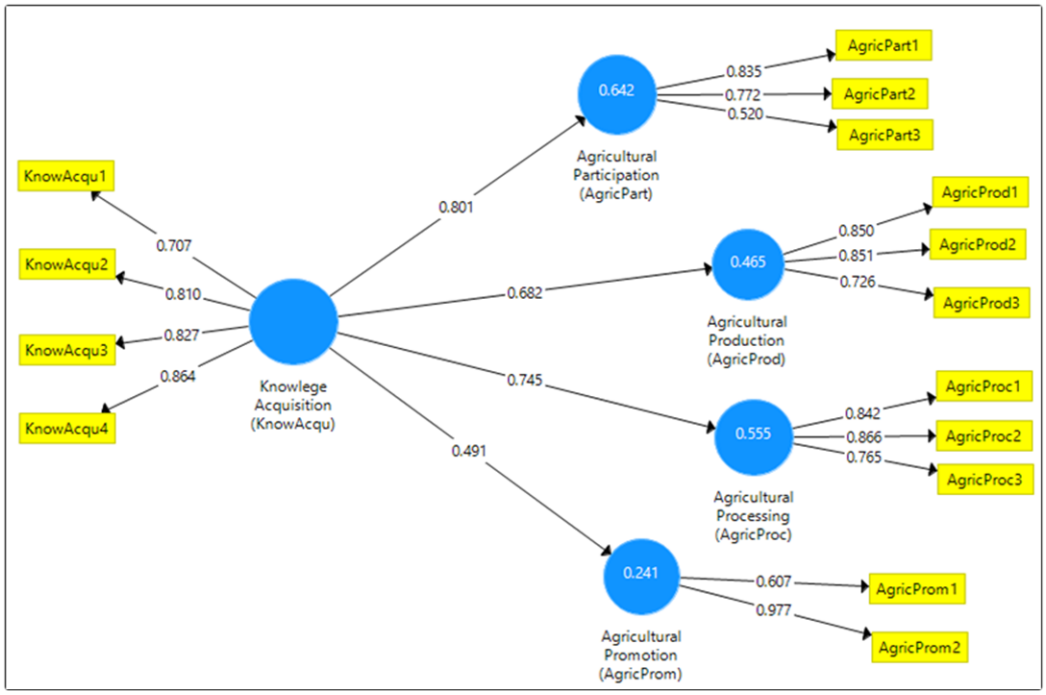

Source: Structural Equation Model Result, 2021

FIGURE 2
PLS ALGORITHM MODEL OF KNOWLEDGE ACQUISITION AND AGRIBUSINESS (AGRICULTURAL PARTICIPATION, PRODUCTION, PROCESSING AND PROMOTION)

Figure 2 shows the PLS algorithm model of knowledge acquisition and agribusiness (agricultural participation, production, processing and promotion) in three selected States in Southwest, Nigeria with the loading values of each item of measurement of knowledge acquisition and agribusiness (agricultural participation, production, processing and promotion), the path coefficient values and the R=square values. Figure 2 portrays the PLS Bootstrapping Model with β and P values of knowledge acquisition and agribusiness. In addition, Figure 2 also shows that the PLS Bootstrapping Model with β and t-statistics values.

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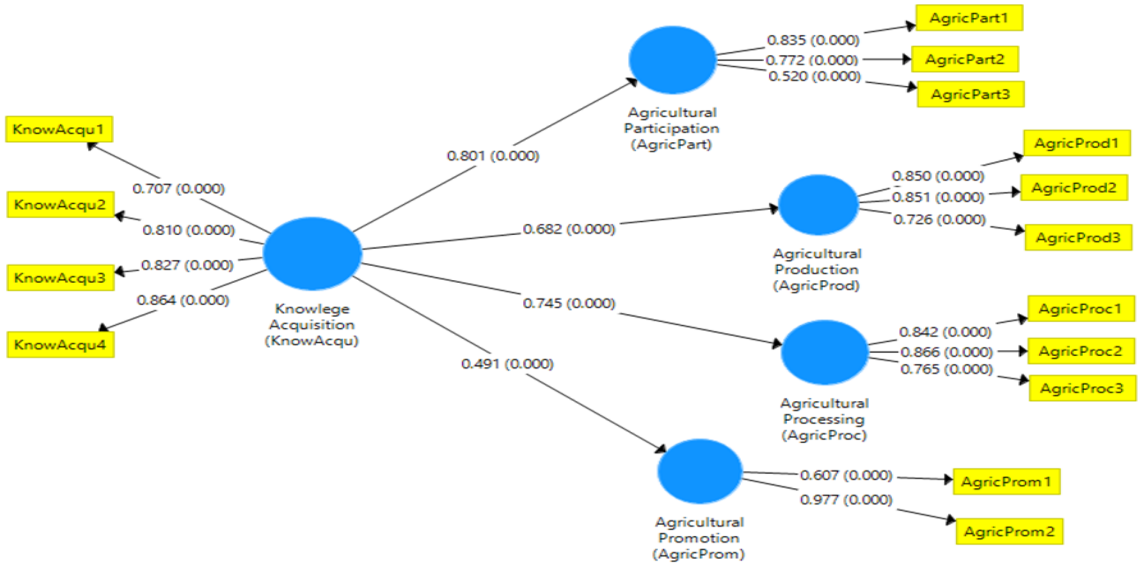

Source: Structural Equation Model Result, 2021

FIGURE 3
PLS BOOTSTRAPPING MODEL WITH B AND P VALUES OF KNOWLEDGE ACQUISITION AND AGRIBUSINESS (AGRICULTURAL PARTICIPATION, PRODUCTION, PROCESSING AND PROMOTION)

Figure 3 presents a p-value that determines the level of probability. Before the probability can be regarded as significant, it must be less than 0.05. As presented in Figure 3, all items measuring knowledge acquisition and agribusiness as captured in the research instrument are significant at a p-value of <0.05. The implication of this is that all the items of measurement contributed significantly. Therefore, knowledge acquisition has a significant influence on agribusiness.

Table 7
CONSTRUCT VALIDITY AND RELIABILITY

Items	Loading	VIF	t-statistics	P value	AVE	Composite Reliability	Cronbach's Alpha
Constructs	≥ 0.7	<3.0	>1.96	<.05	≥0.5	≥ 0.8	> 0.7
Knowledge Acquisition					**0.647**	**0.879**	**0.816**
KnowAcquq1	0.707	1.454	12.189	0.000			
KnowAcquq2	0.810	1.995	24.123	0.000			
KnowAcquq3	0.827	1.937	29.313	0.000			
KnowAcquq4	0.864	2.157	33.873	0.000			
Agricultural Participation					**0.521**	**0.759**	**0.738**
AgricPartq1	0.835	1.230	26.480	0.000			
AgricPartq2	0.772	1.218	12.189	0.000			
AgricPartq3	0.520	1.071	4.145	0.000			
Agricultural Production					**0.658**	**0.852**	**0.737**
AgricProdq1	0.850	1.956	23.871	0.000			

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AgricProdq2	0.851	1.990	26.495	0.000			
AgricProdq3	0.726	1.205	16.778	0.000			
Agricultural Processing					**0.681**	**0.865**	**0.764**
AgricProcq1	0.842	1.860	30.824	0.000			
AgricProcq2	0.866	1.008	25.606	0.000			
AgricProcq3	0.765	1.319	12.687	0.000			
Agricultural Promotion					**0.662**	**0.788**	**0.796**
AgricPromq1	0.607	1.220	6.271	0.000			
AgricPromq2	0.977	1.220	54.811	0.000			

Source: Structural Equation Model Result, 2021

Table 7 depicts the factor loadings of all the items of measurement for knowledge acquisition and agribusiness (agricultural participation, production, processing and promotion as presented in the research instrument. Also, the composite reliability, average variance extracted (AVE) estimate, as well as Cronbach Alpha, were carried out to establish the validity and reliability of the instrument. Meanwhile, the recommended standards for the factor loading, composite reliability, AVE and Cronbach Alpha were met.

Table 8
PATH COEFFICIENTS FOR KNOWLEDGE ACQUISITION AND AGRIBUSINESS (AGRICULTURAL PARTICIPATION, PRODUCTION, PROCESSING AND PROMOTION

	Path Coefficient	**R-Square**	**Std. Dev**	**T-statistics**	**P-value**
KnowAcqu→AgricPart	0.801	0.642	0.031	25.532	0.000
KnowAcqu→AgricProd	0.682	0.465	0.061	11.139	0.000
KnowAcqu→AgricProc	0.745	0.555	0.043	17.337	0.000
KnowAcqu→AgricProm	0.491	0.241	0.066	7.443	0.000

Source: Structural Equation Model Result, 2021

Table 8 depicts the smart partial least squared statistical results of hypothesis one which focused on the relationship and the resultant effect of knowledge acquisition on agribusiness (agricultural participation, production, processing, and promotion. The findings show that knowledge acquisition has a significant effect on agribusiness (agricultural participation, production, processing, and promotion.

Precisely, findings revealed that knowledge acquisition has significant influence on agricultural participation of farmers at (β=0.801, R2=0.642, t-statistics=25.532>1.96, P-value =0.000<0.05). The Path coefficient of 0.801 implies a high degree of relationship between knowledge acquisition and agricultural participation of farmers. The R2 value of 0.642 indicates that 64.2% variance in agricultural participation of farmers can be explained by knowledge acquisition.

DISCUSSION OF FINDINGS

Findings revealed that knowledge acquisition has significant influence on agricultural participation of farmers at (β=0.801, R2=0.642, t-statistics=25.532>1.96, P-value =0.000 <0.05). The Path coefficient of 0.801 implies a high degree of relationship between knowledge acquisition and agricultural participation of farmers. Hence, agricultural participation of farmers has the most predictive value, followed by agricultural processing of farmers, agricultural

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production of farmers and agricultural promotion of farmers in that order. Therefore, the hypothesis that knowledge acquisition does not affect agribusiness (participation, production, processing and promotion) was rejected.

A critical look at the highest degree of relationship between knowledge acquisition and participation with the highest path co-efficient of 0.801 indicates key areas worthy of mention. While 45% of respondents affirmed that they did not have enough knowledge on the cassava before venturing, 77.6% agreed that the knowledge they had was gotten through guardians and relatives (largely informal sources). This study points out how relevant indigenous knowledge still is as a basis for knowledge dissemination and also aligns with Carolan, (2018) that agricultural communities are largely self-generative by nature which maybe a barrier or a basis for resistance to modern ways of agriculture (if not well managed). Also an underlying point this study brings to fore is the distinction between knowledge and skills. The demographic statistics of educational field shows that only 18.8% of respondents had an academic qualification in agricultural sciences. It magnifies specific capabilities needed to thrive in agribusiness. While knowledge refers to the sensibility or awareness of a subject matter, skills involves hands on practical capacities that sometimes goes beyond formal education and training (Lekang et al., 2017); yet both are highly complementary in acquiring more rounded knowledge.

CONCLUSION

Findings revealed that knowledge acquisition has significant influence on agribusiness with participation of farmers having the highest predictive value of 0.801. This simply means that relevant indigenous knowledge still is a basis for knowledge dissemination and also points out that our agricultural communities are still largely self-generative. Also an underlying point is the distinction between knowledge and skills as shown by the demographic statistics which shows that only 18.8% of respondents had an academic qualification in agricultural sciences.

Similarly, the study revealed a strong relationship between knowledge acquisition and agribusiness with the participation of farmers having the highest predictive value. By implication, requisite knowledge and skills must be gotten to attain sustainable performance at every stage of participation in the agribusiness value chain. However, the nature of participants and their needs vary based on their status – prospective, new and existing farmers, location, peculiar situations and environment, and as such should be reflected in how needed knowledge can be acquired.

Contributions to Knowledge

This study created a conceptual linkage between knowledge acquisition and agricultural participation, production, processing and promotion creates a framework more relatable to existing subsystems in Nigeria. It also adapts the dynamic capability theory to identify and fill underlying knowledge issues of cassava agribusiness; the three gaps – technological, business model and market gaps points out areas where requisite agricultural knowledge should be structured, to attain more market visibility and export standards for the crop. This theory also suggests ways through which such knowledge can be acquired either through generic knowledge creation, purchase or rent.

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Recommendations

The indigenous knowledge structure should be harnessed and explored as a tool for skills and information dissemination. Farmers should deliberately strive to be involved in agricultural knowledge information systems and be open to new learning. Educational learning curriculum should reflect modern and alternative forms of cassava farming. This is to close the gap for those who seek knowledge in agricultural sciences through conventional institutions. Modern agricultural techniques should be captured specifically as skills acquisition and not just theoretically based. These skills should cover specifics in precision agriculture such as optics, drones and machines. Government agencies and extension servicers should be aware and active in their role of being the link between research findings/contributions and those in need of such information.

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