Modular and Mobile Processing: A Tool for Enhancing Cassava Value Chain and Profitability

Michael Sawa[1*], Gideon O. D.[1], Akinyomi A. M.[1], Osagbemi O. G.[1],Olorunfemi Ayodele[1]

sawamsawa@gmail.com, dagideon@yahoo.com,*

mikeakinyomi@gmail.comgosagbemi@gmail.com, ayodele@agribusinessnigeria.org

[1]Department of Management and Accounting, International Agribusiness,

Lead City University, Ibadan, Oyo State, Nigeria.

Cassava is a vital source of calories in tropical regions, ranking third after rice and maize. However, the cassava value chain faces challenges that limit its profitability. This study examines the potential of modular and mobile processing as a means to improve the value and profitability of cassava production. Drawing on the theoretical framework of New Institutional Economics, the study utilizes a descriptive survey design with a focus on Ogun State, Nigeria.

The research population consists of 180 cassava-based processors and marketers, selected using a multistage random sampling technique. Primary data is collected through questionnaires, while secondary data is sourced from journals, periodicals, textbooks, and the internet. Simple Regression Analysis is employed to determine the correlation between variables, using SPSS computer package Version 25.

The study reveals that the adoption of modular and mobile processing methods by cassava farmers can significantly impact the value chain and profitability. Farmers who embrace these innovative approaches can achieve higher yields and increase their income. Encouraging cassava growers to adopt modular and mobile processing techniques is recommended to enhance the value chain and profitability of cassava production.

In conclusion, this study highlights the importance of incorporating simple biological and mechanical technologies, new ideas, and policies in cassava production and processing. The findings emphasize the transformative potential of modular and mobile processing methods and call for a shift towards innovative approaches to foster the growth and profitability of the cassava value chain.

Keywords: Modular Processing, Mobile Processing, Cassava, Value Chain, Profitability.

Word Count: 237

Introduction

For each business sector or project, there is a unique value chain. In most cases, each business sector or industry has its own value chain. However, there are some cases where two or more sectors or industries

have the same or similar value chains. The term "value chain" refers to a set of activities that take place from start to finish when it comes to making and distributing goods. The value chain includes, but is not limited to, how ideas come up, how materials are sourced, how they are designed, how they are made, how they are sold, and how they are distributed[1].

As the name implies, the value chain includes all known functions and activities that can be used at any point in a business. These functions and activities usually turn inputs into value and distribute that value to the people who use it. Without the value chain, it is hard for end users to get value from production processes or stages without it. There are many reasons to look at or study a business or investment's value chain. The main goal is to make the chains as efficient as possible so that the value that comes from each stage can be maximized at a cost-effective rate. It means that every business or investor wants to improve their value chain so that they can make money over time[2].

The cassava value chain, which is part of the agricultural value chain concept, is looked at in this study. People don't agree on what the agricultural value chain is all about. The term "agricultural value chain" refers to a series of activities that take place at different stages and times to make sure that agricultural products and produce move from farm settlements to end-users. People who work in the agricultural value chain show the flowcharts that show the information, products, skills, and knowledge that are usually needed and used at each step of the production process[3].

"The people and activities that bring a given agricultural product like cassava, rice, palm fruits, or rubber from the point where it is grown or harvested to the point where it is packaged, sold, and delivered to the final consumer." This is called the agricultural value chain. The agricultural value chain serves as a link between farmers and people who buy food at the market[1].

General conclusion emerging from that literature is that agricultural growth is typically more important for poverty reduction than growth in other economic sectors. In Indonesia, Agriculture currently accounts for 14% of national GDP, having declined from 24% in 1980 (Figure 2). The sector share of employment currently stands at 40%, having declined from a 1980 share of 56%. Such declines are characteristic of developing countries. Agricultural trade is increasingly important for Indonesia. It is the world's largest exporter of palm oil, the second largest producer, and frequently a large importer, of rice. Its share of the country's merchandise exports has grown from 4% in 2000 to 6% in 2008 (from 13 to 24% when processed food exports are included). Nonetheless, variation in supply, demand and prices for agricultural products, as in most large developing countries, reflect mainly the macroeconomic situation in the country rather more than what is happening on world markets. Domestic consumption demand for agricultural products depends largely on per capita income growth. In principle, good agricultural performance operates to reduce measured poverty through both food price and farm income channels. Because food constitutes such a high share of consumer expenditures

by the poor, currently around 50% in Indonesia, lower food prices, would tend to reduce poverty[4].

The value chain of cassava can be thought of as the activities and people that happen at each stage of cassava processing, such as planting, tendering, harvesting, peeling, grating, dewatering, sieving, packaging, and distribution to end users[5, 6]. Talks about what Costa C. thinks says:

The traditional (food) market sells garri, fufu, starch, edible starch, kpokpogarri, lafun, and abacha, all of which are made from cassava. People and businesses that make and sell cassava need to be better at what they do and how they do it. This will help them produce, process, and sell cassava more efficiently, as well as encourage more private investment in cassava production and processing[8, 6].

Modular and mobile processing can help producers, processors, commodity traders, and fabricators be more efficient when they grow, process, and sell cassava. It can also encourage more private sector investment in cassava production, processing, storage, and marketing, which all benefits the cassava value chain. A prefabricated building, technology, or instrument that is used in modular and transportable processing can be made to meet the needs of food processing standards, production, and demand[11].

Mobile and modular processing equipment should be used because of food security concerns, the ability to make more and faster food, and the ability to reach farmers and smallholders with services. A head pottage, which is usually carried by the operator or users, is used to move the mobile unit. This is how modular and mobile processing works. If the unit or system is needed at a specific time or by a specific person, a motorcycle might also be used to get them there. This could be a farm, town, or market center, for example. As a result, all of the cassava processing steps can be done in the shortest amount of time possible, without having to move the product from one point of important input to another. This makes the whole process more cost-effective and profitable[11].

Cassava has been overlooked by policymakers, institutions, international donors, and development agencies in African countries since the post-independence or post-decolonisation era, because they thought cassava was a low-quality food that people would stop eating as their incomes rose. However, challenges of cost-effective productivity and effective processing have been found in the cassava value chain, which means that cassava can be used in a long-term way. There is a need to improve the cassava production and use system, as well as come up with action plans to help with cassava production, processing, and value chain changes[12, 13]. There are two main goals: make a model business that shows how modular and mobile processing can be used and figure out how the two business indices are different.

1.2 Statement of the Problem

The main goal of any business venture or investment is to make money and to keep improving the business over time while meeting set goals. Everyone who does business has a supply chain that

contributes to the value chain in some way, either directly or indirectly. When it comes to the profitability of a business, a lot of it comes down to the effectiveness and efficiency of its value chain. However, there are times when a company's value chain has setbacks and vulnerabilities, which, in most cases, hurt the company and make it less likely to break even or become profitable[2,1].

There is a belief among some individuals that the cultivation and processing of cassava is predominantly a task for those residing in rural areas. Conversely, others perceive it to be a role primarily carried out by women or small-scale farmers. Cassava production and processing, on the other hand, has been used as a business venture by people and groups who want to make money and be more productive[14, 15].It has been found that increasing the production and processing of cassava is important for social and economic growth, especially in rural areas. However, the benefits aren't fully realized because of a lack of ability to properly use the whole process. In the cassava value chain, there is a problem that is hurting the industry's productivity and profitability, so this shows that something is wrong[14, 15, 7].As a result, there needs to be a big change in how cassava is grown and processed. This includes simple biological and mechanical technologies, new ideas, and policies. When simple technologies and new ideas are used correctly, they can improve the cassava value chain and the productivity of cassava as a key crop in the economy. This could lead to the value chain's profitability over time[12, 13, 7]. Modular and mobile processing is the technology that is being looked at in this case. This work will make a research proposal on the subject "Modular and Mobile Processing: A Tool for Improving the Cassava Value Chain and Profitability." Based on the above, this work will write the proposal.

1.3. Research Questions

1. What is the meaning of modular and mobile processing?
2. How can modular and mobile processing be applied in Cassava production and processing?
3. What is the meaning and implications of the value chain?
4. What are the factors militating against the cassava value chain?
5. How can modular and mobile processing be applied to enhance the cassava value chain and profitability?
6. What can model business be built to exemplify the application of modular and mobile processing, modelling the difference in business indices between the two?

Objectives of the Study

1. Define modular and mobile processing as it relates to agricultural production and value chains.
2. Explore how concepts of modular and mobile processing can be implemented within the cassava industry specifically, from farm to product.

3. Outline the key components of a value chain and their importance in commodity markets.
4. Identify challenges farmers currently face that hinder the optimisation of the cassava value chain.
5. Propose methods by which modular and mobile processing approaches could strengthen the cassava value chain and improve profitability.

Research Hypotheses

$H_{o:}$ There is no significant impact of modular and mobile processing in enhancing cassava value chain and profitability.

H_1: There is no significant impact of modular and mobile processing in enhancing cassava value chain and profitability.

Significance of the Research Study

To investigate how modular and mobile processing can be used to improve or boost value and profitability. As a result of this study, agricultural practitioners, investors, farmers, suppliers, governments, and other private entities/stakeholders will see how important cassava farming and the use of cassava products and products are.

This study will also serve as a guide for people, businesses, and governments who want to do engage in cassava modular and mobile processing to improve to increase profitability. There are many parties interested in the subject therefore, this research will provide an overview of ideas that can be used to obtain relevant information and data.

Finally, the findings of this research project can be used by governments and other groups to help them better understand cassava value chains and how modular processing can help improve the value of cassava. It could be used by students and researchers in entrepreneurship and business management and other fields where the issues and subject matter in this research are important.

Limitations of the Research Study

This research study, like other academic research studies, has some limitations. First and foremost, there is a paucity of literature on the topic matter and concepts addressed in the proposed research project. In addition, some of the germane material discovered was not written in English. Because the research study employs a desk-review approach as its qualitative research methodology, it is possible that the research study will be tainted by the prejudices embedded in the works of literature used as data sources.

Methodology

Research Design

The research design is the overall method for integrating the various elements and components of a research project. A research design allows the researcher to incorporate all aspects of the study into a logical and coherent study. The frameworks for variable analysis and the data chosen to analyze them are referred to as the research design[1]. The descriptive survey design is used in this study. The descriptive survey design is a type of non-experimental research design in which the researcher measures two variables in order to assess and comprehend their relationship[2]. The descriptive survey design is important because it aims to measure two variables, investigate their interactions, and identify a pattern of relationship.

The Study Area

The study area is in the state of Ogun. Ogun State is a Nigerian state in the southwest. Western State was formed on February 3, 1976, from the former Western State. Ogun State is bordered on the south by Lagos State, on the north by Oyo and Osun States, on the west by Ondo State, and on the south by the Republic of Benin. Ijebu Ode, the former royal capital of the Ijebu Kingdom, and Sagamu, Nigeria's leading kola nut grower, are both capital and most populous cities in Ogun State. The state of Ogun is mostly covered in rain forest, with some wooden savanna in the northwest. As of 2006, Ogun State had a total population of 3,751,140 people, making it Nigeria's 16th most populous state. With a land area of 16,762 kilometers square, Ogun State is Nigeria's 24th largest state in terms of landmass.

The state is known as the "Gateway to Nigeria" because of its high concentration of industrial estates and its role as a major manufacturing hub in Nigeria. Dangote Cement Factory in Ibese, Nestle, Lafarge Cement Factory in Ewekoro, Memmcol in Orimerunmu, Coleman Cables in Sagamu and Arepo, and Procter & Gamble in Agbara are among the major factories in Ogun.

Sampling

In the study area, 180 cassava-based processors and marketers were chosen using a multistage random selection technique. The first stage entailed choosing two zones from the four zones of the Ogun State Agricultural Development Project (OGADEP), namely Abeokuta and Ijebu. This was done because cassava-based farming and processing are prevalent in these areas. In the second step, six blocks from each of the two zones were proportionately chosen: three blocks from each zone. Then, with a total of twelve cells, a simple random sample of two cells from each block is performed. Finally, nine processors and six marketers were chosen at random from each cell, for a total of 180 respondents.

Sources of Data

Primary Data

They are firsthand accounts gathered specifically for the study. They're usually collected in the field under the supervision and control of a researcher or investigator. The study's primary data was gathered through the distribution of a questionnaire. The questionnaire utilized in this study is divided into three sections: Section A, Section B and section C. Section A is demographic in nature and contains respondents' personal information, whereas Section B and section C contains general questions about the research topic. The questionnaire was made up of several questions and options on which to provide feedback.

Secondary Data

The secondary data was compiled using information from journals, strategic periodicals, library textbooks, and, most importantly, the internet.

Measurements of Variables

The following variables were examined to determine the farmers' socioeconomic characteristics:

Sex: The respondents were asked to indicate whether they were male or female

Age of the farmers: The respondents were asked to indicate their age in years.

Marital status: Single, married, widowed, separated or divorced.

Educational qualification: This was measured as number of years spent in school.

Farming experience: This was measured as number of years spent in cassava farming.

Household size: This was measured as total size of the farmers family.

Religion: This was measured as the belief in a supreme being of the farmers

Major occupation: This was measured as the gainful activities involved by the farmers aside farming.

Method of Data Analysis

Percentages and tables were utilised to analyse the data. Simple Regression Analysis was used to determine the degree of correlation or link between the variables. As a result, using SPSS computer Package Version 25, the hypotheses were tested using basic regression Analysis.

Results And Discussion

This chapter presents the results of the data analysis that was carried out to answer the research questions and evaluate the study's hypotheses. Tables are used to present the findings, which are then explained in four sections: improving the value chain, analyzing the cassava value chain, marketing power of the cassava chain are some of the socioeconomic features of the respondents. This chapter

presents the results of the data analysis that was carried out to answer the research questions and evaluate the study's hypotheses. Tables are used to present the findings, which are then explained in four sections: improving the value chain, analyzing the cassava value chain, marketing power of the cassava chain are some of the socioeconomic features of the respondents.

Socio-Economic Characteristics of Respondents

Sex: 61% male, 39% female

Age Distribution: 18 – 24 years: 32%, 25 – 31 years: 46%, 30 – 38 years: 14%, above 39 & Above: 8%.

Educational Background: None: 8%, Primary: 12%, Secondary: 33%, Tertiary: 47%.

Marital Status: Married: 58%, Single: 42%.

Farming Experience: 1 – 5 years: 13%, 6 – 10 years: 11%, 11 – 15 years: 31%, Above 15: 46%.

Farm Size: 0.1 – 1 ha: 6%, 1.1 – 2 ha: 18%, 2.1 – 3ha: 64%, 3.1 – 4ha: 6%, Above 4 ha: 6%.

The survey found that 100% of the respondents adopt traditional methods of cultivating casava. In terms of processing, the farmers are having various challenges to access processing plants due to logistics cost such as transportation and the distances to move their produce to these plants.

Storage was identified as a major issue as cassava roots tend to commence having reduced values when harvested and kept staying for a day or more without any forms of preservation or processing.

All respondents sell their produce directly either to marketing agents or directly to food processing plants. These buyers usually cover for all logistics costs related to loading, transportation of the casava produce from the frames to either the markets or processing facilities. The farmers believe that they are being underpaid even for the produce as the buyers are aware they do not have any choice but to sell or else they risk losing their produce due to limitation in storage or processing facilities.

In terms of familiarity with mobile processors, a high rate of farmers representing over 96% are not familiar with mobile processors. However, they all believe that accessing mobile processors would be highly beneficial to them in that; it will increase their bargaining power in the market, save costs and reduce wastage.

It was also found out that the farmers having several factors which have limited their decisions to access processing and they include financial constraints, affordability, skills to operate and willingness of other farmers to contribute towards procuring processing equipment. At the same time 96% have shown interest to utilise mobile processors if it is available.

Over 86% of the respondents sell their produce below market rates and this is due to several factors as highlighted such as prices are determined by the buyers, lack of processing equipment, to dispose produce immediately and avoid value depreciation, high cost of logistics, limited market access.

Also, a good leverage point was that all the farmers belonged to cooperatives, and this provides a platform that the government or development agencies can leverage on to introduce the use of mobile processors.

Conclusion

People who grow and sell cassava know a lot about the study's findings. This shows that farmers need to use modular and mobile processing to maximise profit. This means that modular and mobile processing has a big impact on the value chain and profitability of cassava.

Agriculture is still the main source of income for about 38% of people in developing countries, but it isn't working well for a lot of different reasons. In agriculture, there are big differences in how women and men get the resources they need. They don't have as many resources or as many chances as men to get the help they need, so they get less of it. Cassava is a staple crop in Sub-Saharan Africa, but it hasn't been used to its full potential for a long time, and it's often thought of as a poor man's crop in some places. Cassava is still one of the crops that could help fight food insecurity and improve people's lives in Nigeria, even though the effects of climate change are getting worse. Maize, for example, hasn't grown as well as it used to because of the changes. People who grow cassava have a lot of problems because men and women do things in different ways, which leads to different benefits and gains for men and women, such as more money for their families to spend. Individuals who control their own productive resources and make decisions about their families have a big say in the benefits they get from joining agricultural value chains. Women need to be given better, cheaper, and more reliable access to land, credit, agricultural inputs, extension information, markets, and other resources in order to be more productive and make more money, so they need to work together to do this. Making sure that interventions that help men and women in agricultural value chains achieve gender equality in terms of upgrading outcomes are built on a gender lens is a good way to start.

Recommendations

The following recommendations are made based on the research findings:

i. Cassava growers are encouraged to adopt modular and mobile processing methods in order to boost their yields.
ii. Policymakers are encouraged to create policies that will help smallholder farmers boost their productivity in order to help them focus on improving their cassava growing capability in the research region.
iii. Through enhanced technology, smallholder cassava production and small-scale cassava processing must be modernised. For these chain participants, the continued use of conventional techniques implies no process upgrading in the cassava-derived product value chains.
iv. It's also critical to put in place programs to help farmers enhance their ability to satisfy the

demands of business transactions. For long-term production, cassava starch producers should diversify their product and client base.

v. Collective actions public and private sectors – especially through cooperatives.

Suggestions for further Studies

Based on the findings of the study, the study therefore suggestion that:

1. Further research that is interested in this type of study should enhance the sample size to reach a larger population.
2. To include the eastern and northern parts of Nigeria in this type of study, so that more scholars can stretch their tentacles there.
3. Develop a business model demonstrating the application of modular and mobile techniques versus traditional stationary models, comparing relevant financial, socio-economic metrics between scenarios.

References

1. PWC (2017) Transforming Nigeria agricultural value chain: A case study of cocoa and diary industries. PWC, Nigeria
2. M. C. Webber & P. Labaste*, Building Competitiveness in Africa's Agriculture: A guide to value chain concepts and application*, International Bank for Reconstruction and Development/World Bank, 2010.
3. M. Sharma; R. Tiwari & J. Sharma, *Entrepreneurship in Livestock and Agriculture,* New Delhi, India: CBS Publishers & Distributors, 2010.
4. D. Cervantes-Godoy & J. Dewbre, *Economic Importance of Agriculture for Sustainable Development and Poverty Reduction: Findings from a Case Study of Indonesia.*Working Party on Agricultural Policy and Markets, 15-17 November 2010. Reference: TAD/CA/APM/WP(2010)39.lobal
5. U. Kleih; L. Sanni; A. Dipeolu; A. Abass; P. Abdulsalam-Saghir; R. Butterworth & B. Siwoku, *Value Chain Analysis for Nigeria. Submitted to Cassava: Adding Value for Africa (C:AVA)*, Natural Resources Institute, UK, 2008.
6. B. Siwoku, *Prospects and challenges of cassava production for industrial uses in south western Nigeria*. M.B.A – Agribusiness (Abeokuta), University of Agriculture, Abeokuta, Nigeria, 2011.
7. C. Costa, *The Cassava Value Chain in Mozambique,* Washington DC. International Bank for Reconstruction and Development /The World Bank, 2019.

8. L. O. Sanni; O. O. Onadipe; P. Ilona; M. D. Mussagy; A. Abass & A. G. O. Dixon, *Successes and Challenges of Cassava Enterprise in West Africa: Case study of Nigeria, Benin and Sierra Leone*. ISBN 978-131-200-5. IITA, Ibadan, Nigeria, 2009. http://books.google.com/books?hl=en&lr=&id=3DyJIhE3y54C&oi=fnd&pg=PR4&dq=Sanni+L+O&ots=NyaUYgKW6nsig=42WnxwnJCZA0BkxXQfzJQ_j3eMA#v=onepage&q&f=false

9. M. Chitundu; K. Droppelmann& S. Haggblade, *"Intervening in value chains: lessons from Zambia's task force on acceleration of cassava utilisation."* ***Journal of Development Studies*****,** Vol. 45 No. 4, 2009, pp. 593-620.

10. A. Abass; P. Amaza; B. Bachwenkizi; B. Alenkhe; I. Mukuka & N. Cromme. (2017). *"Adding value through the mechanisation of post-harvest cassava processing, and its impact on household poverty in north-eastern Zambia."* ***Applied Economics Letters*****,** 24:9, 2017, pp. 579-583, DOI: 10.1080/13504851.2016.1213356

11. A. T. K. Nuer, *Sustaining Rural Technology Transfer under Rural Enterprises Projects (A Case Study of Cassava Processing Technologies in Rural Ghana)*, Wageningen University and Research Centre, Technology and Agrarian Development group, The Netherlands, 2010.

12. S. Haggblade; A. A. Djurfeldt; D.B. Nyirenda; J.B. Lodin, *"Cassava commercialisation in Southeastern Africa."* **Journal of Agribusiness in Developing and Emerging Economies** *2*(1), 2012, 4-40.

13. Meridien Institute, *Innovations for Agricultural Value Chains in Africa: Applying Science and Technology to Enhance Cassava, Dairy, and Maize Value Chains*. October 2012. Available at:http://merid.org/value-chain-innovations

14. 14. F.I. Nweke; D.S.C Spencer & J.K. Lynam, *The Cassava Transformation: Africa's Best-Kept Secret*. Michigan State University Press, East Lansing, MI. Michigan State University, 2002.

15. 15. E. Salvador; V. Steenkamp, & C. McCrindle, *"Production, consumption and nutritional value of cassava (Manihot esculenta, Crantz)." In "Mozambique: An overview".* ***Journal of Agricultural Biotechnology and Sustainable Development.*** Vol. 6(3), 2014, 29-38, June. DOI: 10.5897/JABSD2014.0224

Appendix

Greetings,

My name is Michael Sawa, and I am pursuing a Master's degree at Lead City University, Ibadan, Oyo State, Nigeria. Currently, I am conducting a study titled "Modular and Mobile Processing: A Tool for Enhancing Cassava Value Chain and Profitability".

I kindly invite you to participate in this research by providing your valuable insights through this questionnaire. Please be assured that all information you provide will be handled with the utmost confidentiality. There is no need to provide your name, ensuring your anonymity.

Thank you in advance for your time and contribution to this research.

Best Regards,

Michael Sawa

SECTION A

SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENT

1. Age of respondent…….....years
2. Gender: a. Male. b. Female.
3. Marital status: a. Single. b. Married. c. Divorced. d. Separated. e. Widowed. f. Others.
4. Religion: a. Christian. b. Muslim. c. Traditional. d. Others.
5. Level of Education a. No schooling. b. Primary school. c. WEAC. d. OND d. BSC/HND. E. MSC/PHD. F. Others,
6. Major occupation: Students, Farmer, Civil servant, Trader, others.
7. Household size
8. Farm size in hectare(s)
9. Farming experience in years
10. Are you a cassava farmer or a processor?

SECTION B

UPGRADING IN THE CASSAVA VALUE CHAIN

1. Do you have a producer's certification? a. non-certified producer. b. certified producer.
2. What kind of technologies is used in the manufacturing process? a. Traditional. b. Modern. c. Advanced.
3. The inputs used and the type of technology used in a modern and advanced state?
4. Will it be easier to halt cassava production and pursue other opportunities? a. Can easily exit. b. Cannot easily exit.
5. Are you able to store the raw cassava that you produce? a. Able to preserve. b. Unable to preserve.

6. Do you offer things that are unique? a. Yes. b. No.
7. Are you able to cut the market price of goods on your own? a. Yes. b. No.
8. Do you sell things that are uniform and undifferentiated? a. Yes. b. No.
9. How many farmers provide cassava cake producers or agents with supplies?
10. In Hectares, what is your manufacturing scale? .....
11. How far is it between your farm and the nearest processing plant... ……
12. What is the size of the nearest processing facility? a. Tons/hrs. b. Tons/days.
13. Will a smaller processor at a closer range be preferable? a. Yes. b. No.
14. Is it going to be easier if the processing equipment is mobile? a. Yes. b. No.
15. Are you a member of a cooperative society? a. Yes. b. No.
16. Is a smaller processor available to your cooperative, if so? a. Yes. b. No.

ASSESSING THE CASSAVA VALUE CHAIN

1. Who purchases your high-quality cassava flour? a. Ethanol producers b. Marketing agents c. Breweries d. food sector
2. Do you get any help from the buyer before you start processing? a. Yes ( ) b. No ( )
3. If so, what kind of help are you looking for? a. Provides inputs for production on credit. b. Technological innovations c. Credit.
4. How long have you been a value chain actor's supplier? a. one to two years. b. more than two years.
5. What is the value chain actors' ordering procedure? a. Opened bidding for orders with prices negotiated and agreed before ordering commissioned b. Bidding does not take place, prices settled after contracts are awarded.
6. Do you only begin supplying after receiving written contracts? a. Supply is done only upon receipt of a written contract b. Supply may start without a written contract.
7. Is the produce inspected before it is delivered? a. Produce is inspected upon delivery b. There is little or no inspection of produce upon delivery.
8. Are you his or her sole supplier or purchaser? a. Supplier has many sources and buyer has many customers b. Few sources of supply and buyer have few customers c. Not sure of other suppliers.
9. Do you get help with new information or better technology? a. Do not receive assistance and any assistance and technical assistance is paid for. b. Receives assistance on new knowledge or improved technology.
10. What is the frequency of communication and what is the nature of communication? a. Communication is not frequent and through formal sources. b. Communication is frequent and through informal sources.

SECTION C

MARKET POWER OF THE CASSAVA VALUE CHAIN

1. Do new market entrants bring new capacity? a. Yes. b. No.
2. Do new market entrants acquire market share? a. Yes. b. No.
3. Do fresh entries to the market lower product prices? a. Yes. b. No.
4. Do new market entrants have to invest a lot of money to compete? a. Yes b. No
5. What is the initial capital required to join the value chain?
6. Are you able to assess the market price of goods on your own? a. Yes. b. No.
7. Do you offer things that are unique? a. Yes. b. No.
8. Are you able to cut the market price of goods on your own? a. Yes. b. No.
9. Do you sell things that are uniform and undifferentiated? a. Yes. b. No.