

**Strengthening Farmers-Agroprocessor Relationship in Cassava Value Chain
A Case Study of Matna Foods Company and ‘Small-scale Cassava Farmers in
Owo LGA of Nigeria**



**A Research Project Submitted to Larenstein University of Applied Sciences in Partial
Fulfillment of the Requirements for the Degree of Master of Development, Specialization
of “Rural Development and Food Security”**

By

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Dedication

This thesis is dedicated to my Wife, Tolulope Yemi-Adeyemo; Daughter, Adeyinka Yemi-Adeyemo and my Son Adedimeji Yemi-Adeyemo.

Abstract

Nigeria is ranked the world's largest producer of cassava with a production of 46 million (IITA 2007) In order to develop the cassava subsector of agriculture in Nigeria. The Nigerian government has supported investors to invest on modern commercial cassava processing mills. Despite the development, the smallholder farmers are not harnessing the benefit as there is poor market linkage to agro-processor and agro-processor on the other hand are not having sufficient raw materials to run their plants. It was against this background that the study was carried out to gain an insight in farmers and agro-processor relationship so as to manage and strengthen the relationship for mutual benefit of the farmer and agro-processing company.

The objective of the study is to strengthen the relationship between the small scale cassava (out growers) farmers and Matna foods company by gaining an insight into the relationship between the out growers and the company so as to propose necessary measures to improve the relationship. The farmers selected were farmers that farm and reside 35km radius of the factory in Owo LGA of Nigeria.

For the objective of the study to be met, the researcher used the 2-2 tango tools. The 2-2 tango is suitable in identifying the challenges area in the relationship. The 2 to tango tools prove very efficient for the study as the tools reveals sensitive areas of differences in the relationship and the tools also provided an opportunity for the company and the farmers to discuss their differences and jointly provided necessary solution to identified problems, in this case the 2 to tango tools serve as a reconciliatory tools to resolve conflict and at the same time strengthen the existing relationship and prevent future crisis.

After the business case description and analyzing the data from self-assessment and debriefing report and meeting, the research revealed that relationships between the company out-growers and the company was weak due to lack of good communication between the company and the farmers and poor extension.

Eight challenge areas were identified in the study: The company extension service; Quality assessment; farmer involvement in pricing (decision making); communication between the farmers and the company; Dependency on the relationship; Commitment and trust; relationship norms and flexibility and functional conflict resolution mechanism.

The study revealed that the company extension is inefficient and ineffective for farmers; that is the farmers are not satisfied with the service provided by the company. On quality assessment

procedure farmer are satisfied with it due to the fact that farmer get premium price for good quality cassava, both the farmer and the company have similar view on the quality assessment procedure. However, the farmer disagreed with the company on involvement in price determination. The study reveals that the company is not involving the farmers in negotiation for price. The study further reveals that the communication between the company and the farmer is weak. This is the rudiment of the problem in the relationship. It was observed that both the farmers and the company agreed on the poor communication that exists in their relationship. On dependency on the relationship the study showed that there is equal dependence on the relationship by the farmers and the company. It was remarkable that despite the unsatisfactory extension service and the poor communication between the farmers and the company the company and the farmers claimed that they are both committed and trust each other; these must have been due to both equal dependence on the relationship. The study also showed that both party in the relationship agreed on the relationship norms and flexibility that is there is solidarity and mutuality. Finally, the study revealed that there is a functional conflict resolution between the company and the farmers.

In order to strengthen the relationships between cassava farmers and the company the study proposed recommendations to the farmers and the company. The recommendations include Creation of a functional and reliable 2 ways communication channel between the company, the farmers and other actors in the value chain and that Farmers should organize themselves into cooperatives to have a stronger negotiation power with the company and enjoy other inherent benefits of a cooperative.

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Acronyms and abbreviations

IITA	International Institute of Tropical Agriculture
ADPs	Agricultural Development Programs
CEDP	Cassava Enterprise Development Project
CGAN	Cassava Growers' Association of Nigeria
GFSR	Global Food Security Response Program
MARKETS	Maximizing Agriculture Revenue and Key Enterprises for Target Sites
MAWR	Ministry of Agriculture and Water Resources
NGO	Non-governmental organization
NRCRI	National Root Crops Research Institute
NSM	Nigeria Starch Mills
NSPFS	National Special Programme on Food Security
RTEP	Root and Tuber Expansion Program
USAID	United States Agency for International Development
FGN	Federal Government of Nigeria
LGA	Local Government Area

Epistemological Reflections

As an employee of the company, with a responsibility to ensure the continuous supply of cassava roots to the factory all year round for optimum utilization of the installed processing capacity of the company. Therefore, my job performance depends on the company relationship with the smallholder farmer; who are the backbone of raw material supply to the company. To that effect my judgment about the company relationship with the farmers may be sentimental. However, the study will be carried out with an independent mind and optimum ignorance as the outcome of study is very critical to the improvement of my job performance.

1. Introduction

1.1 Organization of the thesis

This research report contains of six sections. Section 1 is made up the background of the study, problem statement, objective of the study, justification of the study, conceptual framework, research questions and limitation of the study. The second section is the review of literature, the compilation of relevant information and previous studies that is relevant for the study. The third section is the methodology. The fourth section is the presentation of research results and the fifth section covered the analysis and discussion of results. Finally, this report ends up with the sixth section: conclusion and recommendations.

1.2 Background of the study

Access to market has been a limiting factor for smallholder farmer as a result linking smallholder farmers with the market has been a major policy issue and practice in improving livelihoods for millions of poor in the developing countries (Singh 2009). Furthermore, agro-processor has been identified as a stable and guarantee market for farm produce; therefore any intervention that will improve link farmers to agro-processor will promote livelihood of farmer. Farm-firm linkage is beneficial to farmers as it provides assured market, reduction of risk, guarantee price and farm business support services such as: credit, insurance, grading and inspection, technology extension, and market information. These services can help elevate the scale at which smallholders farmers can operate, raise their productivity and income, and mitigate the risks involved in participating in markets for high value products (Ashok et al 2008). At the same time the linkage will guarantee stable and reliable supply of farm produce (raw material) to the agro-processor that will keep the firm in business and promote profitability.

Therefore it is of interest to gain an insight to farmers and agro-processor relationship so as to manage and strengthen the relationship for mutual benefit of the farmer and agro-processing company.

1.3 Research Problem

Matna Foods Company is a medium scale cassava processing factory, which depends on its outgrowers for supply of cassava roots. The company has an installed capacity to process 120 metric ton of fresh cassava roots daily. The small scale cassava farmers have been the major supplier of fresh cassava roots (Raw Material) to Matna Foods Company over the last decade. This account for 80% of total annual cassava supplied. The company has experienced low and irregular supply of raw material in the last one and half year for instance totals cassava supply by smallholder farmer declined from 1817 metric ton by May, 2012 to 632.9 metric tons by November 2012. During one of the project implementation meetings of IITA-Nestle cassava starch project, between the management of Matna foods and representatives of International institute of tropical Agriculture (IITA) the project coordinator suggested that a waning relationship between Matna's out-growers and Matna foods company can be a major factor for decline in cassava production and low supply of cassava to the factory.

1.4 Objective of the Research:

The objective of the study is to strengthen the relationship between the small scale cassava (out growers) farmers and Matna foods company by gaining an insight into the relationship between the out growers and the company so as to propose necessary measures to improve the relationship.

1.5. Justification of the Study

The main problem with agro-processing in Nigerian is low and irregular supply of raw material while the problem of smallholder farmers is poor market linkage. In order to improve the agricultural sector there is a need to improve the business relationship between the farmer and agro processing firms. It was against this background that Matna foods company who has been experiencing low cassava supply and a waning relationship with its cassava out-grower has directed the researcher to carried out a study on how to improve the working relationship between the company and the farmers so that the company can have a consistent and continuous supply of cassava by creating a win-win relationship.

This research will facilitate the integration of smallholder farmers into high quality product value chains, which will enhance farmer access to reliable markets and increase in income for farming enterprises.

1.6 Conceptual framework

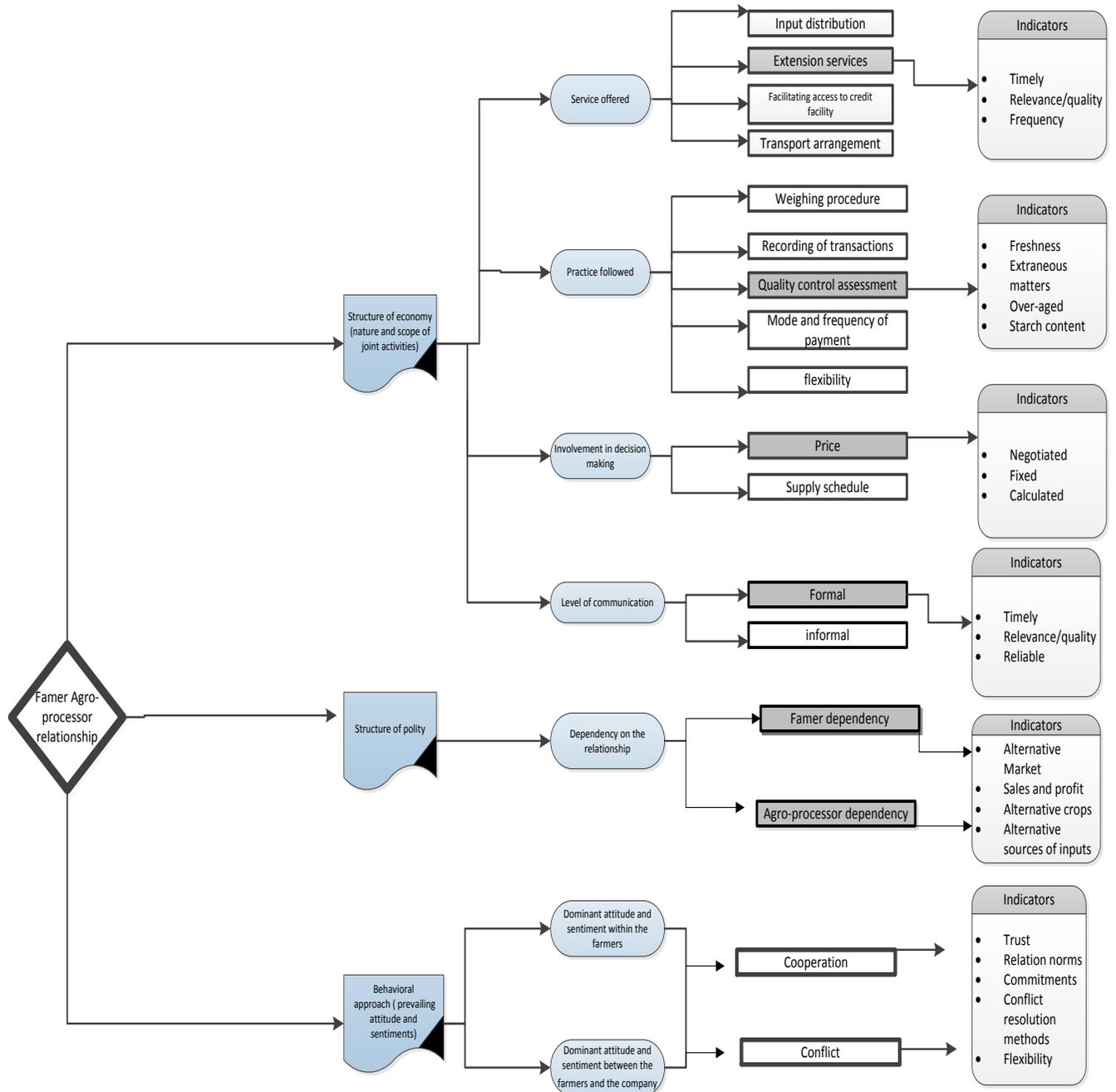


Figure 1: Conceptual Framework Source: Adopted from Duffy and Fearné (2002a) and author review of literature.

The framework to investigate the relationship between the agro-processor and farmers was developed from three dimensions: Relationship climate; structure of polity and structure of the economy.

The structure of the economy that is nature and scope of joint activities is defined in terms of the types of activities, resources and information flows that are used to support and co-ordinate the operation of the value chain (Robicheaux and Coleman 1994, Cannon 1992). Services offered, practices followed, involvement in decision making and level of communication (Claro, 2004) are the aspects that will be used to accessed the structure of the economy

The structure of polity is the level and nature of interdependency that exists in the relationship; however, due to the fact that level and nature of interdependency is dynamic.

The relationship climate is conceptualized as the dominate attitude and sentiments that exist in the relationship. According to Researchers such as Stern and Reve (1980) and Skinner Gassenheimer and Kelley (1992) suggest that conflict and co-operation are the two dominant sentiments that regulate exchange relationships. Four indicators such as: trust, relation norms, commitments and conflict resolution methods will be used to determine the predominate sentiments (cooperation and attitude) (i.e. Dwyer, Schurr and Oh 1987, Heide and John 1992, Morgan and Hunt 1994, Cannon and Perreault 1997, Siguaw, Simpson and Baker 1998)

1.7 Research Questions

The main research questions are:

1. What is the nature and scope of joint activity between the farmers and the company?
2. What is the current level of interdependency between the farmers and the Company?
3. What are the perceived dominate attitude and sentiments in the relationship?

1.7.1 Sub question 1.

1. What type of support service does the company offer and support service farmers required for cassava farming and delivery of cassava to the factory?
2. What is the level of involvement of farmers in pricing of cassava roots at factory gate?
3. What is the company's procedure for cassava quality assessment?
4. What is the perception of the farmer about the procedure and practice for cassava quality assessment?
5. What is the frequency and quality of information exchange between the farmers and the company?

6. What is the relevancy and reliability of information disseminated by the company to the farmers?

1.7.2 Sub question 2

1. What are the alternative sources of market available for farmers?
2. What is the alternative source of cassava roots for the company?

1.7.3 Sub question 3

1. What is the level of trust and commitment in the relationship?
2. What is the method of resolving conflict in the relationship?
3. What is the perception of the farmer about the relation norms?

1.8. Limitation of the study

The study was carried out on smallholder cassava farmers who reside and farm at 35km radius the Matna foods company factory. The result of the research would have been different if the study area was extended to other very distant farmers who also supplied cassava to the factory. The study was carried out during the Ramadan fasting of Muslims and majority of the farmers are Muslims therefore it is difficult to discuss extensively with the farmers because they are weak due to fasting and we are not allowed to interview their wives as they are busy preparing for fast breaking.

2. Literature Review

2.1 Definition of terms

- Contract farming: Contract farming is a forward agreement between farmers and processing and/or marketing firms for the supply and procurement of agricultural products under stipulated conditions.
- Food security: Food security is defined as a state when all people at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 1996).
- Firms: Firms are defined as entities which purchase specific agricultural product from farmers for processing or marketing purposes
- Livelihood: livelihood can be defined as the capabilities, assets and activities required for a means of living and are sustainable when it is able to cope and recover from shocks and stresses without undermining the resource base (Ellis, 2000).
- Smallholder farmers: Smallholder farmers can be defined as farmers with a low asset base and are have access to less than two hectares of cropland (Ellis, 2000).
- Company: For the purpose of this study a company is a private firm (cooperatives, processors, sellers) who that buys farmers' cassava roots.
- Farm: The farm will be used as an area of land that is used for growing cassava in order to sell it to the Company.
- Relationships: is referred to the way in which the company and farmers get connected, feel and behave towards each other in relation with their business.
- Contract: "A contractual arrangement between farmers and other firms, whether oral or written, specifying one or more conditions of production, and one or more conditions of marketing, for an agricultural product, which is non-transferable" (Prowse, 2012).
- Perception: Opinion of cassava farmers or company toward each other about their relationships in cassava production and selling.
- Transparency: In this study it refers to how cassava farmers and company share financial activities, openness without secrets in income repartition in cassava production and the trust and honest between each other.
- Price: in this study price is referred to as the amount of money that the farmer receives for one metric ton of freshly harvested cassava roots at farm gate or at factory gate.
- Quality standards: This is a level of freshness, age, starch content and extraneous materials in cassava roots that are delivered at the factory.

2.2 Relationships in buying and selling

According to 2002 Nobel Prize laureate for economics Vernon L. Smith who stated that Homo sapiens is defined by a “universal propensity for social exchange.” This propensity in turn “finds expression in two distinguishing forms: personal exchange in small-group social transactions, and impersonal trade through markets” (Smith, 2008, p. 15). The personal exchange in small-group social transactions (social exchanges) and the impersonal trade through markets (economic exchanges) are seen as different types of transactional contexts, not as different types of relationships (Cropanzano & Mitchell, 2005). Thus, taking the understanding of buyer-supplier relationships a step further; which has transformed the understanding of business exchange altogether.

Marketing theories has increasingly started to address the relational aspects of economic exchanges, not just in end-consumer markets, but also in industrial markets. In both cases, there is a movement from dyadic to network embedded in buyer-supplier relationship. In analysis of buyer-supplier relationships, the business network context is thought to be fundamental (Hakansson & Snehota, 1995). Gunter et al (2011) has noted a similar shift in the supply chain and operations management literature, where the issue of relationship quality has been receiving increasing research attention.

Ellegaard et al (2002), revealed that several studies on buyer supplier relationship in industrial and relationship marketing, supply chain management and international management conceded that supply relationship is the “backbone of economic activities in modern world” (Nagurney, 201p,p.200). Furthermore Veludo, et al (2006) view buyer-supplier relationship as a crucial to organizational competitiveness, performance and long-term success of companies.

The concept of social network embedded in economic exchange has provided a powerful explanation of trust, commitment and cooperation in many economic and organizational settings, including buyer-supplier relationships (Smelser & Swedberg, 2005; Dobbin, 2004; Manski, 2000). This is referred to as business networking. The concept business network is developed from market exchange theory (Easton & Araujo, 1994) and the social exchange theory (Cook & Emerson, 1978); business network can be defined as a set of interconnected exchange relationships (Prekert & Hallen, 2006, p. 384). This is directly linked to supply relationship. The importance of the supply network within the business network context is understood by Alajoutsijarvi et al (2001, p. 95) as an organized behavioral system of exchange.

Buyer-supplier network relationships are usually entrenched with both market exchange (transformation and exchange of resources) and social exchange (trust, collaboration, etc.) Chen & Paulraj (2004, p. 121). They referred to the business network perspective as collaborative paradigm. In this paradigm, business networks appear as patterns of inter-dependent business relationships “developed and fostered through strategic collaboration with the goal of deriving mutual benefits” (Chen & Paulraj, 2004,p. 121). Further to the concept of business networking Parker (2008) points to the following benefits collaborative paradigm: (1) learning and development; (2) innovation and competitive advantage; (3) value creation; and (4) growth and survival.

In spite of the inherent benefit of close buyer and seller relationship which according to Palmatier et al (2006), also stated that close inter-firm relationships directly increase revenue and profits. Close relationship with channel members still have its shortcomings like vulnerability due to opportunistic behavior of channel partners (Cannon et al., 2000). In consequence of these shortcomings, it is necessary to develop mechanisms to sustain the relationships and maximize benefits for each of the channel partners

2.3 Structural elements of buyer-seller relationship

Recently, there is an increase in recognition that firms that adopted long-term collaborative partnership; enjoys improvement in the operation of supply chain as a whole for mutual benefit of all parties involved. The degree of collaborative partnership between a seller and buyers and benefits accrued depends on: structure of the economy; structure of polity; relationship climate; length of relationship; and market or product characteristics (Duffy and Fearné 2004, Lusch and Brown 1996).

The structure of the economy that is nature and scope of joint activities, defined in terms of the types of activities, resources and information flows that are used to support and co-ordinate the operation of the value chain (Robicheaux and Coleman 1994, Cannon 1992). Services offered, practices followed, involvement in decision making and level of communication (Claro, 2004) are the aspects that determines the structure of the economy

The structure of polity is power relationship that exists between two actors in a value chain that is the level and nature of interdependency that exists in the relationship (Kumar, Scheer and Steenkamp 1995). However, the level and nature of interdependency is dynamic as a result power relation changes over a period of time depending on market and product characteristics.

The relationship climate is the level of cooperation and these is conceptualized as the dominate attitude and sentiments that exist in the relationship. According to Researchers such as Stern and Reve (1980) and Skinner, Gassenheimer and Kelley (1992) suggested that conflict and co-operation are the two dominant sentiments that regulate exchange relationships. The indicators for measuring the dominant attitude and sentiments are: trust, relation norms, commitments and conflict resolution methods (i.e. Dwyer, Schurr and Oh 1987, Heide and John 1992, Morgan and Hunt 1994, Cannon and Perreault 1997, Siguaw, Simpson and Baker 1998)

2.4 Contract Farming

Contract farming is a tool to facilitating market linkage for smallholder farmers and integration of smallholder farmers to wider economy. It also serves as an entry point of the private sectors into provision of extension service. It is one form of vertical co-operation along value chains where a farmer or producer organization co-operates with a marketing partner (wholesaler or agro-processor) by stipulating regulations and mutual liabilities within a contract on the production, supply and acceptance of the agricultural produce(Kathrin and Heike, 2006). There are various definitions for contract farming by different authors but the element of forward purchase agreement is common to all definitions (Key and Runsten 1999, 382; Baumann, 2000;Eaton and Shepherd (2001) Edwin and Haike 2006.) Contract farming is organized in different ways and it is practiced in different models based on agricultural produce and the market involved.

In summary, contract farming is all about collaborative relationship for mutual benefit of farmers and agribusiness. As a consequence, the quality and strengths of the relationship will determine to what extent the benefit of the collaboration can be harnessed. This is in line with Duffy and Fearne (2004) in their study, they acknowledged that firms who engage in co-operative long-term partnerships, improve the operation of the supply chain as a whole for the mutual benefit of all parties involved. Denis et al (2006) in their studies on agro-processing and contract agriculture in Africa also emphasized that the success of agro-processing depends on the long-term relationship between processors and producers.

2.5 Cassava Development Programme in Nigeria

Cassava is the number three staple crop (after rice and maize in terms of consumption), cultivated by both small and large-scale farmers in Nigeria, which has the highest production of cassava in the world. Between 2002 and 2008, the production of cassava in Nigeria has increased from 34 million tonnes to 45 million tonnes (FAO 2008). Other major cassava producing countries include: Thailand (30), Brazil (27), Indonesia (21) and Democratic republic of Congo (15) million tonnes (FAO 2009 a and b). The crop is highly versatile. Aside from its role as a major food staple for more than 800 million people in tropical and sub-tropical parts of the world (Nagib et al., 2009), it is also as an important raw material for industry.

The cassava sector is faced with a number of challenges ranging from pest and diseases, poor agronomic practices, lack of efficient processing facilities, poor marketing/export system, and lack of business orientation among farmers. This situation prompted the Federal Government of Nigeria (FGN) to introduce the Presidential Initiative on Cassava in 2002 in order to promote the crop as a food security commodity, foreign revenue earner, and an avenue for the expansion of economic opportunities for farmers and other relevant stakeholders. The FGN, USAID and Shell Petroleum Development Company, SPDC, made available funds to IITA to implement an *Integrated Cassava Project* in order to intensify efforts to promote cassava. This project focused on introducing high yielding disease-resistant varieties, best agronomic practices, and improved processing facilities for farmers, and by providing better access to markets.

The achievements to date are remarkable; the programs has recorded significant success in the development of high yielding and disease resistant varieties producing on-farm yields of 23 to 40 t/ha (IITA-CEDP, 2009), compared with the national average yield of 11.8 t/ha. More than 600 cassava processing enterprises were established to enhance value addition incomes.

2.6 Operation of Matna Foods Company and Other Players In Cassava Starch Value Chain.

Matna Foods Company is an agro-processing company that process cassava roots into foods grade starch for industrial users. The company depends on smallholder farmer for supply of raw materials. In order for the company to operate efficiently and effectively, the company collaborates with other stakeholder in cassava sub sector of agriculture such as: international institute for tropical agriculture (IITA); USAID/MARKETS (maximizing agricultural revenue and key enterprise in target states); Nestle Nigeria Plc. The entire stakeholder has supported the company in mobilizing smallholder farmers and provides support as well for cultivation of cassava and herein supplied to the Matna factory. Other chain supports has contributed to the

process of production of cassava starch. The framework below is adopted from the rural innovation system and entrepreneurship framework (RISE) to explain the mode of business operation of Matna Foods Company, the farmers and other cassava value chain supporters involved. The principle of the framework is to display how all players in cassava starch value chain interact to have a well-functioning value addition market system. The framework also reflect the interaction of the company and the government as a value chain facilitator.

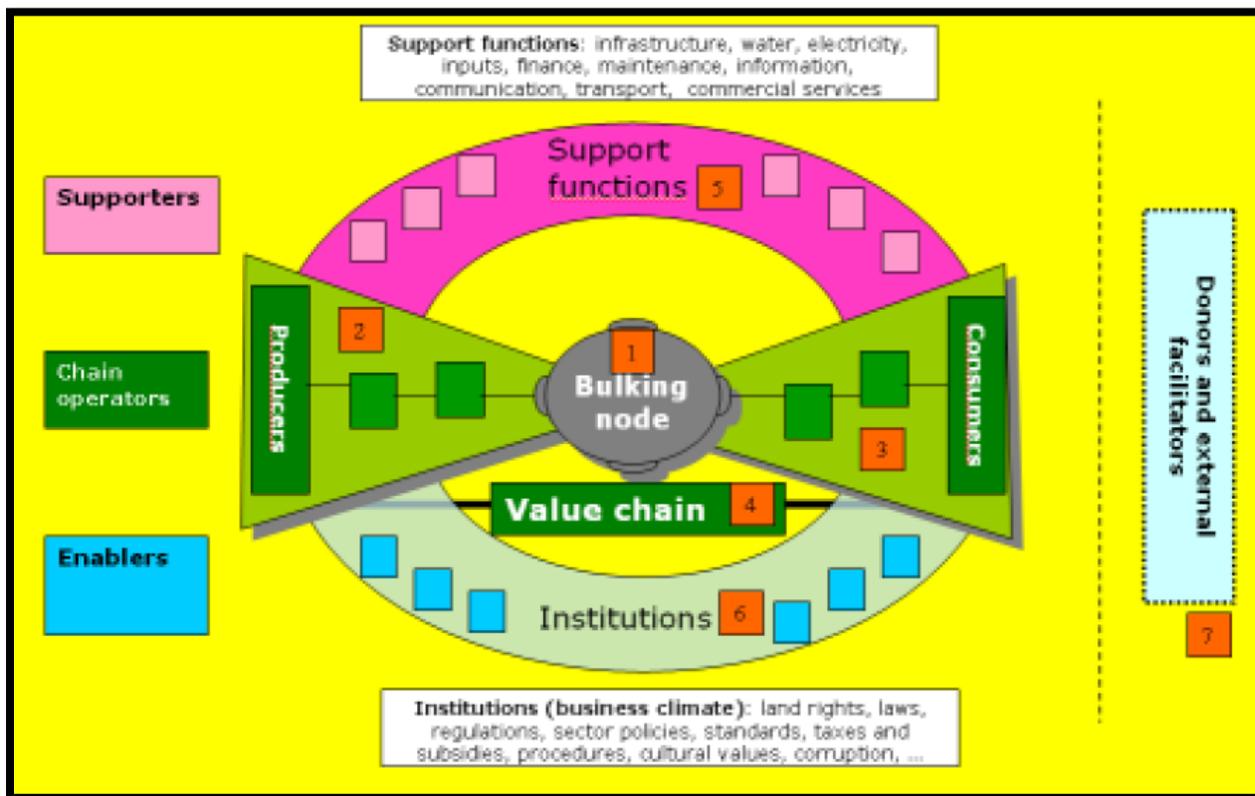


Figure 2 RISE FRAMEWORK Source: Agri-hub 2012

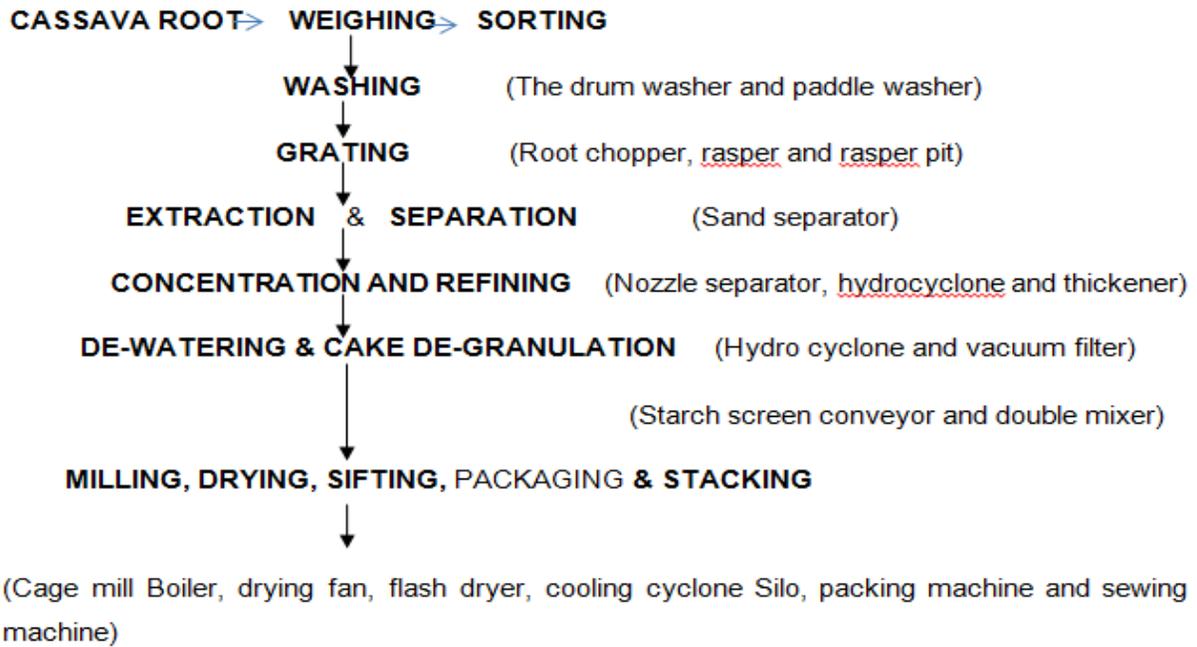
Chain operator: These are the entrepreneurs in the cassava starch value chain such: the farmers producing cassava roots and sale to the company; Matna Foods company, who purchase fresh cassava roots from the farmer and process it into high quality cassava starch and sell to other industrial user of cassava starch such as Nestle Nigeria pls, Oyin pharmaceutical company, Ayoola foods etc. Agricultural input sellers, who sell herbicides, and improved planting materials to farmers, Tractors and equipment suppliers, who provide tractors and equipment to be hired by farmer for cultivation; Transporters, are major player in the

cassava supply logistics as they provide transportation service to both the farmers and the company. For every supply of cassava by the farmers to the company the transporter take 30% of total sales.

Chain supporters: These are stakeholders who have stake in the starch value chain but do not own the product. In this case Bank of Agriculture and First bank of Nigeria. In organizing an out-growers scheme for the company by IITA and other supporting agency, the company facilitate low interest agricultural loan from Bank of Agriculture to the farmers to purchase input and labour for cassava production. The company is committed to purchase all cassava root produced and support the bank in loan recovery. Similarly First bank of Nigeria Plc. provides loans to the company for the factory expansion and also provide overdraft facility as working capitals for the company. Aside the banks, international institute of tropical agriculture who specialize in development of improved, high starch content and commercial viable cassava varieties also play a very supportive role under the USAID's Global Food Security Response (GFSR) and other several cassava development projects. The intervention of MARKETS through the International Institute of tropical Agriculture (IITA) in the cassava production system led to the formation of clusters of growers around the factories in the region, with the aim of enhancing production through improved farm practices and distribution of improved cassava varieties for higher yield per hectare. Nestle Nigeria plc, who is the major buyer of cassava starch also support cassava farmer in a similar manner USAID as support the farmer. Nestle Plc. went further with Matna foods company by provide technical assistance in quality assurance of starch produced to meet the international quality standard.

Chain enablers: the federal government has create a conducive legal framework for Matna foods by putting an import ban on imported starch and also give an incentive inform of tax relief to industrial user of local cassava starch . This has help to develop the starch market in Nigeria since there is no competition from the international market.

2.7 Schematic flow process for cassava starch extraction



2.7.1 Cassava starch processing equipment



Washing



RASPING AND GRATING



EXTRACTION



REFINING AND CONCENTRATION



Figure 3: Cassava starch processing equipment.

2.8 Gender issue in cassava farming

In terms of labor allocation for cassava production, both men and women are engaged in different cassava production tasks. Men typically work on land clearing, plowing, and planting, while women perform weeding, harvesting, transporting, and processing tasks. However, as cassava transformation advances to the stage of cash crop, men contribute more labor to cassava production, while women assume increasing responsibilities in cassava production and processing tasks. Although women are mainly involved in domestic cassava processing, fewer women own cassava-processing machines than men. However, they have easy access to processing machines. In Nigeria, where domestic cassava processing has been mechanized, men carry out mostly the grating and pressing tasks. In domestic cassava processing, women manually peel and wash cassava, men grate and press the cassava, while women toast the mash to make granulated products. Women also play a major role in cassava marketing.

The introduction of labor-saving technologies in cassava production and processing has led to a redefinition of gender roles in the cassava food systems. As opportunities for commercialization increase (arising from favorable market opportunities for cassava food products), the number of women involved in domestic processing increases. Growth in cassava production has provided

increased employment opportunities for women. However, there is a tendency that as mechanized processing equipment (such as graters and mills) are acquired, the involvement of men in cassava processing tends to increase, as they often control and operate these machines.

The purpose of cassava cultivation is in two dimensions: commercial sales for processor and domestic processing for household consumption. The men mainly produced cassava for commercial sales to commercial processors while the women are mainly involved in domestic processing for household consumption.

3 METHODOLOGY

3.1 Study area: Description of the study area

The study was carried out in Owo local Government; it's one of 14 Local Government Areas (LGA) of Ondo state of Nigeria. Ondo State, Nigeria was created on 3 February 1976 from the former Western State. It originally included what is now Ekiti State, which was split off in 1996. Akure is the state capital. The Local government area of Owo has a population of 218,886 (2006 census) and land area of 1027sq km; its boundary in the north by Akoko southwest LGA, in the south by Idanre LGA, in the west by Ose LGA and in the east by Akure north LGA. The climate is tropical with a distinct rainy season between March and October and a dry season between November and February. Farming is the backbone of the economy of the LGA. The major crop produced are cocoa, yam, cassava, oil palm and maize. The LGA was selected for the study due to the fact the Matna foods company factory is located in the area and almost 60% of the cassava out growers are located in the area. In fact the presence of the factory in the LGA has made the LGA to be recognized by the Nigeria government as the cassava processing zone. Furthermore the LGA has benefitted from several cassava development interventions such as USAID/MARKETS project, Nestle cassava starch project and the Government cassava transformation program.

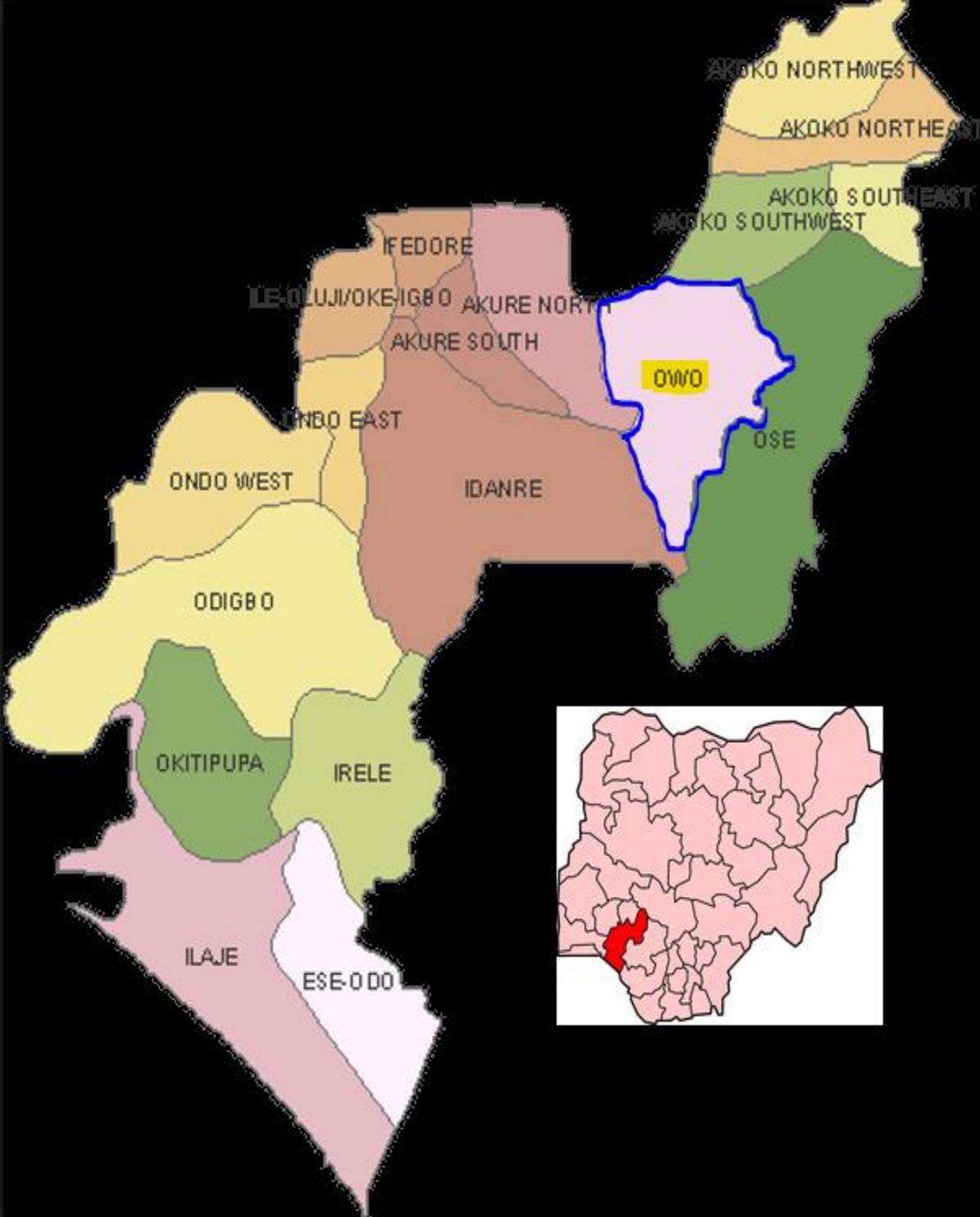


Figure 4: Map of Ondo State, inserted is map of OWO LGA
Source: Grandioseparlor 2007

3.2 Research methodology

The research adopted two approaches to answer the research questions: desk study and field study.

3.2.1 The desk study

The desk study was used to collect secondary information on the research topic and get some theoretical background information on farmers and agribusiness relationship; by review of literatures on contract farming, cassava value chain and theories of buyers and suppliers relationship.

3.2.2 Field data collection

The field study was carried out using “two to tango” tools (is a tool for self-assessment of firm-farmer relations). The tools involved seven steps as follows:

1. Analysis of firm-farmer business case to understand prevailing issues in the business case.in order to get perception of the farmers and the company on the business relationship.
2. Development of the business case based on the view of the farmers and the company on the business relationship.
3. Formulation of statement that meet the characteristics of the business case. Re-check the formulated statements and structure 2 -2 tango and business case.
4. Adapt the excel sheet and prepare structure of debriefing report.
5. Conduct the 2-2 tango
6. Data entry, processing and graph preparations using excel
7. Sharing and discussing self-assessment results.

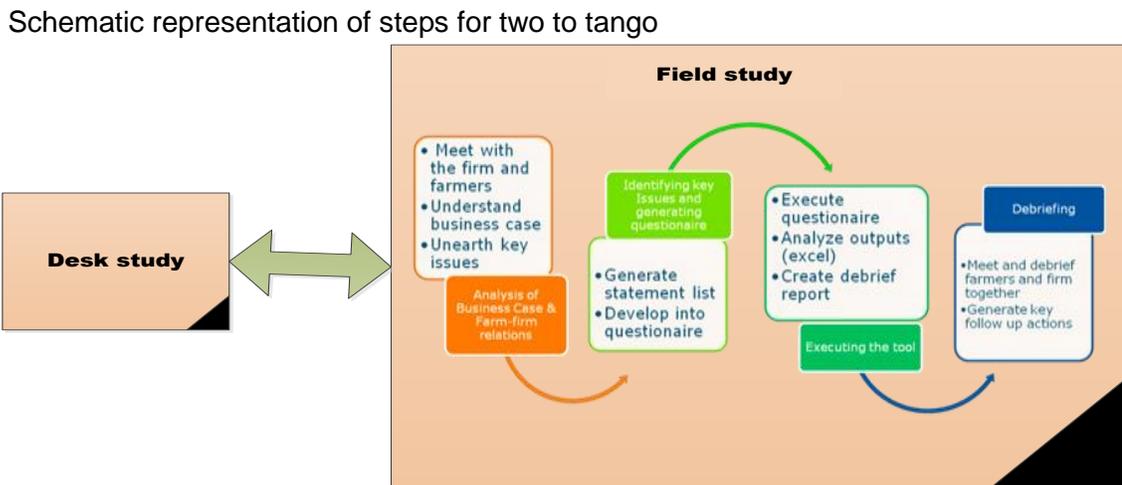


Figure 5: 2:2 Tango tools implementation framework

Source: CDI (2012)

In addition to the above mentioned tools and approaches; observation of the procedure of cassava delivery, quality assessment and payment was also be used as a method of getting more information from the field.

In order to develop the business case and collect data from the farmer the following procedure was followed.

Interview: semi structured interview was conducted on cassava farmers that are supplying cassava to the company currently and similar interview was conducted on the company staff especially the cassava sourcing department of the company and other staff who interact with farmers during cassava supply. The interview helped to have a general overview of the relationship between the farmers and the company as well as the process and procedure of cassava procurement from the farmers by the company. The researcher adopted the checklist (annex 1) for the interview.

Focus group discussion: group discussion was carried out with some group of farmers and the company separately to brainstorm on the challenge area.

Survey: this was carried out by the use of a questionnaire that was developed from the business case description by the researcher. The questionnaire is meant to support or disagree with relevant issues identified in the business case. The questionnaire (annex 3) contains statements that featured in the business case that the farmers and the staff of the company can score from strongly disagree, disagree, agree to strongly agree.

Debriefing meeting: this was conducted inform of focus group discussion with the representative of the company and the farmers together during the monthly farmers meeting in the village. The results of the information collected from the farmer and the company were presented for more clarification and find out what factor area influencing the results and suggestion from both party on possible ways to improve on necessary area where improvement are required

3.3 Selection of respondents

Interview: Respondent was selected from the staff of Matna Foods Company and out-grower that farm is located at 35km radius of the factory. Selection of the company staff will be based on their interaction with the farmer as required in their job responsibility such as: cassava sourcing officers, quality control officers, cashier and the production supervisors. The interview focused on the relationship between the company and the farmers. On the farmers' side, 24 farmers were selected (3 farmers from the 8 farmer's group at 35 km radius of the factory). The

focus of the interview will be on the relationship between the farmers and the company and the expectation of the farmer from the company.

Survey: six staff of the company that are directly responsible for cassava sourcing, and have interaction with farmer during the process of cassava supply to the factory were administer to the questionnaire. The staff are Raw material manager, extension officer, 2 Agricultural officers quality control officer and logistic manager. The respondent on the farmers side, a total of 24 farmers were selected from seven farmer groups that farm and reside at 35km radius of the factory. 3 farmers from each farmers group. Out of the 24 farmers, only 4 are female farmers this is because the farmer majorly Muslim who do not permit women to do outdoor business. And also the research was carried out during the Ramadan fasting so women are busy cooking for breaking of fasts.

Debriefing meeting: Due to the current shortage of cassava supply in the company, the Managing Director, the Raw material manager and an agricultural officer represented the company in the meeting. For the farmer it was an open meeting because the meeting was deliberately scheduled to coincide to the monthly general farmers meeting in the community so that farmers attendance will be high. The meeting and the research was used as a reconciliatory tools to bring the company and the farmer on the table to discuss their differences.

3.4 Data processing and analysis

A pre-developed Excel workbook was used for data entry and generation of graphs. For each challenge area two graphs and a table were obtained. One graph will show the median scores of each statement and the median score of all statement. The second graph will show the level of agreement between firm and farmers for each challenge area and each statement. The table will show the median score for each challenge area.

3.5 Debriefing Meeting

The generated graphs and tables in the excel work was used to develop the debriefing report. The debriefing was done inform of focus group discussion where the outcome of the self-assessment result was presented for the company and the farmers together. The researcher explained the results and allowed the farmers and the representative of the company to discuss factors that are influencing each challenge area and differences on their opinions on the statements on each challenge area. The observation and information obtained on the debriefing meeting were used for interpretation of results. Finally conclusions and recommendation were drawn on how to improve the relationship between Matna foods company and their out-growers.

4. PRESENTATION OF FINDINGS

4.1 Business Case Description Of Matna Foods Company and smallholder cassava farmers in Owo LGA of Nigeria

4.1.1 Introduction to Matna Foods Company

Matna Foods Company limited was incorporated on the 24th September, 1998. It was incorporated as a limited liability company to manufacture cassava starch, cassava flour and other auxiliary products of cassava in Nigeria. The company is an agro-based industry which is located at km 19, Akure Owo express way between river Ogbese and Uso town in Owo local government area of Ondo state, Nigeria. The branch is located at plot 102, Isheri road, Ojodu, Ikeja, Lagos State, Nigeria. The company which commenced operations in June 2002, has the solely responsibility of extracting cassava starch from cassava roots for local consumption and export.

The main raw material which is cassava tubers were being sourced from the local farmers, Matna farms and augmented from privately owned cassava plantation in Akure forest reserve. The company make use of large volume of water in the process of cassava starch products which is one of the raw materials they use and its supplied in large quantity from 11 bore holes owned by the company, Oke-odo Water Corporation, and external tankers. The company make use of large volume of water in the process of cassava starch mostly for washing and starch refining operations. Hence, large volume of liquid effluent was being generated from their operations.

Their starch is being produced under Korean technology. The products is competitive at the international starch market, approximately 45,000 metric tonnes of the national demand of starch is being imported from abroad. Their plant was installed to process daily about 120tonnes of fresh cassava roots. The yield of cassava to starch is about 20% to 25%.

The company is partitioned into different sections for their operations, some of which are: production, marketing, quality control, finance and administration, maintenance and cassava sourcing.

The company product has a brand name "MATNA CASSAVA STARCH". The starch is produced according to customer's specification and in conformity with the requirements of the Standards Organization of Nigeria (SON) packed in 50 and 25kg bags which is a substitute to imported corn starch for local industrial consumption and possible regional exports. The product

is in two grades: Chemical grade for the chemical/textile industry, and Food grade for the food and pharmaceutical industries



Figure 6: Matna Cassava Starch and the Factory building

The company has several awards for their achievement in promoting agro-processing in Nigeria. The awards are: The AGRIBUSINESS AWARD by the European Marketing Research Center (EMRC) in Brussels, Belgium; The FAMAN Fellow Award; The Merit Award by The Farmers Association of Nigeria; The Merit Award by The Nigeria Institute of Food Science and Technology; NANS Best Foods Company in Southern Nigeria Award; The Federal Ministry of Science & Technology Merit Award for Development/Processing of Local Raw Materials. The company objective is to be the leading starch industry in Africa.

4.1.2 Introduction to cassava farmers

Before the installation of the cassava processing, cassava farmer had the problem of marketing cassava roots therefore they only grow cassava for household consumption. At inception of the company the company organized the farmers into an out-grower scheme, this was later taken over by IITA/USAID under the Global Food Security Response (GFSR) and USAID/MARKETS cassava development programmes. Under the program the farmers were mobilized into clusters of farmers to grow cassava and supply to the company. Farmers were trained on modern agronomic practices that will ensure higher cassava yield and minimize labor use and cost. Farmers were also given improved, higher yielding, commercial viable and disease resistance cassava planting materials. Furthermore the company in collaboration with the Government bank of agriculture provide loan to farmers to expand their farm size and since then cassava

farming has been a major source of income for farmers. Although farmer grow other crops such as: yam, maize, cocoa, pepper, oil palms etc. initially farmer are committing all cassava produced to the company but now that the open market price for cassava is high farmer under take a lot of side sales and only sell to the company when they need cash urgently. Most of the farmers have an average farm size of 2 hectare and their average cassava yield per hectare is 20ton/ha. Majorities are male farmers making use of family labor and they have low level of formal education.



Figure 7: Cassava farmers on the demonstration farm

4.2 Functioning of the Company and the Farmers: Challenge areas

The business case was developed for the purpose of understanding and description of the current relationships between Matna Foods Company and smallholder cassava farmers in Owo LGA of Nigeria. The business case was developed by obtaining information from the cassava farmers in the company's' out-grower scheme and the staff of the company that are responsible for facilitating supply of cassava roots to the factory. Semi structured interview was used to gather the information.

The results have been organized into eight sections called challenge areas as follows: The company extension service; Quality assessment; farmer involvement in pricing (decision making); communication between the farmers and the company; Dependency on the relationship; Commitment and trust; relationship norms and flexibility and functional conflict resolution mechanism.

4.2.1. Company extension service

The company does not have the capacity to run a private extension service, therefore the company collaborate with donor project on cassava farming development such as Usaid/Markets cassava development project and Nestle/IITA cassava starch project to provide extension service for the out-growers. According to some farmers the quality of the advice given is very relevant for cassava production and also help to boost the production but the timing of the service is not in accordance with their planning season. The oldest farmer in the out-grower scheme stated that the training on modern agronomic practices for cassava production has not only increased their yield but also help to increase their income. Majority of the farmers and the company raw material manager also pointed out that cost of production has been minimized as a result of advisory service provided by the company and also the farmer now have access to herbicide, fertilizer, planting material, tractors and equipment which has in consequence help farmers to scale up cassava production. Some farmers alleged that the extension service is selective whereby not all farmers in the out-grower scheme benefit from the company's extension service. The raw material manager reacted to this that there is a limit to what they can provide due to lack of funding and the government extension service is not willing to work together with the company; as it will not yield any political benefit to the government.



Figure 8: Bill boards for the cassava development projects

The company setup a demonstration farm on the factory for farmers training. To demonstrate the training on modern agronomic practice for cassava cultivation to ensures higher cassava yield of an average of 35 ton per hectare and to test yield difference between the IITA improved cassava varieties and the local varieties. The farmer said it a good development in training by physically demonstrating the training but only one demonstration farm on the company factory is far from the farmers.



Figure 9: Cassava farmers on field trainings

The company has a cassava sourcing department that is responsible for coordination and organization of out-grower and also facilitates the supply of cassava roots to the company. The department is headed by the Raw material Manager assisted by an Agricultural extensionist and five agricultural officers; who are responsible for the provision of extension service to the farmers on the field. The agricultural officers are not qualified extensionist but they are trained on the job by the company extensionist who is a graduate of Agricultural extension. According to the raw material manager the department does not have the capacity to serve all farmers in the out-growers due to limited resource made available by the company. The farmers acknowledged that the company extension is working with them to improve their cassava yield and increase income from cassava farming but the extension team are not properly funded.

4.2.2 Quality assessment

There is a procedure for quality assessment of the cassava root supplied to the factory. The quality of the cassava roots determine the quality of starch produced and the starch recovery from the cassava roots and since the technology of the company is to recover starch from the cassava roots the company put a quality assessment measure to purchase fresh cassava roots with high starch content and minimize factors that will reduce starch content of cassava roots.

The procedure for cassava weighing and payment is as follows:

1. The cassava truck parks securely by the entrance gate.
2. The owner alights and draws the attention of the factory duty security men.
3. The cassava truck owner/ the farmer is briefed of his right to monitor all processes for the weighing and payment of his/her cassava supplied
4. The cassava truck drives to the weighing bridge and the scale officer shall record the first weighing result on the cassava inspection card in the presence of the designated staff of quality control unit.
5. The cassava truck leaves for the cassava bay and to offload as directed by the supervisor of the cassava grinding unit who will also invite the inspection officer to assess the quality of the cassava roots.
6. Upon the completion of the offloading, the quality control officer will assess the cassava quality by allocating percentage deduction following approved criteria of over-age, foam formation, trimming, sand content and other extraneous material. This assessment report is recorded on inspection card and passed over to the scale officer for final reconciliation and for any adjustment necessary.
7. The cassava truck returns to the weigh bridge for the second and final weight determination. The scale officer in the presence of the quality control officer will again take independent reading and recording
8. The net weight is then adjusted for the deduction for quality issues where applicable and the revised net weight shall be advised to the farmer.
9. The scale officer and the quality control officer will both endorsed the inspection form and submit to the internal control manager to sign off.
10. Finally the scale officer will issue a signed cassava payment slip to the farmer to present to the company cashier for payment.

The farmers are aware of the quality standard requirement for cassava roots for the company. According to farmer “we work hard to ensure that we meet the quality standard of cassava roots

supplied to the factory since the quality determine the price the company paid”. A cassava transporter stated that they ensure that they delivered the cassava root to the factory with 24 hours of harvesting because the company is very strict about the freshness of the cassava roots” a times the company reject cassava root which is not fresh to required standard as it may affect the company final product.

The major problem with the production of starch from cassava root is that the fresh cassava roots must be processed within 24 hour after harvesting. This was stated by the Raw material manager and later confirmed by farmers. The raw material manager also revealed that the company is planning to purchase starch analyzer to determine starch content of the fresh cassava roots and price for cassava roots will be dependent of the percentage starch in the cassava roots.



Figure 10: weighing and offloading of cassava in Matna factory

The qualities of raw materials is ascertained with the following parameters,

- Freshness
- Trimming
- Overage/foam formation
- Extraneous matters

FRESHNESS

The freshness of cassava roots is considered during inspection to know the quality of the cassava roots. Samples of cassava roots of the farmer (suppliers) are picked at random to check whether the cassava roots are fresh, rotten or almost rotten. Visual observation is also

used to check for discolouration in the roots, odours of the cassava roots are checked for and if it gives a fermenting smell, which shows that the cassava roots are not fresh.

TRIMMING

The cassava roots are checked whether the stalks are properly cut off by the farmers before delivery. It is necessary to ensure that the stalks are properly cut off in order to ensure easy movement of the cassava roots through the machine, to prevent mechanical damage and to reduce the rate of fibres produced.

OVERAGE/FOAM FORMATION

Cassava roots of the farmer are picked at random and if cracks are noticed it confirms overage. Also the cassava roots were thrown on the ground and if it cracks immediately and the centre appears foaming, that also confirms overage/foaming of the cassava roots.

EXTRANEIOUS MATTER

The cassava roots are checked for unwanted materials or foreign matters in which constitute the extraneous matters in the consignment.

JUGDEMENT

After using the above listed parameters to check on the consignment brought by the farmers, and if all of the parameters are met, then the consignment is certified for acceptance. If the cassava roots brought by the customer meet any of the four parameters, deductions of the parameters that are not met are deducted from the farmers' payment. In Annex 2 is a format used in the grading and deduction of the cassava roots. The deductions are made in order to encourage the farmers to supply quality raw materials.

4.2.3. Involvement in price determination

Matna Foods Company is the biggest user of cassava in the state, with its capacity of processing 120 ton of fresh cassava daily. Despite the fact that Owo LGA is one of the major cassava growing area in the state as it was stimulated by the presence of the factory in Owo LGA, currently the factory is getting cassava of less than 30% of its installed capacity. The study revealed that farmer are getting higher price for cassava roots in the open market than the company. The company buys fresh cassava of all varieties at the same price, there is a discount for impurities and quality standards. Although there is no formal contract between the company

and the farmer for purchase of buying cassava, but all farmers are aware that the company will buy their cassava.

In the year 2009 the company paid 13,500 Naira per ton of cassava at factory gate, the price dropped to 8,500 naira in 2011 and currently the price at factory gate is 11,500 Naira per ton. The market survey reveals that the price of cassava in the open market is in between 18,000 to 20,000 naira depending on the varieties. Meanwhile most farmers in the out-grower scheme are selling in the open market due to higher price paid in the open market. While this study was being conducted, an increase of 500 Naira was added. The Price is fixed by the company without consulting the farmers. According to one literate farmer “the farmers are not happy on how the company fixed its prices, the company does not take into consideration the farmers cost of production of cassava roots” similarly, a staff of the company also mentioned that although the price for fresh cassava is higher in the open market but immediate payment is not guaranteed in the market as the company pays immediately after delivery, furthermore he revealed that it is the account department of the company that determined cassava price on behalf of the company without carrying the cassava sourcing department along. Another respondent said “the only way for farmers to negotiate the better price for cassava roots is stop selling to the company”. Some respondents from farmers as well as from the company said that “higher price should be given to farmers who supply fresh cassava of higher quality in order to motivate others”.

A farmer said that “although we are not happy with the price of cassava paid by the company but the company pays immediately after cassava are supplied to the factory and the procedure for weight and payment is transparent”. Some farmer mentioned that the company only considers its own cost to determine cassava price without consider farmers’ cost of production.

4.2.4. Communication between Matna Foods Company and Out-grower.

The communication between the company and the out-growers is informal ways. Farmers complain “for not having the way to express their views to the company”. The company stated that they have both formal and informal means of communication. The raw material manager said that the company has the data base for all supplier of cassava and they have also register farmers’ mobile phone numbers in the data base, therefore they send bulk SMS to all the farmers at once to advise them of latest development in the company. On the other hand the farmers have easy access to his office to get feedbacks from farmers, he further said that the cassava sourcing team regularly carried out periodic farm visit and attends farmers meeting in

the villages; and report directly to the management. In case of farmer who do not have mobile phone or who are not literate, the company use radio jungle and adverts in local languages to reach all farmers. In addition, the company put notice at the company entrance gate, agriculture input dealers shops to further reach the farmers.

Farmers complained that the company do not involve them in case of price review and that the company only invites them for negotiation when cassava supplied to the factory is declining, of which farmers noted that this is not healthy for good business relationship. The farmers also called our attention to the uncultured treatment they are given by the company security during the period of excess supply of cassava to the factory. The cassava sourcing team admitted that the communication system between the company and the farmers are weak as the company did not properly fund the department.

4.2.5. Dependency on the relationship.

The company acknowledged that they depend on the smallholder cassava farmers as the main supplier of raw material. According to the job responsibility letter to the raw material manager “peasant farmers are the backbone of the company raw material supply to the factory”. Based on cassava supplied record in the last 5 years, smallholder farmers supplied about 80% of total cassava supplied to the factory. Similarly, the technology of the company is developed to extract starch from cassava roots; therefore cassava is the sole raw material for the company without any alternative. The Managing director concluded that “No Farmer No Matna”.

The farmer in the own perception see the company as the only reliable cassava market in the state and they depend on the company for cash as the company pays immediately after supply. The farmer grows other crops intercropped with cassava such as maize and also plants other crop solely for open market especially yam. Farmers reveal that the company is a source of instant cash for purchase of inputs for other crop. One of our female farmers who is a widow said she plant cassava for the company to pay her children school fees while she plant other crops for household consumption. The head of one farmers group said that the presence of the company in the area has actually transform cassava from traditional food crop to a cash crop. The raw material manager revealed that the dependency on the relationship varies depending on volume of cassava available for supply; there are period of excess supply whereby farmers highly depends on the company for sales of cassava roots and there is also the period of shortage in supply whereby the price in the open market is very high, then the company is at the mercy of farmers for survival. Another striking thing is that majority of the cassava farmers

produce yam as well, and yam give them more income than cassava but yam is a seasonal crop while cassava can be grown all year round.

4.2.6. Commitment and trust:

The company and the farmers agree that they are both committed to the relationship. The company staff said that the company is investing to develop the business with the farmers, and that the company has set aside a large sum of money to provide credit support for farmers. The farmers are optimistic that the current relationship will develop stronger in future. The company revealed that it is difficult to trust smallholder farmers with loans. Farmers claimed that the company is dependable for timely payment. Farmers further appreciated the transparent procedure for cassava purchase and payment.

4.2.7. Relational norms and flexibility:

The company and the farmer agreed that there is solidarity, flexibility and mutuality in the relationship. The company and the farmers has many times collaborate to fight against exploitation of the police and forest guide along the farm roads and also the company has supported some farmers for rehabilitation of farm roads. The company stated that they gave an effective response to change; especially change in cassava price if there is price change in the open market. Farmers also admitted the company is flexible to elongate the working hours to ensured that they received all cassava harvested daily.

4.2.8. Functional conflict resolution mechanism:

Cassava supplied is the major indicator for any conflict between the company and the farmers as being noted by the company extension officer. The farmer declared that conflict are resolved amicably but occasionally by restoring to threat by cutting down supply of cassava to the factory.

4.3 Data processing and findings

The 2 to tango excel workbook was used to analyze the scores; the scores on the questionnaire were entered in a excel workbook. The excel workbook automatically generates a table and two graphs: The table shows the median for each statement in each challenge; the first gives graphical representation of both the company and the farmers median scores while the second graph displays the level of agreement per each statement for every challenge area.

Table 1: List of challenge area

Challenge areas	
1	Company extension service
2	Quality assessment
3	Involvement in price determination
4	Communication
5	Dependency on the relationship
6	Commitment and trust
7	Relationship norms and flexibility
8	Functional conflict resolution

4.3.1 Scale for Judging the Median Scores for Each Statement

In order judge the median score for each statement in the challenge area, the table below will be used to interpret the median scores.

Table 2: Scale for judging the median score for each statement

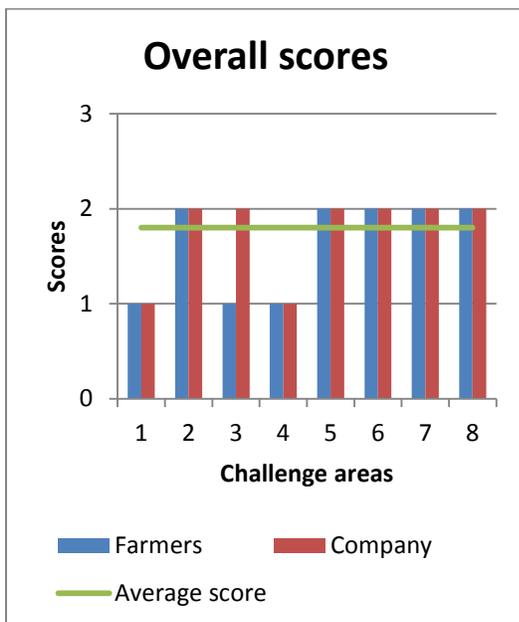
	Median scores	Interpretation
A	1 or below 1	A very low score that is the respondent strongly disagrees with the statement. Meaning that an aspect of the relationship is unsatisfactory and there is an urge for improvement.
B	1.5	A low score, that is the respondent slightly disagrees to the statement, dissatisfaction of the respondent; therefore improvement is necessary to improve the relationship
C	2	A positive score that is respondent slightly agrees to the statement. This implied that the relationship is not at optimal level
D	2.5 and above	A very high score, the average respondent strongly agreed to the statement. Indicating that the farmer and the company are satisfied with the relationship.

4.3.2 Overall results

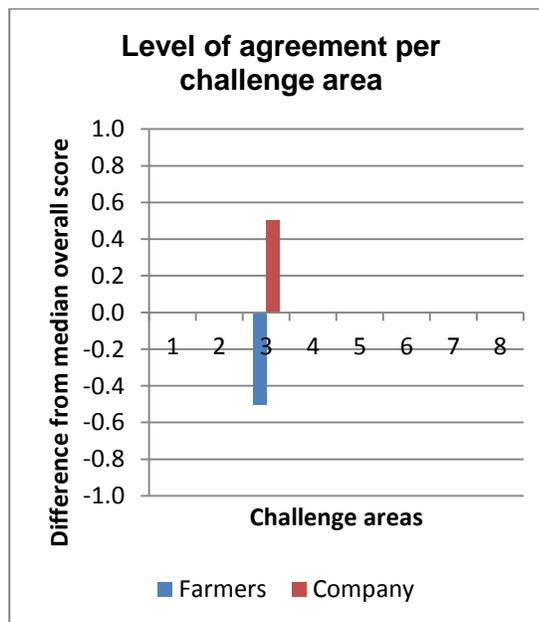
Table 3: Median scores per challenge area

Overall results	Median scores per challenge area								Median all areas
Challenge areas	1	2	3	4	5	6	7	8	
Farmers' scores	1.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0
Company scores	1.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
Median firm-farm per challenge area	1.0	2.0	1.5	1.0	2.0	2.0	2.0	2.0	2.0
Average overall score (all challenge areas)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
Difference farmers - Median F-F score	0.0	0.0	-0.5	0.0	0.0	0.0	0.0	0.0	0.0
Difference Company - Median F-F score	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0

The overall median score for the firm- farmers' relationship for all the challenge area was 2. This implies that the relationship is positive but it is not at optimum level. Therefore there is a need for improvement. The challenge area 1 was score very low by both the company and the farmers, it was scored the lowest while challenge area 6 (commitment and trust) was scored highest by the farmers and the company. The median farmers' scores for all the challenge area was below median overall score for all the challenge area. On the other hand the company's median scores for challenge area1 and challenge area 3 were below median overall score for all the challenge area. It was observable that the overall median score was above overall average.



Graph1: overall median scores.



Graph 1: Level of Agreement per challenge area

It can be observed that the perception of farmers and the company are not difference for all other the challenge areas except for challenge area 3 (involvement in price determination).

4.3.3 Challenge area 1: Company extension service

The challenge area on company extension service is compiled by 9 statements talking about the quality and relevancy of the extension service provided by the company. The result was given as median score for each statement as rated by the farmers and the company. The numbers represent the following statements:

Table 4: Statements for company extension service

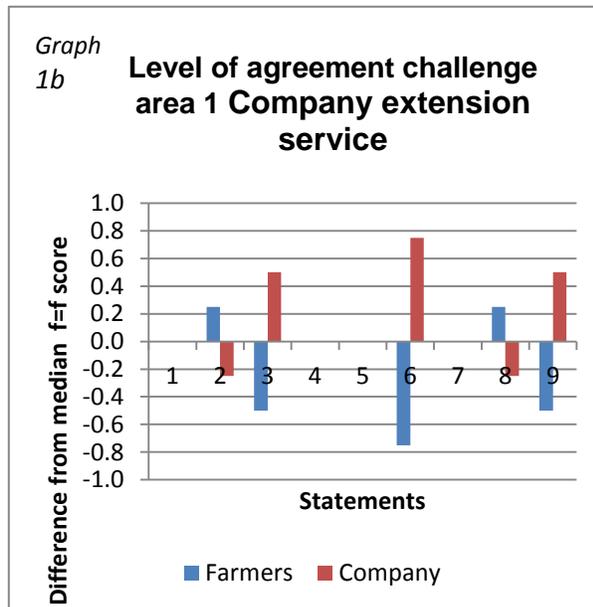
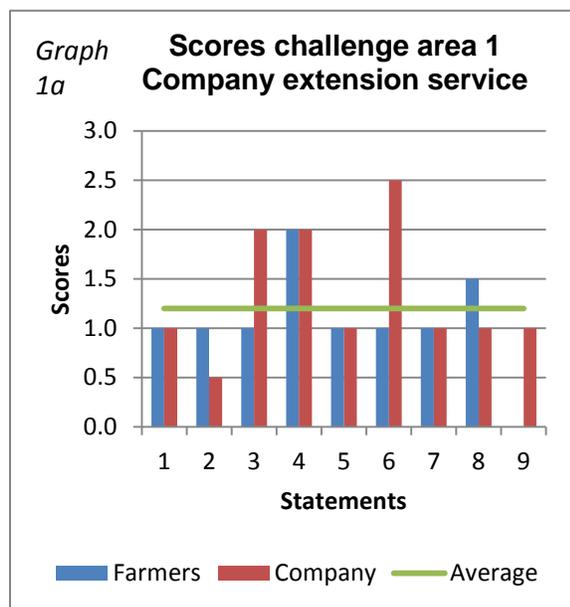
1	The extension service provided is timely
2	The extension service provided meets the practical needs of the farmers
3	Farmers are provided with sufficient know how on cassava production
4	The training provided has help farmers to increase yield and income
5	There is regular farm visit by the company extension service
6	The demonstration farms are close to farmers
7	The service of the extension respond to the needs of the farmers
8	The agricultural officer is efficient in providing information and training to farmers
9	Farmers are satisfied and happy with the extension service provided by the company

The farmers are negative about the company extension service; it was on only on statement 4 that farmers agreed with the statement. On the other hand, the company agreed to statement 3, 4, and statement 6 while the company also disagrees to statement 1, 2,5,7,8 and statement 9. It is observable that both the company and the farmers agreed to statement 4. The overall median score is below the overall average.

Table 5: Statements for company extension service

Challenge area 1	Median scores per statement									Median area score
Statements	1	2	3	4	5	6	7	8	9	
Farmers' scores	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.5	0.0	1.0
Company scores	1.0	0.5	2.0	2.0	1.0	2.5	1.0	1.0	1.0	1.0
Median firm-farmer statement score	1.0	0.8	1.5	2.0	1.0	1.8	1.0	1.3	0.5	1.0
Average firm-farmer area score	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Difference farmers - Median F-F score	0.0	0.3	-0.5	0.0	0.0	-0.8	0.0	0.3	-0.5	0.0
Difference Company - Median F-F score	0.0	-0.3	0.5	0.0	0.0	0.8	0.0	-0.3	0.5	0.0

The overall median scores for the farmers and the company is 1 which indicates that both the company and the farmers strongly disagreed to the statement, which implied that the company extension service is unsatisfactory and there is a need for improvement.



Graph 2: scores of challenge area 1.

Graph 3: level of agreement on challenge area

Concerning the level of agreement, it can be observed that there is high level of agreement on statement 1, 4, 5, and statement 7 while there are no agreement between statement 2, 3, 6, 8 and 9. It is remarkable that the farmers and the company strongly disagree on statement 6.

4.3.4 Challenge area 2: Quality assessment

Nine statements were also used to determine farmers and the company perception on the procedure and process on quality assessment of cassava roots supplied to the factory. Below are the statements:

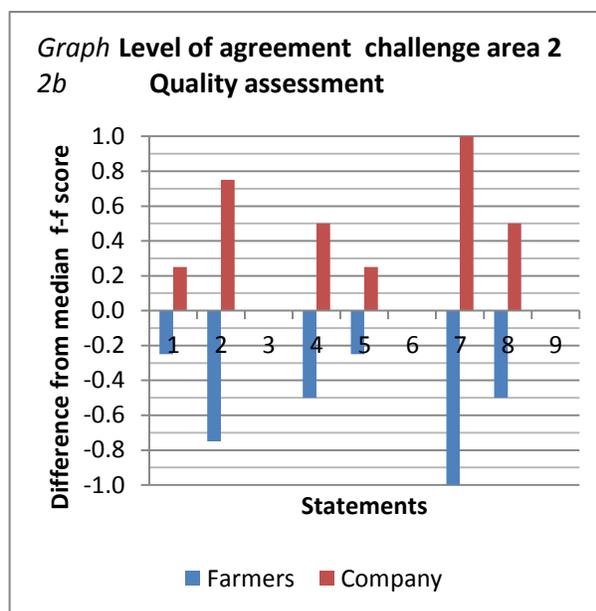
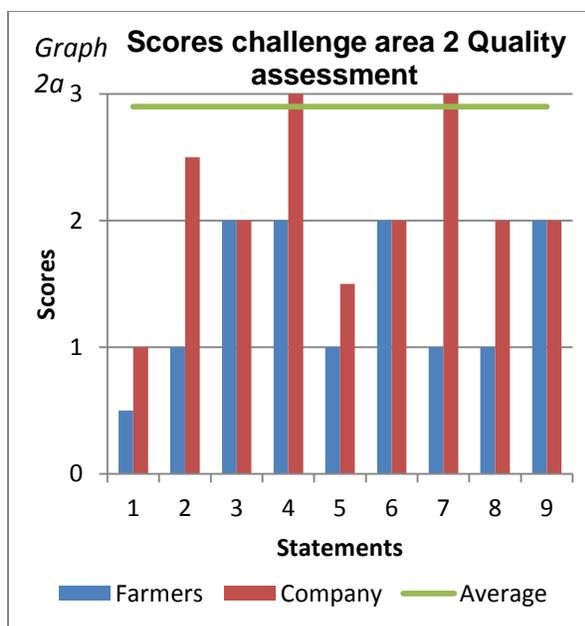
Table 6: Statements for quality assessment

1	Farmers are happy with quality control team of the company
2	Farmers know and understand quality assessment criteria
3	The age of the cassava determines the starch content of the cassava roots
4	The quality grade determine the price paid for the cassava root
5	Cassava harvested are delivered to the factory with 24 hours
6	Farmers understood how the quality grade affects the price of cassava root
7	The quality control team educates farmers on the quality standard for cassava root
8	There is mutual understanding on quality between the farmers and the company
9	The company is happy with the quality of cassava purchased from farmers

The median score for overall statement for the farmers and the company is 2 which indicate that both the farmers and the company agreed with the statement. For the company's median score for all the statement It is observable that it was only statement 1 and statement 5 that are below overall median score of Firm-farmers for all statements. For farmers on the other hands, it was only statement 3, 4, 6 and statement 9 that are above the overall median score of Firm-farmers for all statements. The overall firm-farm median score is 2 which implied that farmers are positive about the quality assessment procedure but yet it is not at optimum level. It is remarkable that the overall median score is below the overall average.

Table 7: Median scores per challenge area

Challenge area 2	Median scores per statement									Median area score
	1	2	3	4	5	6	7	8	9	
Statements										
Farmers' scores	0.5	1.0	2.0	2.0	1.0	2.0	1.0	1.0	2.0	2.0
Company scores	1.0	2.5	2.0	3.0	1.5	2.0	3.0	2.0	2.0	2.0
Median firm-farmer statement score	0.8	1.8	2.0	2.5	1.3	2.0	2.0	1.5	2.0	2.0
Average firm-farmer area score	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	
Difference farmers - median F-F score	-0.3	-0.8	0.0	-0.5	-0.3	0.0	-1.0	-0.5	0.0	0.0
Difference Company - median F-F score	0.3	0.8	0.0	0.5	0.3	0.0	1.0	0.5	0.0	0.0



Graph 4: scores of challenge area 2.

Graph 5: Level of agreement on challenge area 2

Concerning the level of agreement, it is remarkable that there is high level of disagreement on statement 1, 2, 4, 5, 7 and 8 while there are agreements on other statements. In the overall the farmer and the company are equal in their assessment.

4.3.5 Challenge area 3: Involvement in price determination

The opinion of the farmers and the company on involvement in price determination was assessed using nine statements. Below are the statements:

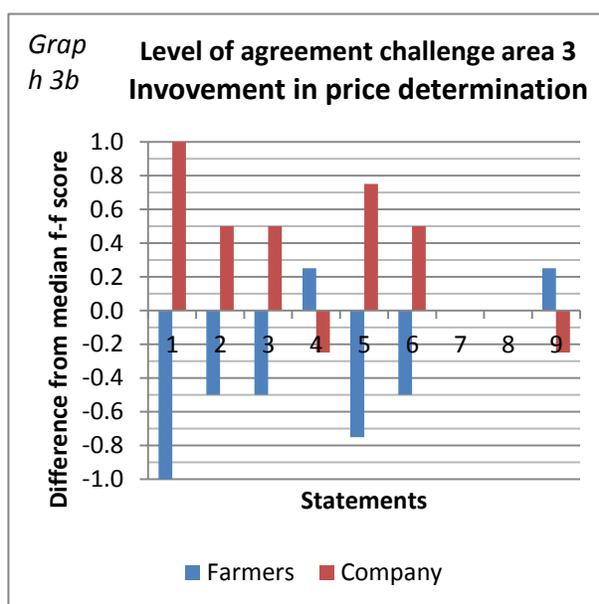
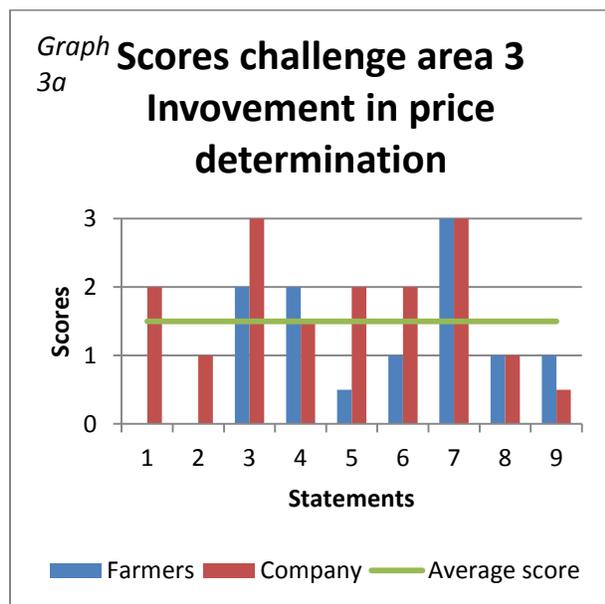
Table 8: Statements for involvement in decision making

1	The price offered by the company makes farmers happy
2	Farmers participate in price setting
3	The company is able to purchase and process all cassava produced by the farmers
4	When negotiating prices the company tries to force the price down as low as possible without any consideration of our costs
5	The company considers important the views/ideas of farmers
6	The company understands and knows the farmers cost of producing one ton of cassava
7	The company pays farmers on schedule/without delay
8	All Farmers are paid at the same price
9	The farmers know the company cost of producing one ton of cassava starch

The farmers strongly agreed to statement 7 and they strongly disagree with statement 1; 2, 5, 6, 8. The company on the other hand, strongly agreed to statement 3, 7 and strongly disagrees to statement 2, 4, 8. It is observable that both the company and the farmers strongly disagreed to statement 2, statement 8 and statement 9. The overall firm-farm median is 1.5 which implied that the respondent is unsatisfactory but the company overall median score was above overall average score which implied that the company perception about the challenge area is positive.

Table 9: Median scores per challenge area

Challenge area 3	Median scores per statement									Median area score
Statements	1	2	3	4	5	6	7	8	9	
Farmers' scores	0.0	0.0	2.0	2.0	0.5	1.0	3.0	1.0	1.0	1.0
Company scores	2.0	1.0	3.0	1.5	2.0	2.0	3.0	1.0	0.5	2.0
Median firm-farmer statement score	1.0	0.5	2.5	1.8	1.3	1.5	3.0	1.0	0.8	1.5
Average firm-farmer area score	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Difference farmers - median F-F score	-1.0	-0.5	-0.5	0.3	-0.8	-0.5	0.0	0.0	0.3	-0.5
Difference Company - median F-F score	1.0	0.5	0.5	-0.3	0.8	0.5	0.0	0.0	-0.3	0.5



Note: farmer scores for statement 1 and 2 are zero but not a missing figure.

Graph 6 Scores of challenge area 3. Graph 7: Level of agreement on challenge area 3

Concerning the level of agreement, it was observable that it was on only on statement 7 and statement 8 that the company and the farmer agreed.

4.3.6 Challenge area 4: Communication

Nine statements were used to determine the perception of farmer about the communication between the farmer and the company. Below are the statements:

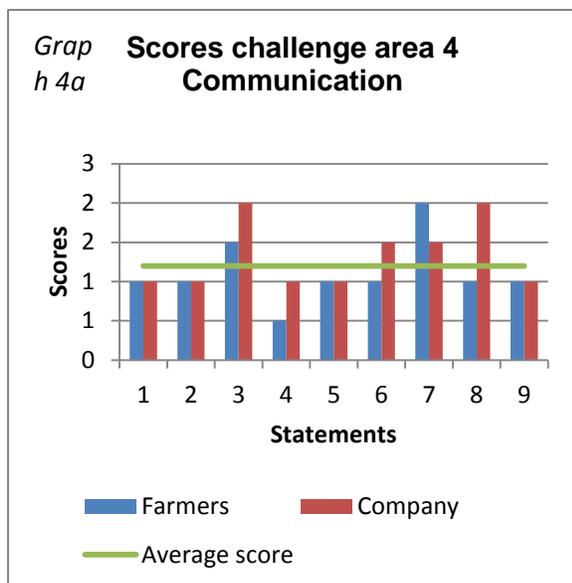
Table 10: Statements for communication between the company and the farmers

1	Cassava farmers are regularly kept informed on the company issues
2	Farmers regularly visit the company in order to understand the functioning of the company
3	The company gives answers to all questions asked by the farmers on the cassava farming
4	The company communicates on a daily basis with the farmer (e.g. phone)
5	The company and the farmer formally communicate review in price with each other
6	The company/ farmers keeps us informed about events or changes that may affect us
7	The company have regular strategic meetings with the farmers, in which they discuss the future requirements and goals for the relationship
8	We are confident the company/farmer does not withhold information that could be of use to our business
9	The company has instituted the communication channel through which the farmers can send their ideas

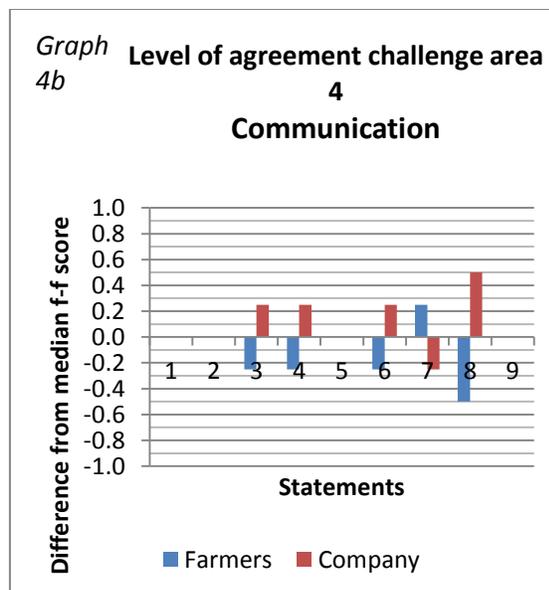
The overall firm-farmer median score for all the statement for the company and the farmers is 1. This implies that the communication between the company and the farmers is weak. For farmers, they strongly disagreed to 8 out of the nine statements and only agreed to statement 7. For the company, the company only agreed to statement 3 and statement 8.

Table 11: Median score per statement

Challenge area 4	Median scores per statement									Median area score
	1	2	3	4	5	6	7	8	9	
Statements										
Farmers' scores	1.0	1.0	1.5	0.5	1.0	1.0	2.0	1.0	1.0	1.0
Company scores	1.0	1.0	2.0	1.0	1.0	1.5	1.5	2.0	1.0	1.0
Median firm-farmer statement score	1.0	1.0	1.8	0.8	1.0	1.3	1.8	1.5	1.0	1.0
Average firm-farmer area score	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Difference farmers - median F-F score	0.0	0.0	-0.3	-0.3	0.0	-0.3	0.3	-0.5	0.0	0.0
Difference Company - median F-F score	0.0	0.0	0.3	0.3	0.0	0.3	-0.3	0.5	0.0	0.0



Graph 8: Scores of challenge area 4.



Graph 9: Level of agreement challenge area 4.

There is high level of agreement on four statements out of 9 statements. It is remarkable that statement 8 has the highest disagreement.

4.3.7 Challenge area 5: dependency on the relationship

The structure of polity was determined by determining the dependency level of both the farmers and the company on the relationship. Nine statements were used to assess the dependency on the relationship. Below are the statements:

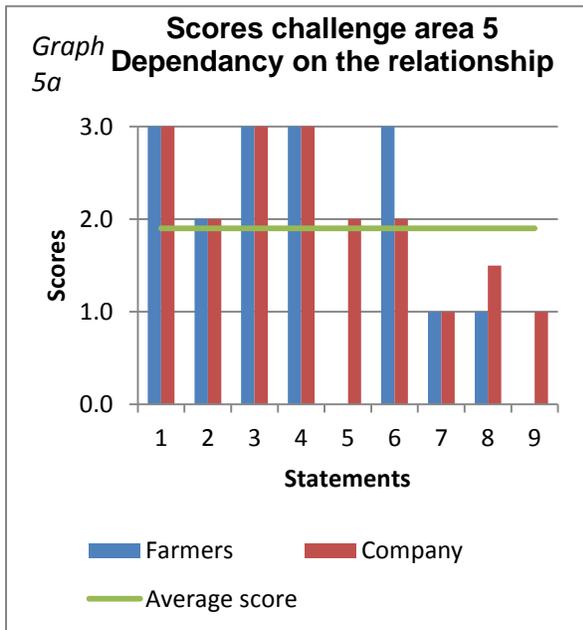
Table 12: Statements for dependency on the relationship

1	Farmer grow other crops that give more income than cassava
2	There are other reliable market for cassava roots other than the company
3	Cassava is the sole raw material used by the company
4	Farmers are the sole supplier of cassava roots to the factory
5	There are other source of raw materials for the company
6	It will be very disruptive to the company operation to end the relationship with the smallholder famers
7	The company has made investment on the farmers that would make it difficult to terminate business with the farmers
8	The farmers can easily be replaced by another set of out-growers
9	The farmers view the company as better than the other cassava market

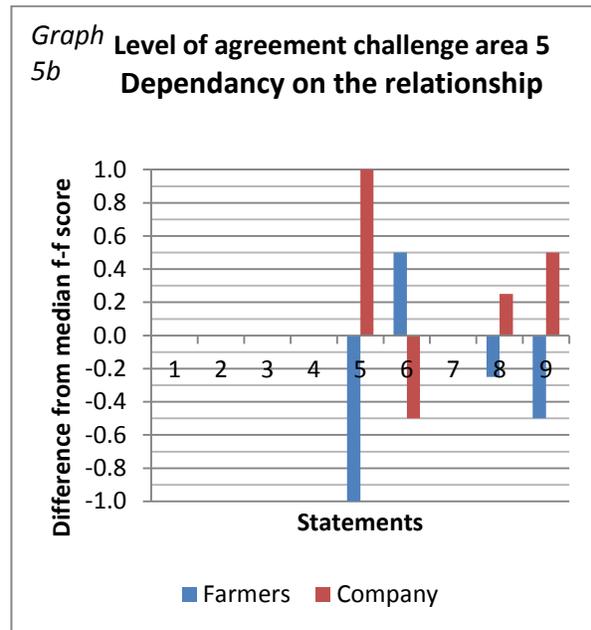
Table 13: Median score per statement

Challenge area 5	Median scores per statement									Median area score
	1	2	3	4	5	6	7	8	9	
Statements										
Farmers' scores	3.0	2.0	3.0	3.0	0.0	3.0	1.0	1.0	0.0	2.0
Company scores	3.0	2.0	3.0	3.0	2.0	2.0	1.0	1.5	1.0	2.0
Median firm-farmer statement score	3.0	2.0	3.0	3.0	1.0	2.5	1.0	1.3	0.5	2.0
Average firm-farmer statement score	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	
Difference farmers - median F-F score	0.0	0.0	0.0	0.0	-1.0	0.5	0.0	-0.3	-0.5	0.0
Difference Company - median F-F score	0.0	0.0	0.0	0.0	1.0	-0.5	0.0	0.3	0.5	0.0

The overall firm-farm median scores is 2 which implied that the farmers slightly agreed with all statements in the challenge area. The farmers strongly agreed to statement 1,2, 4, 6 while they also strongly disagree to statement 5 and 9. It is observed that median scores of statement 1; statement 3; statement 4 of the company and the farmers are greater than the overall median scores of firm-farmers.



Graph 10: Scores of challenge area 5.



Graph 11: Level of agreement challenge area 5

4.3.8 Challenge area 6: Commitment and trust

The level of commitment and trust between the farmer and the company in the relationship are accessed using seven statements. Below are the statements:

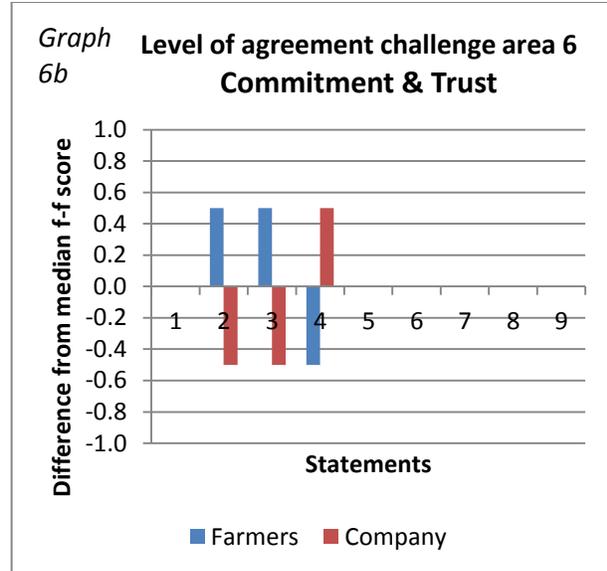
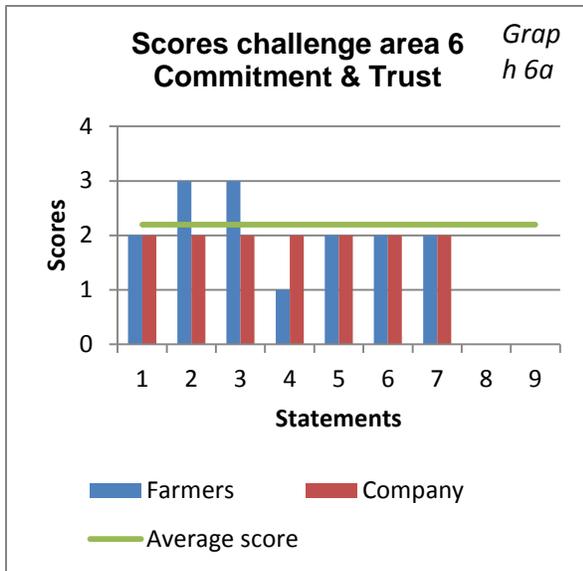
Table 14: Statements for commitment and trust

1	We expect our relationship with the farmer/company to continue for a long time.
2	We expect our relationship with this the farmer/company to strengthen over time
3	We are willing to make investments to develop our business with the farmer/company
4	The farmers/company staff is dependable and honorable and stands by their word
5	We believe that the farmer/company would not try to deceive us.
6	The farmer/company would not deliberately take action that would negatively affect us
7	This company would not use confidential information to take advantage of us.

Table 15: Median score per statement

Challenge area 6	Median scores per statement							Median area score
Statements	1	2	3	4	5	6	7	
Farmers' scores	2.0	3.0	3.0	1.0	2.0	2.0	2.0	2.0
Company scores	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Median firm-farmer statement score	2.0	2.5	2.5	1.5	2.0	2.0	2.0	2.0
Average firm-farmer area score	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
Difference farmers - median F-F score	0.0	0.5	0.5	-0.5	0.0	0.0	0.0	0.0
Difference Company - median F-F score	0.0	-0.5	-0.5	0.5	0.0	0.0	0.0	0.0

The overall firm-farm median score is 2 which implied that the farmers and the company slightly agreed that there is a positive level trust and commitment in the relationship. It is remarkable that for all statement, it was only statement 4 for the farmer that is below the overall median score of firm-farmers area score.



Graph 12: Scores of challenge area 6. **Graph 13: Level of agreement challenge area 6.** It can be observed that there is agreement for statement 1; statement 5; statement 6 and statement 7 while there is disagreement for statement 2, statement 3, and statement 4. It is remarkable that there is equal level of disagreement for the statement in the challenge area.

4.3.9 Challenge area 7: Relationship norms and flexibility

The relation norm and flexibility was measured to determine the level of solidarity and mutuality between the farmer and the company. Six statements were used to access the relation norm. The statements are as follows:

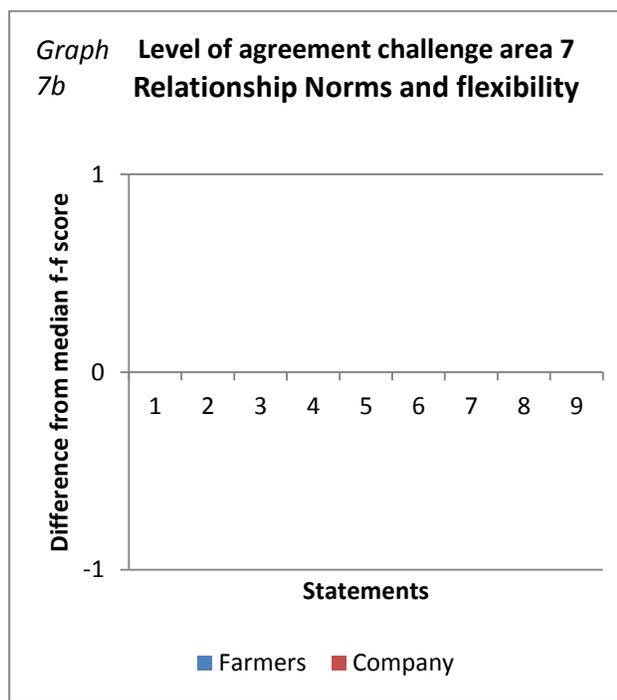
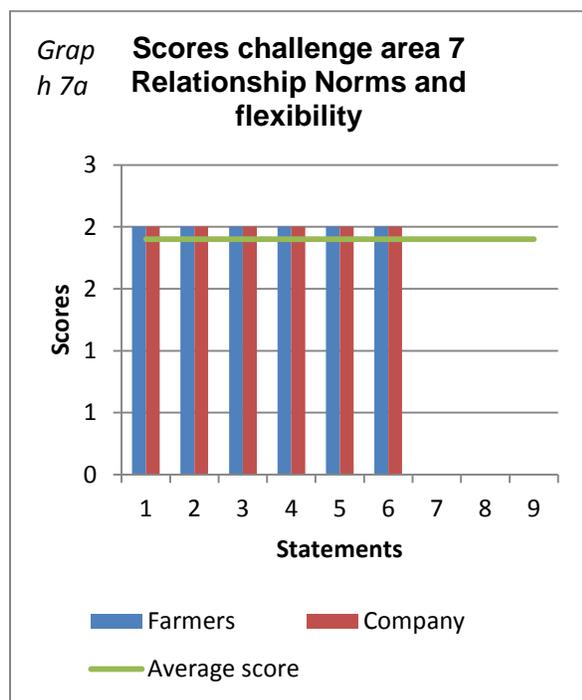
Table 16: Relation norms and flexibility

1	If either of us has a problem, we can count on each other's support to find a solution.
2	We are happy to do the farmer/company favors, as we know that such action will be reciprocated in the future
3	When an unexpected situation arises that proves detrimental to either party, we would both rather work out a new deal than hold each other to the original terms
4	If either of us encounters unexpected problems or needs, we are both able to be flexible and adapt to the changing circumstances
5	We receive a fair proportion of the benefits that are generated from this relationship
6	We believe that this customer strives to take action that benefits the relationship as a whole, rather than looking for ways to fulfill its own interests at our expense

The overall firm-farm median score for the challenge area was 2 which implied the respondents are positive on the challenge area. It is remarkable that the median scores for both the farmers and the company were 2.

Table 17: Median score per statement

Challenge area 7	Median scores per statement						median area score
Statements	1	2	3	4	5	6	
Farmers' scores	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Company scores	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Median firm-farmer statement score	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Average firm-farmer area score	1.9	1.9	1.9	1.9	1.9	1.9	
Difference farmers - Median F-F score	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Difference Company - Median F-F score	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Graph 14: Scores of challenge area 7. Graph 15: Level of agreement challenge area 7.

It was observed that there is an agreement for all the statements for both the company and the farmers. This revealed that the relation norm is not a challenge area.

4.3.10 Challenge area 8: Functional Conflict Resolution

The mechanism for conflict resolution was measured using 5 statements. Below are the statements:

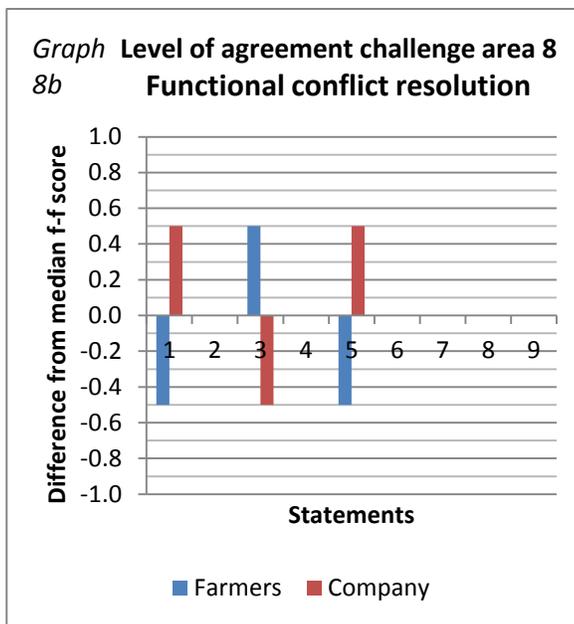
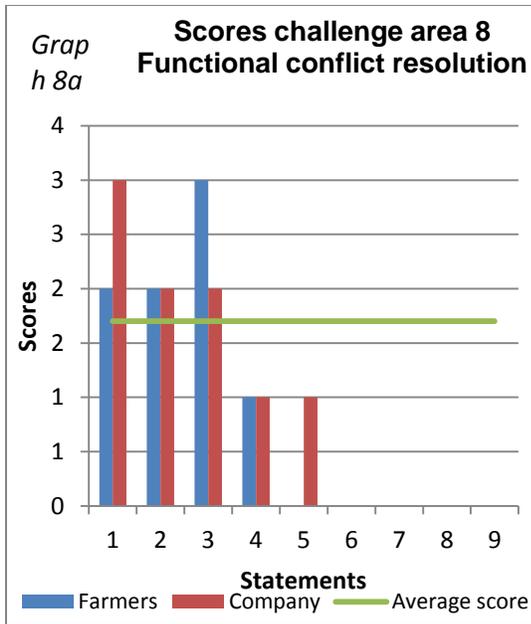
Table 18: statement for conflict resolution.

1	When disagreements arise in this relationship, people tend to spend time shifting blame for the problem
2	There are lingering feelings of resentment and frustration resulting from problems that have not been satisfactorily resolved in the past
3	In trying to resolve a difficult problem this customer sometimes lets us know that they can take their business elsewhere
4	There is a functional platform for conflict resolution.
5	There is a third party that mediate in case of disagreement between the company and the farmers

Table 19: Median score per statement

Challenge area 8	Median scores per statement					Median area score
Statements	1	2	3	4	5	
Farmers' scores	2.0	2.0	3.0	1.0	0.0	2.0
Company scores	3.0	2.0	2.0	1.0	1.0	2.0
Median firm-farmer statement score	2.5	2.0	2.5	1.0	0.5	2.0
Average firm-farmer area score	1.7	1.7	1.7	1.7	1.7	
Difference farmers - median F-F score	-0.5	0.0	0.5	0.0	-0.5	0.0
Difference Company - median F-F score	0.5	0.0	-0.5	0.0	0.5	0.0

The overall firm-farmer median scores for the challenge area are 2, which imply that there is positive agreement to statements challenge area. It was observed that for farmer and the company, it was statement 4 and statement 5 that they disagree with the statement.



Graph 16: Scores of challenge area 8. Graph 17: Level of agreement challenge area 8.

It is remarkable that there is equal level of disagreements for statement 1; statement 3 and statement 5 and there is agreement for statement 2 and statement 4.

4.4 Debriefing report

Debriefing meetings was held after the analysis of the data collected with the questionnaires. In the meeting the result of the self-assessment scores was discussed and the opinion of the both farmers and Matna Foods Company are summarized in the table below.

Table 4.12: Factors influencing the scores on the challenge area and suggestions for improvement.

Challenge Area	Factors influencing the scores on challenge areas.	Follow-up action for improvement
The company extension service	<ul style="list-style-type: none"> - The company extension department (cassava sourcing department) is short staffed - The company staffs are only interested in cassava supplied to the company. - The agricultural officers are not provided with suitable vehicle far regular farm visit - The company do not give incentive to farmers to attend trainings on demonstration farms 	<ul style="list-style-type: none"> - The company should collaborate with the government extension service to serve the farmers better. - The company should empower the company extension staff. - The company should provide power motorcycle for agricultural officers for regular farm visit. - The demonstration farm should be on farmers farm. - The farmer should organized step down training for each on improve cassava cultivation practice.
Quality assessment	<ul style="list-style-type: none"> - Delay in transportation of cassava from the farm to the company due to bad farm road. - Farmer are not aware of quality standard for cassava roots. - Farmer grow any varieties of cassava without consideration for the starch content of the cassava roots 	<ul style="list-style-type: none"> - The company should train farmer on quality assessment for cassava roots. - Company should provide vehicle for farmer to transport cassava from the farm to the factory so that cassava will reach the company within 24 hours - The company quality control team of the company should be more

		<p>friendly to farmers</p> <ul style="list-style-type: none"> - The company should provide the planting materials for cassava varieties that meet the company standard.
Involvement in price determination	<ul style="list-style-type: none"> - The company should deal with farmer as individuals and not as a group. - In meeting the company have no respect for farmer opinions 	<ul style="list-style-type: none"> - The company should recognize and deal with the farmers organization rather than individual farmers. - Farmers leaders should be invited for negotiation for cassava price at the beginning of growing season. - Farmer should keep record of cost of production for cassava. - The company should have a formal farming contract with farmers whereby both parties will have an agreed forward purchase prices for cassava produce under such contract. - The company should considers farmers cost of production and give a fair price to farmers. - Farmers should supply high volume of cassava to the company; as high volume helps the company to minimized cost and make profit.
Communication	<ul style="list-style-type: none"> - Most farmer are illiterates - Farmers live where there are mobile phone networks - They supplied their cassava roots directly to the factory 	<ul style="list-style-type: none"> - The company agricultural officer should disseminate information to farmers - There should be regular farm visit by the company agriculture officers

	<p>themselves, therefore they come to the factory and can get information directly from the Raw material manager.</p>	<ul style="list-style-type: none"> - The company and the farmers should have periodic monthly or bimonthly meeting to discuss issues that affects their business relationship.
<p>Dependency on the relationship</p>	<ul style="list-style-type: none"> - Farmer are smallholder farmers who grow majorly for household consumption. - The company process only cassava roots into cassava starch - Farmer grows other crops that are seasonal - Smallholder farmer supplied about 80% of total cassava supplied to the factory. - The company is the only bulk purchaser of cassava roots in the community 	<ul style="list-style-type: none"> - The farmers should scale up their cassava production to commercial size for them to increased their income from cassava farming. - The company and the farmers should realized that they are both partners in business and should do everything for mutual benefits of all parties involved.
<p>Commitment and trust</p>	<ul style="list-style-type: none"> - The company has been on continuous operation for the past ten years, - Farmers has also been supplying cassava to the company since the inception - The procedure of cassava purchase and payment is transparent 	<ul style="list-style-type: none"> - The company and the farmers should work together as partners in business and should not do anything that will affect the commitment and trust that they have built together over the last ten years. - The company should invest in program that will assist farmer to boost cassava production and productivity
<p>Relationship norms and</p>	<ul style="list-style-type: none"> - Both the company and the farmer depend on each other to 	<ul style="list-style-type: none"> - The company should ensure that farmers are given fair proportions of

flexibility	<p>survive in business therefore they have to do things for mutual benefits.</p> <ul style="list-style-type: none"> - The dependency of the company on the farmers is high therefore the company give solidarity to farmers when the farmer have issues with landlords, government and tax officers. 	<p>the benefit of the value addition on the cassava.</p> <ul style="list-style-type: none"> - The farmers and the farmers should be ready at all time to adjust to changes. - The farmers and the company should provide solidarity for each other in case any of the partners run into a problem.
Functional conflict resolution	<ul style="list-style-type: none"> - There is a weak communication channel between the company and the farmers - There is no formal platform for information exchange between the company and the farmer. - Farmers are not organized as an organization for relating with the company. - The company is no willing to relate with existing farmer organization. - The government extension service are not ready available to be a third party between the company and the farmers. 	<ul style="list-style-type: none"> - The company and the farmer should develop a good channels for information exchange. - Conflict between the farmers and the company should be resolve amicable rather than terminating business relationship. - The company should help to organized farmers into formal farmer union that will negotiate on behalf of farmers.

5. DISCUSSION OF RESULTS

5.1 Discussion focusing on challenge areas

The aim of this chapter is to discuss and interpret the findings of this research in reference to the research questions. These research questions have further led the research to develop challenge areas in the firm-farmers relationship. Therefore the finding of the study will be used to improve the relationship between the farmers and Matna Foods Company.

In order to answer the research questions, the investigation concentrations on the challenge areas: Company extension service; perceptions about quality assessment of fresh cassava roots; involvement in price determination; communication between the company and the farmers; level of dependency on the firm-farmers relationship; commitment and trust between the farmers and the company; relation norms and flexibility; and conflict resolution mechanism. The discussion will also look at possible the areas of improvement for each challenge area.

5.1. Support service provided by the company: Extension service

The support services offered by partners in the relationship helped in maintaining a relationship. The company provides extension service to the farmers to help farmers to boost cassava production and increase income. The study reveals that the extension service did not meet the practical needs of the farmers. Both the company and the farmers agreed that the extension service provided by the company is not timely and does not meet the practical needs of the farmer. However, it is remarkable that both the farmer and the company indicated that the training provided help farmers to increase yield and income which is in line with According to Pedro, et al (2009) in a study, they revealed that extension services contribute 40% to increasing production. The only area of disagreement between the company and the farmers is the location of the demonstration farm; whereby the farmers disagreed that the location of the demonstration farm is far from them and the company has a contrary option. The farmers and the company agreed that the farmers are not satisfied and happy with the extension service provided by the company. In order to improve the relationship between the company and the farmers there is a need to improve the quality and efficiency of extension service provided by the company, since the company extension is the interface between the company and the farmers. The company agricultural officers who provide the extension service for farmer complained to low funding on the side of the company and lack of transportation facility.

Therefore it is advisable for the company to improve the funding for the extension service in order to serve the farmers better. The company agricultural officers feel that frequency visit and advisory service to farmer helps to improve farmers trust for the company and farming relationship. In summary the study revealed that an improvement in frequency and quality of extension service has a positive influence on relationship between the company and the farmers.

5.2. Perception of the farmers and the company on quality assessment of fresh cassava roots

The company produced food grade starch for multinational foods companies; therefore the quality of their product must meet the food grade standard. As a result of this, the company is strict on the quality of fresh cassava roots that are purchased by the farmers. Similarly the quality in terms of freshness and age of the cassava root determined the starch content of the cassava roots. The study revealed that both the company and the farmers agreed that the age of the cassava roots determine the starch content of cassava roots and the quality grades determine the price paid for cassava roots. However, the farmers are not happy with the quality assessment team for their failure to educate them on how to meet the quality standard of the company. The farmers are aware that they will receive a premium price for supply of good quality of cassava roots to the company. The farmer and the company disagreed on option of the farmers that they are not educated by the company staff. The study revealed that the company and the farmers differ on the mutual understating on quality of cassava roots. It is obvious that the company and the farmers must come to agreement for mutual understanding of quality criteria on cassava root and also the quality control department should collaborate with the company extension officer to train farmers on how to produce and supply good quality cassava roots.

5.3. Involvements in price determination.

According to Lusch and Brown (1996) they suggested that the longer a supplier has been doing business with a customer, the more likely it is that the parties engage in joint activates. In the case of Matna foods company and the farmers the major area of joint activity is the involvement in price setting which is primary to the survival of the relationship. The farmer complained about the price of cassava offered by the company, they revealed that they are not always involved in price setting and in case of negotiations the company tries to force the price as possible without consideration for farmer cost of production. Therefore they are forced to accept low price since the company is a bulk purchaser that can purchase and process all cassava produced by them.

This is in line with the opinion of Fearne and Hughes (1999) when they state that suppliers of commodity items are forced to accept low price in order to achieve volume growth, which does little to improve their immediate and long term financial performance. The farmer further stated that despite the low price offered by the farmer the company pays on time. The company and the farmers differ on the opinion that farmers are happy with price paid by the company; the company does not respect the view of the farmer and that the company do not understand the farmer cost of production of cassava. Both the company and the farmers agreed that they do not understand each other cost of production. Price is a critical issue in farming relationship since both parties are investors; therefore it is important for both parties to get involved in negotiation for price at the beginning of every growing season. And also the company should carry out periodic market survey to know the open market price and possible review the prices to avoid side selling by the farmer. This as a result will serve as an incentive for farmers to be committed to cassava farming and supply to the company.

5.4 communication between the company and the farmers

Communication can be defined as formal and informal sharing of meaningful and timely information (Anderson and Narus 1990). Generally, the study revealed that the communication between the company and the farmers is very weak; which according to Lynette et al (2007), effective communication is essential to the success of a supply chain. The majority of the farmers complained that they are not regularly kept informed on company issues; there is no formal communication between the company and the farmers before cassava price is review. The company agreed with farmers on the farmers complains and the company only disagrees by saying they give answers to all question raised by farmers and the company claimed that they do not hold information that could be of use to the farmers. The weakness in communication is as a result of weak extension service provided by the company. Therefore it is important for the company to empower the extension department of the company to give timely and relevant information to farmers. This is because timely communication foster trust by assisting in resolving disputes and bring into line perception and expectations (Etgar 1979).

5.5. Level of dependency on the firm-farmers relationship

Dependence is an important variable in firm – farmers' relationship (Wilson 1995). The measure of dependence is on how easily a firm can replace its partner. The farmer grows other crops other than cassava and there are other markets for cassava root. They also view that there are better market for cassava other than the company. On the other hand, the company also agreed

with the farmers that farmer grows other crops that give more income than cassava and that there are other market available for farmers. However the company disagreed with the farmer that there are other sources of cassava roots other than the smallholder farmers. the study reveals that the company do not have made large investment on farmers thereby making it easy for any of the party to opt out of the relationship. The study further reveals that the company is much more dependent on the smallholder as the only business of the company is to process cassava roots and smallholder farmers are responsible for supply of 80% of total cassava supplied. Furthermore the farmers grow other crop and also have an alternative market for cassava roots. This is based on the theory that as the number of customers supplied increases, the dependency on one customer decrease (Provan and Skinner 1989) It will be better for the company to make large investment on smallholder farmers so that both party will be committed to the farming relationship.

5.6 Commitment and trust between the farmers and the company.

Trust is described as a foundation of the strategic business (Spekman 1988) and model building block for functional relationship (Wilson 1995) and also critical determinant of relationship continuity (Morgan and Hunt 1994). Commitment refers to an implicit or explicit pledge of relational continuity between exchange partners (Dwyer, Schurr & Oh 1987). In buyer-seller research revealed that it trusts that determines relationship commitments (Achrol, 1991; Geyskens, Steenkamp and Kumar 1999; Morgan and Hunt 1994). It is remarkable that despite the reported weak communication between the company and the farmers, the farmer and the company indicated that there is a high level of trust and commitment since according to Achrol et al, trust is major determinant of commitments. The farmers and the company agreed that both party are committed to the relationship. It was commitment that was sustaining the relationship despite the weak communication between the farmer and the company. This is in line with the view of Morgan and Hunt 1994. The study further revealed that both the company and the farmer just gave a socially acceptable answers but it does not reflect reality.

5.7. Relation norms

The relation norms are the measure of solidarity, mutuality, flexibility and information exchange. The company and the farmers indicated that they are an acceptable level of relationship norms, despite the weakness in information exchange. The level of relation norm must have been influenced by the trust and commitment in the relationship. Flexibility is faster response to

change that can be of mutual benefit of partners in the relationship. The farmer and the company indicated that they can count on each other if any of them is having a problem.

5.8. Conflict resolution mechanism

Conflict resolution within a relationship is also an important indicator for stability of a relationship. For every business partner there always will be “disagreements” or "conflict" in relational exchanges (Dwyer, Schurr, and Oh 1987). Therefore it is necessary to resolve conflict amicably; in fact conflict resolution strengthens relationship and increase productivity in relational exchange (Anderson and Narus 1990, p. 45). The company and the farmers agreed that there is no functional conflict resolution mechanism. This can be suggested that the weakness in the communication between the company and the farmers can influence the conflict resolution. This is line with the statement of (Anderson and Narus 1990) who stated that “communication and past co-operative behaviors lead to the perception that conflict is functional”. The farmers and the company have a quite disagreement on having a third party that mediate between the company and the farmers. The opinion of the farmer was that there was none while the company reported that the IITA has always been a third party. Generally the study reveal that conflict are not resolved amicably and that there is no platform in which the company and farmer resolves crisis.

6. Conclusions and Recommendations

6.1 conclusion

Matna Foods Company, heavily depends on smallholders' cassava farmer for raw materials to run their factory. It was recorded that smallholder farmers supplied 80% of total annual cassava supplied to the factory. The study found that the joint activities for supporting and coordinating the production and supply of fresh cassava roots to the company are: provision of extension service; price negotiation; quality assessment and information exchange between the farmers and the company. The study concluded that the relationship between the company and the farmers is weak and this is as a result of poor communication between the company and the farmers.

The study revealed that farmers are not involved in price determination and the technical advice provided to the farmer does not meet the practical needs of the farmers. Similarly, unit price offered by the company is an important variable in determining the continuity of the relationship. When company price is higher than market price, farmers will be motivated to produce more cassava and supply to the company. But if otherwise farmer will divert to other crop crops that give more income with less labor and land input or alternatively, sell their cassava elsewhere.

The current level of dependency of the company on the smallholder farmers is very high as cassava is the only raw material for the company and farmer produced and supplied 80% of total cassava supplied.

The current low supply of cassava to the factory is a reflection that the company and the farmers are not totally committed and trust the relationship but both are giving socially acceptable answers to questions but their responses do not reflect the reality. Finally, the poor communication between the company and the farmers is responsible for the challenges in the relationship.

The study has the limitation of generalization as the numbers of farmers interviewed are not much and the study is limited to farmers that farm and reside 35 km radius the Matna factory. I recommend interviewing a small number of farmers further away to the factory to see if their response differs from the current findings of the study.

6.2 Recommendations

Based on the conclusion the following recommendations are made.

To Manta Foods Company

- Create a functional and reliable 2 ways communication channel between the company, the farmers and other actors in the value chain by provision of facilities for telecommunication and regular farm visit by the cassava sourcing department.
- Formalize the cassava farming contact with the farmers so that the company can get consistent and reliable supply of raw material to the company.
- Provide good quality, effective and relevant extension services which will meet the requirement of the farmers and improve communication and strengthen their relationships
- Collaborate with the government extension service to reach to large numbers of farmers.
- The company needs to be transparent about their cost, selling price and their margins so as to develop functional working relationships with farmers that will foster trust and commitment to the relationship.
- The company should help to organize farmers into cooperative and recognize their leader for better communication and negotiation with the farmers.
- A plane platform should be establish for the farmers and the company to discuss and negotiate the price for their cassava produced and comparing the costs of production of farmer in price setting.

To the Farmers

- Farmer should organize themselves into cooperatives to have a stronger negotiation power with the company and enjoy other inherent benefits of cooperative.
- The farmers should adopt the modern ways of cassava cultivation to increase their yield and minimize cost of cassava production per ton.
- Scale up cassava production to enjoy the economy of scale; meet the growing demand for cassava root and increase income from cassava farming.
- The farmer should view the company as a business partner and always be willing to discuss their differences with the company.
- Farmers should attend training, meeting and workshop organized by the company and other stakeholder in cassava development sector.
- The farmers' cooperative must play a vital role in dissemination information to members and also convey information to the company on behalf of members.

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Annex

Annex 1: Checklist topics for interviews

F-F challenge areas	Experiences, examples /Views and comments	Importance
Context: power distribution, level playing field, trust between farmers and companies, transaction risks and costs, previous experiences, project orientation,		
Local service provision : research, extension, input supply, credit, transport,		
Crop / produce: export market, bulk product for local market, ... alternative crops, alternative market outlets		
Farmers: resource endowment, food & livelihood security, level of specialization, economic orientation, modalities for selecting farmers		
Company: resource endowment, 'open door policy', credibility and transparency, qualified staff,		
Prices and price setting modalities : min-max prices, dealing with market price, fluctuations (reference market prices), differential prices for quality (1 st and 2 nd grade), bonus for higher volumes or quality.		
Embedded services: inputs, credit, training, farmers credit discipline and risks of side use, company default on service provision, ...		
Delivery : timeliness, volume, quality and grading, traceability and administration		
Side selling : farmers' respect of contract, new entrants, predatory purchasing, horizontal coordination		

(code of conduct with other buyers), vertical coordination (relations and goodwill with farmers)		
Payment modalities : cash/bank account, timeliness of payment, company default on payment, group/individual payment, ...		
Standards: International and sector specific standards, food safety, certification and traceability, ...		

Annex 2: Questionnaire for the interview to farmers

Business Case Features; interview with farmer organization

1. Business case and respondents

Country:	
Product:	
Name of farmers' organization:	
Name of firm(s)	

<i>Date of interview:</i>	
<i>Name of persons interviewed:</i>	
<i>Function of persons interviewed:</i>	

1. Farmers' organization

Type of Organization:	
Year of establishment:	
Number of organized farmers (total, men, women) :	

a. How and to which level are the farmers organized?

- Circle the entities applicable and cross out the entities not applicable.

				
Individual Farmers				Company Ltd
	Farmers Association	Cooperative	Union	Federation

b. Has the trading entity, owned by the farmer, been registered?

- No, it is an informal entity
- Yes, it is a formal registered entity

c. How has the trading entity been registered?

- NGO

- Cooperative (with right to be involved in economic activities)
- Union (with right to be involved in economic activities)
- Federation (with right to be involved in economic activities)
- Non-profit business
- Social business
- Fully commercial business

<i>Observations:</i>	
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2. Product:

Does the business / farmer organization offer:

- one product or
- several products

- a perishable product or
- a non-perishable product

- a standard product or
- a tailor made product

- a seasonal product or
- year-round-production?

<i>Observations:</i>	
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3. Production

- a. Which functions are performed in ownership by the farmers?
 - Planting/sowing
 - Harvesting
 - Bulking
 - 1st processing stage (for instance: cleaning / grading)
 - Intermediate processing
 - Final processing
 - Packaging
- b. Hygiene and food safety certificates required?
 - Yes

- No

<i>Observations:</i>	
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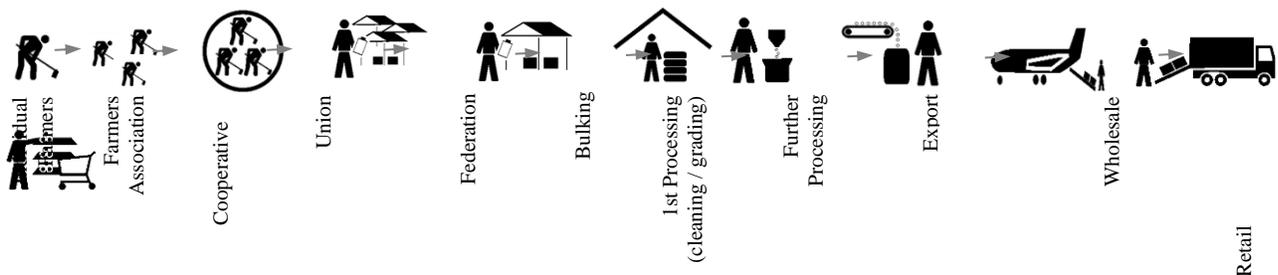
4. Quantitative data

Average production volume of farmers' organization per season (if possible details for different seasons) :	
Average production volume per farmer (or household) per season:	
Average acreage per farmer (or household) per season (ha):	
Total volume of product before processing:	
Total volume of product after processing (when applicable):	
<i>Observations:</i>	

5. Voice:

- a. Does decision making take place in a democratic way (through elected decision makers) or through a business hierarchy (decision making power linked to function in company).
 - Democratic structure
 - Business hierarchy

- b. Until which point in the chain does the farmer have decision making power?
 - Circle entities in which the farmer has decision making power (through democratic structure). Cross out those entities in which the farmer does not have decision making power.



<i>Observations:</i>	
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6. Product branding

- a. Is the product specifically branded?
 - Organic Certified
 - Conventional, generic (no specific brand)
 - Socially certified (Fair Trade, UTZ, etc)
- b. Is the product sold to the customer under the specific brand name of the business/producer organization?
 - Yes
 - No

<i>Observations:</i>	
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7. Customer / Market:

- a. How many customers does the business/farmer organization serve?
 - one
 - several
- b. Categorize the direct customer(s)
 - trader,
 - exporter,
 - processor,
 - wholesale,
 - retail,
 - end-user
- c. Which market does the business/farmer organization serve?
 - the mass market (bulk market)
 - a niche market
- d. Is the direct customer a local or an international customer?

- Local
 - International
- e. Is the end-market (end-consumer) a local or international market?
- Local end-market
 - International end-market

<i>Observations:</i>	
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8. Revenue model:

Does the business / producer organization earn its income through:

- the sale of a physical product,
- the sale of a service
- lending/renting/leasing the use of a physical product

<i>Observations:</i>	
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9. Pricing

a. Which pricing mechanism is used:

- List price: predefined fixed prices
- Price depends on the quality of the product
- Price depends on the type and characteristic of the direct customer
- Price is determined as a function of the quantity purchased
- Price is negotiated between two or more partners depending on negotiation power and/or negotiation skills
- Price depends on inventory and time of purchase
- Price is established dynamically based on supply and demand
- Price is determined by outcome of competitive bidding

b. Is the business / farmer organization cost driven or value driven?

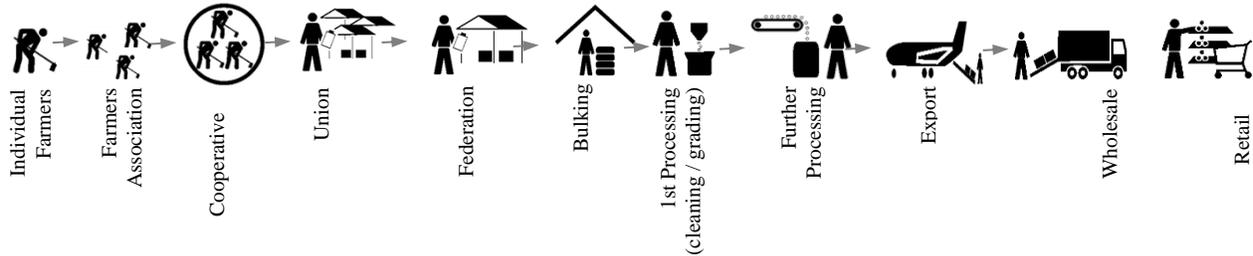
- Cost-driven (cheap)
- Value driven (high quality)

<i>Observations:</i>	
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10. Trade Contracts

Indicate with lines between which parties trade-contracts are signed.



Observations:	
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11. Risk:

a. Which risks does the business / farmer organization bare? Up until which point in the value chain does the business/farmer organization run this risk?

Draw a line behind in risk from which point in the value chain until which point in the value chain the business/farmer organization runs this risk



Climate Risk
Input misuse risk
Pest & diseases
Side-selling risk
Timeliness
Volume Risk
Quality Risk
Processing Risk
Financial Risk
Storage Risk

Transport Risk
Certification Risk
Marketing Risk
Reputational Risk

**Example: The farmer remains owner of the product up until delivery after export.
Therefore transport risk is their risk until that point:**

Transport risk 

<i>Observations:</i>	
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Annex 3. Research Questionnaire

You are invited to participate in this study on the relationship between cassava farmers and Matna Foods Company Limited. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will only be used for the purpose of the study.

Matna Foods Company and Smallholder Cassava Farmers

For company employees:

If you work for a company, please fill in the following questions. If you are finished you can start answering the statements on the next page. Thank you for your cooperation!

Position respondent:	<i>What is your position in the company?</i>
Duration participation:	<i>How long have you worked for this company?</i>

For members of the farmer group/cooperative:

If you are a member of the farmer group/cooperative, please fill in the following questions. If you are finished you can start answering the statements on the next page.

Characteristic respondent:	<i>What is the name of your farmer group / cooperative?</i>
Position respondent:	<i>What is your position in your farmer group / cooperative?</i> <input type="checkbox"/> I am a farmer and sell my products through this farmer group <input type="checkbox"/> I am a board member / member of core group <input type="checkbox"/> My position is:

Duration participation:	<p><i>How long have you been a part of this farmer group/coop?</i></p> <p>.....</p> <p><i>[If applicable:] Since when have you have occupied position in the board?</i></p> <p>.....</p>
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Statements		Use (√) to score each statement appropriately			
		0	1	2	3
		<i>Strongly disagree</i>	<i>Disagree</i>	<i>agree</i>	<i>Strongly agree</i>
		☹☹	☹	☺	☺☺
1 Company extension services					
1.1	The extension service provided is timely				
1.2	The extension service provided meets the practical needs of the farmers				
1.3	Farmers are provided with sufficient know how on cassava production				
1.4	The training provided has help farmers to increase yield and income				
1.5	There is regular farm visit by the company extension service				

1.6	The demonstration farms are close to farmers				
1.7	The service of the extension respond to the needs of the farmers				
1.8	The agricultural officer is efficient in providing information and training to farmers				
1.9	Farmers are satisfied and happy with the extension service provided by the company				
2	<i>Quality assessment</i>				
2.1	Farmers are happy with quality control team of the company				
2.2	Farmers know and understand quality assessment criteria				
2.3	The age of the cassava determines the starch content of the cassava roots				
2.4	The quality grade determine the price paid for the cassava root				
2.5	Cassava harvested are delivered to the factory with 24 hours				
2.6	Farmers understood how the quality grade affects the price of cassava root				
2.7	The quality control team educates farmers on the quality standard for cassava root				
2.8	There is mutual understanding on quality between the farmers and the compnay				
2.9	The company is happy with the quality of cassava purchased from farmers				

3. involvement in price determination					
3.1	The price offered by the company makes farmers happy				
3.2	Farmers participate in price setting				
3.3	The company is able to purchase and process all cassava produced by the farmers				
3.4	When negotiating prices the company tries to force the price down as low as possible without any consideration of our costs				
3.5	The company considers important the views/ideas of farmers				
3.6	The company understands and knows the farmers cost of producing one ton of cassava				
3.7	The company pays farmers on schedule/without delay				
3.8	All Farmers are paid at the same price				
3.9	The farmers know the company cost of producing one ton of cassava starch				
4 Communication					
4.1	Cassava farmers are regularly kept informed on the company issues				
4.2	Farmers regularly visit the company in order to understand the functioning of the company				
4.3	The company gives answers to all questions asked by the farmers on the cassava farming				
4.4	The company communicates on a daily basis with				

	the farmer (e.g. phone)				
4.5	The company and the farmer formally communicate review in price with each other				
4.6	The company/ farmers keeps us informed about events or changes that may affect us				
4.7	The company have regular strategic meetings with the farmers, in which they discuss the future requirements and goals for the relationship.				
4.8	We are confident the company/farmer does not withhold information that could be of use to our business				
4.9	The company has instituted the communication channel through which the farmers can send their ideas				

5 Dependency on the relationship					
5.1	Farmer grow other crops that give more income than cassava				
5.2	There are other reliable market for cassava roots other than the company				
5.3	Cassava is the sole raw material used by the company				
5.4	Farmers are the sole supplier of cassava roots to the factory				

5.5	There are other source of raw materials for the company				
5.6	It will be very disruptive to the company operation to end the relationship with the smallholder famers				
5.7	The company has made investment on the farmers that would make it difficult to terminate business with the farmers				
5.8	The farmers can easily be replaced by another set of out-growers				
5.9	The farmers view the company as better than the other cassava market				
<i>Sentiment and attitude</i>					
6	Commitment				
6.1	We expect our relationship with the farmer/company to continue for a long time.				
6.2	We expect our relationship with this the farmer/company to strengthen over time				
6.3	We are willing to make investments to develop our business with the farmer/company				
	Trust				
6.4	The farmers/company staff is dependable and honourable and stands by their word				
6.5	We believe that the farmer/company would not try to deceive us.				
6.6	The farmer/company would not deliberately take action that would negatively affect us				
6.7	This company would not use confidential information				

	to take advantage of us.				
7	Relationship Norms & Flexibility				
7.1	If either of us has a problem, we can count on each other's support to find a solution.				
7.2	We are happy to do the farmer/company favours, as we know that such action will be reciprocated in the future				
7.3	When an unexpected situation arises that proves detrimental to either party, we would both rather work out a new deal than hold each other to the original terms				
7.4	If either of us encounters unexpected problems or needs, we are both able to be flexible and adapt to the changing circumstances				
7.5	We receive a fair proportion of the benefits that are generated from this relationship				
7.6	We believe that this customer strives to take action that benefits the relationship as a whole, rather than looking for ways to fulfil its own interests at our expense				
8	Functional Conflict Resolution				
8.1	When disagreements arise in this relationship, people tend to spend time shifting blame for the problem				
8.2	There are lingering feelings of resentment and frustration resulting from problems that have not been satisfactorily resolved in the past				
8.3	In trying to resolve a difficult problem this customer sometimes lets us know that they can take their				

	business elsewhere				
8.4	There is a functional platform for conflict resolution.				
8.5	There is a third party that mediate in case of disagreement between the company and the farmers				

Thank you for your cooperation

Signature.....

Annex 4 Cassava inspection sheet

Vehicle No.				Customer Name	
1 st Weight				2 nd Weight	
(1) Freshness					Remarks
Very good	Good	Fair	Poor	Very poor	
A	A1	A	A	A	A1
(2) TRIMMING					
Very good	Good	Fair	Poor	Very poor	
A	A	A	A	A	A
(3) OVERAGE/FOAM FORMATION					
Very good	Good	Fair	Poor	Very poor	
A	A	A	A	A	A
(4) EXTRANEIOUS MATTERS					
Very good	Good	Fair	Poor	Very poor	
A	A1	A	A	A	A1
Total deduction			2%		
				Signature of inspector	

Annex 5: Photo Gallery



Administration of questionnaire



Discussion with Matna staff



Administration of questionnaire



Administration of questionnaire



Focus group discussion



Focus group discussion



Focus group discussion



House setting of a farmer



Focus group discussion



Cassava scouring department staff



Debriefing meeting



Cassava supply



Cassava plant



Company extensionist