

UNIVERSITY FOR DEVELOPMENT STUDIES

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**TRADER-FARMER COLLABORATION AND AGRICULTURAL
COMMERCIALIZATION IN YAGABA IN THE NORTH-EAST REGION OF GHANA.**

ABDUL- MUKADAS SALISU



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BY

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**THESIS SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL INNOVATION
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MARCH, 2022



DECLARATION

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I hereby declare that this thesis is the result of my original work and that no part of it has been presented for another degree in this University or elsewhere:

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Supervisor

I hereby declare that the preparation and presentation of the thesis was supervised following the guidelines on supervision of thesis laid down by the University for Development Studies.

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ABSTRACT

Smallholder commercialization becomes a necessary driver for poverty alleviation and food security in agriculturally driven economies in Sub-Saharan Africa considering rising population growth with increased competition for access to resources. However, commercializing smallholder farming in agriculturally driven economies vary in scales, institutional arrangements and labour regimes as well as socio-economic, environmental and political influence with varying policy initiatives towards incorporating smallholder farmers to the commercial value chains which can be traced by an increase in market participation, higher income, improved standard of living and sustainable poverty alleviation. The study investigated into trader-farmer collaboration and its livelihood impact on poverty alleviation. The study explored, described and explained the research through a narrative and case study design with a purposive sampling technique to select respondents and a convenient sampling technique in selecting the traders. Both primary and secondary sources of data were used and the findings revealed that trader-farmer collaboration in the Yagaba Community has been impactful in terms of its livelihood impacts with improved living standards and food security of both farmers and traders despite numerous challenges including lack of infrastructure, bad road network, absence of inclusive and broad-based policies to ensure sustainability.

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DEDICATION

This piece is dedicated to my able supervisor Dr. Wolfram Laube, my lecturers, my family, the good people of Yagaba community and my friends. To every young person with no family name nor inheritance, yet, trying so hard to find their feet, I dedicate this research to you. Hold on tight and keep faith. On a very good day, all this hustle shall pay off; it will be worth the struggle.



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LIST OF ACRONYMS

COMESA	Common Market in Eastern and Southern Africa
FAO	<i>Food and Agriculture Organisation</i>
FASDEP	Food and Agriculture Sector Development Policy
GSS	Ghana Statistical Service
IFAD	<i>International Fund for Agricultural Development</i>
IWAD:	Integrated Water and Agricultural Development
MCA:	Millennium Challenge Account
MMDAs	Metropolitan, Municipal and District Assemblies
MoFA	Ministry of <i>Food and Agriculture</i>
NGOs	Non-Governmental Organizations
SADC	<i>Southern Africa Development Community</i>
SSA	Sub-Saharan Africa



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The role of agriculture in the socio-economic development of Ghana can neither be overemphasized nor gainsaid. Even in the wake of Ghana's commercial oil production in 2011 the agricultural sector was contributing 0.8% growth rate of total GDP for over two decades although with a declining share of 29.8% to 18.9% of GDP. The agricultural sector still serves as a strong anchor on which the nation's economic development hinges with regards to job creation, poverty alleviation and as an important source of raw materials for other sectors of the economy. For instance, the agribusiness sector in Ghana has a huge multiplier effect on employment that creates over 750 jobs for every additional US\$1million of output. With regard to employment, over 70% of jobs are in agriculture. People working in the sector are predominantly rural dwellers engaged in farming activities, with limited agro-processing and value addition. However, the sector recently faces myriad challenges to its optimal performance with a significant and steady decline in GDP of 31% from 2008 to 18.9% in 2016 with average growth rate of 4.3% (World Bank Group, 2018).

The seemingly waning quality of growth momentum of the sector stems from the rise in growth of the industrial activities, such as mining and petroleum, as well as growth in the service industry (World Bank Group, 2018). Other major factors that exacerbated the declining importance of the agricultural sector for the economy



include climate change primarily causing drought and flood that contributes to crop failure and consequently low yields.

Despite the presence of some large farms and plantations engaged in cash crop production, Ghana's agricultural landscape dominated by smallholders, with 90% of smallholders producing on lands with sizes less than 2 hectares (Chamberlin, 2007). About 78% of land in Ghana are governed according to traditional rules and administered by traditional leaders such as chiefs with just about 20% and 2% controlled by the nation and shared ownership, respectively. These structures have created distortions in the production of agricultural goods for commercial purposes, reduced agricultural investment and limited farming to more traditional ways of production in smallholder farming. Most development economists have suggested that government effort and commitment to help to commercialize smallholder farmers remains an important agenda and the major way to bring about food security, sustainable poverty alleviation and eventually high living standards in rural Ghana.

As Pradhan, Dewina and Minsten (2010), posit, the concept of agricultural commercialization is in itself, the gradual increment in the sale of farm produce by farmers. It, therefore, becomes an activity marked by the increase of farmers' productivity by employing land, labor and modern farming inputs, to produce and market surpluses, which in turn would improve the living standards of commercialized farmers through higher agricultural incomes (Jayne, Haggblade, Minot, and Rashid, 2011) cited in (Alhassan, 2018). Critical success factors like better seeds, improved practices, fertilizers and expertise are the highlight of



successful commercialization. At the core of this concept is the integration of a large proportion of rural small holder farmers into viable high agricultural value chains to boost output and general agricultural growth (Jayne & Muyanga, 2011).

Factors such as the scale of production or the crop type do not influence the commercialization. Both, family farms or commercial farms producing crops for the market can be considered commercialized (Poulton et al., 2008). Underlying the concept of commercialization is the idea of an evolution of subsistence farming. Subsistence production basically implies a focus on a mode of farming and consumption that relies heavily on self-sufficiency. Subsistence farmers participate in agricultural markets mostly as buyers (Okello, 2005; Burke, 2009). Barrett (2008) and Jayne et al. (2010) suggest that most smallholder farmers assume the position of buyers rather than sellers because they often have no or too little surpluses for sale because of a lack of capital for adequate investments, ultimately resulting in low yields — a situation described as low equilibrium poverty trap. Against this backdrop, commercialization is identified with the increased production of both cash crops and traditionally grown food crops for the market, which is the focal point of this study.

There seems to be a high correlation between agricultural commercialization policies in Africa and the economic and political organization prevailing in the region. These policies have nonetheless evolved over the years into the now liberalized era. Global trade movements and the growth of multi-national agribusinesses have greatly advanced the trends in agricultural commercialization. Until this growth is reflected

in the alleviation of rural poverty, the process of commercialization would best be termed as useless (Alhassan, 2018). To be successful, commercialization should transition the largely poor rural farming communities from subsistence farming to producing for the market.

Commercial farming in Sub-Saharan Africa has taken varying forms in scale differentials, institutional arrangements and labor regimes as well as political influences, and there exists a long history of attempts made to encourage commercial agriculture. These efforts have included the establishment of private estates and contract farming in colonial times and state-owned and -managed estates in post-independence era (Ruth Hall, 2017). Furthermore, out-grower arrangements have been encouraged across different crops such as cocoa, cotton, tobacco and sugarcane, as a means of bringing smallholder family farmers into the commercialized system as well as across the nation (Glover 1984; Oya 2012; Baglioni 2015).

The out-grower model operates by means of aggregating small producers and incorporating them into commercial value chains (Porter & Howard, 1997). The model links capital to out-growers through contracts, thus ideally giving smallholders the opportunity for wealth accumulation. Guinness Ghana Limited, for instance, has established contracts with sorghum farmers in Ghana's northern belt. Aside holding a nucleus farming estate under Guinness Ghana limited, the company increases sorghum supplies from out-growers. This creates a ready market for farmers and reduces farmers' cost for agricultural inputs since Guinness Ghana



Limited covers all of these cost and chargers and liberates the farmers from all of those expenses and challenges.

In contract farming, farmers are usually provided with some form of credit to obtain otherwise unaffordable agricultural inputs to boost the production. Often, this credit is provided by investors who advance credit to the farmers on the arrangement of total overhaul after production at a fee or splitting the harvest on pre-arranged terms. In other cases, arrangements are often made with financial institutions like banks, to advance credit to the farmers with the investors acting as guarantors (Eaton & Shepherd, 2001)

Pitt and Moskowitz (2005), assert that enhancing access credit in cash or kind for small-scale farmers would go a long way to aid agricultural growth and subsequently achieve poverty alleviation in many developing countries. Access to credit promotes higher production and commercialization which in return engenders good return and consequently, poverty reduction (Sekyi, 2020).

Unfortunately, this has not been the Ghanaian story, with formal credit mainly accessible to large-scale farmers (who constitute 20% of the farming population) employing collateral in the form of lands and houses (Owusu-Antwi & Antwi, 2010). The remaining 80% are ultimately sidelined due to limited access to formal credit, thus, they resort to informal credit facilities. Lyon (2000) asserts that the economically well-endowed families or households or individuals living in rural areas often buy the required agro-chemicals for the farmers and as repayment take a



share of the crops during harvest. Unarguably, easy and cheap credit being introduced constitutes the fastest way to give rise the agricultural production.

In Africa, and in Ghana in particular, access to informal credit sources is noted to be of more significance in financing agriculture than the formal sources. The formal segment of the credit market refers to all formal institutions such as banks and other financial houses and bureaus offering financial assistance in return for collateral. The informal sector on the other hand includes all sorts of private lending by family, unrelated individuals and friends who charge interest, as well as lending from family members, relatives and friends which carries zero or low interest rates (Sekyi, 2020).

Some of the informal credit sources include savings cooperatives, rotating savings and credit associations, lending and gifts from relative and friends, merchants, various clubs and village banks Trader credit is also constituting a major source of capital contributing significantly to the commercialization of small-scale farmer production.

Nyangteng and van Apeldoorn (1971: 104) cited in (Fergus, 2000) underlined the importance and role of trader credit. Unlike agricultural credit from formal banking institutions, where one needs to go through formal procedures and to provide collateral, and which is often delayed, trader credit provides easy access to agricultural capital through its ease in administering, cost effectiveness as well as the fact that traders provide credit in a timely manner as they are much more aware of the production process.



To obtain credit from traders, farmers do not need to provide a guarantor. Traders provide inputs or credit without preconditions (apart from guaranteed purchase of the sponsored farm products) and sometimes even serve as guarantors when farmers need to receive goods or funds on credit from agro-chemical dealers. When the time is due for repayment, both the farmers and traders go to the dealers to pay the debts.

Traders also assist farmers with seeds and new varieties. They provide farmers with these in order to improve their standard of production and the quality of crops, which they will obtain as repayment after harvest (Lyon, 1997b). Traders provide credit in cash or kind – or may act as guarantors – because they are interested in the farmers’ produce. Providing credit is meant to give them safe access to the produce, even if there exists competition for farm produce due to higher demand than supply and under changing dynamics of the market.

In a way, traders’ credit can also be perceived as a particular form of contract farming. In the context of capital (for farmers) and market challenges (for traders), a long-term relationship between traders and farmers plays a pivotal role. Farmers, on the one hand, are granted easy access to credit/inputs for production with reduced transaction cost, while the traders on the other hand are guaranteed constant supplies, irrespective of the market forces. This offers advantage to both contracting parties in the production and commercialization chain.

1.2 Problem Statement

The lack of agricultural support services, most notably credit and financial services, constitutes one of the prime deterrents to market participation and successful inclusive commercialization of smallholders. Access to credit and financial services by rural smallholder producers is one of the limiting factors and binding constraints challenging smallholder producers. This is due to the fact that the majority of smallholder producers operate on traditional and untitled lands that cannot be pledged as a security or collateral to secure formal credit facilities, which is usually demanded for by lending institutions (Memon, 2016). However, credit facilities are the necessary drivers of successful commercialization of rural agriculture. Olagunju (2007, as cited in Memon, 2016) states that access to credit facilities could give birth to an effective utilization of resources and a rise in output and income in the rural economy. It could also enhance smallholders' levels of food security, market participation and consequently a reduction in poverty.

Historically, access to formal sources of credit by non-collateralized smallholder farmers has been a major problem in developing countries, including Ghana, because of the high risk of default and credit delinquency that has been associated with smallholder credit. But due to the continued lack of security or collateral of smallholder farmers, even formal lending institutions have come up with new lending models and approaches based on social capital. These approaches build on preexisting forms of trust, norms and values, power structures and loyalty in the rural societies to enforce credit repayment.





These models or approaches include:

1) *Group Based Lending:*

This strategy was introduced by the Grameen Bank of Bangladesh to ensure that smallholders receive the needed financial support to maximize their output. In this model or approach, individual smallholder farmers are put into groups, in which farmers are held responsible for the credit default of other group members, thereby serving as a substitute for collateral (Fergus, 2000). Before disbursement, farmers are given training and education relative to credit and financial management to ensure prudent usage of funds to effectively maximize their benefit and to prevent risk of default. This strategy uses *social pressure* through peer monitoring in order to prevent or reduce risk of default.

2) *Collective action:*

Using collective action has also been one of the strategies in enforcing credit contracts. This strategy is based on the use of the local households with in-depth understanding of the clients as well as the culture, values and norms of the community in order to track and monitor borrowers closely as a means of keeping them on track to avoid the risk of default (Johann Kirsten, 2013).

In addition to the formal credit options mentioned above, smallholders can access credit or finance through the *mobilization of savings* by group members and small intimal loans. These initiatives have resulted in an increase in the availability of smallholder finance and credit.



In Ghana, about 50% of the farming households produce more agricultural products than they need for home consumption. Many of them have made the transition from small-scale farming to commercial agriculture with the support of the informal credit sector.

This raises considerable interest. Credit facilities form part of the production- and commercialization process in the rural economy. Easy and cheap credit is given to farmers as a way to motivate increased production. Ubon A. Essien (2016) suggested that the availability of adequate credit will aid farmers to expand their scope of operations and will be used to apply improved technologies. There are a lot of merits in informal credit facilities, however, there has been a drawback which has to do with the production, acquisition and repayment of credit in the informal sector, especially when dealing with small-scale farmers in the rural communities. The agricultural production of smallholders, especially in the research area, is prone to high risks, such as fluctuations in yield and even crop failure. Risks such as adverse weather patterns (ameliorated by the effects of climate change), pests and bushfires can lead to production losses and the failure of farmers to repay traders. Due to the informality of credit arrangements, it could be difficult for traders to recover credits when farmers default. Some farmers may even refuse to heed their responsibilities, despite sufficient yields, especially when unforeseen financial needs, for instance in the case of health issues within the family, come up. Information management (about the creditworthiness of potential creditors, but also crop performance), risk management



by farmers and traders, and the establishment of social capital are important factors that can help to curb these dangers (Lyon 1997 b).

Insights from the study of Yagaba community have been gathered to develop an understanding of how informal credit, and particularly trader credit, contributes to agricultural commercialization and how the risk inherent in it are managed by farmers and traders alike. This research focuses on how trader credit contributes to the furtherance of agricultural commercialization of agricultural production in the Yagaba community, through which farmers increase their use of productivity-enhancing technologies, harvest greater output per unit of land and labor, obtain more surpluses, increase market participation, and uplift their incomes and living standards. It will detail which interest of farmers and traders are served and how information flows and risks are managed.

Although trader credit was the major source of smallholder credit and thus commercialization for a long time, the Ghanaian government has recently begun to support the area surrounding Yagaba with projects accelerating the commercialization of smallholders. The Food and Agriculture Sector Development Policy II (FASDEP II), the Planting for Export and Rural Development (PERD) and the Ghana Commercial Agriculture Project have provided approaches that are meant to help local farmers to penetrate domestic and international markets. These policies are mainly aimed at creating favorable business conditions. Farmers will enjoy both comparative and competitive advantages in producing the required volumes of goods on timely basis without compromising quality. Some of the strategic actions are

aiming at improving market information and intelligence, accessibility, agricultural financing and provision of relevant market infrastructure. At the global level, the initiative is driven by a group of 28 partner companies of the World Economic Forum: AGCO Corporation, A.P. Møller-Maersk A/S, BASFSE, Bayer Crop Science AG, Bunge Limited, Cargill Inc., CF Industries Holdings Inc., The Coca-Cola Company, Diageo Plc, DuPont, General Mills Inc., Heineken, METRO AG, Mondelez International Inc., Monsanto Company, The Mosaic Company, Nestlé SA, Novozymes A/S, PepsiCo Inc., Rabobank International, Royal DSM NV, SABMiller Plc, Sinar Mas Agribusiness & Food, Swiss Reinsurance Company Ltd, Syngenta International AG, Unilever, Wal-Mart Stores Inc., Yara International ASA.

The initiative works in close partnership with 14 governments, international and civil-society organizations, farmers associations, academic and research institutions, and others. At the national level however, the agricultural component of the Millennium Challenge Account (Mca) Programme in Ghana,

In Yagaba, under this initiative, the Commercial Development for Farmer-Based Organization (CDFO) seeks to encourage smallholder farmers to become market-oriented. Farmer-based organizations (FBO) are being trained and supported with capital to increase production and sales (Edward Martey, 2012).

Apart from understanding the performance and effects of trader credit in Yagaba, this study discovers the effects of formal programs to commercialize smallholder agriculture and how it affects trader-farmer relations and their form of collaboration



and largely explore how the livelihood of farmers and traders are affected and how it generally relates to poverty alleviation.

1.3 Objectives of the Study

1.3.0 General Objective:

Generally, the research seeks to determine the factors enabling trader-farmer relations to contribute to the agricultural commercialization of smallholders.

1.3.1 Specific objectives

The specific objectives are:

1. To discover the respective drivers and interest that let traders and smallholders collaborate.
2. To discover the pre-conditions, mechanism and factors that lead to the failure or success of trader-farmer collaboration, with a particular focus on risk management and transaction costs.
3. To assess the perceived impact of formal agricultural commercialization initiatives on trader-farmer collaboration

1.4 Research Questions

What are the factors helping to make trader-farmer collaborations a viable smallholder inclusive model of agricultural commercialization?

1.4.1 Specific Research Questions



1. What are the respective interests and drivers that let traders and smallholders collaborate in agricultural commercialization?
2. What are the pre-conditions, mechanism and factors that lead to the failure or success of trader-farmer collaboration?
3. What is the impact of formal initiatives of agricultural commercialization on trader-farmer collaboration?

1.5 Significance of the Study

In the review of relevant and related literature, it is observed that that despite the large numbers of publications addressing the issue, only few empirical studies have been conducted. Therefore, assessing the role of informal credit on the commercialization of the agricultural sector in northern Ghana and how it improves livelihood of both the farmer and trader seems to provide an important contribution. Agricultural credit plays an important role in enhancing the agricultural productivity in developing countries like Ghana. Up to now many smallholder households are only partially engaging in commercial agriculture. Therefore, informal credit can help break the vicious cycle of subsistence farming and also breaking financial limitations that is characterized by inadequate tools, retarding large-scale and commercialization process. Credit facilities play an important role in the commercialization of the rural economy as it improves farm level practices and develops linkages of farmers with markets and industry based on deployment of new technologies, ideas and future pathways for sustainable growth of the agro-industry. It further creates an environment in which small holder producers are able to



sustainably enter modern supply chains leading to increase in income and livelihood hence reducing poverty. Therefore, it is significant to understand the contribution trader-farmer credit makes to this development.

1.6 Limitations of the Study

Research of this magnitude is broad and it is not possible to cover all relevant aspects. The study has been limited by the following factors: the cost of commuting various areas to conduct research and a language barrier that made interview session tedious and time-consuming. Additionally, literature around the subject area, to the best of the researcher's knowledge, is very limited. Therefore, this research is of exploratory nature. However, this should take nothing away from the study as inferential judgments will be borrowed from similar studies conducted by other researchers.

1.7 Organization of the Study

The entire study is organized into five major chapters outlined as follows:

Chapter one provides an insight into the background, statement of the problem, the research objectives, and research questions, significance of the study, limitations of the study and organization of the study.

Chapter Two deals with the review of relevant and related literature on the subject matter and it consists mainly of the review of theoretical and empirical literature on the topic under study and the conceptual framework.



Chapter Three presents the methodology used in collecting the relevant data required to achieve the objective of the study. It contains a discussion of the research design, methods of data collection, research population, and sampling techniques, sample size, describes the research instruments used in collecting the data, and details the form of data analysis. A qualitative methodological approach was employed. Data collected from the field was qualitatively interpreted and analyzed. Relevant charts, tables and graphs were generated to present a synthesis of the research findings to achieve the purpose of the study.

Chapter Four presents the data collected, analyses of the data, and the major findings. The statistical data analysis is mainly descriptive. Relevant tables, charts and graphs are used to support qualitative findings in accordance with the research objectives.

Finally, Chapter Five covers summary of the findings, conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Historically, geographical distance and the small scale of production have been great disincentives to the commercialization of smallholder agriculture. Lack of capital and geographic isolation have been the fundamental reasons why most farmers resort to small-scale farming except for those producing high-value export commodities. This has therefore reiterated the necessity for agricultural revolution as an engine of growth to meet rural future demands, hence rural development as a whole and substantially decreasing or eradicating poverty. This can be done by increasing the production of crops, technology advancement and policy reforms.

Ghana is largely an agrarian economy with the business of agriculture significantly dominated by smallholder farmers (GSS, 2014). Majority of the population in developing countries is rural (IFAD, 2011; UNCTAD, 2015) and their predominant livelihood activities is farming. Efforts to lift these rural households out of poverty and to set them up on the pathway of development has, therefore, often focused on the promotion of agricultural development. In this process, smallholder commercialization is seen as a transformational process considered as a major link from a semi- subsistence agrarian society to a more diversified and food secured economy with higher general living standards. To commercialize smallholder agriculture significant capital, usually provided in the form of formal or informal credit, is necessary.





2.2 Agricultural Commercialization and Smallholders

A document drafted by Mellor Johnson states that an inclusive agricultural Smallholder commercialization can be viewed as a system that influences farmers to intensify their operations by clinching to trending technologies in order to enable them to boost labour productivity which leads to an increase in overall income and improves overall standard of living in the long run (T.S.Jayne et al., 2012).

To commercialize agriculture is to shift from a subsistence-oriented to an increasingly market-oriented pattern of production and input use. In Ghana, agriculture is predominantly on a smallholder basis, and farms are widely dispersed, making the provision of support services expensive. About 90% of farm holdings are less than 2 hectares in size, although there are some large farms and plantations for cash crops such as rubber, oil palm and coconut and to a lesser extent, rice, maize and pineapples (Chamberlin, 2007). Production on smallholder farms is largely rain fed with less than 1% of the arable land irrigated. Therefore, production varies with the amount and distribution of rainfall. The importance of maize, rice, yam, cassava and beans cannot be emphasized enough for the smallholders. This in essence reflects the importance of these crops to food security strategies under poor or variable market conditions. Smallholder commercialization in Ghana includes the sale of marketable surplus of traditional crops, the diversification into the production of new crops, and the introduction of new income generating and post-harvest activities such as processing of farm produce (Edward Martey et al., 2012).

Two major interlinked factors determine how lucrative smallholder agricultural commercialization can get. The governments and private investors' ability to support commercialization models that are suitable for accommodating specific social, economic, environmental and geographic conditions is the first major factor to consider. Support programs need to create access to agricultural credit and improved inputs for smallholder farmers, and need to enhance the access to agricultural advisory and technology.

Furthermore, it is essential to improve the legal framework to create an enabling environment for agricultural commercialization and market integration. There has, for instance, been an enhancement in the regional and domestic marketing of Southern African countries for smallholder farmers due to the elimination of export and import bans and tariffs respectively. This was made possible by the institution of the Common Market in Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC).

Smallholder farmers' transition from subsistence farming to commercialized farming has faced stiff opposition from varying factors. These factors are the socio-economic features and resource endowment of the smallholder producers, inadequate access to sufficient agricultural support services, high transaction costs, institutional factors, as well as lack of proper agricultural and developmental infrastructure.





2.3 Challenges to Successful Smallholder Commercialization

The aforementioned challenges are further discussed in great detail in an effort to foster proper understanding of the subject.

2.3.1 Socio-economic factors and resource endowment

One of the most important determinants of the success of commercialization is evident in the socio-economic features of smallholder producer. For this reason, market participation is very low among the majority of the rural household in SSA because the features associated with these farming practices are deterrent in itself. Some of these features range from the size of a household to the age and gender of the household head, level of education, mixed cropping and non-farm equipment which is usually a prerequisite of a household's decision to participate in commercial markets as well as in determining the type of crops that households commercialize. A feature like inadequate education and literacy levels may result in poor networking, poor negotiation and bargaining (Johann Kirsten, 2013). Furthermore, another feature reducing the ability to engage in commercial agriculture of smallholders in sub-Saharan Africa is their small land holding sizes of less than 0.5 hectares per household. Farms are largely rain-fed with little to no irrigation mechanisms in place. Furthermore, resident farmers in these areas often recycle seed and add very little additional nutrients for soil enhancement. These challenges are compounded by the adverse agro-climatic and political conditions, as well as low and declining soil fertility, pest and disease outbreaks, fragmentation and climate change which



constitute the major actors and challenges confronting smallholder farmers notably in rural settings (Dorward & Kydd, 2002).

2.3.2 Infrastructure

Determinants of successful commercialization of smallholder farmers include the availability and adequacy of infrastructure. Good road networks and transportation availability, irrigation facilities, adequate means of telecommunication and reliable sources of energy are very important. However, there are large setbacks faced by smallholder farmers in the realization of a successful commercialization infrastructure is either inadequate or even lacking. Unmet infrastructural needs include but are not limited to irrigation, electricity or power, animal dip tanks, and road networks and transportation. Moreover, the physical remoteness as well as the lack of telecommunication infrastructure prevents smallholders from assessing adequate market information and the realization of adequate prices. The past years have seen some African governments trying to make considerable efforts in developing and investing in rural infrastructure, but these efforts don't easily translate to the poor in terms of benefits (Gunatilaka, 1999) cited in (Johann Kristen et al., 2013).

2.3.3 Lack of access to agricultural support services

Owing to the lack and inadequacies identified from the discussion, the role of public agricultural support services become very pivotal in shaping efforts towards the entry of smallholder farmers into lucrative commercial markets. Aside the ever-pressing financial need of most rural producers in the region, the limited access to agricultural



support services poses a hindrance to a successful and inclusive commercialization of smallholder agriculture. Where these smallholder farmers demonstrate the potential, capability and willingness to go commercial, they are still shackled by the lack of access to market information, agricultural credit, and the lack of access to input markets for high yielding seeds and inorganic fertilizer (Johann Kristen et al., 2013).

Gaining the necessary support from both government and the private sector could provide an avenue that could propel the success of smallholders in overcoming multiple market and institutional failures and many limitations that prevent them from participating in market opportunities within diverse agricultural value chains. In the case of large-scale farmers or groups of farmers who come together to form larger cooperatives, access to inputs, agricultural advisory services and market information becomes easier because of their financial capacity. As basic agricultural support services come at high fees, smallholders lack access as their budget cannot quite support. To further add to that, the majority of smallholder farmers in sub-Saharan Africa are unable to secure land tenure arrangements and this worsens their woes even further, as they lack collateral to access formal credit. This problem persists because of the culture of customary or untitled land that majority of farmers operate on. Untitled lands cannot be used as collateral to secure credit facilities. But even when smallholders are able to afford the existing financial services, they come at really expensive costs. Financial service providers in Sub-Saharan Africa are not



faced with enough competition to beat down their interest charges (Johann Kirsten, 2013).

2.4 The Importance and Operation of Trader-Farmer Collaborations

The nature of trader-farmer collaborations is akin to that of contract farming which involves a contractual arrangement between smallholder producers and traders in agricultural goods. The core of this agreement involves traders supporting smallholders with the required inputs in order to scale up their production to commercial quantities in exchange for pre-agreed sale of large quantities of farm produce in return. With this mode of collaboration, there comes the potential of providing guaranteed market outlets to farmers while reducing transaction cost. Trader credit, therefore, has the ability to positively impact farmers by allowing their relatively secure participation in the agricultural markets. Modern supply chains often driven by supermarkets are inherently hostile to smallholder producers. Van Der Heijden, (2010) suggested that the techniques employed in supply chain management and procurement in modern value chains are designed to extract a lot from supply chain players. The liberalization of the food markets in sub-Saharan Africa has created more opportunities for food suppliers in local and foreign markets. There is now the opportunity for many African countries to export their produce by linking them directly to foreign markets. This, according to Weatherspoon and Reardon (2003) has spearheaded increased wealth and income creation. Notable African countries that have taken advantage of the rising trend of the supermarket model include South Africa, Kenya and Nigeria (Weatherspoon & Reardon, 2003).



In order to meet the needs and demands of both domestic and foreign markets, smallholder producers are put into groups and linked directly to the supply chain of retailers in order to supply in qualities and quantities that meet their demand. However, these are largely market transactions, often devoid of any social component. But the social should not be deduced from the economic, and economic transactions should be embedded in social relations. Moore (1997: 313) stresses on how trade is based on social interaction and how it promotes social relations where there were not any traces of its existence.

Historically, trader credit has played a very central and socially integrated role in promoting smallholder commercialization in less developed countries in Sub-Saharan Africa.

Nyangteng and Van Apeldoorn in 1971 have highlighted the importance and advantages of trader credit over banking institutions relative to easy access, easy administration and timeliness, which are often resulting from the social capital generated and made use of in trader-farmer collaboration.

Trader credit comes in the form of financial support or inputs. Some traders give inputs to smallholder farmers or act as the guarantors when farmers receive credit from the agro-chemical dealers. Some other traders go to the agro-chemical seller with the farmers to purchase the inputs and they both go back when repayment is due to the farmer. Traders also help many of the farmers with viable seeds to improve their yield. Traders are an important channel for the spreading of new varieties and the

distribution of quality seed to farmers in order to improve the quality of the crop. One of the major reasons smallholder farmers prefer trader credit is due to flexibility and the ease with which they are negotiable and accessible in times of dire need (Fergus, 2000). Becket (1944) also reported that interest on credits was reduced by half and new loans are given when farmers were in grave difficulties, because of the long-term social relations and interests that are established as a result of these collaborations.

Trader-farmer contracts are not backed by law and any formal documentation. Therefore, traders use social networks and social capital in order to monitor and track smallholders to prevent diversion of funds and risk of default. An essential factor that promotes market participation of smallholder producers and successful commercialization is social capital (see more in 2.3.4). This is made up of social factors that creating social cohesion and control in social structures and institutional frameworks such as successful farmer organizations or associations and contract farming arrangements. These factors include: culture, power, trust, norms, values, social networks and loyalty, which constitute the necessary drivers forces that shape the actions and in-actions as well as the behavioral characters of traders, service providers and smallholder producers, thereby, creating an advantage of a reduction in transaction cost, the enforceability of informal contractual arrangements and facilitating access to market information (Johann Kristen et al., 2013). However, trader-farmer collaboration is facing certain risks that can only be partially mediated through social capital.



2.5 Risks involved in trader-farmer collaboration

Despite the many advantages associated with traders and farmers, contractual arrangements between the traders and farmers in the agricultural business sector have not always proved sustainable. Many traders feel they are being cheated through side selling, when farmers sell their products to different individuals not being part of the contract. This creates the risk of default on the loans that were received by the farmers as part of the agreement. Where traders realize this, it becomes very difficult for them to assist farmers in their next production or sometimes they may support but the level of support is reduced due to loss of trust between both parties.

There are also cases, where pest and diseases or climatic conditions such as drought may lead to the failure of crops. In such cases, traders might choose to give more time to the farmers to pay or may let the farmer pay using other sources of income (Fergus, 2000). But often the traders may help the farmers with additional support so they can produce more to pay for all their debts from the following harvest.

But contract arrangements with traders can also be problematic for farmers. Traders tend to purchase the produce from the farmer at an agreed price, which may well be lower than the average market price. Especially, when the farmers lack access to markets and market information the traders enjoy and higher bargaining power and informational advantages, which may lead to the exploitation of farmers. Especially, in times of market gluts, when the supply of a certain farm product exceeds the demand, misunderstanding between farmers and traders are common. The prices





become so low that farmer's loose out in their contract despite the bests of efforts of the trader.

As can be seen there is ample risk to successful trader-farmer collaboration. However, there is also ample evidence for successful collaboration. Thus, the need to pay attention to patterns of risk management.

2.6 Risk management in trader-farmer collaboration

Risk is associated with every investment which involves the chance of loss or the probability of not getting one's investment back. Risk management is an effort to systematically identify, measure and mitigate possible losses in order to achieve one's objectives. In trader-farmer collaboration in the production and sale of agricultural produce, the above-mentioned risks can be managed through the different strategies. Traders rely on collective action and peer monitoring of borrowers by individuals with thorough knowledge about the clients and their community in order to prevent risk of diversion of funds and default. Moreover, another effective strategy of risk management employed by traders is through education and training of smallholder farmers Traders show farmers how to effectively manage funds and risks in order to ensure prudent utilization of borrowed funds, which is meant to maximize farmers' benefit while guaranteeing repayment. In addition to the above-mentioned strategies, an effective way to manage risk is by successfully gaining information about the borrowers. In this case, smallholder farmers are first identified relative to their ethnicity i.e., to ascertain those that are natives and those that are strangers or migrants. This helps to determine their

qualification credit application and accessibility as well as their capacity to repay. This strategy also helps to ensure easy monitoring and recovery process. This boosts the lenders confidence of repayment.

2.6.1 Risk Reduction through Social Capital

An essential factor promoting trader-farmer collaboration and market participation of smallholder producers and successful commercialization is social capital. This is made up of certain factors that bind social structures and institutional frameworks such as successful farmer organizations or associations and contract farming arrangements which creates a network among actors. These factors include; culture, power, trust, norms, values and commitment which constitutes the necessary drivers and binding forces that shape the behavior of traders, service providers and smallholder producers. In essence, the notion of social capital constitutes social cohesion and interaction among individuals, groups and institutional frameworks in which social relations are embedded.

There are numerous significant contributions by social capital toward a successful and inclusive smallholder commercialization. Key factors include information and direct access to markets. Social capital creates the advantage of a reduction in transaction cost with easy access to information while creating a link and bridging the gap between smallholder producers and market centers (Johann Kirsten, 2013). Direct access to market and market information enhances market participation of smallholder producers while easy access to information enhances farmers' knowledge with respect to the competing market forces and average market price of





the product they are offering. Moreover, direct and easy access to markets eliminates the idea of “intermediation” between smallholder producers and commercial markets which consequently reduce transaction cost (Johann Kristen et al., 2013). High transaction cost act as the major impediments to smallholder farmer commercialization and it is usually blamed for poor participation by smallholder producers in better-playing markets. In addition, social capital also helps accessing general agricultural support services including credit and financial services, market information, access to markets by creating a link between smallholders and market centers which provides the advantage of alleviating potential exploitation of smallholder farmers by middlemen and other players along the agricultural value chain (Johann Kristen et al., 2013). Finally, the drivers and binding forces of social cohesion including, power, values, norms, trust and network also act as guarantees allowing access to support and facilitate transactions and trading activities between traders and smallholders. Social capital, especially values, rules and norms, and the institutions guaranteeing adherence, such as family heads, elders or chiefs, reduce the risk of default and credit delinquency between contracting parties. This strategy uses social pressure to reduce default and credit delinquency through peer monitoring. Moreover, social capital is more significant as it helps in reducing the risk of default on the part of smallholders through “*collective action*” strategies. This strategy is based on the use of local individuals with in-depth knowledge of the clients as well as the culture, values and norms of the community in order to monitor borrowers closely as means of keeping them on track to prevent diversion of funds and the risk of default (Johann Kristen et al., 2013).



The concept of social relations in this study may be referred to as relationships, networks, connections, affiliations and bonds between two or more people. In these relations, class is often considered as an important factor. Others include ethnic, religious and community groupings. The focal point of this study is on business and micro level relations that are necessitated and driven by power, trust, norms and network (Fergus, 2000). In essence, the approach is to determine the drivers that best shape successful farmer-trader collaboration

These relations are referred to as 'social capital'. The study will look into the nature of social capital at the micro-scale and how it helps farmers and traders to engage in successful collaboration and to reduce the risks of cooperating.

2.7 Empirical Review

Smallholder agriculture commercialization is being considered a key strategy to sustainable reduction of poverty and achievement that surmounts growth in many countries in Sub-Saharan Africa. Johann Kristen et al. (2013) argued that agricultural commercialization for an all-inclusive growth in sub-Saharan African countries which greatly rely on smallholder agriculture as backbone to their economies, requires public-private partnerships to improve smallholder market participation as well as to assist smallholder producers with market orientation.

Alhassan et al. (2018) analyzed the effect of non-farm participation by farmers on the decision to sell five crops (i.e. market participation) – maize, beans, groundnut, rice and sorghum, on the one hand and the quantity sold (level of commercialization)



by farmers who made the decision to sell these crops. They concluded that non-farm engagement by farmers boosts market participation and levels of commercialization in Ghana, implying that non-farm engagement and agricultural commercialization are complements. Developing the agricultural sector thus requires the government to pay more attention to creating conditions that would stimulate participation of farmers in non-farm activities.

The Millennium Challenge Account (MCA) program in Ghana has an agricultural component that is consistent with the country's Food and Agriculture Sector Development Policy (FASDEP). In a study to analyze the trends in maize and cassava production by farm households in Ghana, Edward Martey et al (2012), estimated the levels of commercialization of these two crops. The authors also quantified the magnitude and direction of factors affecting the intensity of commercialization by the farm households using the Tobit regression analysis. The results indicated a higher annual growth rate of cassava production (16%) compared to maize production (6%). The study observes, inter alia, that output price, farm size, households with access to extension services, distance to market and market information determine the extent of commercialization.

However, inferred from the above, it can be observed that, the studies mentioned above (Edward Martey et al., 2012; Alhassan et al., 2018,) suffered a major flaw of "narrowed scope" by focusing mainly on only the commercialization i.e. the marketing aspect without focusing on the necessary determinants and drivers that



impact smallholders (inputs such as access to credit, in-organic fertilizers, agro chemicals etc) from the entire process of production to commercial.

Fergus Lyon (2000) in his study “*Trust and power in a farmer-trader relation: a study of small-scale vegetable production and marketing systems in Ghana*”, however, examined the commercialization process of smallholder farmers. He was able to show how social capital helps managing risks in indigenous marketing systems, facilitates access to finance and to resources and results in inclusive and sustainable smallholder commercialization in a case study of the Brong Ahafo Region of Ghana. He used semi-structured interviews, questionnaire and structured interviews, observation and participatory methods in data collection in a mixed method research approaches. However, the analysis and findings of Lyon, 2000 is that, lack detail the indigenous financial system or arrangement as well as the role of trusts and network in the trader-farmer collaboration in the marketing process. For instance, in times where there is a glut in the local and traditional markets, traders use *bests of efforts* arrangements to assist farmers to sell their produce in the urban markets. This behavior is not based on any contractual arrangement between the trader and farmer, but is built on social capital. In most cases too, the social capital is built based on the relationship and success of previous contracts between the parties. In other cases, when farmers are unable to sell their produce, and when social capital, such as trust and networks, are not much considered farmers are cheated by traders taking advantage of the despair of the farmers. Thus Lyon (2000) provides the only good (albeit superficial) empirical account of the impact of the role of social

in capital trader-farmer relations in Ghana. He convincingly shows how social capital in the form of trust, networks (for information sharing) and local sanctioning mechanisms reduces risk and enables successful smallholder commercialization.

2.8 Conceptual framework

The conceptual framework of a study assists in stimulating the research while ensuring the extension of knowledge by providing both direction and impetus to the research enquiry (Dickson Adom, 2018). The conceptual framework constitutes the researcher's own constructed model that is used to explain the relationship between the main variables in the study and a model consisting of interconnected concepts explaining the relationship between them and how the researcher asserts to answer the research problem defined.



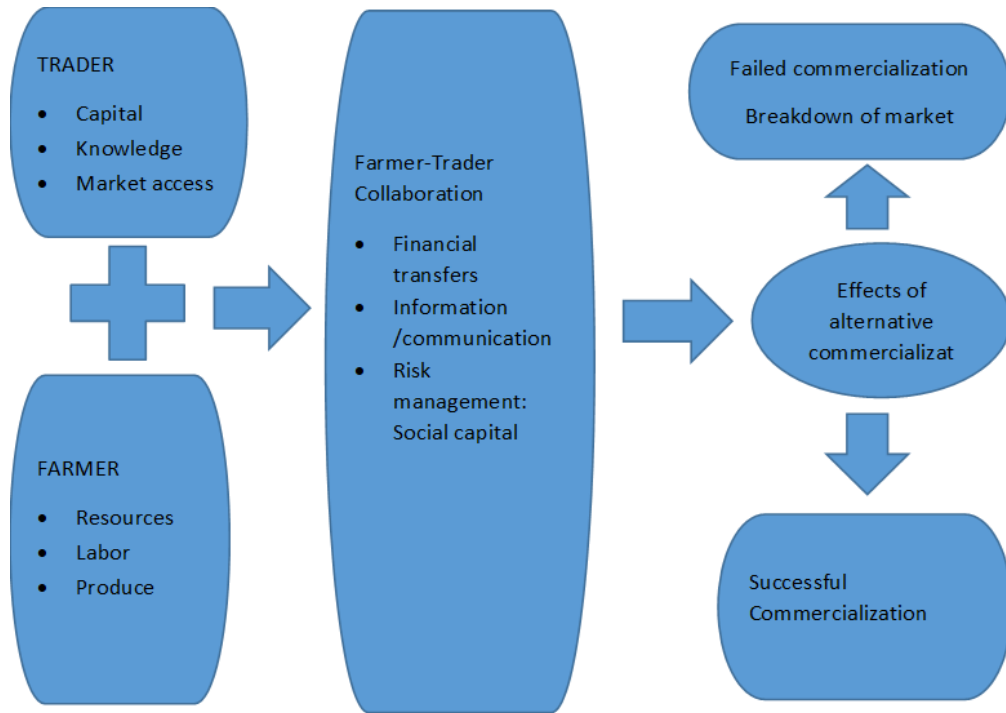


Figure 1 Conceptual Framework

Source: Author's Construct



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This particular chapter presents the methodology used in collecting the relevant and necessary data required to achieve the objective of the study. These consist of the study area, research design, research population, sampling technique or method, the research instruments used to collect the data and methods of data collection and data analysis. The selected area for this study is Mamprugu Moagduri District.

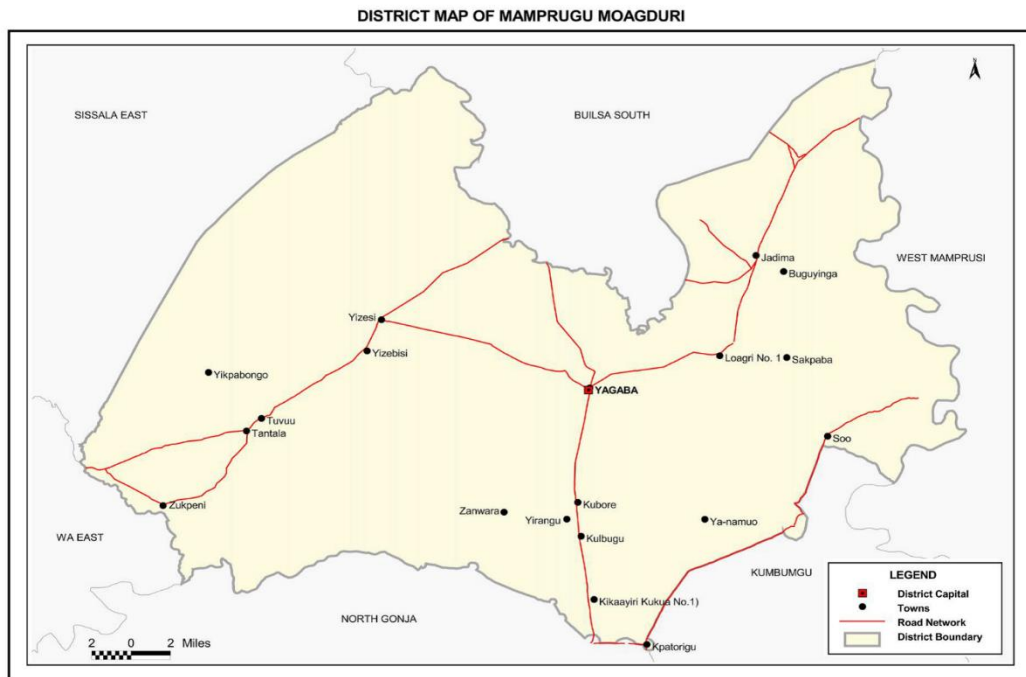


Figure 2 District Map of Mamprugu Moagduri (Research Area)



The research area was selected because it is a typical rural district earmarked by smallholder agriculture and has a long tradition of trader-farmer collaboration. Furthermore, recent agricultural investments and formal contract farming arrangements allows to study the interaction between formal and informal sources of farming capital and its effects on smallholder commercialization. The Mamprugu Moagduri district is one of the 260 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana.



Photograph 1 Mamprugu Moagduri District Assembly Office

Source: Field survey, 2020.

It was created and inaugurated in the year 2012 from the bigger umbrella of West Mamprusi. With Yagaba as its capital, the district has a total land size of 2,121.31 sq



kilometers and shares boundaries with North Gonja District to the west, Kumbungu District to the south, Sissala East Municipal in the Upper West Region, Builsa South District in the Upper East Region and West Mamprusi Municipal in the Northern Region. The population of the District according to 2010 population and housing census stands at 46,894 with 23,439 males and 23,455 females. The district Assembly office as shown in photograph 1 in page 36, is one of the few standard buildings in the entire district as compared to photograph 2 on page 37 that show the home settlements and environment of the people of Yagaba as a result of poverty.



Photograph 2 Home Settlements in Yagaba

Source: Field survey, 2020.



The population of Mamprugu Moagduri District, according to the 2010 Population and Housing Census, is 46,894 representing 1.9 percent of the region's total population. Males constitute nearly 50 percent and females represent just a little above 50 percent. In terms of rural-urban distribution, the district has all of its inhabitants living in rural localities. This implies that the district is completely a rural one. The district has a sex ratio of 99.9. The population of the district is youthful revealing a broad base population pyramid which tapers off with a small number of elderly persons. The total age dependency ratio for the district is 10:1 which is highly dominated by males compared to females. The figure showcased for female is higher as compared to that of males in terms of illiteracy ratio. The employment percentage of the population constitute individuals of ages 15 years and above with 50.2 percent self-employed without employees and 1 percent contributing family workers. Apprentices, domestic employees and casual workers form less than one percent of the employed population. The private informal sector is the largest employer in the district with a percentage of 98.1 whereas the public sector constitutes 7 percent. Again, 94 percent are skilled agricultural. Forestry and fishery workers, 8 percent in craft and related trade and 1.7 engaged in services and sales, 2.8 percent in craft and related trade, and 1.7 percent are engaged in services and sales. About 76.0 percent of the populations aged 15 years and older are economically active while 24.0 percent are economically not active. Of the economically active population, 99.0 percent are employed while 1.0 percent is unemployed. For those who are economically not active, a larger percentage of them (perform household duties (40.3) and, 32.0 percent are in full time education. 20.2 percent are too old or young to work. Four

out of ten unemployed are seeking work for the first time. As high as 97.2 percent of households in the district are engage in agriculture. Most households in the district (98.6%) are involved in crop farming. Poultry (chicken) is the dominant animal reared in the district (GHS, 2010).

The 2010 PHC puts the total employed population 15 years and older in the district at 19,069, representing 40.7 percent of the total population of the district. Majority of the employed population are in the agriculture, forestry and fishing industry (93.5%). The manufacturing industry which is the second largest industry in the district employs only 2.4 percent of employed persons similar to wholesale and retail (2.3%). Water supply, sewerage waste management, and remediation activities as well as the arts entertainment and creative industry are the least employer of people in the district. In terms of agricultural processing, sheanut, beans, groundnut and dawadawa processing are the main activities in the district. The processing is mostly undertaken by women groups (GHS, 2010).

3.2 Research Design

In the context of this study, a narrative research design was used which provides an insight and clear picture of the situation or a population under study by exploring, describing and explaining data. The choice of this design was influenced by the approach and objective to achieve. It involved a thorough investigation or critical empirical inquiry that investigates a contemporary phenomenon in a real-life context and seeking facts of the problem or case under study in order to achieve a better of understanding the general operations and happenings of smallholder





commercialization, trader-farmer collaborations and its impact on rural livelihoods in terms of poverty reduction in the presence of a number of relevant alternative commercialization efforts.

This study is predominantly qualitative. In the qualitative approach, data collection is mostly done through various forms of interviews and through observation because the researcher has little knowledge on the subject matter under study and therefore needs to develop understanding (Cooper & Schindler, 2009). Data sources included semi-structured interviews with traders and farmers to discover the respective drivers that let traders and smallholders collaborate and to settle the curiosity on the preconditions, mechanisms and factors that lead to the failure or success of trader-farmer collaboration. Expert interviews with MOFS-/IWAD staff and focus group discussions with farmers/traders were conducted to assess the impact of alternative agricultural commercialization on trader-farmer collaboration. Participant observation was conducted in market settings and farmer meetings to seek more insights and facts with respect to smallholder commercialization as well as trader-farmer relations and the respective drivers and binding forces such as trust, power and norms and the inherent risks involved in such contractual obligations.

A purposive sampling technique was used in selecting the principal respondents in the village in which the choice was influenced by the availability of the needed data to achieve the objective of the study. A purposive sampling technique enables the researcher to identify the principal respondents with the requisite expertise and character traits in the case under study (Cohen, 2007). Because of this, the study

employed a purposive sampling technique to select the farmers while a convenient sampling technique was used to select the traders in the village market where they wait for their produce to be sold, that is, a snowball sampling of traders and farmers whereby from a farmer or trader, the researcher is connected with another respondent farmer or trader for more information during the data collection.

3.3 Study Population

The population for the study included the Yagaba community while the target population for the study was small holder farmers, traders and authorities and major actors in trader credit and commercialization process such as NGO's in the Yagaba community in the Mamprugu Mogduri district in the North-East region of Ghana. The major economic activity is farming and it constitutes smallholder farmers and traders. The influence of the choice of this community is because it is a farming community predominated by smallholder farmers.

3.4 Sources of Data

Both primary and secondary sources of data were used for the study. The primary data was derived from through semi-structured interviews with traders, farmers and opinion leaders to discover the respective drivers and interest that let smallholders collaborate and as well to settle the curiosity on the preconditions, mechanisms and factors that lead to the failure or success of trader-farmer collaboration. Expert interviews with MOFS/IWAD staff and focus group discussions with farmers and traders was conducted, as well as participant observation, to assess the impact of alternative agricultural commercialization on trader-farmer collaboration as well as





its significance as a major input to widening their scope of production in commercial quantities and commercialization of smallholders, and the inherent risks involved in such contractual obligations. Primary data constitute first-hand information obtained from field research, analyzed and used purposely for the study (Nguyen, 2017). The primary data was obtained through semi-structured interviews conducted with an interview guide and focus group discussions to explore the relevant information pertaining to researcher's interest. The secondary data includes second hand information which already existed and used for other purposes but relative to this particular topic under study. This was obtained from books, reports, journal articles and the internet, which is widely available to provide detail explanations to certain key concepts and ideas in respect of the topic under study.



Photograph 3: The chief of Yagaba

Source: Field survey, 2020.

3.5 Data Collection Instruments and Research Experience

The data collection instruments used to collect the relevant and necessary data required to achieve the objective of the study included:

- a) Semi structured interview guides. The use of this tool allowed for open ended questions to gain insight into a wider range of perspectives.
- b) Key experts and informants interview guides
- c) The use of focus group discussions by way of group discussions

The choice of using focus group discussions was to capture discussions on issues that are not likely to come up in everyday casual conversations. As Morgan (1988) posits, its use also helps the researcher in formulating hypotheses on questionnaire.

Additionally, the use of key informants and constant interviews fosters trust building to allow for deeper insights into issues (Cook and Crang, 1995).

Interviews with farmers were conducted in their houses in the mornings. This preceded the time they go to farm. For the evening schedules, it took place on their return home after a well-deserved rest. Farm visits were made in order to understand the production systems of the farmers. It was observed that farmers cultivate different types of crops at the same time for different purposes including family food security and commercial purposes respectively. Some of the main crop types cultivated by farmers included rice, maize, beans and cowpea.

For the traders, their interviews took place wherever they could be met, including various houses where they deal with farmers directly in fulfilling their respective





contractual obligations. Additionally, village markets were targeted considering that they are areas where traders wait for produce to be sold.

For sellers of agricultural inputs, interviews were conducted in their shops and in their homes in the evenings. Although this could potentially interrupt their normal trading activities, sitting in the shop allowed opportunities for observation.

Generally, the field research was thought provoking and enlightening. Often, I did not have to ask questions, but only had to observe or feel for myself like, for instance the nature of the bumpy dusty roads matched by the rusty and almost crawling public transport leading to Yagaba, the untarred road networks within the community, and most especially the life-threatening road networks to the farms. The only places I found semi-tarred roads or better road networks were ones that have been constructed by IWAD, to make movement to and from their farms easy even though they have better and stronger cars and machines that can stand the poor road networks but on the part of the layman or the smallholder farmer, they have bicycles or very old motorbikes on which they are literally pushing to and from the farms.

There were a few shop keepers who initially avoided me because they believed that COVID-19 could be passed on by a stranger like myself. I was easily identified because of my constant use of my nose mask, something not common in the area. It mostly took Abdul-Hadi, my research assistant I made who guided me around, to explain to the women especially that my nose mask and sanitizer does not only

protect me but them as well, before they could receive me and make time for me or even allow me to get closer.

3.6 Socio-Demographic Characteristics of Respondents

The respondents included 67 farmers, 64 traders, 7 members of the Yagaba traditional authority and 12 staff of IWAD, rounding the total number of respondents to 150. The features of the respondents' demographic data captured for the analysis included: gender, age, level of education, and years of experience in their respective specializations. These specializations include farming years as well as trading years. With those working with IWAD and the traditional authorities, it included the number of years serving in their respective jurisdictions. The demographic characteristics greatly influenced the responses given on trader-farmers collaboration and agricultural commercialization as well as its processes and dynamics in the Yagaba community.



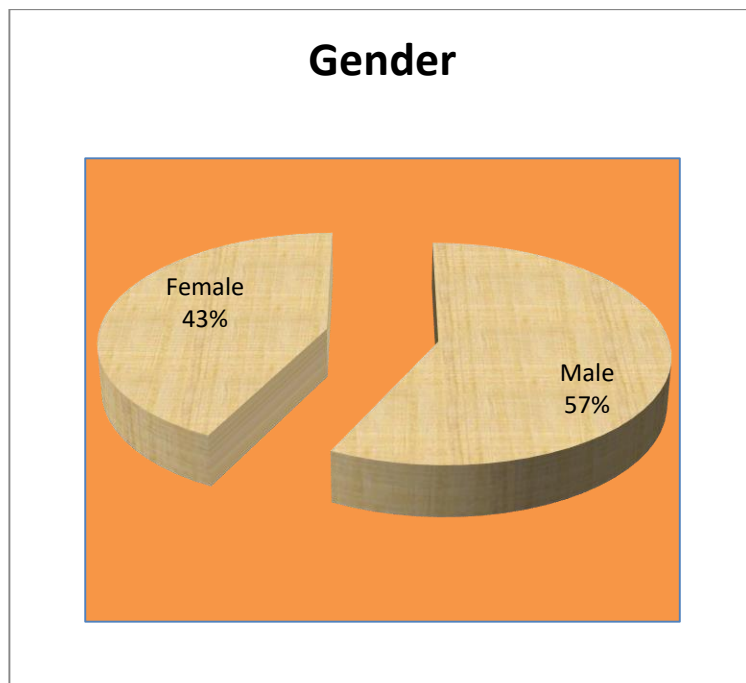


Figure 3 Gender distributions of respondents (N=150)

Source: Field survey, 2020.

In Figure 3, the researcher sought to distinguish the set of gender distribution of respondents who participated in the research based on our biologically determined character traits of being a male or female. Of all people interviewed individually 86 (57%) were males while 64 (43%) were females. In general, data obtained and analyzed indicate that both set of gender participated in the study and data collection process and findings did not suffer any gender bias. Understanding gender differences explains their role in socio-economic and political activities and level of access to resources and their extent of market participation. For instance, it is empirically proven that women have a limited participation in socio-economic, political, cultural and moral activities with limited opportunities and access to resources including capital, land and labor due to social pressure as opposed to men



(Interview with Tindana, Yagaba, West Mamprusi, 24.02.2020). From the field, all the smallholder farmers or farm owners interviewed were all male that is, all 67, all of the 7 traditional leaders I interacted with were all male as a result of the traditions of the land whereby leadership is largely in the hands of men and not women (Interview with Yagaba Naa, Yagaba, West Mamprusi, 24.02.2020). The 12 officers from IWAD I interviewed who represented an alternative model of commercialization in the Yagaba community were all male due to the technically demanding nature of their operations especially with machinery, farm field works and the nature as well as locations of the farms (Interview with Operations Officer - IWAD, Yagaba, West Mamprusi, 03.03.2020) but on the other hand, of the 64 traders interviewed, only 3 were male are doing very well in this collaborative business. The influence of the female dominated nature of trade around this community is informed by myriad factors including; Differences in gender and their respect roles in socio-economic and political activities, access to resources and level of market participation. This fact is empirically proven that women have a limited participation in socio-economic, political, cultural and religious factors activities, limited opportunities and access to resources including capital, land and labor.

In Table 1, the researcher sought to explore the age distribution of respondents who participated in the survey. From the survey, the findings revealed that (63) representing 42% were between the age range of 18-30, (74) representing 49% were between the range of 31-60 whiles (13) representing 9% were 60 years and above. The analysis further shows that the age ranging between 31-60 recorded the highest



(49%) which stands to reason that more than half of the respondents who participated in the research constituted the middle age group. I focused more on these respondents as the middle age group of farmers is highly involved in trader credit and commercialization processes., because of their many years' of experience and easy access to resources. Whereas, the youth are reading courses in schools in cities and nearby towns as well as securing white collar jobs over farming. Also for the youth securing land to farm is usually a challenge especially for customary reasons that embraces seniority and respect of family and communal hierarchies (Interview with Tindana, Yagaba, West Mamprusi, 24.02.2020).

Table 1 Age distribution of respondents

Respondents' age distribution		
Age	Frequency	Percentage
18-30	63	42.0
31-60	74	49.0
60 & above	13	9.0
Total	150	100

In table 4.1, the researcher sought to ascertain the various qualifications of respondents who participated in the survey relative to their level of education. From the findings, (12) representing 8% had tertiary education, (28) representing 18% had



secondary, (43) representing 29% had Basic education and (67) representing 45% had no any formal education. Of the 12 respondents who had tertiary education, one is a husband of a trader who partners with his wife and sisters as a general supervisor and advisor and this gives them a better outcome from the farm to the market. He is learned in agricultural extension and he is able to command what he actually wants to be done on the farm, regularly supervises the farm and sometimes works with the farmers. His sister who also has an HND in marketing, handles the branding and packaging of their produce and this keeps them at the top of other traders in the markets.

Table 2 Respondent's level of education

Level of education	Frequency	Percentage %
Tertiary	12	8.0
Secondary	28	18.0
Primary	43	29.0
Non	67	45.0
Total	150	100

Source: field survey, 2021

Most of the farmers, who grew up in the rural environment of Yagaba, where school enrolment has only increased in the 2000s, had no formal education or only basic education. However, most of the traders, many of them from the regional capital Tamale, where school attendance even among girls has been much higher



historically, most of the traders had basic or secondary education. This proved very beneficial for them, since most of these traders could keep documented records of their previous and current transaction, make analytical decisions or checks on production and commercialization. They were also much more versatile in the use of mobile phones, which makes communication faster and more flexible. Thus, they can better monitor market developments but also better monitor the farmers they collaborate with.

The field experience clarified the significance of education in determining how well the educated or the highly educated are able to understand and use technology like mobile phones in enhancing easy and flexible communication and monitoring of production and marketing as well keeping records of collaboration business transactions and being able to think critically and practice with reasoning to get better and right produce for the markets to meet the demands of the markets and also to maximize profit or in the worst case avoid the incurrence of any form of loss. A trader in an interview said:

“Education plays a significant role in our trade activities in terms of negotiations and bargaining so most of us without formal education often involve our husbands or any other relative with educational background whenever need be”. (Interview with trader, Cargo station - Yagaba , West Mamprusi, 27.03.2020)

Table 3 Respondents' occupation

Participants' occupation	Frequency	Percentage
Trader	64	43.0
Farmer	67	44.0
Staff of IWAD	12	8.0
Traditional authorities	7	5.0
Total	150	100

Source: field study, 2020

In Table 3, the researcher presents the respondents' occupation relative to specialization of work. Of the respondents interviewed, (64) representing 43% were traders, (67) representing 45% were farmers, (12) representing 8% were executives of an NGO engaged in alternative commercialization and (7) representing 5% were traditional authorities. Representatives of the different groups were interviewed, because they play different roles in the trader-farmer collaboration process towards a successful commercialization and poverty alleviation.

In 4, the researcher sought to explore respondents' years of working experience within their respective occupations. From the survey, the findings revealed that (9) representing 6% had less than a year experience; this group of respondents were especially traders and farmers who from their own observation and analysis of the happenings around their colleagues in trader-farmer collaborations and have decided to produce under the same model. 47 respondents, representing 31% had between 1-5 years, 52 respondents representing 35% had between 6-10 years while 42



respondents representing 28% had more than 10 years' experience within their respective specialization of work. The analysis further shows that respondents have different years of working experience which clearly demonstrates their commitment and dedication towards promoting the socio-economic development of the community and livelihood impact of the people



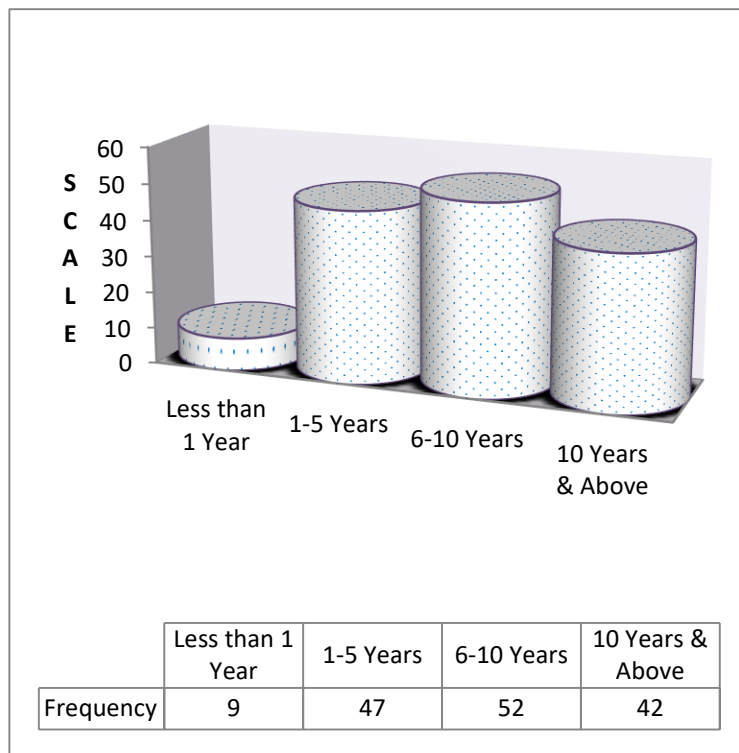


Figure 4 Participant's years of professional experience

Table 4 Years of experience in different professions

Years of Experience	FARMER	TRADERS	IWAD	Traditional rulers
Less than 1 Year	5	8	0	0
1-5 Years	20	23	7	0
6-10 Years	27	20	5	0
10 Years and Above	15	13	0	7

Source: Field survey, 2020

In Figure 4 Participant's years of professional experience



Table 4, the respondents' years of experience is broken down within their respective occupations or the roles they play. It reveals that the traditional leaders have been in the knowing playing their roles in governing the affairs and customs of their land for more than 10 years.

In Figure 4 Participant's years of professional experience

Table 4, it is revealed that the respondents, as far as formal agricultural commercialization mainly brought about by IWAD, are mostly individuals who have performed their roles with IWAD for between 3 to 7 years, having the research officer and the and the main operations officer being experienced in the institution for seven years and the 5 field officers spending six years each while the administrative staff and the other two operations officers have been at post for about three years each.

3.7 Data Analysis

Much of the preliminary analysis was in the form of written notes on the side of transcripts, or noting ideas and memos. Data was coded and interpreted in order to explore the relationships, drivers and perspectives of trader-farmer collaborations in smallholder commercialization process. Much of the preliminary analysis of the data collected was in the form of notes and memo writing and further coded, synthesized and analyzed in order to dive deep and explore in detailed the respective drivers and

perspectives of inclusive smallholder commercialization and how this impacted on rural livelihoods in terms of poverty alleviation. Prior to data collection, appropriate questions with respect to the subject matter were designed and piloted and afterwards, it was subjected to further adjustment and re-modification to help collect the relevant data required to achieve the objective of the study. The researcher employed personal observation and inductive approaches that is based on qualitative data that stimulates further exploration, understanding and interpretation of local marketing and commercialization strategies such as *bests of efforts* as well as how the *future and forward* contracts work in the trader-farmer collaboration process.



CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with detailed analysis of the data collected from the field research. It provides descriptive statistics including tabulation in charts and discusses the findings from qualitative interviews and observations. The research findings, analysis and presentation were focused on trader-farmer collaboration as well as its processes and dynamics in Yagaba community in the North-East Region of Ghana as a case study. The findings and analysis of this study is further emphasizing the role and contributions of social capital as well as the factors that shape the trader-farmer collaborations towards a successful commercialization in the socio-economic development and poverty alleviation in the rural communities. It will be organized along the research questions.

4.2 Driving Forces of Smallholder Trader Collaboration

4.2.1 Farmer Perspectives and Strategies

From my interaction with farmers (Farmer group discussion, Yagaba, West Mamprusi, 22.02.2020), rice production is really doing well because it is recounted to be a major cash crop and most lucrative and it is one of the major cash crops produced in large scales that provides a good record of income for farmers, followed by maize. The soil in the community is rich in nutrients that makes it suitable for rice production. Poultry, sheep, goat and cattle rearing is widespread because of the ample pasture available.





Photograph 4 Cattle rearing in Yagaba

Source: Field survey, 2020.

Therefore, rearing of animals provides a good source of cash income for farmers. As seen in photograph 4 above, cattle rearing is a major agricultural venture in yagaba. Shea-nuts are also doing well. They are harvested from shea-trees that grow wildly on the vast arable land. They are processed for shea-butter as a source of income for the women. Moreover, dawadawa production was also noted as a major lucrative source of cash income. The seeds are harvested from the dawadawa trees in the dry seasons and undergo processing to obtain the aromatic powder which is either sold for income or used in the family as cooking ingredient. The findings revealed different factors that influence the crop choice and strategies of production and diversification of the farmers in the community. These factors include the demand





and supply for individual products, rainfall patterns, nature and topography of soil, household size, and the risks factors involved in the production and commercialization process.

In all, 67 farmers were interviewed constituting both individuals and farmer groups inclusive relative to the production process, access to the factors of production and the crop types as well as factors that shape the crop choices and the risks involve.

Among the 67 farmers interviewed, (7) individual farmers representing 5% said they operate on family lands which are continuously cultivated every year under rain-fed farming system with a progressive decline in soil fertility. They reiterated that the right of ownership and access to land in most rural areas including the Yagaba community is basically determined by three major factors: family's long history of settlement, kinship authority (royalty) and social ties. This makes it difficult to expand the size of their lands or procure new ones to increase their production capacities. The findings revealed further that the land tenure system, and size of household are the preconditions and major determinants that influence the farming model combined with the lack of access to agricultural support services as the major deterrents to productivity, market participation and successful commercialization.

Most of these farmers have been farming since the days of Dr. Hilla Limann, mainly in rice, maize and cowpea but the headache has always been about capital and labor and having to find ready markets.

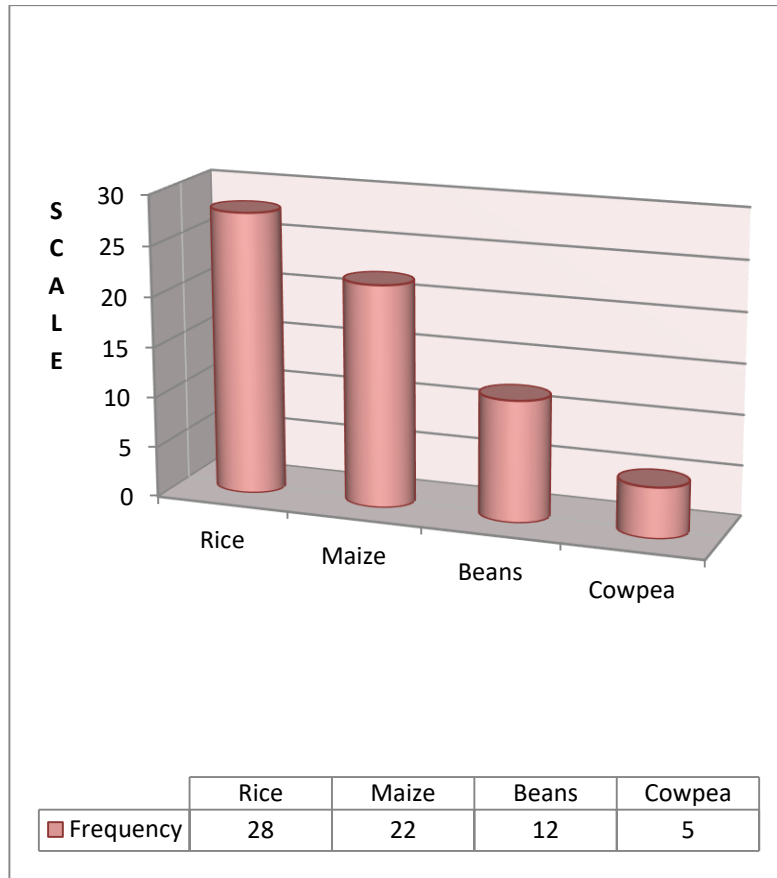


Figure 5 Main Crop types cultivated by Farmers in the Community

Source: field Study, 2020.

In Figure 5, the researcher sought to ascertain the various crop types grown by farmers. From the survey, the findings show that (28) representing 42% is the proportion of rice cultivated, (22) representing 33% is maize, (12) representing 18% is beans and (5) representing 7% is cowpea. However, results from the findings is obviously skewed in favor of rice production which constituted the largest crop type produced by farmers in the community. It is recounted by farmers to be a major cash crop and most lucrative followed by maize. The findings further revealed the factors that informed the crop choice to include; the soil in the community which is quite



suitable and in effect influence the crop choice of production and diversification of the farming models in the community. Moreover, other factors include; demand and supply forces, rainfall patterns, nature and topography of soil and household size and the risks factors involved in the production and commercialization process. The local farmers decide what they want to produce at what time of the year depending on their farm size and soil texture and fertility, the affordability of cost involved and if it is not for the purpose of sustaining the farmers family only, then the farmers consider the market demands as well and this then boils down to the connection with the traders.

As can be seen from Figure 4 Participant's years of professional experience

Table 4, 42 farmers out of the total farmer respondents of 67, are very much experienced in their fields, even with some mentioning to be farming since the times of former President of the republic of Ghana, Dr. Hilla Limann, as farmers and also in collaborations with traders especially traders in the city or town markets who will support them to commercialize their production, and to serve a ready market and maximize profit. The years of experience of these farmers have in the long run influenced their choice of crops at different times, on different plots and at which period of the farming season. They have been on the fields for several years and so they get to decide whether to produce maize, cowpea, rice and other vegetables, considering the land and its fertility and soil texture as well as the weather and rainfall. More experienced farmers stand better chances of getting to collaborate with



traders. Traders prefer to collaborate with experienced farmers unless these have negative records of unsuccessful collaborations, or are not specialized in the produce a trader may be interested in. However, if the traders' interest rates may not be favorable, or the land size of the farmer cannot yield the number of bags of produce the trader requires of the farmer, both sides may decide not to collaborate.

It is emphasized that since most of the commercial production is largely, according to the study findings, financed by the traders, smallholders switch to produce what the financier is interested in and not exactly what the farmer is a hundred percent very much interested in producing. The study findings have revealed that due to the poor roads, connecting with a market is challenging and so when a farmer has a trader he does business with, he would not want to break the relation and so will comply with the farm demands of the trader since he (the farmer) is assured of a ready market after a successful market. The financing of the production also, from this study, influences the choice of crops to produce since the trader is financing and will decide on what to finance although weather, rainfall and soil texture too are notable factors.

The collaboration with traders is cherished thanks to trust and commitments that is birthed through social relations and under social capital, as smallholders are meeting a number of problems in the commercialization of their production.

"I have been here since the time of J.J. Rawlings and every other farmer can testify to what I am telling you... our road network is our major problem because we have the men [labor] and our lands are very fertile. But to get

investors travel here will be very difficult because of the roads. And even to have us farmers travel to just Walewale to buy agrochemicals is another road issue, not to talk of having to carry large quantities of our agricultural produce to the bigger markets in the towns and cities to sell to make money. That is why the place is not fast developing and we are not making more progress in agricultural commercialization by ourselves.” (Interview with old farmer, Yagaba, West Mamprusi District, 27.03.2020)

Another farmer corroborated:

“I grew up a maize farmer. Honestly. I cannot remember when. But I started operating on my own when I lost my father long time ago. My entire family including my wife, are all laborers on my farm because that is what we survive on. When we harvest, every family member takes the maize to different markets to sell and raise cash for us to buy other things. My brother introduced me to a lady from Tamale and willing to grow my production rate by partnering with me and providing me with inputs especially money to pay labor and security because I made her understand that there has always been interference by herdsmen and cattle invading and destroying farms as well as instances of charcoal producers setting our farms ablaze. Since this relationship, I acquired more land to produce more because she seems to have lots of buyers in the market and I as well as my family also have our buyers. I do not ever want to get a problem with her because she has been



very helpful". (Farmer interview, Yagaba, West Mamprusi District, 27.02.2020)

These old farmers shared their long-term observation on the obstacles to agricultural commercialization and it boils down to the connection where we have smallholder farmers from Yagaba wanting to collaborate with traders from the towns and cities so they could fund the production and help them to gain market access. This usually leads some farmers in this to offer better prices to attract the traders to buy from them. If they could afford logistics, they could transport their produce out of the area and sell it at better prices. But since there are logistical challenges and the bad roads, they agree to sell at lower prices.





Photograph 5 Bad road network

Source: Field survey, 2020.

Another issue he stressed, based on his years of experience in agricultural production and collaboration with traders, is the cost of chemicals and logistics. Therefore, farmers team up to solicit for and strike better deals with traders especially so they could also maximize profit. This is by means of incorporating them into the commercial value chains whilst granting them access to resources and support services through contractual obligations with the traders or other partners.

From the individual interviews, the findings revealed that some small holder farmers were organized into producer groups or associations called *Suhuyini* group and *Tigbaborika* associations respectively. The *Suhuyini* (One Heart) group is made up of (30) members representing 81% and (7) executives, representing 19% respectively whilst the (We are also in need) is made up of 32 members representing 84% and 6 executives representing 16% respectively.

The farmer groups make collective decisions on behalf of all member farmers especially when it comes to pricing of produce in the research area as well as negotiating with potential partner, for instance traders, who may want to go into a collaborative production with the entire group or members of the group be it an individual or a private company or institution.

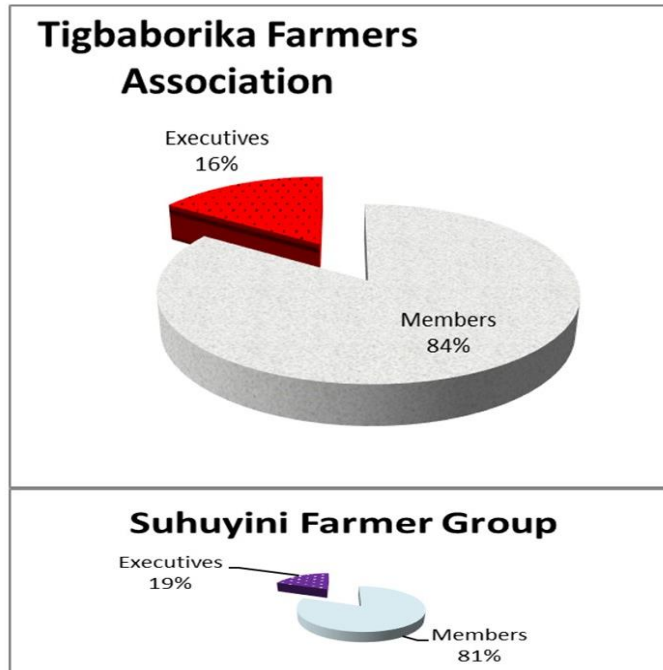


Figure 6 Farmer Associations and their Executives

Source: Field Study, 2020

Usually, the farmer groups only steps in a collaboration deliberation, if they are involved. For an instance with rice production, the soil and rainfall in the Yagaba community is very good for a competitive yield especially when the rainfall is constant, then a negotiation is done to secure a combine harvester from the partnering traders so they can have a smooth harvest and better yield for the market to ensure profit at the end.

“Because of lack machinery, especially when it comes to harvest, the cattle destroy our farms and we run at a loss and so, to stay away from complete loss, we take monies from these traders to hire harvesters and other machines



to cultivate” Farmer interview, Yagaba, West Mamprusi District, 27.02.2020).

The farmers in this area often bridge some rules especially in pricing and selling but this could sit on top of poverty that affects logistics especially because if they could afford logistics, they could transport it out of the area and sell the produce at better prices.

“We have no or very slim chances in bargaining over prices since we are eager to sell and fend for our families and slide away from poverty” Farmer interview, Yagaba, West Mamprusi District, 27.02.2020).

But since there is a challenge on logistics, ‘our roads affect transportation’ as seen in photograph 5 in page 63, they remain in the community with the produce and then with the help of mobile phones, call their relatives in the cities and towns to connect them to buyers.

A major factor frustrating farmer, is the lack of market access, followed by the cost of chemicals and logistics and so they team up to solicit for better deals with traders so they could also maximize profit. According to Johann Kirsten; 2013, inadequate education and literacy levels may result in poor negotiation and bargaining. The traders in turn incorporate the farmers into commercial value chains whilst granting them access to resources and support services through contractual obligations with the traders or other partners. A trader explained:



“The reason we collaborate with farmers is to provide them inputs to expand their production capacities as well as ready market for their produce from which we also make profit after we move the produce to urban markets for sale. In this process, we both derive a mutual benefit by generating income to support ourselves and our families”. (trader interview, Yagaba, West Mamprusi District, 28.02.2020)

When it comes to the commercialization of their production, smallholders will often listen to the advice and demands of the traders they collaborate with. Trader-Farmer collaboration and agricultural commercialization boosts labor productivity and increases income and living standards (T.S. Jayne et al,2012). They know which (type and variety of) crops should be grown in order to meet high demand and realize good prices:

“I grow more of maize but some years I do rice depending on my partner’s suggestions. I listen to the suggestion of Alhaji [his collaborating trader] because years ago he used to come here with some NGO’s to teach us agricultural things and even donated some cutlasses and safety boots to us. He supervises and checks on our farm regularly and helps on the farm as well and this makes my children work harder because they say they want to be like him.” (Farmer interview, Yagaba, West Mamprusi District, 27.02.2020)





Another farmer explained:

“I am currently in business with a woman from Tamale. From what I know, I am not the only farmer she is working with and so I do my best to deliver because she helps a lot with my family’s upkeep especially my girls. She gives them clothes, soaps and even sanitary pads. She sometimes sends her brother, an old farmer, to check on the farm and he gives me ideas and ways to handle the farm too”. (Farmer interview, Yagaba, West Mamprusi District, 27.02.2020)

But sometimes the collaboration between traders and farmers in agribusiness faces challenges; adverse agro-climate and political conditions as well as declining soil fertility, pest and disease outbreak and climate change constitute major challenges in rural settings (Doward & Kydd,2002) as a farmer disclosed how his collaboration with a first timer trader in this collaboration came to an end although he found this relationship very beneficial from start till they got to when they had to transport the produce to the market where she sells;

“We had an issue with transportation of the bags of maize to Tamale market because it was too expensive and the drivers will not consider due to how bad the roads are and so she decided that I sell everything on my own in bits and then we do not engage in any further collaborations. I could tell she was not happy and even now that the roads are a bit better, she still finds the cost of transporting the produce to Tamale very expensive and so she will buy in

wholesale at the market and do her retail business”. (Farmer interview, Yagaba, West Mamprusi District, 28.02.2020)

Some relationships between the traders and farmers goes beyond on farm activities and support. With reference to the theory of social capital, according to Moore (1997:313) social interaction and social relations promotes meeting the needs and demands of both foreign and domestic market. It embraces family and fosters the connectedness between traders and farmers and this goes in the long run to motivate and influence detailed and successful harvest in order to fasten the relationship, yield a good harvest and then increase profit. But while others are having a great time in this business, others too are on another side of the story. In some cases, communication, understanding and respect towards diversity of ideas challenges the relationship and its success;

“I used to be a large-scale rice farmer until I lost my farm to fires. I decided to switch to maize farming because I have a family to take care of and I was considering to collaborate with some traders so they support me but my friends who work with them sometimes complain that they are being disrespected and called cheats by the city women”. (Farmer interview, Yagaba, West Mamprusi District, 28.02.2020)

From the above it should have come clear that farmers face a number of obstacles – a lack of capital for agricultural inputs, poor road networks and market access, a lack of agricultural support service – making it difficult for them to commercialize their



agricultural production. Where the smallholder farmers demonstrate potential, capabilities and willingness to go commercial, they are still shackled by the lack of access market information, agricultural credit and lack of access to input markets for high yielding seeds and organic fertilizer (Johann Kristen et al,2013).Therefore, collaborating with traders and engaging in contract farming has been important in getting access to capital, market access and knowledge about new crop varieties, production methods and market demand. As rain-fed agricultural production under the existing agro-ecological conditions is risky and yields may vary this – together with selfish behaviour of individuals – can put farmer-trader collaboration at a risk. Farmers thus try to carefully manage the relationships they engage in with traders. Maintaining reputation and trust is essential and some of the farmers have engaged in farmer collaborations that help keeping up the social capital by intervening in individual trader-farmer collaborations at times of stress.

4.2.2 Trader Interests and Strategies

In the research area, the farmers dominate in production although they collaborate with the traders to finance production and provide market access. The traders on the other hand are major financiers, either directly by cash or by making available other factors of production such as paying for extra labor, machinery, seed and integrate the farmers they are working with into regional value chains.

The traders, in turn go into partnerships and collaborations with the local Yagaba farmers, despite the threats of their profit or capital, to meet the demands of their costumers - be it retailers, food processors or individual households. They provide



farmers with the capital to afford machinery, agrochemicals, expand their farmlands, pay for extra labor and yield better and more marketable harvest. They also serve the farmers with a ready market for the sale of surplus produce. Easy access, easy administration and timeliness over banking institutions and this results from social capital and made use of in trader-farmer collaboration (Fergus,2000) . Prices include the agreed interest rates. They do so at the risks and shocks of on-farm disasters such as floods, poor yields, droughts, decline in land fertility, fire outbreaks, and even pest and disease attacks which may threaten the repayment of loans and the relationship between the trader and the farmer. As one trader explained:

“I went into agricultural trading a few months into marriage about some years ago. My sister-in-law was into it and I saw how lucrative it was because she is a widow with four children yet she is able to handle all her financial responsibilities. I told her my interest to join the business somewhere in 2007 or 2009; I am not too sure. She was is into cola nuts but my interest has always been into maize and so she introduced me to her supplier’s brother who is a small scale maize farmer. He has been lifesaving since we met and even at times when he is unable to produce up to my desired quantity, he is able to get more from other farmers. But in the past three to four years, I have been able to give him enough money to pay labour and get security for the farm because sometimes the herdsmen invade the farms with animals and also in one way or the other, the charcoal producers cause fires to destroy our farms. Since we started with providing monetary support, production has

really increased and it has been stable because he has more hands on the farm and during harvest, I pay for machines to help foster that. Even with packaging, I send him sacks and threads to ensure neat packaging for my buyers. Sometimes, the farmer prefers to be paid in cash at the end of my sales although I allow him to take some of the produce for his family. At other times, he also brings buyers and makes his cash directly from the farm; I don't have a problem with it if only I get the number of bags I need for my household and my buyers". (Trader interview, Aboabo Market, Tamale, 17.02.2020)

But most traders interviewed have been in business for a while now. More than half of the traders, that is 33 out of 64, are being in operation for more than six years and engage in trader-farmer collaboration and thus bring about agricultural commercialization (see Figure 4 Participant's years of professional experience

Table 4). The longer these traders have been in business, the better they get to know what produce to demand from the farms to serve the market demands so as to increase profit. Also, the number of years of experience of these traders according to this study, influences the level of trust and relationship between the farmers and the traders.



**Table 5 Interviews with different categories of traders**

Traders	Frequency	Percentage
Freelance rural traders	24	37.0%
Freelance urban traders	14	22.0%
Interlinked rural traders with farmers	19	30.0%
Interlinked urban traders with farmers	7	11.0%
Total	64	100%

Source: field survey, 2021.

Conducting the research, the researcher sought to explore the marketing system as well as the contractual arrangements and binding forces that shape the trader-farmer collaboration. From the survey, 14 respondents representing 22% individual traders were interviewed as the main actors in the trading activities to include freelance urban based traders, 24 representing 37% were freelance rural traders, 19 representing 30% were urban based traders linked with small holder farmers whilst 7 representing 11% were rural traders linked with small holder farmers respectively. Most of these traders were linked with some of the farmers based on contractual arrangements whilst others are *freelance traders*.

Apart from individual farmer-trader collaboration, the findings also revealed new contractual arrangements between traders and farmers in the trader-farmer collaboration process. Under these new arrangements, most of these urban and rural



traders were linked with some of the farmers through other people acting as *brokers* who play an intermediation role between small holder farmers and traders due to their close-connectedness with the farmers, in-depth knowledge of the rural market structure, as well as information on demand and supply conditions and price of the produce in the rural markets. In these arrangements, the urban traders do not have a direct relationship or collaboration with the smallholders except through the *brokers* (intermediaries). Traders with these arrangements would advance money to the *brokers thus, third parties who step in as intermediaries to* buy the grains or cereals in advance from farmers at the point of harvesting and processing, collect them in bulk and the trader later comes for them and transport them to the urban markets. Most of the traders opted for this type of arrangements because they have a low risk tolerance:

“I have been in this market since Kufuor won his first term of office in the year 2000 but I always buy from farmers who have harvested and are selling although I have heard about the collaboration business with farmers but I am usually scared to join because even with those we buy from, sometimes they want to cheat me. Also, the stories I hear in this market even scares me; Like some of the women will just wake up and hear from her farmer that the farm has been on fire or water has destroyed everything; as for me I am hypertensive, I cannot take such news so whenever someone brings me this offer, I tell them I will think about it, then I pack my belongings and run...I

get lots of people recommending each time even groups but me I can't.”
(Interview with trader 6, Aboabo market, Tamale, 03.10.2020)

On the other hand, some of these traders including both rural- and urban-based had a direct link with the small holders through contractual arrangements:

“I sell cowpea, beans. Any kind of beans. I work with different farmers almost at the same time. I took after this business from my mother as an only daughter and my six brothers are all farmers. They used to harvest and I sell in the markets until I got married and belonged to another family. So I work with other farmers now, but it is always almost like I am on the field with these farmers because they tell me everything. I get to verify from my brothers because they also belong to the farmer groups. I grew up on beans farms so I know very well about the varieties. My farmers are the best, they deliver very well and they even package everything neat and I treat them very well too. The women in the market say it is because I am strict that is why they deliver to me I am not too sure about it, I think it is because I have known them for long and my brothers know them even more and their families as well. Moreover, I make sure I send their wives and children clothes and soaps and cooking oil.” (Trader interview 13, aboabo market, Tamale, 20.11.2020)

In this case, the traders sponsor the smallholder farmers with inputs (capital) including: viable seeds, chemical fertilizers and agro-chemicals whilst the farmer provide the land and labour and, in some occasions, too, the traders finance



everything including the labour cost with a guaranteed number of bags, which include some interest for the provision of the capital, to be paid by the farmer upon successful harvest based on the agreed terms and conditions of the contract.

As discussed in literature that focused on commercialization, that is , the marketing aspect, without necessarily tackling the determinants and drivers that impact smallholders access to credit, inorganic fertilizers and agrochemicals (Edward Martey et al,2012 & Alhassan et al 2008) , the contracts, in turn, are giving farmers a guaranteed market. If the farmer is able to produce in excess, the surplus is owned by the farmers and they have the discretion to sell to their collaborating traders or to side-sell. However, from the findings, traders also recounted that in case of crop failure, the risk is shared between the trader and farmer. In these arrangements, the social relational factors that shape the trader-farmers collaboration include: *network, trust, power and commitment*.

From the survey, the findings also revealed another new trading and commercialization arrangements between traders and farmers in the trader-farmer collaboration process. This new arrangement is called “*best of efforts*”. From a trader interview 4 on November 20, 2020 in the Aboabo market in tamale, a trader stated that,

“A lady I buy cooking oil from, came with a really neat variety of beans. She told me it was produced by her brother but on their family farm on a small scale. Not so much. I bought the little she had and my customers loved it. I

met her brother through her. They have a very small family but it looks like they all depend on the family farm. And so because their outputs are limited, I do not involve myself too much in the production process but once they harvest, I transport the produce to the market and sell, slice my profit and send him the rest of his money but sometimes when finances are a bit tough, I foot that part of the cost mostly with agrochemicals while they handle the seed, labour and land. The children in the family are very hardworking and respectful so I sometimes buy those school bags and other clothes for other family members.” (Interview with trader 6, Aboabo market, Tamale, 03.10.2020)

In this type of arrangements, the trader does not sponsor the farmer in the production process, but steps in to assist the farmer to dispose or sell his produce by moving them to the urban markets. This helps the farmers in times of glut and low demand in the rural markets. Profits are then shared based on the terms and conditions of agreements between the collaborating parties. This type of arrangement is primarily embedded on *network, trust and commitment*.

Moreover, another arrangement of the trader-farmer collaboration included *futures and swaps*. Under the *futures* arrangement, traders advance credit to farmers in advance for a particular number of bags of the produce whilst the crops are still on the field but guaranteed to be supplied immediately after harvest. In this arrangement, there is a double coincidence of interest: the farmer needs capital for farming and the trader wants guaranteed access to agricultural produce:



“For about four years I used to buy beans in large quantities anyhow and then come to sell to other buyers here in Tamale and sometimes in Yendi and Savelugu. Sometimes I get very nice varieties to buy. But other times, not too much of the market’s favourite. So this influenced me to speak with one of the farmers who on two occasions got me a particular variety that even myself, I could tell that it was very neat and free from lots of chaff. He assured me he could get more for me but it would come at increased production cost. I decided to pay for the seed, but also put my conditions across that he should not sell any beans directly to other traders from the same markets I run my businesses, but should only supply to me. He did not agree to this because he mentioned that he already had some loyal traders he dealt with so upon hearing this, instead of having to pay for the entire production, he and I paid partly each for fertilizer since he takes a portion of the produce too.” (Trader interview, Aboabo market, Tamale, 23.11.2020).



They both come to mutual terms and conditions of agreement relative to the amount needed by the farmer with an agreed price of the produce which determines the number of bags of the produce to be supplied to the trader after harvest. However, the pre-determined price of the produce is fixed and not subject to changes irrespective of the volatility of the market price. In this type of arrangements, the fixed price is termed as *forward* with the traders as the long-position holder. In this type of arrangement, the trader becomes a *speculator* relative to the outcome of the future price of the produce. The price could go up or down depending on the market

forces which are the risk involved in this type of arrangement as recounted by traders. Another risk is that, in some cases, the farmers default in honoring their part of the contract by side-selling the produce and therefore fail to supply the produce on the agreed date as was agreed on per the terms and conditions of the contract which is one of the risk factors involved in this type arrangement.

Moreover, other arrangements discovered in the trader-farmer collaboration process included *swaps*. In this type of arrangements, farmers in of seed or inputs, but also household or luxury items, are provided with these by traders in exchange for an agreed number of bags of farm produce. This type of arrangements does not involve any cash transfer but an exchange of a commodity for another between traders and farmers. In this type of arrangements, the trader neither sponsors the farmer nor buys the produce with cash but provide farmers with certain commodities including: TV-sets, cloths, bicycles and motor-bicycles based on farmers request in exchange of an agreed number of bags of farm produce. Based on this type of arrangement, the price of the item supplied by the trader determines the quantity of bags of the produce to be supplied by the farmer relative to an agreed price. This type of trader-farmer collaboration is a direct exchange based on certain terms of negotiations and agreements between the parties. This type of arrangements offers advantages of improved market access for the farmer, while it reduces transaction costs (e.g. time searching and negotiating for produce) and grants secure access to produce for the trader. Here again risk of production failure and default exist. While the first cannot be mitigated





and traders and farmers may agree to share the possible production risk, farmers and traders try to address the problem of default by relying on social capital.

In most cases, the trust is built based on the relationship and success of previous contracts between the parties. In other cases, due to the desperation of the farmers, relational factors or forces such as trust and network are not much considered and the farmers cheat the traders. Which is a risk factor involved in this type of arrangement. The trader finances all the cost incurred in the marketing of the produce until they are finally disposed and the trade is settled between the parties.

This section addressed the interests and respective drivers that stimulate the trader-farmer collaboration process. It is discovered on the part of the farmer that they get support to expand their farms since the traders provide financial support to afford labor, cost in chemical and seed supply, securing machinery especially during harvest and a ready market after harvest. To the traders, they get to have a ready supplier, specificity of crop variety is always on point and timeliness to suit their business schedules. In these arrangements, traders and farmers derive mutual benefits in promoting agribusiness, ensuring sustainable food security and consequently income generation which in effect progressively and sustainably alleviates poverty among rural dwellers.

However, different types of contractual arrangements in the trader-farmer collaboration are neither legally backed by law nor does any formal documentation exist. Contracts can thus not be formally enforcing but traders rather social capital to



make sure they can profit from their collaboration with the farmers. So it is interesting to understand which factors mitigate the inherent risks.

4.2.3 Social Capital and the Management of Risks in Trader-Farmer Collaboration

Trust is a major aspect of social capital. Trust works better when there are no doubts in the other parties or associates in this study, between the traders and the farmers, despite risks and possible uncertainties where a party may take advantage of a partner in the collaboration. According to Gambetta (1988, p. 217), the embracement of trust relies on they believe that the other parties will behave in accordance to the agreements they have made. The traders who have been in the collaboration business especially for more than 10 years have little or no doubts about the farmers they work with and hence have easy flow of their produce from the farms to the markets. They have become almost members of the farmers' families they operate with and they understand their production better. The very much experienced traders who have benefitted from successful farmer-trader relations, receiving what they expect from the farms, are those who subsequently help to connect new traders, who have the fear to get into the financing of the smallholder farmers in Yagaba. They link them up by making use of the social capital and networks developed with the smallholder farmers in the Yagaba, so the newcomers can also engage in collaboration agreements:

“My sister in-law has been in this business since I got married to my husband [...]. My first child is 14 years old now. [...]. She introduced me to this

collaboration with the farmers and I did not doubt it because I see how well she does in the market especially with the way her maize especially is usually free from all this chaff and pest in the sack”. (Trader interview, inside a cargo vehicle, Fumbisi-Yagaba road, West Mamprusi District, 23.02.2020)

This excerpt from an interaction I had with one trader in a truck to Yagaba from Fumbisi, underlines that social capital comes from social relations and networks. In other parts of the interview, she mentioned that her sister helped her to find a farmer for collaboration who is related to the farmer working with her. She relied on that service knowing that social relations and networks built over the years of influences the social capital because the more social capital is used, the stronger the bond and the reliability of collaboration.

The traders, especially those who have been in business for over 10 years, have attested to the fact that their working relationships with the farmers continue to improve every year of successful collaboration and the continuity in transactions, especially if there are no misunderstandings.

From the survey, the researcher sought to ascertain the role of local authorities in the trader-farmer collaboration process in the Yagaba community. From the findings, the local authority interviewed included the chief, the *Tindana* (the chief priest) and five (5) other elders of council. On local authority interview on small holders farmers, the chief (refer to page 42 photograph 3), recounted that the Yagaba community is





predominantly a farming community primarily smallholder driven and more diversified because, others are more into cattle rearing. The chief reiterated that:

“As for farmer’s relationship with their partners, usually it is done through the farmer groups which we are aware of. They have days they meet to discuss and make decisions. The “tindaana” is aware of everything they do.”

(Interview with Yagaba Naa, Yagaba, West Mamprusi District, 22.02.2020)

Most of the farmers either individually or in groups often come to him in request for plots of land for farming and he directs them to the *Tindana* because he is almost always on the field ensuring peace and fertility on his territories. The chief is the highest authority in both socio-economic, political and matters of security concerning the village as well as deciding on cases in both socio-economic and commercial dispute resolution in traders-farmer collaborations. On the first day I visited Yagaba I came to his palace to seek his permission to do research in the area.

The chief said he has been on the throne since 2007/2008 and he since started his reign with all the members of his council seated with him. Since then, they have been fully engaged with issues concerning the general agricultural production and its businesses since the community is largely engaged in agricultural production. They have been blessed with vast lands, fertile soil, rainfall and above all smart and hardworking men and women who make it possible for the Yagaba community to yield great harvest at the end of the annual farming season.



As leaders, especially those who have reigned for this long, they pointed out of the problems of the area also. The traditional revealed that their road networks are their biggest problem in commercializing and expanding their agricultural production (refer to page 63 photograph 4). The chief and elders complained about the poor roads and they believe if the roads leading to Yagaba are fixed, it will go a long way to promote their growth in agricultural production, ensure an uninterrupted inflow of agrochemicals, better seeds and even extension officers and machinery. They also observed that the poor nature of the roads negatively affects the flow of their agricultural produce outside the community, where it could be sold to make money to improve the living standards of the people or to have traders and other agriculture related stakeholders visit to improve on their agricultural production. As agricultural investors they could only make mention of IWAD and credited them a lot for the bold step to engage in the area.

Because of the difficulty in expanding agricultural production and getting good market access, they commended trader-farmer relationships to. However, while the chief is the highest authority and will have the final jurisdiction, also in the case of traders-farmer disputes it is the *Tindana*, who is engaged in the day-to day interaction with farmers.

The *Tindana* is the chief priest of the chief who plays an ‘*intermediation role*’ between the people and the chief on every issue be it social, political and economic. In terms of trader-farmer collaboration, the *Tindana* is the first point of contact who acts as a *mediator and ‘guarantor for non-collateralized farmers’* in contractual



arrangements in trader-farmer collaborations in case of any eventuality relative to risk of delay or default of payment by non-collateralized farmers.

The *Tindana* recounted further that in terms of the trader-farmer collaboration, both traders and farmers have coexisted in mutually beneficial relationships without any track record or case of commercial dispute between traders and farmers. He stated that:

“There has been almost no case of disputes especially relating to agricultural issues because my people are very peaceful and they have all come to understand that unity will make us grow. Also, I will say that the farmers comply so well because they fear to be kicked out of the contract due to competition because this collaboration is helping not just the farmers sustain a living but supports the economic wellbeing of the entire community to the extent that even some of the wealthy animal farmers here in Yagaba have ventured into doing these businesses with the crop farmers and then take some of the produce to sell or for their wives and sisters to sell in the markets, mostly outside this community”. (Interview with Tindana, Yagaba, West Mamprusi District, 27.02.2020)

The study showed that the main traditional authorities are not so many in number but the people do not capitalize on that to disrespect the traditions of the land. The role of local authorities in the trader-farmer collaboration process in the Yagaba community according to the Yagaba Naa is very significant because the entire



community collectively has an eye on the actions of every individual in the community. From an interview with the Yagaba Naa:

“The local authority includes myself (the chief), the Tindana (who is the spiritual head or the chief priest) and five other elders of council who have separated powers but all govern collectively for the betterment and development of our small but growing and peaceful community. The Yagaba community is predominantly a farming community primarily small holder driven and more diversified because, others are also into animal rearing especially into cattle rearing. In terms of trader-farmer collaboration, the Tindana is the first point of contact who acts as a mediator and ‘guarantor for non-collateralized farmers’ in contractual arrangements in trader-farmer collaborations in case of any eventuality relative to risk of delay or default of payment by non-collateralized farmers.” (Interview with Yagaba Naa Wun’nim Mumin, Yagaba, West Mamprusi, 22.02.2020)

As one of the traders corroborated:

“The trader-farmer collaboration assumes the dimensions of contract farming except contractual arrangements do not involve formal documentations and therefore not legally enforceable. So any dispute that arises from such arrangements is resolved among ourselves through arbitration and most at times too if the case at hand is serious and cannot be resolved among ourselves, we present it before the local chief of the

community for adjudication”. (Interview with trader 6, Aboabo market, Tamale, 03.10.2020)

But it is not only the traditional authorities who mediate between farmers and traders. The farmer cooperatives that were mentioned above also play an important role.

Moreover, the farmer group discussions also revealed that farmers collectively enjoy a lot of benefits for being in a group as well as in the cooperative and collaboration business including easy access to capital, ready market, technical skills, arbitration in conflict resolution and ultimately protecting the interest of farmers and to foster a healthy trader-farmer relation is important, as farming in this environment is risky and the loss of future productions is undeniably possible. The farmer groups collectively administer the capital rates, the intervals of contact between individual collaborating traders and farmers and the timing of repayment. Traders often have to make sales of produce before being able to pay collaborating farmers. But by delaying the payment they can also ensure that the collaborating farmer stick to the agreements.

The above shows that social capital in the form of trust, often established over years of successful collaboration, expanding networks of farmers and traders, as well as local traditional rules and authority and farmer cooperatives are essential in enabling trader-farmer collaboration, despite the absence of any formal contractual



arrangements and sanctioning mechanisms. Social capital thus facilitates collaboration, reduces transaction costs and is crucial in the process of agricultural commercialization that enables farmers to expand their production, facilitates market access and enhances farmers' livelihoods. At the same time it helps traders to have preferential and relatively secure access to farm produce and thus profit.

4.2.4 The Impact of Formal Agricultural Commercialization on Trader-Farmer Collaboration

The past years have seen a number of governments in Africa making efforts in securing rural infrastructure although it is hard to find these efforts translate to the poor in terms of benefit (Johann Kristen et al, 2013) but in the research area, IWAD, a non-governmental organization, has been the major formal commercial agricultural project in operation and is also collaborating with smallholders in formal contract farming arrangements. Photograph 6 on page 89 shows a signpost indicating the office of IWAD, this organization plays a significant role in ensuring a commercialization of small holder producers, arguably enhancing their livelihoods whilst ensuring the profitability of their operations and dealings.





Photograph 6 IWAD Signpost In Yagaba

Source: Field survey, 2020.

The staff of IWAD, representing the alternative commercialization group, are broken down into two major parts that is the administrative and the actual field staff. Within the administrative staff, there are the research officers who gather information from the operations officers and especially the field officers in order to delve deeper into this findings to discover causes of problems during production and distribution and also how to bridge the gap so the organization could harvest better yield and maximize profit especially that the organization is not a non-profit organization while the administrative staff take records of all dealing in the organization be it on recruitment, financing, logistics, production and distribution of produce. More



information from the field officer further breaks down the field staff into two, which is, the field officers and the operations officers. While the field officers are directly on the farms with all farmers be it in on farm trainings or actual planting and harvesting, the operations officers are more related with logistic, machinery and most of the technological and scientific know-how of what goes on or not before, during and after production.

IWAD	Frequency	Percentage
Field officer	5	42.0%
Operations officer	3	25.0%
Administrative staff	3	25.0%
Research officer	1	8.0%
Total	12	100

Table 6 Respondents at IWAD

Source: Field survey, 2021.





, shows the respondents that were interviewed in order to explore the role of alternative commercialization institutions in the trader-farmer collaboration process. From the survey, the findings revealed that (5) respondents representing 42.0% were field officers, (3) representing 25.0% were operations officer, (3) representing 25.0% were administrative staff and (1) representing 8.0% were research officers.

It is the role of the operations officers and field officers of the organization to conduct proper community entry through the chiefs especially as customs demand. If permission is granted, IWAD-staff demonstrates or makes the community understand their motives, their goals and every condition attached to associating or collaborating with them. The farmers entering into contract with IWAD are secured with all the necessary logistics they need that includes viable seeds, facilities to enable irrigation, agro-chemicals and machines that will foster a better and more efficient and effective production, harvesting and processing, based on what contract arrangements hold.

“The farmers and even some of the leaders in the community were not too sure what we meant until we organized demonstrative farming, it was then the farmers began to show interest and the leaders developed trust in our operations.” (Interview with operations officer, IWAD, Yagaba, West Mamprusi District, 24.02.2020)

From the 5 to 6 years of experience of the field officers and the research officer, and interview with them revealed that poverty is a strong drive making the farmers



interested in collaborating with IWAD. According to the operations officer most the smallholder farmers are unable to serve the markets because they cannot provide their own seed, secure farmlands or chemical supplies let alone paying for additional labor.

In the context of IWAD farmers are largely restricted to the provision of human labor that is the physical strength and skill that is required for the farm activities to take place from production to the harvesting stage. Others are able to provide land and other physical resources such as seed and agro-chemicals to ensure a good yield at harvest.

But IWAD does not only work with individual farmers. They also make use of local farmer groups. The chiefs recommended to work with groups or associations. As has been shown above (see 0), the findings revealed that some small holder farmers were organized into producer groups or associations called *Suhuyini* group and *Tigbaborika* associations respectively. The *Suhuyini* group is made up of (30) members and (7) executives whilst the *Tigbabora* is made up of (32) members and (6) executives respectively. Working with these groups assists incorporating non-collateralized farmers into the commercial value chains whilst granting them access to resources, inputs, and field training and support services to produce in large scale with increased output levels, enhance their level of market participation and consequently high income and poverty alleviation. The executives of each farmer group or association represent their members in meetings both on-and-off the field

and take decisions on behalf of their members relative to bargaining and contract negotiations with IWAD in order to ensure the welfare of their members.

“We organize workshops at community centers and the chief’s palaces to display how everything works including terms and conditions especially in the cases of dishonesty by farmer. Poverty is the number one and main reason that gets farmers on board because they cannot on their own provide seed, afford land and other important inputs or even to pay labor hence we take care of that on their behalf based on agreements. Our irrigation facilities is also a major pull factor for the farmers, because due to our irrigation, most farmers have confessed to me to get on board to have an all-year-round-production and so we allocate lands and inputs but then, once a while we make records of some farmers who are being very reluctant to provide labor.” (Interview with field officer, IWAD, Yagaba, 27.02.2020)

The field officers reiterated further that each farmer group is provided with all the logistics including viable seeds, chemical fertilizers, irrigation facilities, agro-chemicals and machinery for production, harvesting and processing based on contractual arrangements. Farmers who are able to produce in excess of the agreed quantity over the total cost of production, increases their market participation with guaranteed market which in return reduces transaction cost and increases their incomes. The field officers provide on-field training and monitoring activities and provide technical advice to farmers to ensure they have a good yield. He further explained:

“We started with maize farming and then later introduced rice, because it is mostly preferred and considered by farmers as a major cash crop with which they make more income for about 38.5 hectares as to 27 hectares of maize production. After production and successful harvest, IWAD calculates the total input and production cost to ensure recovery and repayment. Farmers, who are able to produce in excess of the total cost, can decide to side-sell their produce. We also incur a lot of losses due to certain risk factors. These risk factors include, theft, drought, bush fires, pest and disease attack and crop failure which are natural occurrences and cannot be avoided.”
(Interview with field officer, IWAD, Yagaba, 27.02.2020)

According to the research officer:

“Farmers are usually motivated by the quality of our seed and machinery - quality management - resource management, access to resources, and our communication flow, the education and information, details and demonstrations, and the fact that they get to produce all year due to irrigation” (Interview with research officer, IWAD, Yagaba, 27.02.2020)

The most encouraging part of the IWAD project is that it brings farmers on board despite their predicaments in the cost of production, quality of machinery and irrigation facilities which enable farmers to ensure an all year production. Farmers that are reluctant and not proven worthy are eliminated or dismissed whilst the most





performing farmers are also awarded for their enthusiasm, hard work and commitment.

“Farmers get to decide if they are interested especially after we have undergone demonstrative farming and most of the farmers are usually motivated by the quality of our seeds and machinery that is: quality management, resource management (access to resource), communication flow and the fact that they get to produce all year because of irrigation.”
(Interview with operations officer, IWAD, Yagaba, West Mamprusi District, 27.02.2020)

The number one reason gathered from interviewing the field officers and the research officer reveals that poverty is a major push in getting them more interested farmers. Most of the farmers cannot provide their own seed, afford lands or other important inputs like chemical supplies or even to pay for labor. Hence these farmers join IWAD to take care of the earlier mentioned on the farmers’ behalf, on agreements. Irrigation is also a major issue that pushes the smallholder farmers to IWAD.

As has been discussed, IWAD is the only alternative agricultural commercialization institution in this community for the past few years. A profit-making organization with the objective of ensuring poverty alleviation among small-holder rural farmers through sustainable agriculture and food security by means of incorporating non-collateralized farmers into the commercial value chains whilst granting them access to resources, inputs, field training and support services to produce in large scale with



increased output levels and enhanced market participation. The organization introduced modern systems or methods of farming into agriculture and simultaneously provides education and training programs to farmers to enhance their technical expertise and skills on how to adopt or apply modern farming techniques through the application of modern technology, appropriate use of agro-chemicals, irrigation facilities and viable seeds to improve their farming methods from small-scale subsistence to a more sustainable and commercialized system in order to increase their market participation, food security with improved nutrition, higher incomes and consequently, sustainable poverty alleviation. Based on the interviews with farmers, we realized most farmers prefer being a part of IWAD than the trader-farmers collaborations since most farmers get to experience the use of quality seedlings and machinery. They get to understand the proper ways of dealings with farming activities due to proper management by IWAD officials and there is accessibility of resources whenever they are needed. We established that most farmers are not getting their full sake of what is due them because of mainly that fact that there is high illiteracy, not having access to adequate and quality machinery and resource to help them with their farming activities. Most of the farmers, who grew up in the rural environment of Yagaba, had no formal education or only basic education. However, most of the traders had basic or secondary education. This proved very beneficial for them, since most of these traders could keep documented records of their day-to-day transactions, make analytical and strategic decisions on production and commercialization. They were also much more versatile in the use of mobile phones, which makes communication faster and more flexible. Thus, they



can better monitor market developments but also better monitor the farmers they collaborate with. Lack of education prevents most rural farmers from making proper contractual agreement and keeping proper books with regards to their farming activities and this makes most of the traders take advantage of these farmers. IWAD is the only alternative agricultural commercialization institution in this community and therefore, plays a significant role in ensuring a commercialization of small holder producers, arguably enhancing their livelihoods whilst ensuring the profitability of their operations and dealings. Through IWAD, farmers join groups who also serve as intermediaries between the officials of IWAD and the farmers. These helps to curb the distrust most farmers have when dealing with these traders.

Though, IWAD provides guaranteed market to farmers but this however does not significantly affect the trader-farmer collaboration because IWAD deals with only a few numbers or groups of farmers as compared to the whole farming population in the community despite farmers' discretion of side-selling their production surpluses to other trading partners.

4.3 Risk Factors for Agricultural Commercialization

From the survey, the findings revealed despite efforts towards ensuring successful commercialization, there are other factors that inhibit the general commercialization process. From the survey, the findings further classified the risk factors into socio-economic, geographical and environmental factors.

4.3.1 The environmental risk factors that affect successful commercialization

Adverse agrochemical and political conditions as well as declining soil fertility, pest and diseases outbreaks and climate change, constitute major challenges in rural settings (Doward & Kydd,2002), the study has reveals that some of these environmental risk factors are the results of natural phenomena or occurrences that cannot be controlled or mitigated by both traders and farmer and include: harsh weather conditions such as drought, flood, low pattern of rainfall, bushfires by hunters and honey tappers, cattle invasion of farms by Fulani Herdsmen, pest and disease attack, and a decline in soil fertility are some major environmental risk factors that contribute to low yield and consequently affects production, reduced market participation, and success of the entire production.

4.3.2 Socio-economic, demographic and geographical factors

These are factors constituting the major deterrents to successful commercialization of smallholder farmers in the Yagaba community. Whilst some of these factors are common, others vary greatly based on geographical differences. Inadequate education and literacy levels may result in poor networking, poor negotiation and bargaining (Johann Kirsten, 2013). From the survey, the researcher found some of these factors to centrally embedded on the *lack of credit* and other factors including; poverty, size of household, land tenure system, level of education, model of farming, bad road network, lack of production, harvesting and processing equipment's, absence of an institutionalized Agricultural credit support system, increased cost of agricultural inputs, lack of viable seeds, lack of irrigation logistics, absence of



adequate market information, lack of training on modern farming techniques and lack of sustainable broad-based policies that can ensure inclusive participation and general commercialization, changing needs of consumer taste and preference in food markets and the emergence of urbanization and rural urban migration. These were the major deterrents recounted by farmers that inhibit successful commercialization and therefore prevent smallholder farmers from participating in the entire agricultural value chain.



Photograph 7 Lack of Modern Technological Processing Machinery

Source: Field survey, 2020.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is a synthesis of the entire study. It presents a summary of the research findings, conclusion and recommendations of the study. The chapter is organized as follows; first, it presents a summary of the research findings according to the research objectives followed by conclusion and recommendations.

5.2 Findings and Results of Study

The findings and results of this study were primarily grounded on the research objectives and questions. Primary data was directly obtained from traders, farmers, IWAD, local authority and the researcher's personal observation on the subject matter. The summary of results from the research were embedded on the research objectives and questions designed to address the research problem on trader-farmer collaboration and its livelihood impact in poverty alleviation in the Yagaba community in the North-East Region of Ghana.

In line with the research objectives and questions, the following are results from the findings;

The research findings in line with **the respective drivers and factors that influence traders and small holders to collaborate**, in respect to the gender of respondents



revealed that both genders participated in the survey so data collection did not suffer any form of bias despite males constituting the highest. The findings seek to interpret further that both set of gender constituted respondents from the survey including both traders and farmers from whom data was elicited to achieve the purpose of the study. However, the skewed results in favor of males may be generally attributed to the male dominated nature of the population of the community respondents from whom data was elicited to achieve the purpose of the study. From the research findings, seeks to suggest that gender play a very significant role much as the trader-farmer collaboration is concern in determining the crop type to produce, access to resources, model of farming and level of market participation respectively and consequently determines the level of food security as well as the success or failure of the trader-farmer contractual arrangements.

The research findings in relation to the age distribution of respondents revealed the record of larger numbers in the middle age class due to their experience and easy access to resources. What account for the low record of the youth age class is that they are reading courses in schools in cities and nearby towns whilst others are in urban centers seeking opportunities due to rural urban migration. Largely, the youth mostly function under a broader or a bigger umbrella to be able to function well in this production process especially because securing land to farm is usually a challenge for the younger population especially for customary reasons that embraces seniority and respect of family and communal hierarchies. The skewed results in favor of the middle age group clearly depicts the propensity and significant



contribution of these group of people in socio-economic development of the community much as trading and farming is concerned as the major economic activities in the community.

Moreover, the findings with respect to participant's education revealed that most of the farmers had basic education or no formal education at all while most of the traders had either secondary or basic education and this received a commendation as most of these traders could keep documented records of their previous and current productions, make analytical decisions or checks on production and commercialization and the use of mobile phones that fastens and makes communication flexible and reliable between the players in the collaboration. Findings seek to interpret that education play an influential role in determining the crop type to produce as well as its viability and marketability of the produce. This seeks to suggest that, poor or low level of education leads to poor decision making, poor farm management, poor negotiation and poor bargaining power in the trader-farmer collaboration and general commercialization process.

Moreover, the research findings in line with participants experience revealed that respondents have different years of working experience including both traders and farmers which clearly demonstrates their various farming and trading skills, commitment and dedication towards promoting the socio-economic development of the community and livelihood impact of the people.



In line with the findings on farmer's interview in relation to access to land and inputs for production revealed that; the right of ownership and access to land in the Yagaba community is basically determined by three major factors; family's long history of settlement, kinship authority (royalty) and social ties. Majority of the lands are controlled by traditional authority of the community which make it difficult for farmers to expand the size of their lands or procure new ones to increase their scale of production. The findings revealed further that the land tenure system constituted the precondition and major deterrent because all the lands in the community are held under customary rule and controlled by the chief as the highest authority of the community. Coupled with lack of inputs, credit facilities and capital were some of the major drawbacks to successful production and commercialization of small-holder farmers.

Further, research findings relating to the crop type and factors influencing the choice of crops produced revealed that rice, maize, beans, millet, groundnut and cowpea. However, rice production constituted the largest because it is the major cash crop that provides a good source of income to farmers. The factors influencing these crop types included; demand and supply forces, rainfall patterns, nature and topography of soil and household size and the risks factors involved in the production and commercialization process.

The findings relating to local authority interview showed that the chief is the highest authority in both socio-economic, political and matters of security concerning the village as well as deciding on cases in both socio-economic and commercial dispute

resolution in traders-farmer collaborations. The *Tindana* (*Chief priest*) on the other hand is the chief priest and hand of the chief who plays an ‘intermediation role’ between the people and the chief on every issue be it social, political and economic. In terms of trader-farmer collaboration, the Tindana (chief priest) is the first point of contact who acts as a mediator and guarantor for non-collateralized farmers in contractual arrangements in trader-farmer collaborations in case of any eventuality relative to risk of delay or default of payment by non-collateralized farmers.

The findings relating to **the risks factors that affect the trader-farmer collaboration** showed that most of the risk factors included occurrences that cannot be mitigated or controlled by neither farmers nor traders. These factors were further classified into social, economic, environmental or geographical and included; harsh weather conditions such as drought, flood, low pattern of rainfall, bushfires by hunters and honey tappers, cattle invasion of farms by Fulani Herdsmen, pest and disease attack, and decline in soil fertility are some major environmental risk factors that contribute to low yield and consequently affects production, reduced market participation, and success of the entire commercialization. These were the major deterrents recounted by farmers that inhibit successful commercialization and therefore prevent smallholder farmers from participating in the entire agricultural value chain.

The findings with respect to traders’ interview revealed two different types of traders in agri-business in the trader-farmer collaboration process. These included urban based traders and rural traders. These were further categorized as free-lance urban





based traders, free-lance rural traders, urban based traders linked with farmers and rural traders linked with some of the farmers through contractual arrangements in the trader-farmer collaboration process whilst others are *freelance traders*. The studies also discovered some other new contractual arrangements between traders and farmers in the trader-farmer collaboration process. In these new arrangements, most of these urban and rural traders were linked with some of the farmers through other people in a form of *brokers* who play an intermediation role between small holder farmers and traders due to their close-connectedness with the farmers, in-depth knowledge of the rural market structure as well as information on demand and supply conditions and price of the produce in the rural markets. In these arrangements, the urban traders do not have a direct relationship or collaboration with the small holder farmers except through the *brokers* (intermediaries). Traders with these arrangements would advance money to the *brokers or intermediaries* to buy the grains or cereals in advance from farmers at the point of harvesting and processing, collect them in bulk and the trader later comes for them and transports them to the urban markets. Most of the traders opted for this type of arrangements because they have a zero-risk tolerance.

On the other hand, some of these traders including both rural and urban-based had a direct linked with the small holders through contractual arrangements. In this case, the traders sponsor the smallholder farmers with capital, credit and inputs whilst the farmer provide the skilled labour and, in some occasions, too, the traders finance everything including the labour cost with a guaranteed number of bags to be paid by



the farmer upon successful harvest based on the agreed terms and conditions of the contract giving farmers a guaranteed market and reduced transaction cost. If the farmer is able to produce in excess, the surplus is owned by the farmer with which he has the discretion to sell to the contracting trader or side-sell. However, from the findings, traders also recounted that in case of crop failure, the risk is shared between the trader and farmer. In these arrangements, the social relational factors that shape the trader-farmers collaboration include; *network, trust, power and commitment*.

Study discovered another new trading and commercialization arrangements between traders and farmers in the trader-farmer collaboration process. This new arrangement is called “*best of efforts*”. In this type of arrangements, the trader neither buys nor sponsor’s the farmer in the production process but steps in to assist the farmer to dispose or sell his produce by moving them to the urban markets in times of glut or influx due to higher supply with low demand in rural and traditional markets based on the terms and conditions of agreements on the trade. This type of arrangement is primarily embedded on *network, trust and commitment*.

In most cases too, the trust is built based on the relationship and success of previous contracts between the parties. In other cases, due to the frustration and desperation of the farmer to sell his produce, relational factors or forces such as trust and network are not much considered in such arrangements and this sometimes yields negative results of cheating the farmer in the process. Which is a risk factor involved in this type of arrangement. The trader finance all the cost incurred in the marketing of the



produce until they are finally disposed and the trade is settled between the trader and the farmer.

Moreover, another trading arrangement discovered in the trader-farmer collaboration included *futures and swaps*. Under the *futures* arrangement, the study found that traders advance credit to farmers in advance in return of a guaranteed number of bags of the produce to be settled post successful harvest whilst the crops are still on the field but guaranteed to be supplied immediately after harvest. In this arrangement, the study discovered a double coincidence of wants between the contracting parties with the farmer need of money and the trader in need of the produce. They both come to mutual terms and conditions of agreement relative to the amount needed by the farmer at an agreed price of the produce which determines the number of bags of the produce to be supplied to the trader post-harvest. However, the pre-determined price of the produce is fixed and not subject to changes to reflect future changes in market price of the produce irrespective of the volatility of the market. In this type of arrangements, the fixed price is termed as *forward* with the traders as the long-position holder. In this type of arrangement, the study discovered that the trader becomes a *speculator* relative to the outcome of the future price of the produce because, the price could go up or down depending on the market forces which are the risk involved in this type of arrangement as recounted by traders. In some cases too, the farmers default in honoring their part of the contract by side-selling the produce and therefore fails to supply or deliver the produce on the agreed date as per



the terms and conditions of the contract which is one of the risk factors involved in this type arrangement.

Moreover, other arrangements discovered in the trader-farmer collaboration process included *swaps*. In this type of arrangements, the study found that farmers that need certain commodities or items are provided by traders in exchange for an agreed number of bags of farm produce. This type of arrangements did not involve any physical cash but an exchange of a commodity for another between traders and farmers. In type of arrangements, the trader neither sponsors the farmer nor buys the produce with physical cash but rather provide farmers with certain commodities including; TV-sets, cloths, bicycles and motor-bicycles based on farmers request in exchange of an agreed number of bags of farm produce. Based on this type of arrangement, the price of the item demanded and supplied by the trader determines the quantity of bags of the farm produce to be supplied by the farmer relative to an agreed price. This type of trader-farmer collaboration involves a direct exchange trading based on certain terms of negotiations and agreements between the trader and the farmer. This type of arrangements offers advantages of ready market and reduced transaction cost.

The research **findings from alternative commercialization** discovered IWAD as the only alternative commercialization institution in the Yagaba community who operate at a profit by means of incorporating non-collateralized farmers into the commercial value chains whilst granting them access to resources, inputs, and field training and support services to produce in large scale with increased output levels,



enhance their level of market participation and consequently high income and poverty alleviation. Farmers are provided with all the logistics including viable seeds, chemical fertilizers, irrigation facilities, agro-chemicals and machinery for production, harvesting and processing based on contractual arrangements. Farmers who are able to produce in excess of the agreed quantity over the total cost of production, increases their market participation with guaranteed market which in return reduces transaction cost and increased in their incomes. The field officers provide on-field training and monitoring activities and provide technical advice to farmers to ensure they have a good yield. IWAD started with maize farming and then later introduced rice because it is mostly preferred and considered a major cash crop that provide income for about 38.5 hectors as to 27 hectors of maize production. After production and successful harvest, IWAD calculates the total input and production cost to ensure recovery and repayment. Farmers, who are able to produce in excess of the total cost, can decide to side-sell their produce. We also incur a lot of loses due to certain risk factors. These risk factors include, theft, drought, bush fires, pest and disease attack and crop failure which are natural occurrences and cannot be avoided.

The most encouraging part of IWAD project that brings farmers on board despite their predicaments is the cost of production, quality of machinery and irrigation facilities which enable farmers to ensure an all year production. Farmers that are reluctant and not proven worthy are eliminated or dismissed whilst the most performing farmers are also awarded for their enthusiasm, hard work and

commitment. Farmers get to decide if they are interested especially after we have undergone demonstrative farming and most of the farmers are usually motivated by the quality of our seeds and machinery that is; quality management, resource management (access to resource), communication flow and the fact that they get to produce all year because of irrigation.

The number one reason gathered from interviewing the field officers and the research officer reveals that poverty is a major push in getting them more interested farmers. Most of the farmers cannot provide their own seed, afford lands or other important inputs like chemical supplies or even to pay for labour. Hence these farmers join IWAD to take care of the earlier mentioned on the farmers' behalf, on agreements. Irrigation is also a major issue that pushes the smallholder farmers to IWAD.

IWAD was identified as the only alternative commercialization institution in the entire community that provides inputs, training and agricultural support services as well as guaranteed market to farmers in promoting sustainable agriculture, food security, and incomes to farmers, improved standard of living and poverty alleviation. However, it is imperative to say that the activities of IWAD did not significantly affect the trader-farmer collaboration considering the fewer number or group of farmers they are dealing with as compared to the entire farming population of the community.



5.3 Conclusion

Trader-farmer collaboration in the Yagaba community has been more impactful in terms of its livelihood impacts with improved living standards of most farmers despite numerous challenges including lack of infrastructure, bad road network, absence of inclusive and broad-based policies to ensure sustainability. However, despite these significant contributions, the sector faces many drawbacks ranging from land tenure system, socio-economic, political, infrastructure and environmental challenges which militate against successful production and commercialization which in effect contribute to the declining importance of the sector to the economy relative to food security, employment and livelihood impacts and GDP which has policy implication. Welfare, livelihood impacts and sustainable poverty eradication is possible if the commercialization of small-holder farmers is inclusive and broad-based with a significant majority of the poor rural masses benefiting from such initiative without recourse.

Relative to the conclusion in line with the first research question with respect to the *interest and drivers that led traders and smallholder collaboration*, it is imperative to state that both parties derive mutual benefits from such arrangements and these include; economies of scale, accessibility to capital, mitigation of risks, reduction of transaction costs, ready & easy access to markets, food security, source of employment and income generation to both parties.

Moreover, in line with the second research question on the *preconditions and factors that led to the success or failure of the trader-farmer collaboration*, I therefore





conclude that despite several benefits derived from the trader-farmer collaboration, the arrangement is also fraught with challenges ranging from environmental, social, economic and political factors respectively including; climate change, gender of household, level of education, land fragmentation, harsh-weather conditions such as drought & bush-fires, flood, pests & disease all contribute to the successes and failures of the trader-farmer collaborations and this require remedial measures to address the negative implications.

Consequently, drawing from the findings in relation to the *third research question on the formal initiatives of agricultural commercialization*, it is instructive to state that formal initiatives play an influential role in the trader-farmer collaboration and generation commercialization of smallholder farmers including; improved access to information and market participation, it reduces the role of intermediation and transaction costs, provide support in general agricultural support services, credit, provide guarantee for access to capital and other credit facilities as well as training and skills to both farmers and traders that ultimately enhances facilitation of transactions at a reduced risks. This under the social capital theory gears towards trust and commitment mostly because a farmer belongs to a farmer group they operate with already and also a farmer renews his contract with the institution only after proving his commitment and trustworthiness in the previous production.

Conclusively, it differs in the extent to which traders and smallholders derive benefits from the trader-farmer collaboration in the general agricultural commercialization process. However, suffice to say that both parties derive mutual benefits from the

trader-farmer collaboration process and that ultimately constitutes the necessary drivers of this contractual arrangement between the parties especially from their social relations and how they are able to collectively manage risks and the challenges especially with smallholder commercialization..

5.4 Recommendations

The recommendations based on the findings of the study include;

- Under the umbrella of social capital , the poor rural masses requires concerted efforts by government and the private sector with support to boost the sector with policy objectives to transition from small scale subsistence to a large scale and more commercialized systems especially through their rural traditional authorities because the rural farmers according to the study are guided by their traditional power, norms and customs that translates to how they network, their commitment and trust so they can hold fast to the rope to ensuring a food secured economy and sustainable poverty alleviation.

- To achieve a successful collaboration with all parties involved in agricultural production especially a successful smallholder commercialization, according on the findings from the study it is discovered that the cost of inputs and machinery is a major issue that needs to be addressed and so key players in governance must provide subsidies on agricultural inputs in order to enable farmers expand their production capacities to improve upon livelihoods and the national GDP.



- The agricultural sector, especially in relation to commercialization, requires sustainable, inclusive and broad-based policies and initiatives to help promote sustainable agriculture with improved living standards and general socio-economic development to improve the livelihood of the rural farmers especially. This is because, even from literature, the government efforts that have been made to secure rural infrastructure has not translated to the poor rural indigenes especially the small scale farmers in terms of benefits.

- Government and private partners must see the need to develop new market models that will include smallholder farmers who are disadvantaged due to infrastructural, socio-economic, political and environmental constraints existing in commercial values chains.





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APPENDICES

INTERVIEW GUIDES

LOCAL AUTHORITIES INTERVIEW GUIDE

1. Do you have traders and farmers or other agricultural stakeholders visiting you to discuss issues on agriculture?
2. What are some of these issues?
3. Do you come across trader-farmer relations?
How about farmer-NGO or other alternative agricultural relations?
4. Tell me about the instances where you have to step in as guarantor for smallholders to sign up for these relationships
5. How do you foster or protect these relationships?
6. Do these relationships have promises for your community at large?
7. How has their relationship led to improved variety of produce, farm expansion and marketing of produce?

FARMER INTERVIEW GUIDE

1. How long have you been farming?
2. What varieties of crops have you been producing?
3. Do you get support to produce on the farm?
4. Does this support come as a form of collaboration?
5. Who are you collaborating with?
6. Does this support come in form of Kanpur, seed, cash, fertilizer, machinery...
7. How did you come across this partner?
8. How long have you been in this relationship?
9. Are there other factors holding you together with your partner?
(Family, guarantor, collateral,)
10. In instances where you have low yield and unable to meet the the agreement between your partner and yourself, what do you do? ---- What does your partner do?
11. How is your usage of farm inputs now?
 - Labour recruitment
 - Fertilizer
 - Changes in
 - Number of acres produced
12. How does this relationship boost market links and readiness in the market, or do you give all the produce to your partner? ---If no, what are some of the arrangements?





TRADER INTERVIEW GUIDE

1. How long have you been trading?
2. Have you been selling a particular product all the time?
3. Do you buy from other traders or ready farms?
4. Are you very specific when it comes to the variety of produce you will love to sell in the markets?
5. Does your specificities in variety influence how you'll get these varieties?
6. How do you get into relationships with the farmers?
 - If via referrals, what are some of the indicators you look at for?
 - Do you require that a farmer brings a collateral or guarantor before you kick start?
7. Do you determine what the farmer grows or sponsor what they are already producing?
8. Do you provide farmers with lands, labour, fertilizer, money, family wellbeing...?
9. What are some of the agreements you make with the farmers?
10. Are there any instances where some farmers flee to alternative agricultural commercialization?
11. Have you worked with farmers who have been engaged in other relationships before?

ALTERNATIVE COMMERCIALIZATION INTERVIEW GUIDE

1. How do you get farmers to collaborate with you?
2. Are you motivated by their farm size, their produce?
3. How do you operate with these farmers?

- do you involve the chiefs?
 - do you require collateral and guarantor?
4. How long does a farmer get to enjoy your packages?
 5. What are some of the packages?
 - do you cater for farmers' health insurance, family welfare, children's school fees...
- Do these packages come in form of seeds, cash, fertilizer, machinery, labour...?
6. Do you continue the farmers' already existing production of varieties or you decide what the farmers should produce?
 7. What benefits do you clearly state out that farmers derive from this relationship?
 8. In cases where some farms are very far with terrible roads, do you construct roads to the farms?
 9. How often do you have farmers signing up to collaborate with you? What motivates them?
 10. What happens in case of fires or floods? Or cases where farmers do not complete all of the production agreements?

