

**EFFECTS OF DECENTRALIZATION ON AGRICULTURAL
DEVELOPMENT IN EAST GONJA DISTRICT, NORTHERN REGION,
GHANA**

**BY
HAWA MAHAMA**



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UNIVERSITY FOR DEVELOPMENT STUDIES

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DEVELOPMENT IN EAST GONJA DISTRICT, NORTHERN REGION,
GHANA**

BY

**HAWA MAHAMA
(UDS/MIC/0069/15)**

**THESIS SUBMITTED TO THE DEPARTMENT OF AGRICULTURAL
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AWARD OF MASTER OF PHILOSOPHY IN INNOVATION
COMMUNICATION**

UNIVERSITY FOR DEVELOPMENT STUDIES



DECLARATION

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

Candidate's Signature:..... Date:.....

Name:

Supervisors'

I hereby declare that the preparation and presentation of the dissertation/thesis was supervised in accordance with the guidelines on supervision of dissertation/thesis laid down by the University for Development Studies.

Principal Supervisor's Signature:.....Date:.....

Name:

Co-Supervisor's Signature..... Date:.....

Name:



ABSTRACT

Though the traditional role of the department of agriculture under the district assembly still focuses on agricultural development, resource flow, reporting structures and decision making processes has shifted from mainstream MoFA after the implementation of decentralization. Yet, very little is known about the extent to which this shift has contributed to agricultural development at the district level. This study therefore, examined the effects of decentralization of agricultural development in the East Gonja District. This was done by collecting both secondary and primary data. Primary data were collected from a sample of 180 stakeholders comprising 136 farmers and 44 other key stakeholders drawn from, DA, DoA, NGOs and Assembly members. Data was collected using questionnaire, interview guides and focus group discussions. The study revealed that age, education, sex and farming experience recorded significant coefficients of 0.239, 0.345, 0.301 and 0.112 respectively. This implies that age, education, sex and farming experience were the predictors of participation in agricultural development. Meanwhile, in contrast marital status recorded a negative standard coefficient figure of 0.121 which implied that marital status does not have any impact on participation in agricultural development. The results also revealed that the achievements of decentralization were abysmal with inadequate resource taking a central stage, whilst the constraints abound. On the reporting structure, there was poor communication resulting in tension among stakeholders in the agricultural sector and the DA; resulting in some negative impact on agricultural productivity. The reporting structures were ill equipped with the requisite knowledge of their new roles. Based on this, it is recommended that the assembly should ensure that the key stakeholders understand the new concept to be able to take up their new roles at the DA. There is also the need to identify avenues where internally generated funds could be generated to supplement the central government allocations.



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DEDICATION

To my mum, Hajia Afilua Lansah and in loving memory of my late dad Mr. Jonathan Kwabena Mahama with much love and appreciation.

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ACRONYMS

AD	Agricultural Development
AEAs	Agricultural Extension Agents
AMs	Assembly Members
CAP	Community Action Planning
DA	District Assembly
DAD	District Agricultural Department
DADU	District Agricultural Department Unit
DCE	District Chief Executive
DoA	District Office of Agriculture
DRC	Democratic Republic of Congo
EC	Executive Committee
EGD	East Gonja District
EGDA	East Gonja District Assembly
EURR	European Union Rural Review
FASDEP	Food and Agricultural Sector Development Programme
FBO	Farmer Based Organizations
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GNA	Ghana News Agency



GPU	www.udsspace.uds.edu.gh Gari Processing Unit
IFAD	International Fund for Agricultural Development
ILGS	Institute of Local Government Studies
IGF	Internally Generated Fund
IMF	International Monetary Fund
LGAs	Local Government Administration
LGCs	Local Government Councils
LGL	Local Government Law
LI	Legislative Instrument
MDGs	Millennium Development Goals
MLG&RD	Ministry of Local Government & Rural Development
MMDAS	Metropolitan, Municipal Districts Assemblies
MoFA	Ministry of Food and Agriculture
MS	Microsoft
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
PAD	Participation in Agricultural Development
PNDCL	Provisional National Defense Council
RING	Resiliency in Northern Ghana



SDGs	www.udsspace.uds.edu.gh Sustainable Development Goals
SPRING Globally	Strengthening Partnership, Results and Innovations in Nutrition
SPSS	Statistical Package for Social Sciences
SRID	Statistics, Research and Information Directorate
SWOT	Strengths, Weaknesses, Opportunities and Threats
TFP	Total Factor Productivity
UCC	University of Cape Coast
UN	United Nation
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
USAID	United States Agency for International Development
VAT	Value Added Tax



1.0 INTRODUCTION

1.1 Background

Globally, there has been a paradigm shift in governance in the past three decades where a lot of attention has been devoted to issues of governmental, economic and administrative reforms (Rosenbaum, 2013). In some parts of the world, these reforms have been highly aggressive, with many governments moving from authoritarian, one-party states to relatively democratic ones (Rosenbaum, 2013). Fundamentally, such reforms as captured by global headlines have been geared towards the enhancement of governmental decentralization and local government, which has the potential to boost local demands for more responsive and democratic grass-roots governance.

In Africa, prior to attempting a decentralized system of local governance, most African countries had a long history of formal, centralized rule which dates back to colonial times and in some instances much beyond. Power and resources were controlled from the centre or capital. Decision making was centralized and the local level had virtually no input in the processes. They had responsibilities for the delivery of services such as education, health, roads, water supply and agricultural extension, and resources (Crawford & Hartman, 2008). Nevertheless, to date it appears that “regardless of the design of the local government system, the prevailing centralizing tendencies on the part of central government have rendered meaningful decentralization a myth in most African countries” (Oyugi 2000).

It is in furtherance to this that the 1992 Fourth Republican Constitution of Ghana created adequate space for the incorporation of all necessary elements of participatory





decision making from the www.udsspace.uds.edu.gh local to the national level. The vehicle through which to deepen this process was the decentralization policy (The Ghana Constitution, 1992).

Though Ghana has made several attempts to give meaning to governance since independence through various legislations, Chapter 20, Article 256 of the 1992 Constitution provides the clearest expression of decentralization and the local governance system in the country. Local governments are part of the overall local governance system (Alam, 2011). They are specific entities created by national or sub-national statutes with political authority, but are not necessarily elected; embodying besides local government are other social actors such as citizens, trades and businesses, community organizations, non-governmental organizations (NGOs), traditional authorities and the media (Alam, 2011).

The most recent activity has been the LI 1961 that sought to operationalize the Local Government (Departments of District Assemblies) (Commencement) Instrument, 2009 ("the Instrument") at the district level as the Departments of the District Assemblies (DAs).

Under section 161 (1) of the Local Government Act, 1993, Act 462, (22) decentralized departments at the district level ceased to exist and were reconstituted through series of mergers into 16 Departments in the Metropolitan Assemblies, 13 in the Municipal Assemblies and 11 in the District Assemblies under section 38 of the Act (Local Government Instrument 2009).

The functions of the various departments of the Assembly amongst which is the Department of Agriculture (DoA) is stipulated in the third schedule (Regulation 4) includes amongst others to assist in the formulation and implementation of agricultural policy for the District Assembly within the framework of national policies and also to advise the District Assembly on matters related to agricultural

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development in the district. It is significant to note that section 38 (2) of Act 462 envisages the implementation of the composite budget system under which the budget of the Departments of the District Assemblies are to be integrated into the budgets of the District Assemblies. It also provides that each District Assembly shall be responsible for the preparation, administration and control of the budgetary allocations of the Departments under the Assembly (Local Government Act). This makes the Agricultural Department, which was formally under the Ministry of Food and Agriculture now directly under the District assembly. The activities of the DoA are now the responsibility of the District Assembly, where preparations of Agriculture plans, administration and control of budgetary allocations are made (ILGS, 2009, MLG&RD, 2010, Charles, 2011 & Ofei-Aboagye, 2012).

Agriculture is the backbone of most Assemblies as it plays a significant role in the socioeconomic development of the districts. It plays a crucial role in the sustenance and growth of the Ghanaian economy and the situation is not different from the East Gonja District Assembly (UCC, 2009 & East Gonja District, 2010). The main agricultural subsectors in the district include crops, livestock, fisheries, agro-forestry and non-traditional commodities (East Gonja District Analytical Report, 2010).

1.2 The Ghana Agricultural Sector Development and Present Challenges

In Ghana, the majority (60%) of the population lives in rural areas and depends either directly or indirectly on agriculture for their livelihood and survival. Agriculture plays an important role in economic growth, food security, poverty reduction, livelihoods, rural development and the environment (Green et al., n.d & Ibrahim, 2014). The country produces a variety of crops in various climatic zones which range from dry savanna to wet forest and which run in east-west bands across the country.



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Agricultural crops, including yams, grains, cocoa, oil palms, kola nuts, and timber, form the base of Ghana's economy (Awiah, 2015).

Although government after government have tried to use agricultural wealth as a springboard for the country's overall economic development, Ghana's agricultural output has consistently fallen since the 1960s. Beginning with the drop in commodity prices in the late 1960s, farmers have been faced with fewer incentives to produce as well as with a general deterioration of necessary infrastructure and services. Farmers have also had to deal with increasingly expensive inputs, such as fertilizer, because of overvaluation of the Cedi. Food production has fallen as well, with a decline in the food self-sufficiency ratio from 83 percent in 1961-66 to 71 percent in 1978-80, coupled with a four-fold increase in food imports in the decade prior to 1982. By 1983, when drought hit the region, food shortages were widespread, and export crop production reached an all-time low (Boadu-Mensah, 2016).

Ghana, like most developing countries, has more arable land than most Western European countries, yet Ghana import agricultural products from these countries. Ghana is a net importer of almost every agricultural product ranging from rice, wheat, soya bean, corn, poultry products (turkey tail, chicken, etc), fish and fish products, beef, pork, pig feet, and cow leg. The country cannot continue to apply piecemeal approaches to solving this very essential food importation problem (Akunzule, 2014).

Over the years, governments have been in a hurry to implement various intervention programmes different from those implemented by predecessor governments. Interestingly, all the intervention programmes are either short termed or not sustained long enough to ensure that results are achieved. Even though Agriculture has a central role to play in promoting growth and ensuring development at the local level,



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development goals in the country has often been described as too ambitious that it has failed to achieve any meaningful outcomes. According to Dio (2010), broad-based agricultural development is a key for transformation in Ghana. He argues that, the agricultural output growth (and hence a large share of GDP) is still not driven by productivity growth. Yields of most crops are still far below their potentials and level of modern technology adoption in agricultural production and processing is still extremely low. It was revealed that, Agriculture remains highly dependent on rainfall and irrigation even though only 3% of the total crop area and less than 20% of irrigation potential is used. Accelerating the transformation will therefore require functioning markets, including the development of an effective and efficient service sector. Trade, transport, finance and communication are all key elements to further improve the market access and efficiency in Ghana (Breisinger, Diao, Thurlow and Alhassan, 2008; Diao 2010).

Addressing these challenges will mean the creation of incentives and opportunities for all stakeholders of the private sector to drive growth in agriculture. This can be achieved by ensuring strong policy support and massive public investment that will ensure the creation of an enabling environment for the development of agriculture (Diao, 2010). The revelations of this nature is a concern to stakeholders, for it is increasingly becoming evident that agriculture is not receiving the needed investment and attention that is required to ensure agricultural development (Akubori, personal communication, December 1, 2017). It is in line with this that the East Gonja District, where more than half the populations are farmers was therefore identified to examine the effects of the new system on agricultural development.



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Also, at the United Nations Sustainable Development Summit on 25 September 2015, world leaders adopted the 2030 Agenda for Sustainable Development, which included a set of 17 Sustainable Development Goals (SDGs) targeted at ending poverty, fighting inequality and injustice, and tackling climate change by 2030. The Sustainable Development Goals, otherwise known as the Global Goals, was built on Millennium Development Goals that the world committed to achieve by 2015. The SDGs and the broader sustainable development agenda, is expected to go further than the MDGs, to address the root causes of poverty and the universal need for development that works for all. This platform provided world leaders with an unprecedented opportunity to shift the world onto a path of inclusive, sustainable and resilient development (Helen, 2015).

More than any other sector, agriculture is the common thread which holds the 17 SDGs together. Specifically, the SDG 1, 2, 8 12 and 16 calls specifically to “End poverty, end hunger, Employment, sustainable consumption and production and governance and achieve food security and improved nutrition and promote sustainable agriculture”. In addition, reaching the SDG targets simply will not be possible without a strong agricultural sector. The SDGs aim to address the complex challenges universally (for both developed and developing), holistic (people-centred and planet-sensitive) and measurably to drive action and track progress.

1.3 Problem Statement

Since 2010, the staffs of the District Agricultural Department across the country have been working under the Local Government Service (Mahama, 2012). This is in line with the National Policy Framework, which was intended to accelerate the decentralization effort towards the ends envisaged in the Fourth Republican Constitution to give the process the clarity, consistency and certainty required to





www.udsspace.uds.edu.gh promote the local level governance and development (MLG&RD, 2010). The policy envisioned that the assembly system should facilitate local level democracy through active participation of the people with the aim of prioritizing a strong and extensive agenda to facilitate economic growth, employment and income generation in order to promote household welfare and the alleviation of poverty which is expected to promote issues of agricultural development at the local level (MLG&RD, 2010).

For decentralization to be successful there is the need for stock taking of the achievements, outstanding challenges and lost opportunities if any, with a view of enhancing the policies, institutions and their processes (Ahwoi, 2000). There are extensive empirical studies that have been carried out around the world on the subject matter. Examples of such studies spanned on decentralization and agricultural development (Lai & Cistulli, 2005), Decentralization and Access to Agricultural Extension Services in Kenya (Nambiro, Omiti & Mugunieri, 2006), Impact of Decentralized Ministry of Food and Agriculture on Extension Delivery (Fiadjoe & Tsekpo, 2004). Mgbenka, (2015) also conducted a research on the role of the Local Government Council in Agricultural Transformation in Nigeria: the study found out that failure of local government in the area of service delivery over the years has made the citizens lose faith and trust in local government administration as an institution in Nigeria. Most LGCs in Nigeria do not offer any assistance to agricultural interventions in local government areas (LGAs). However, apart from Tsekpo (2004), all the other studies were carried outside the study country and were also very generic and did not touch specifically on the effects of decentralization on agricultural development especially in the East Gonja District where the majority of the people in the assembly are farmers.

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This leaves policy implementers and potential development partners in a limbo when it comes to decision making as there will be the likelihood of making decisions that are not area specific in terms of agricultural development because of lack of adequate knowledge about the achievement and constraints of the decentralization system. In addition, there are fears that the less endowed districts that basically depend on government subvention because of their inability to mobilize local resources may face bigger challenges in competing for the scarce resources (Abdullah, 2011). This may further worsen the plight of agriculture if priority is not given to it at the district level in terms of resource allocation.

These challenges have a high tendency in impeding the effectiveness of decentralization in promoting the District Agricultural Department (DAD) to achieve its targeted objectives.

To bridge this knowledge gap, this research empirically investigated on how decentralization had affected agricultural development in the East Gonja District.

1.4 Research Questions

1.4.1 Main Research Question

What have been the effects of decentralization on Agricultural development in the East Gonja District?

1.4.2 Specific Questions

1. What are the perceptions of stakeholders on the achievement of decentralization of agricultural development in the East Gonja District?
2. How are the reporting structures in the district promoting Agricultural development within the decentralized department?



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3. How are the various decisions making processes at the local level, promoting agricultural development in the East Gonja District?
4. What are the constraints of decentralization on agricultural development in the East Gonja District?

1.5 Research Objectives

1.5.1 Main Research Objective

The main objective of the study was to examine the effects of decentralization on Agricultural development in the East Gonja District?

1.5.2 Specific Objective

- Describe the perceptions of stakeholders on the achievement of decentralization of Agricultural development in the district;
- Describe how the reporting structures are contributing to Agricultural Development within the decentralized department;
- Assess how the decision making processes at the local level promote Agricultural development.
- Evaluate the constraints of decentralization on Agricultural development in the district;

1.6 Scope of the Study

This study examined the effects of decentralization on agricultural development in the East Gonja District of the northern region of Ghana. It focused on the key stakeholders in the area of agricultural development in the East Gonja District. It looked at the stakeholder perceptions on the achievements and constraints of decentralization of agricultural development in the district.



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Further, the study looked at how the reporting structures in the district is promoting agricultural development and also how the decision making processes are enhancing agricultural development.

Geographically, the study covered East Gonja District in the northern region of Ghana.

The study concentrated on the period 2004 to 2016. This period was used because it was in 2010 that the Local Government Instrument 1961 was operationalized and all the departments in the assembly which hitherto were departments on their own were brought under the DA and therefore the period 2004 to 2009 represented the before decentralization and 2010 to 2016 represented the period of decentralization.

1.7 Justification of the Study

This study is of importance because decentralization has a potential of ensuring full representation of people in terms of their ideas, feeling and decision on matters concerning their own development at the local level.

The question that needs an answer now is whether the implementation of the decentralization system in Ghana has brought some changes in the area of agricultural development and if not, why? This is critical, because, the objective of introducing human systems such as the decentralization system is to accelerate growth and progress. The only way progress can be measured is through both scheduled and unscheduled evaluations after which lessons learnt is used as feedback to help improve on the performance of the system.

Although many studies have been conducted on agricultural development in different locations of the world, this is a new area in Ghana since Agricultural departments in the country over the years have not had any direct link with the local government system in Ghana. The two institutions in the past have been working in isolation.



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The recent amalgamation of the two calls for an aggressive scrutiny of what effects decentralization has had on agricultural development (Crawford & Hartmann, 2008; Opare, Egbenya, Kaba, n.d).

Government and policy makers will also benefit from the study by getting evidence-based report on the effects of their activities on agricultural development the East Gonja District.

It is hoped that the suggestions and recommendations made could be added to existing academic knowledge by serving as reference material for further and future research.

It will constitute an important document for East Gonja District, development partners, people in the academia as well as all persons directly involved in agricultural development both within and outside the East Gonja District and also influence policy direction

1.8 Limitations

A study of this nature would require an extensive review of more than one district to ensure a comparative analysis of different situations to come out with a more informed analysis. However, as a result of time and resource constraints the study was limited to one district.

However, this does not in any way affect the outcome of this research since diverse stakeholders were used in this study and both qualitative and quantitative data were elicited to ensure triangulation of the results and also neutralize these limitations.

1.9 Organization of the Study

The study is organized into five parts and covers the following. Chapter one focused on the background of the study area. It presented a comprehensive background to the study, a statement of the problem that necessitated the study, the key questions and



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the objectives of the study. It ended with the scope and limitation as well as how the whole research was organized.

The second chapter dealt with theoretical and empirical literature reviewed on the key concepts of the topic and sets the study in context with respect to the theoretical underpinning of the study. It helped to put forth the expected results from the survey and provided the basis of support in terms of results.

Chapter three described the study area, study population, sampling as well as the data source and methods used to collect the data for the research. The chapter ends with the details of the analytical procedures the research adapted to obtain results and how the results are presented.

Chapter four provided a descriptive analysis, estimation of the results and discussions of the finding.

Chapter five which is the final chapter of the study presented the summary of the entire findings, conclusions arrived at and recommendation derived from the results of the research.



2.0 LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of relevant literature on the key concepts of the study. It further presents an empirical review of the study and ends with the conceptual framework of the study.

2.2 The Concept of Decentralization

Decentralization has gained currency in both recent academic and social discourses with different versions from different perspectives. Whereas some scholars say it is the transfer of authority and responsibility for public functions of the central government to subordinate or quasi-independent government organizations or the private sector (Rondinelli, 1999), others perceive it as playing a decisive role in central government and local government relations (Eryilmaz, 2011).

In terms of its existence, Robertson (2002), observed that decentralization unquestionably is not new but that in reality, attracted a lot of attention in the 1950s and 1960s when British and French colonial administrations prepared colonies for independence by devolving responsibilities for certain programmes to local authorities. This assertion was corroborated by Robertson (2002) who added that, in the 1980s decentralization came to the forefront of the development agenda alongside the renewed global emphasis on governance and human-centred approaches to human development. These positions, however, have not only described the domains of decentralization, but also brought forward the historical background of decentralization. Whereas the latter definition puts emphasis on playing a decisive role, the former highlights that it is more of a transfer of authority and responsibility



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for public functions from the central government to subordinate or quasi-independent government organizations (Robertson, 2002).

Generally, decentralization has two principal components participation and accountability. Participation is chiefly concerned with increasing the role of citizens in choosing their local leaders and in telling those leaders what to do-in other words, providing input into local governance. In other words the voices of the local people must be heard. Accountability constitutes the other side of the process; it is the degree to which local governments have to explain or justify what they have done or failed to do. Local elections are the most common and powerful form of accountability, but other mechanisms such as citizen councils can have limited influence (Eryilmaz, 2011 and Schneider, 2003).

Centralization which is decentralization's antonym, has a much more precise and accepted usage as the concentration of power, resources, and authority in a single center (Schneider, 2003). Generally, there has been an acknowledgment by most governments in Africa, that their efforts at improving the quality of life of their people is a mirage as they are unable to achieve the desired results due to the over centralization of power, resources and decision-making. This resulted in focusing more on a system of governance where direct access to decision making and resource allocation could be enhanced (Nhedi, 2013).

It is in line with this new dimension that the Government of Ghana embraced and started implementing a decentralized system of governance in 1988 (Alam & Koranteng, 2011) within three broad areas; political, administrative and fiscal dimensions. This was after the enactment of the Local Government Law, PNDC Law 207 (1988). The Law was given further backing in the 1992 Republican Constitution.



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This is enshrined in Chapter 20 of the 1992 National Constitution of the 1993, Act 462 was given.

Political dimension includes the transfer of state administration, legislative authority and judicial autonomy to local governments. From the perspective of democratic principles, political decentralization means democratization, greater political participation through elections (vote and voice), and more influence in the formulation and implementation of policies. The concept implies that the selection of representatives from local electoral jurisdictions allows citizens to know their political representatives better and in turn allows elected officials to better assess, understand and work towards fulfilling the needs of their constituents (Hayden & Samuel, 2011). According to Gash, Randall & Sims (2007), there are three main indicators of success that are specific (but not exclusive) to political decentralization. According to their study, these indicators include widespread support, robust accountability mechanisms, and meaningful transfers of power. Concurring with Gash et al (2007), Abdulaziz, Ababsa, Karam, & Knox, (2015) provides a more detailed assertion that, the underlying benefit of political decentralization is that citizens have increased opportunity to participate in the decision-making processes that are brought closer to them. While democratization gives citizen's vote power, decentralization translates the vote into an effective voice. This, however, is conditional: there should be enabling institutional, legal and policy frameworks in place; and citizens should be aware of and have the ability to effectively use these opportunities. Beyond citizens electing their leaders, they should have the power to hold their leaders and other authorities to account.

On the other hand, administrative decentralization is more about transferring some conventional functions of the state to autonomous public institutions Göymen &



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Sazak (2014), whilst Yusoff, Sarjoon & Hassan (2016) looked at it as redistributing authority, responsibility and financial resources for providing public services from the national government to local units of government agencies, sub national government or semi-autonomous public authorities or corporation. Proponents of decentralization are of the view that, there are three major forms of administrative decentralization: deconcentration, delegation, and devolution. Each form raises different legal issues. Deconcentration is concerned with redistributing decision making authority and financial and management responsibilities among different levels of a national government. For example, it may involve shifting responsibilities from government officials working in the head office to ministry staff working in regions, provinces or districts. It is argued that deconcentration does not usually involve any changes to existing laws. Though in some countries, changes to who may exercise a legal power have to follow a specific legal procedure (Crawford and Hartman, 2008 and Allam and Koranteng, 2011).

Delegation as another form of administrative decentralization is the transfer of national government responsibility of decision-making and administration of public functions to semi-autonomous public sector organizations. These organizations usually have separate legal status and have a great deal of discretion and autonomy around management decision-making (Juma, 2013). Lastly, but not the least is devolution which is where national governments devolve functions to sub national government. In a devolved system, sub national governments often have clear and legally recognized geographical boundaries over which they exercise authority and within which they perform these functions. Devolution may involve constitutional law reform as well as law reform to formalize the devolution of powers, roles and accountabilities (Yuliani, 2004).



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Aside the political and administrative decentralization is the fiscal decentralization which is a core component of decentralization. According to Bene (2009), if sub national governments and private organizations are to carry out decentralized functions effectively, there is the need to ensure that there is an adequate level of revenues either raised locally or transferred from the national government as well as the authority to make decisions about expenditure. Law changes are likely to be required to give effect to the fiscal devolution, to authorize the transfer of revenue and to authorize local decision making and revenue raising (Lai and Cistulli, 2005). Drawing distinctions between these various concepts is useful for highlighting the many dimensions to successful decentralization and the need for coordination among them. Nevertheless, there is clearly overlap in defining any of these terms and the precise definitions are not as important as the need for a comprehensive approach. Political, administrative, fiscal and market decentralization can also appear, in different forms and combinations across countries, within countries and even within sectors (Aritonang, 2016).

Under appropriate conditions, all of these forms of decentralization can play important roles in broadening participation in political, economic and social activities as well as helping to alleviate the bottlenecks in decision making that are often caused by central government planning and control of important economic and social activities. According to Krishnamohan (2015), decentralization has the ability to cut complex bureaucratic procedures as well as increase government officials' sensitivity to local conditions and needs. Moreover, decentralization can help national government ministries reach larger numbers of local areas with services; allow greater political representation for diverse political, ethnic, religious, and cultural groups in decision-making; and relieve top managers in central ministries of "routine" tasks to





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concentrate on policy. In some countries, decentralization may create a geographical focus at the local level for coordinating national, state, provincial, district, and local programs more effectively and can provide better opportunities for participation by local residents in decision making (Kahkonan & Lanyi, 2001; Krishnamohan, 2015 and Aritonang, 2016 & Mohammed, 2017).

Furthermore, decentralization may lead to more creative, innovative and responsive programs by allowing local “experimentation.” It can also increase political stability and national unity by allowing citizens to better control public programs at the local level (Krishnamohan, 2015). It has however been argued that decentralization has its positive and negative sides. For instance, below is the highlights or argument for and against decentralization (adapted from Treisman, 2007 & Pike et al, 2010).

Administrative efficiency: Multi-tier government makes it possible to satisfy citizens’ demands for public goods and service more precisely and cost-effectively.

Critique: Only administrative and not political decentralization is required for this outcome.

Local competition: Competition among local governments to attract mobile residents or investment induces them to be more honest, efficient and responsive.

Critique: The conditions for local competition will rarely be met in most countries and, in any event, may lead to perverse outcomes.

Fiscal incentives: Increasing the local governments’ share in a shared tax should increase their motivation to support local economic activity, resulting in better performance nationwide.

Critique: Increasing the local governments’ share means decreasing the shares of other levels of government.

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Democracy: Decentralization, by reducing the scale of government increases citizen participation and cultivates civic virtue and enhances electoral accountability because citizens are more informed about local issues.

Critique: Local government can cultivate corruption as well as virtue and are not necessarily any better informed about local as opposed to national issues.

Checks, balances and liberty: In decentralized systems, strong local government will check government abuses and protect against central government abuse.

Critique: Central governments can pursue divide and conquer mechanisms while local government may use their powers to protect local abuses.

Veto players and change. By making policy changes depend on more actors, decentralization tends to increase policy stability.

Critique: Can lead to the entrenchment of bad policies and lack of incentive for innovation.

Local information and policy innovation: Local governments are able to make better use of local information, which can lead to policy innovation.

Critique: Local governments are not necessarily adept at eliciting local information, while central government can make more use of policy innovations.

Ethnic conflicts: Political decentralization defuses ethnic conflicts by satisfying demand for local autonomy.

Critique: Political decentralization may equally entrench such conflicts.

Fiscal pressures: Politically strong local governments undermine fiscal and macroeconomic discipline by exploiting “soft budget constraints” to extract central government transfers. Critique: These are more a function of weak central government than strong local governments.



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Fiscal coordination: When local governments and central governments can independently tax the same base or are expected by voters to spend on the same services, leading to problems of over-taxing or over-spending.

Critique: Pressures to overtax and overspend may offset each other.

Inequality: Decentralized systems empower strong places at the expense of weaker ones.

Critique: Fiscal equalization measures can mitigate spatial inequality. Additional administrative costs. Multiple layers of government multiply the costs of government. Critique: Decentralization reveals the costs of government to citizens.

In his address at the orientation of new Assembly persons at Bolgatanga in the Upper East Region of Ghana, the then Local Government Minister, Hon. Collins Dauda revealed that “as a country, Ghana has chalked a lot of successes in terms of decentralization and local government and that it was not for nothing that its prides itself as a beacon of democracy. He, however, lamented that aside these successes a lot needed to be done as the country was still bedeviled with several challenges which needed a concerted effort by all and sundry. According to him, one critical area that needed attention was the absence of an implementation program to direct action for monitoring progress. He also indicated that the conceptual differences among various sectors; lack of structure of local government staff; lack of adequately trained human resource; inadequate funding and challenges of coordinating donor support among others were some of the challenges still affecting the whole decentralization process (MLGRD, 2015).

Admittedly, these challenges are a global phenomenon as studies on decentralization in other countries such as Latin America, South Africa and Zimbabwe confirmed to these concerns (Chigwata, 2010; Siddle, 2011; and Bossuyt, 2013;).



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The rationale for decentralization as earlier mentioned is essential to devolve political control, administrative authority and financial resources as well as decision making from the centre to the grassroots level. Albeit these challenges of decentralization, the benefits of this arrangement are envisaged to far outweigh that of the centralized system of governance. One important and commendable outcome of decentralization in Ghana has been the implementation of the LI 1961 which has brought all the departments in the assembly under the District Assembly, of which the District Agricultural Department Unit (DADU) has now become a decentralized department under the District Assembly.

2.3 Structures and Processes in a Decentralized System of Governance

The two factors that determine how an organization function in relation to its internal and external environment basically revolves around the structures and processes that they operate within (Armstrong, 2014). Organizations vary in their complexity, but it is always necessary to divide the overall management task into a variety of activities, to allocate these activities to the different parts of the organization and to establish means of managing the organization (Child, 1997). An organizational structure usually is described in the form of an organizational chart. This places individuals in boxes that denote their job and their position in the hierarchy and traces the direct lines authority (command and control) through the management hierarchies that presents an organization's framework and guidelines for managing its activities (Armstrong, 2005 and Morgan, 2015).

Consequently, Corkindale (2011), observed that an organizational structure, is significant in the sense that it allows employees to officially know who to report to in different situations and also making it clear for employees to exactly know who has



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the final responsibility for what. The structure of an organization as observed earlier, does not give any real indication of how it functions. To understand this, it is necessary to consider the various processes that take place within the structural framework as well involving adequately all the participants in the development of the process.

The participation of representatives of farmers or more broadly key stakeholders in the agricultural sector is important both for helping give decentralization the most productive orientations and for facilitating its implementation. It is important to put on record that once a commitment to involve local level people in the process is made, it is important to ensure that those who participate are sufficiently represented in the broad spectrum of that district (Norton, 2004).

2.4 Structure of decentralized system in the district

The Local Government (Departments of District Assemblies) operationalized the decentralized departments at the district level as the Departments of the District Assemblies (Das). This conversion triggered off the establishments of Metropolitan, Municipal Districts Assemblies (MMDAs) with the commencement of functioning of decentralized departments as departments of MMDAs (Ofei-Aboagye, 2012). Under section 161 (1) of the Local Government Act 1993, Act, 462, 22 decentralized departments at the district level ceased to exist and were reconstituted and merged into 16 departments in the Metropolitan Assemblies, 13 in the Municipal Assemblies and 11 in the District Assemblies under 38 of the Act. This came into force on 25th February, 2010 (Local Government Instrument, 2009). Figures 2.1 and 2.3 are graphical representation of the new decentralized departments of the East Gonja District Assembly and the organogram of the department of agriculture.



Figure 2.1 A graphical representation of the new decentralized departments of the East Gonja District Assembly

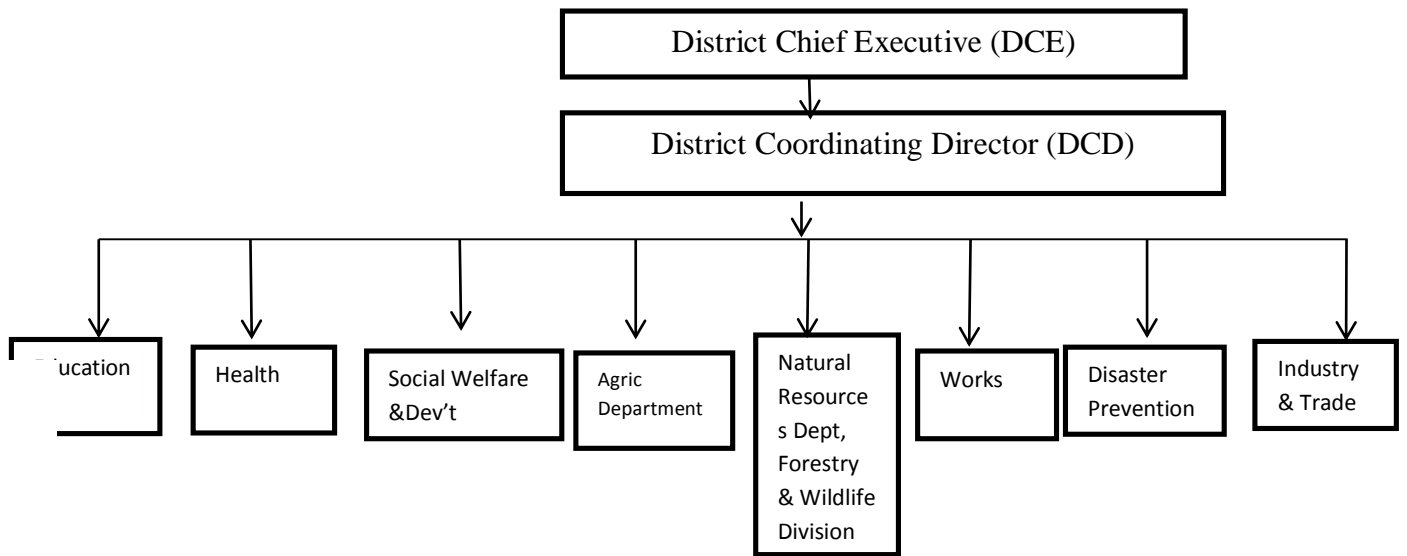
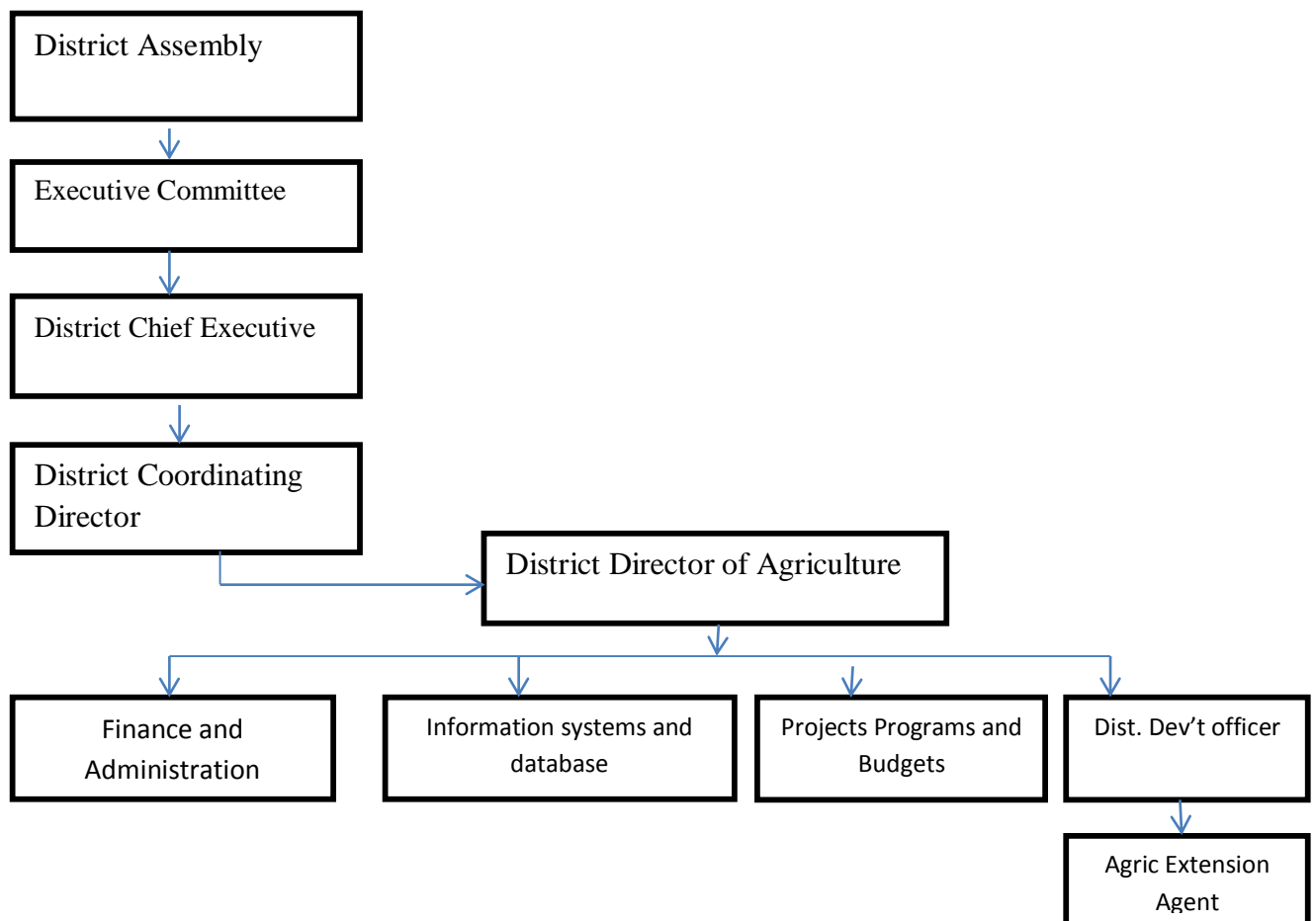


Figure 2.2 Organogram of the Department of Agriculture



Source: Monitoring and Evaluation Unit of ROA, Northern Region



2.4.1 Functions of Department within the Decentralized System

Some of the major functions of the department of Agriculture at the District Assembly include, but not limited to the following:

- Responsible for the provision of extension services in the areas of natural resources management, and rural infrastructural and small scale irrigation in the district
- Assist in the formulation and implementation of agricultural policy for the District Assembly within the framework of national policies;
- Submit a report on the implementation of policies and programmes to the District Assembly;
- Advise the District Assembly on matters related to agricultural development in the district.

2.5 Obligations of DA towards the Performance of the Functions of the Department

Under the new Local Government system where all decentralized departments are now under one umbrella, the MMDAs have an oversight responsibility which now makes the role very crucial at the District Assembly level (N'yel, 2011 August, 14).

One of the key obligations of the DA to the DoA is to ensure the implementation of the composite budget system under which the budget of DoA is to be integrated into the budgets of the District Assembly. In other words, the responsibility of the Assembly includes the preparation, administration and control of the budgetary allocations of the department.



2.6 Agricultural Development

The role and importance of agriculture in development have changed in line with prevailing circumstances and ideas in recent years. The 1950s industry witnessed an improvement in economic development where the role of agriculture saw a release in labour and capital to fuel industrialization. Also, the mid-1960s was also characterized by fears that food production could not keep pace with the rapid population growth. This was what called for what was termed as the green revolution which saw the technical advances in plant breeding. This brought about a significant increase in yields per hectare of grains in favored area through the use of high-yielding varieties of cereals, fertilizer, crop protection and irrigation (Norton, 2005; Wiggins, 2013).

However, since 2000, there has been a growing sense that agriculture has been unduly neglected, especially in Africa. In part this came from the focus on poverty and hunger in the Millennium Development Goals. With three-quarters of the poor and hungry located in rural areas, most of them farming, this directed attention to agriculture, especially where output had grown slowly over the previous two decades, as was the case in most of Africa. In 2003, for example, African ministers of agriculture meeting in Maputo pledged to increase spending on agricultural development in a bid to raise growth rates of agriculture to six per cent a year. Agriculture gained further attention when cereals prices spiked on world markets in 2007–08 to a degree not seen since 1973–74. A world that had subsequently grown accustomed to ever-cheaper staples on international markets – prices in real terms had declined by 60% since the 1960s – was shocked (Wiggins, 2013).



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Agricultural development, according to (Brinkerhoff and Arthur, 1990) can be classified into three distinct but related dimensions. The physical-technical, the economic-financial, and the institutional-human. The physical-technical dimension looks at land utilization, agricultural technologies, research and extension, agricultural inputs, farm-to-market access, productivity and production maximization, and so on. Agricultural development from the economic-financial perspective is concerned with costs, factors of production, and terms of trade, pricing policies, subsidies, incentives, credit, and return on investment, market mechanisms, and the like. The institutional-human dimension looks at knowledge and skills, organization and management, training, implementation capacity, social relations, politics, communication, motivation, participation, local government, public-private sector linkages, culture and values, historical experience, and so on.

Therefore, for the huge numbers of farm families, whose members constitute the main work for, agriculture is not merely an occupation or a source of income but a way of life. The introduction of any technical innovation that is expected to bring about development, should perhaps be adapted with due recourse not only to the natural and economic conditions, but should go further to ensure that those affected really understand the recommended changes and are willing to accept them and must be capable of carrying them out (Todaro et al, 2006).

Agricultural development is defined therefore as: “the process that creates the conditions for the fulfillment of agricultural potential. Those conditions include the accumulation of knowledge and availability of technology as well as the allocation of inputs and output” (De Laiglesia 2006).

Agriculture development, according to the Cervantes-Gordoy and Dewder (2010) can be said to be positive when there is insurgency in the agricultural industry which is





profit giving and at the [same time](http://www.udsspace.uds.edu.gh) eco-friendly. It reiterates that Agriculture development could also include the provision and assistance to crop producers with the help of various agricultural resources providing protection, assisting in the research sphere, employing the latest techniques, controlling pests and facilitating diversity all fall within the purview of agriculture development.

Based on the above definitions and discussions of agricultural development, in this particular study agricultural development will mean a situation where assistance is provided to the crop producers with the help of various agricultural resources. This assistance will include providing protection, assisting in the research sphere, employing latest techniques, controlling pests and facilitating diversity which in turn will lead to an increase in crop yield, improved farmers' income, an enhanced extension service delivery and also enhanced participation in decision making by the crop farmers.

Generally, the perceived limits to producing food for a growing global population have been a source of debate and preoccupations for ages (Alexandratos and Bruinsma, 2012). These debates have revealed that even though, there has been an increase in the world food production, there has also been an increase in the population and per capita consumption too (Alexandrato and Bruinsma, 2012). They further argued that population increased to 6.9 billion in 2010, up from 2.5 billion in 1950 and 3.7 billion in 1970. According to the report, the UN population projections – from the medium variant of the 2008 release employed indicate that the world total could reach 9.15 billion in 2050. Thus, there is the tendency of an increase of 2.25 billion over the next 40 years, which is lower than the 3.2 billion increases that materialized between 1970 and 2010. According to them, this deceleration could impact on world agriculture by lowering its rate of growth compared to the past.

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In East Asia for instance, it was discovered that to promote agricultural development, there was the need to support the implementation of policies to ensure effective governance that was more inclusive in its approach (Juma, 2007). Indeed, democratization, civil society participation, decentralization, transparency, accountability and corruption control hold great potential for strengthening governance. It was therefore very crucial to come out with effective policies to promote local level development which should include measures that enhance poor peoples' access to assets such as land, water, education and health. This measure requires significant public investments, well-defined property rights, and effective land administration (Juma, 2007).

Even though, there is enormous potential in the African continent, not only to feed itself and eliminate hunger and food insecurity, but also as a major player in global food markets. Undoubtedly one in four people are undernourished even though that absolute number of undernourished people has increased over the last 30 years; food insecurity remains an essentially rural phenomenon. This phenomenon affects the rural world more than cities because the people producing food often do not make enough to feed their families due to the lack of adequate access to the means of production (land, manure, tools), and rural communities are poorer and struggle to buy food. Permanent economic access to food has become the decisive factor in food insecurity. Food insecurity is first and foremost about poverty and inequalities. Consequently, achieving agricultural development is a necessary condition for reducing food insecurity, but is not sufficient by itself (African Outlook, 2013).

There appears to be a bigger picture encompassing policies, institutions and stakeholders. Ghana is the second-largest producer of cocoa, with about 15% of the world market. Cocoa is dominated by Ghana's next-door neighbor, Cote D'Ivoire,



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which has spent the last decade in disarray after a civil war and the ensuing post-war violence. Despite the fact that agriculture accounts for about 40% of GDP and more than half the workforce, cocoa is the only commercial crop of economic significance. While other industrial crops, including cotton, rubber, and tobacco are grown, they are small potatoes compared to cocoa and other exports. (The major exports are timber, gold, diamond, bauxite, and manganese. It is difficult for African economies to be competitive in global agriculture markets due to agriculture subsidies in the U.S. and Europe, efficient farming practices in Brazil and Argentina, and the scale of rice production in Thailand and Vietnam (African Outlook n.d).

The main food crops grown in Ghana are maize, yams, cassava, and, to a lesser extent, sorghum, and millet, and more recently, rice. It has been established that Agricultural policy is important for Ghana's development for five reasons: Poverty Reduction, Growth, Food Security "Dutch" Disease, and Climate Change. How agricultural policies are addressed in these areas will have a major impact on the lives of Ghanaians.

According to a Send-Ghana report (2009), agricultural development policies in the past, have tried to come out with policies that were aimed at increasing productivity accompanied by some strategies for market assets farmers in the country, this has not yielded much results. A comprehensive agricultural policy known as Food and Agricultural Sector Development Programme (FASDEP II) was subsequently developed, to ensure food security and improvements in incomes. This programme was aimed at improving economic growth that was to be led by the private sector. There were also calls to allocate requisite resources to fund agricultural development. However, the findings of the report revealed that admittedly, good agricultural development policies on paper, does not reflect the needs and interest of farmers and



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are not ends in themselves. For instance, the implementation of the agricultural policy somehow excluded some critical stakeholders like the small holder farmers and this was a major factor that affected the FASDEP II. The report further indicated that no matter how pleasant an agricultural policy may be, in terms of its policy coverage, relevance, viability and plausibility to all stakeholders, if there is not enough commitment to make financial resources available in addition to the strong institutional arrangement to effectively coordinate relevant activities for the realization of key objectives, the policy becomes a white elephant (Send-Ghana, 2009).

2.7 Decentralization and Agricultural Development

Over the years the world over, there has been several investigations into decentralization and what benefits it brings to society as a whole and most especially how it impacts on the economic sector which represents the engine of every country. Admittedly, beyond providing food, agriculture sustains the economies of most countries in significant ways, especially in the developing world. Across Sub-Saharan Africa, for example, agriculture accounts for three-quarters of employment and one third of GDP; 75% of the world's poor live in rural areas and have an economic link to agriculture (Jutting De Laiglesia, 2009).

Additionally, decentralization has been observed to have the potential of reducing bottlenecks in bureaucracy, enhancing public accountability and tailoring development plans to particular needs (Opare, Egbenya and Kaba, 2009). For very poor households, agricultural development not only seen as a defense against hunger, but also can raise incomes nearly four times more effectively than growth in any other sector. However, agriculture is still neglected in most countries' budgets. It is



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therefore crucial that the link between the two that is decentralized and agriculture be looked at to ensure that Agrarian activities seem to be the dominant one (Shah, 2010; Khan, 2012, & The World Bank, 2016).

One classical example of such studies has been a research conducted in Karnataka. According to this research, whilst decentralization is likely to reduce agro-ecological variability and hence favour decentralization it also reveals the heterogeneity within farming communities. It is also observed that the provision of agricultural extension can incorporate private sector activities and that incentive structures can be devised to enhance their effectiveness.

Whilst, in principle, there is nothing to exclude this occurring at the national level, in practice this flexibility is more likely to be achieved with decentralization and the provision of club goods. The paper concluded by looking at several ways that local government could provide an enabling environment for the private sector. Many of these require a change of attitude from regarding the private sector as a source of short-term taxation and economic rent extraction, to an appreciation that a vibrant private sector can increase the productivity and wealth of the local economy and hence increase the long-term viability of local government.

Also, another study looked at the impact of decentralization of governance structure for the delivery of agricultural public services in the state of Karnataka using survey data collected from 36 gramapanchayats through focused group discussions. The evidence showed that discussions on agricultural issues in gramasabhas influence the public service delivery positively. Similarly, the regular participation of the officials of the state department of agriculture in gramasabha meetings had a significant effect on joint agricultural activities, especially demonstrations of new technology to farmers. The study underlined the importance of the institution and how such



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institutional structures can enable effective service delivery to the farmers (Kannan, 2013). Akramov (2010) on decentralization, Agricultural Services, and Determinants of Input Use in Nigeria revealed that the substantial differences in agricultural productivity between Asia and Africa can be largely explained by differences in the use of modern inputs. The evidence suggests that better access to infrastructure (such as roads and irrigation) and agricultural services has given Asian farmers significantly better access to modern inputs, while Sub-Saharan African farmers without such an access are not able to fully exploit the benefits of modern agricultural inputs.

On the other hand, Agravante (2015) looked at the Perceptions of Agricultural Extension Workers (AEWs) on the performance and Impacts of Decentralized Agricultural Extension: The Case of Eastern Samar And Leyte Provinces, Philippines found out that the objectives of decentralizing agricultural extension has not met the expectations of AEWs and key informants due to key factors such as lack of funds at the local level, low priority for agricultural programs, and partisan politics. On the other hand, positive outcomes include timely release of salaries, direct access to human resource and financial resources at the local level, and proximity of AEWs to household family members. This study has proved that after 20 years of decentralization, the AEWs in Eastern Samar and Leyte provinces were dissatisfied with decentralization as expressed by their support for the renationalization of agricultural extension. The study highlighted the significance of the leadership qualities of local chief executives (Governors and Mayors), competence, and in-depth understanding of the value of agriculture and rural sector development. These characteristics are required for successful implementation of decentralized agricultural extension.



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Whiles Kaarhus and Nyirenda (2006) in a report on decentralization in the agricultural sector in Malawi on the policies, processes and community linkages asserted that the process of decentralization is, in general, being pursued with persistent influence from Central Government and Donors, involving quests for power and competition over resources that also include Traditional Authorities, local politicians and community groups. The process, however, lacks clear leadership with the necessary commitment and strategy to make the process succeed within the given time frames of the Decentralization Programme. On the other hand, there is not only considerable reluctance to devolve power and resources to lower levels, but also to question public officials, institutions – and Traditional Authorities – regarding their roles in the devolution process. These challenges in terms of creating downward-accountability mechanisms are, in turn, related to the challenges of both democratization and capacity building at all levels.

According to Agyeman (2010), in a study on the effects of Ghanaian Decentralized Development Planning system in the provision of health and educational infrastructure found out that the health and educational infrastructure have improved during the implementation of decentralized planning within the survey period. However, the performance of the two sectors during the time under review could not be exclusively attributed to decentralize planning due to the fact that:

- The provision of health and education infrastructure is not solely done by the Municipal Assembly. Their mother departments, thus Ministry of Education/Ghana Education Service and Ministry of Health/ Ghana Health Service also continue to provide the physical infrastructure at the district level and also provide policy directions.



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- Transfer of funds from the central government to the municipal assembly in the form of DACF though inadequate and unpredictable has significantly contributed to the provision of health and educational infrastructure. It was also learnt that the impact could have been greater if the Municipal Assembly has the full autonomy over the disbursement of the fund.
- Infrastructure provision at the municipal level is greatly influenced by interventions from central government, donors and non-governmental organizations.

These observations by the various writers therefore meant that there was the need to look at how the various group of people involved in promoting agricultural development perceived the effect of decentralization on agricultural development.

Stakeholders are a diverse group of actors who can be affected by a strategy or project. In this study, therefore the stakeholders are the various actors in local government with the aim promoting agricultural development in the East Gonja District. The perceptions of what effects decentralization has brought to them in the area of agricultural development were sought from the various stakeholders (both primary and secondary stakeholders). According to Robbins (2001) Perception represents the process by which an individual organize and interpret the sensory impressions in order to give meaning to the environment. Therefore, the issue is – each one of us perceives the world around us in different ways. It is our persona) perception of that reality which shapes and directs our behavior, and some objective understanding of external reality (Robbins, 2001).



2.8 Criteria for Assessing Key Agricultural Development

According to Johnston, Onwuegbuzie & Turner (2007), a country's overall agricultural development policy is a composite of sub strategies relating to research, education, water resources development, promotion of farmers' organizations, marketing and price policy, credit and the distribution of inputs, agricultural taxation, land tenure, policies affecting the nature and pace of mechanization, and other elements. The total efficiency of the strategy depends on the complementarities among these varied activities and the quality of implementation as well as decisions with respect to the allocation of funds and personnel and policies for individual sub strategies. Rational decision-making is complicated by insufficient knowledge about a large number of interacting variables, including the response of farmers to changes in the technical and economic environment in which they operate.

Similarly, some general criteria for assessing key agricultural policies often depend on an enabling policy environment that meets the following criteria. According to Send-Ghana report, investing in the following guidelines is essential in coming out with agricultural policies especially at the local level.

- Policy makers have the responsibility of ensuring that farmers are able to produce their food crops in a manner that will sustain their livelihood whilst the farmers on the other hand must work hard to develop their capacities to be independent.
- Policies are expected to be targeted at increasing the availability and reduction in the cost of inputs for small producers so that they are able to access the available resource at a reasonable cost which should be environmentally



friendly and aim to www.udsspace.uds.edu.gh preserve and conserve land for future use in agricultural production.

- Policies are expected to recognize and address the distinct challenges and policy proposals evaluated to determine which segments of society (based at a minimum on gender, class, and race/ethnicity are excluded).
- Government policies should provide support to farmers by investing in the marketing infrastructure as well as ensure that small scale farmers have access to affordable financial services. It was revealed that, rural finance is a huge constraint, amongst others in terms of affordable credit in order to purchase inputs, savings schemes etc. These financial services need to be accompanied by capacity building schemes purposely addressing the capacity needs of the farmers, such credit management skills that assist farmers to efficiently and effectively use the loans for the intended purposes and not for other family needs (which sometimes leads to defaulting).
- Policies, according to the report are expected to provide useful, efficient, and expanded extension services for small farmers. Many rural farmers are unable to access extension programs that provide them with the knowledge to use new technology. Programs such as those that encourage farmer exchanges to view and learn about new technologies and those that help with training and capacity building should be promoted. In addition, these programs should aim to collect and disseminate information on best practices, using research that utilizes both modern and indigenous knowledge and is designed specifically for farmer use.
- Promoting farmer organizations where farmers could be supported in capacity building in advocacy, and their engagement in policy debates. In order for



farmers' voices to www.udsspace.uds.edu.gh be heard, their knowledge to be known, and their concerns, perspective and needs to be taken into consideration, farmers collective voices are important. Policies should promote collective action, bargaining and policy engagement with farmers through farmer based organizations. These organizations can be a means for farmers to access inputs at a reasonable cost, to connect to buyers and to engage political leaders and policy makers on their interests and needs.

- The report showed that, when government decides on new policies to address the concerns of farmers, they often forget to adequately take into account indigenous knowledge and skills. Policies should be based on community needs that are assessed through careful and adequate consultations with key stakeholders. Johnston et. al (n.d.)

2.9 Definitions of Key Variables of the study

2.9.1 Income

It is argued that increased agricultural production and productivity, strengthen local development institutions, and the diffusion of appropriate technology are not ends in themselves; they are only a means for improving the living conditions of people suffering from the age-old problems of poverty and deprivation (UN, 2012). Higher income means better food, improved nutrition, better clothing, better educational facilities, declining mortality and illiteracy rates, and more viable social and political institutions (Olaniya, & Bankole 2005). Therefore, income level is usually a good predictor of the social, political, and cultural status of people. Simply defined, income refers to the monetized value of the flow of goods and services. Income can be measured at both the macro (national) and the micro (household or individual) levels (ILO, 2003).



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In this study the focus was more on the individual level where farmers' perceptions were sought on the levels of their income before the implementation of decentralization and their income after the implementation of decentralization.

2.9.2 Food Security

Food security is the condition in which all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (Clay, 2002). The WHO states that there are three pillars that determine food security: food availability, food access, and food utilization.

The ultimate objective of world food security should be to ensure that all people at all times have both physical and economic access to the basic food they need. Food security should have three specific aims, namely ensuring production of adequate food supplies; maximizing stability in the flow of supplies; and securing access to available supplies on the part of those who need them (Edralin & Collado, 2005). Food security is the "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices (Edralin & Collado, 2005).

The World Food Summit defines access as having "physical, economic and social access". Access is still not commonly accepted as an essential part of food security despite Amartya Sen's introduction of the concept in the early 1980s. Many people only consider access within an economic or financial context, particularly since the 2005 Niger food crisis and the start of food price volatility in 2008. Marian & Mazziota, (2011) therefore defined food access as a household's ability to have the right amount of food regularly through a combination of purchases, barter, borrowings, food assistance or gifts.

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The above indicators relate to food production, food distribution, and food consumption, respectively. More than these factors, food security requires decentralized governance as well as proper interventions to guarantee the sustainability of food production, distribution, and consumption.

However, at the lower level where governance is close to the citizens, it is imperative that there exists strong, stable local government that will enhance and protect food security. This can be done by incorporating all the three basic pillars of food security at the local level. In other words, a sustainable food system will help to satisfy basic human needs while decentralized governance will encourage local initiative. Food security will be lasting only if all these factors are applied.

2.9.3 Participation

The concept of participation has become topical in all spheres of governance and development discourse in recent times. It has been described as politics and the way power is distributed between different actors within society. Also, it is about how decision-making are shared amongst people and how this affects their abilities to empower themselves and others (Bene, 2009). The aim of participation is to make people more directly involved in problem solving at the grassroots complemented with the belief that people's action ought to be at the centre of government (Edralin, 2000).

Undoubtedly, the definition of participation is therefore as varied as there are development practitioners. Some human rights activists and politicians do not agree on the contribution of participation in improving the lives of the people (Rahman, 1991). While some do not believe in its value, others believe it is the 'magic bullet' that brings improvements in the lives of people, especially those at the local level (Raymond, 2000). Participation as a concept varies with its application and the



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definition depends on the context in which it occurs. For some it is a matter of principle, for others, practice while others maintain it is an end in itself (Raymond, 2000).

According to Gaventa (2004), the term participation is mostly used in the social arena, community or in development projects. But more and more, it is also used in relation to the rights of citizenship and democratic governance. Viewed in this way, it implies that participation can be approached from either the social or political perspective. Gaventa and Valderrama (1999) assert that political participation on one hand, usually involves the engagement of citizens in traditional forms of political activities. It often focuses more on mechanisms of indirect participation like voting, political parties and lobbying.

Local citizen participation has long been acknowledged as a useful tool to enhance public policies: it improves policies' responsiveness to the population's needs and quality as citizens make creative and innovative proposals to solve development challenges.

Even though the constitution of Ghana guarantees the participation of citizens in local government areas, there is widespread dissatisfaction with the state of participation and accountability in the local government system (MLGRD, 2010). In addition, participation should involve as many people as possible in making vital decisions that affect their lives. Participation therefore allows for the participation of people in decision making that affect their wellbeing. Participation in agricultural development is therefore viewed as a situation where farmers' voices are heard at the local level on interventions that are expected to influence agricultural development.



2.9.4 Agricultural Yields

Agricultural yield is measured as the ratio of agricultural outputs to agricultural inputs. While individual products are usually measured by weight, their varying densities make measuring overall agricultural output difficult. Therefore, the output is usually measured as the market value of final output, which excludes intermediate products such as corn feed used in the meat industry. This output value may be compared to many different types of inputs such as labour and land (yield). These are called partial measures of productivity

Agricultural yield may also be measured by what is termed total factor productivity (TFP). This method of calculating agricultural productivity compares an index of agricultural inputs to an index of outputs. This measure of agricultural productivity was established to remedy the shortcomings of the partial measures of productivity; notably that it is often hard to identify the factors cause them to change. Changes in TFP are usually attributed to technological improvements.

2.10 Conceptual and Analytical Frameworks

The conceptual framework is presented in figure 2.3. The concepts used in addition to the main ideas already mentioned include looking at the district as the focal point of the study since it is the most basic level for political and administrative decentralization. Thus, the environment, reporting structures and decision making processes, roles and the various conditions that influence the performance of these roles and the involvement of other actors in the process both at the local level would be investigated in details and the outcomes of such interactions presented in the study.

2.10.1 Logic of the Conceptual Framework

The literature reviewed so far indicates that for decentralization to be effective in promoting Agricultural development, the various forms of decentralization (Political,



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Administrative and Fiscal) must work in sync and cannot be allowed to work in isolation. Therefore, there is the need to continuously monitor and evaluate the decision making processes and the reporting structures in order to achieve the desired results at all stages especially at the local level where real transformation is most important. These reporting structures should include the various levels of governance, the private sector and civil society whilst the decision making processes include, amongst others the laws, policies, culture and institutions.

All these notwithstanding, there are specific latent but very crucial interventions that are

needed to ensure the achievement of the overall agricultural development. These interventions include devolving power and decision making to the farmers at the local level, encouraging the youth to venture into agriculture, promoting best agronomic practices and discouraging the use of dangerous pesticides, promoting alternative off-farm opportunities to farm-houses through research and development, adjusting agricultural policies to promote sustainable production systems and innovative technologies, relieve pressure on the natural resource use (land & water) and devolving resource mobilization. The successful application of these interventions, are more than likely to help enhance and improve agricultural development at the local and ultimately, national level. These relationships are presented in the figure 2.3.



The Link Between Decentralization and Agricultural Development

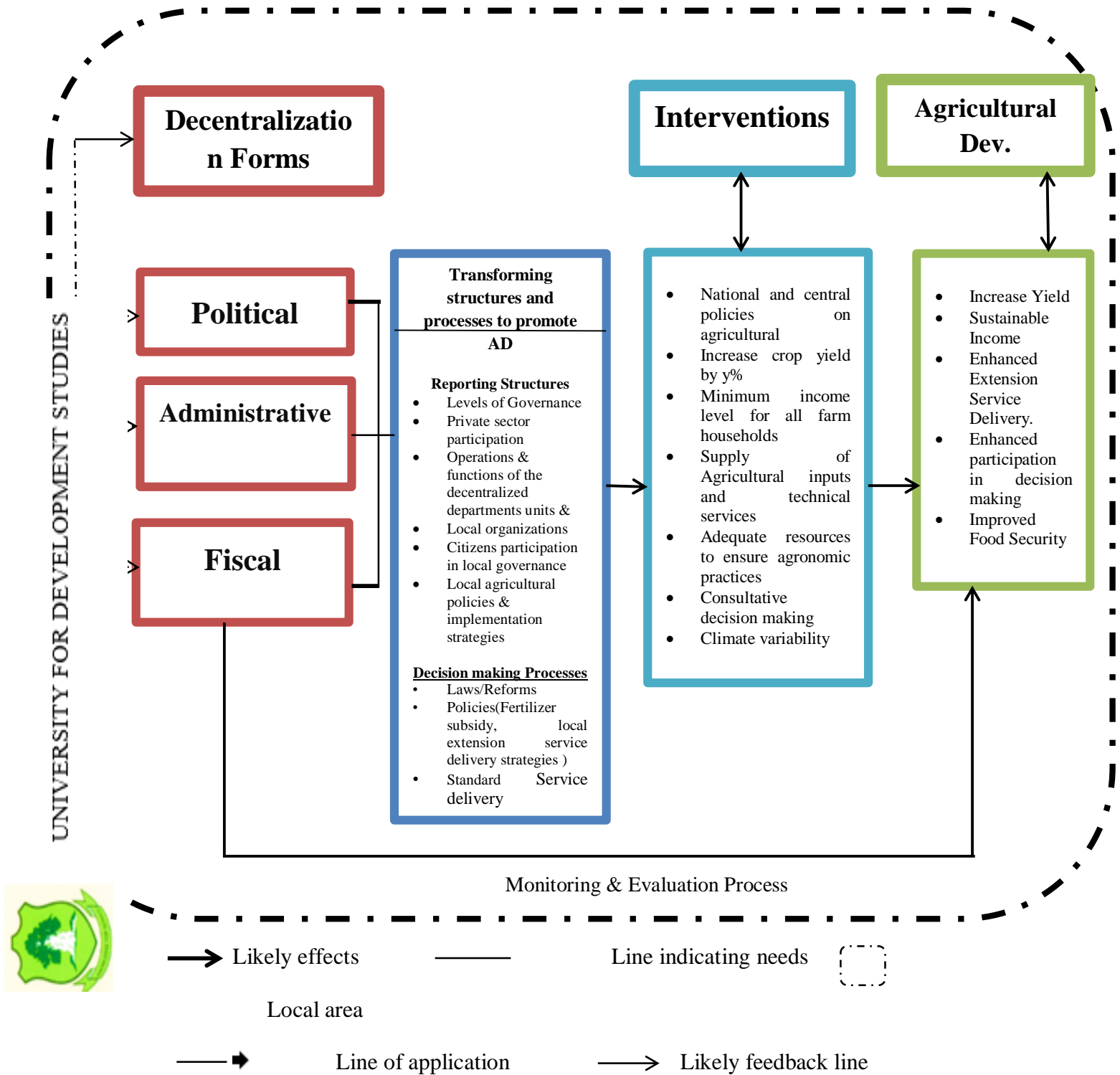


Figure 2.3: Conceptual framework

Adapted from Shotton, (2005) & Sustainable Livelihood Framework (SLF), DFID, (2002)

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The line between the forms of decentralization and the reporting structures and processes indicates the transformational requirements that should be met if it is to carry out agricultural development, mandate effectively and successfully. The various forms of decentralization can be transferred to the local level, yet there will still not be changes if the various structures and processes are not transformed it will be difficult to achieve the desired objective. The line between the reporting structures/decision making processes and intervention outcomes represents the application of the measures pursued at the local level to promote agricultural development. The applications of these interventions which constitute the intervening variables are expected to ensure that, the agricultural needs of the farmers are met. This is likely to bring about changes in the agricultural development status of the local area and this is indicated by a line of effects.

The line from the effects back to the main forms of decentralization indicates the monitoring and evaluation process that is very relevant to the decentralization process if it is to succeed. This feedback link might be well understood as the life blood of the decentralization process within the local level governance. If this feedback is acted upon, the likely success of decentralization is enhanced.

However, if the various actors ignore the feedback results, the success of the decentralization process is compromised. The feedback results include what the local level did well and needs to be improved upon or what it failed to properly implement and needs to be addressed well going into the future. All these take place within the local area. The line delineating the local area in the diagram above is in broken forms to indicate that, the local level is not closed system but opened to the outside environmental influences where other non-local actors get involved in the process.



3.0 METHODOLOGY

3.1 Introduction

This chapter presents insight into the study area, the study population, sampling procedure employed and sampling size. It further details the data collection procedure and analytical tools used to obtain results.

In order to examine the effects of decentralization in relation to Agricultural development in the East Gonja District, different approaches, and techniques were used in the collection and analysis of both qualitative and quantitative data. This part explains how these were done

3.2 The Study Area

This study area represents the geographical and the various methods that were used for the study.

3.2.1 Profile of the Study Area

The study was conducted in the East Gonja District in the Northern Region of Ghana. The geographical characteristics, including demographic and socioeconomic information about the District are discussed below. Figure 3.1 is the map of the East Gonja District showing the study communities.



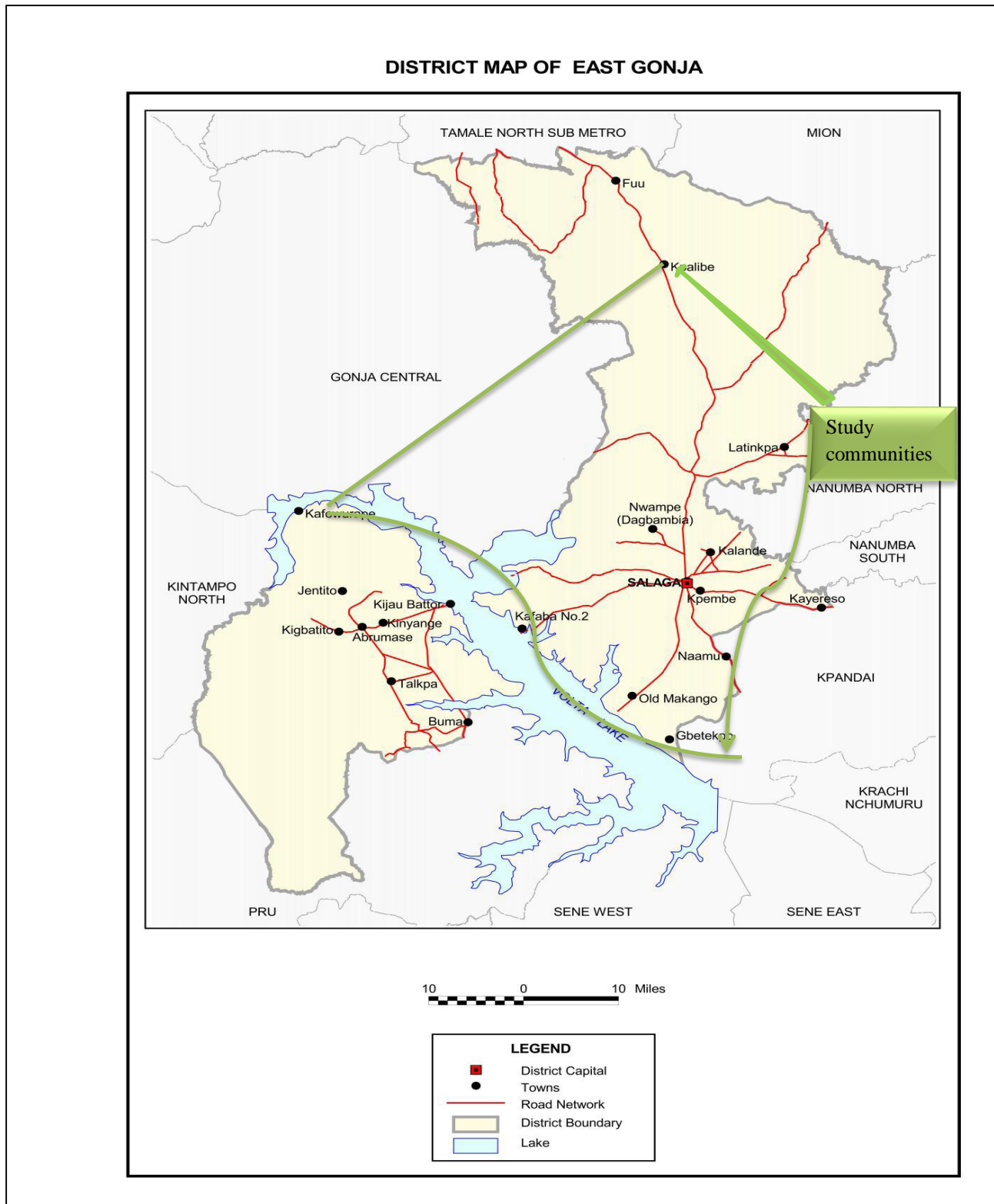


Figure 3.1 Map of East Gonja District

Source: Ghana Statistical Service, 2014

3.2.2 Location and Size

The East Gonja District was created by Legislative Instrument (LI 1938) in 2007. It is located in the South-eastern section of the Northern Region of Ghana. The district lies within Latitude 8°N and 9.29°N and, Longitude 0.29°E and 1.26°W. It shares boundaries to the east with the Mion district, to the north with Nanumba-South and Kpandai Districts, and the Brong-Ahafo Region to the south. The total land area of the district is 8,340.10 square kilometres and occupies about 11.95 per cent of the landmass of the Northern Region thus making it the largest district in the country in terms of land mass.

The East Gonja District lies in the Tropical Continental climate zone. Temperatures are fairly high, ranging between 29°C and 40°C. Maximum temperature is usually recorded in April, towards the end of the dry season with minimum temperatures recorded from December to January, during the harmattan period. The area experiences a single rainy season (May to October) and a long dry season (November to March/April). Average annual rainfall varies between 1,112.7 mm and 1,734.6mm (East Gonja District Medium Term Development Plan, 2015).

The natural vegetation of the district is the Guinea Savannah Woodland. There are few grooves, which have been preserved over the years. The tree cover is relatively dense, compared to the rest of the Northern Region. However, intensive harvesting of trees for fuel wood and charcoal burning, and also the activities of the Fulani herdsmen are fast reducing the tree cover, particularly in areas close to the Tamale Metropolitan Assembly (East Gonja District, Medium Term Development Plan, 2015).



3.2.3 Demographic Characteristics

The demographic characteristics include the population size, structure and the composition of the East Gonja District.

3.2.4 Populations Size, Structure and Composition

The population of East Gonja District, according to the 2010 Population and Housing Census, is 135,450 representing 5.5 per cent of the region's total population. Males constitute 51.5 per cent and females represent 48 per cent. Eighty-one per cent of the population is rural. The district has a sex ratio of 106.1. The population of the district is youthful (44.0%) depicting a broad base population pyramid which tapers off with a small number of elderly persons (4.0%). The total age dependency ratio for the District is 95.44, the age dependency ratio for males is higher (95.44) than that of females (88.9) (East Gonja District, Medium Term Development Plan, 2015).

3.2.5 Household Size, Composition and Structure

The district has a household population of 133,139 with a total number of 18,811 households. The average household size in the district is 4.4 persons per household. Children constitute the largest proportion of the household structure accounting for 53.3 per cent. Spouses form about 10.5 per cent. Nuclear households (head, spouse(s) and children) constitute 33.5 per cent of the total number of households in the district (East Gonja District Medium Term Development Plan, 2015).

3.2.6 Occupational Distribution

Of the employed population, 77.2 per cent are engaged in skilled agricultural activities, forestry and fishery workers, 6.0 per cent in service sales, 11.1 per cent in craft and related trade and 0.7 per cent are engaged as managers, professionals and technicians. Table 3.1 shows the occupational distribution of the East Gonja District.



Table 3.1: Occupational Distribution

Type of Occupation (Both Sexes)	Both Sexes	Male	Female
Managers	355	162	193
Professionals	972	686	286
Technicians and associate professionals	302	239	63
Clerical support workers	106	81	25
Service and sales workers	3,209	729	2,480
Skilled agricultural forestry and fishery workers	41,109	24,864	16,245
Craft and related trades workers	5,879	1,261	4,618
Elementary occupations	870	369	501
Plant and machine operators and assemblers	387	369	18
Other occupations	9	4	5
Total	53,198	28,764	24,434

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.2.7 Economy of the District

Agriculture is the main occupation of the people. The common crops cultivated in the district include yam, millet, rice, cassava and groundnuts. The main cash crop is shea nut, which is grown in the wild.

The district falls within the sub-basins of the Black and White Volta. Other rivers and season tributaries form a network with some important valleys such as the Katanga and Chambugu which are suitable for rice farming. Groundwater use has been common with an estimated 184 boreholes drilled since 1970.

The district has a cassava processing factory in Salaga for processing cassava into products such as flour, cakes, starch, animal feed and other products. This does not only provide an avenue to process a home grown crop, but also provides a source of income for the people.



3.2.8 Agriculture

As high as 72.6 per cent of households in the district engage in agriculture. In the rural localities, eight out of ten households (81.3%) are agricultural households, while in the urban localities, 43.1 per cent of households are into agriculture. Most households in the district (93.9%) are involved in crop farming. Poultry (chicken) is the dominant animal reared in the district (East Gonja District, Medium Term Development Plan, 2015).

3.2.9 Political Administration

The East Gonja District consists of 50 Assembly members with 35 elected and 15 appointed. The Administrative capital is Salaga, which is centrally located in the district. Two members of Parliament represent the district, one for Salaga North constituency and the other for Salaga South constituency.

For easy administration, the East Gonja District has been zoned into six Area councils with 35 electoral areas. The District Chief Executive is the Chief executive officer of the Assembly with both Administrative and Political responsibilities. The District Coordinating Director is the Chief Administrator of the Assembly. The eleven decentralized departments are all present and functional in the district.

3.3 The Research Design

Research design according to Creswell (2009), “are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis”. It is a field plan which gives structure and logic to what the researcher intends to do and also allows the checking of errors in a systematic and organized manner. The research design that was employed in this study was the cross-sectional survey design.



3.3.1 Population for the study

According to Kumekpor (2002), the population of a study may be considered as the number of all units of the phenomenon to be investigated that exists in the area of investigation. Also, Cooper & Schindler, (2001) indicated that the population is the total collection of elements about which some inferences can be made. Sekaran (2000) on the other hand, opined that population is the aggregate of all cases that conform to some designated set of specifications.

In this study, the population included the Administrative staff of the Assembly, Assembly member, officers of the decentralized Agricultural department, Development Partners and Farmers in the East Gonja District. A preliminary visit to the district in August, 2016 revealed that there are five (5) NGOs in the district, Thirty-four (34) Farmer Based Organizations, sixteen (16) key Agric officers, and sixteen (16) key staff of the Assembly.

3.3.2 Sampling Procedure and Sample Size Determination

Empirically supported generalizations are usually based on partial information. This has been supported by Frankfort-Nachimias and Nachimias (1996 p. 179). They maintained that the researcher can draw precise inferences on all units based on relatively small units when the units accurately present the relevant attributes of the whole unit.

The reasons for using a sample rather than collecting data from the entire population are self-evident. For investigations involving several hundreds and even thousands of elements, it is practically impossible to collect data from the entire population or test every element. Even if it is possible it would have time and financial implications which do not allow for the use of the entire population.



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In this study, both probability and non-probability sampling techniques were used to select the research units of the target population. Probability sampling is when every unit of the population has a knowing and equal chance/probability to be selected/included in the sample. Common types are simple random sampling, systematic sampling, stratified sampling and cluster sampling.

Non-probability sampling is a sampling technique where the samples are gathered in a process that does not give all the individuals in the population equal chances (equal probability) of being selected. Subjects in a non-probability sample are usually selected on the basis of their accessibility or by the purposive personal judgment of the researcher (Mugera, 2013).

3.4 Sampling Procedure

A multi-stage sampling technique (five staged) was used in this study to select 180 respondents comprising five categories of the population. This included the key staff of the district assembly, key staff of the District Office of Agric, Assembly persons, key staff of NGOs, and farmers from the various farmer based organizations. The following step by step procedure was used to get the sample for the study.

Stage I: East Gonja District was purposively sampled from the twenty-six districts in the northern region. Purposive sampling techniques have also been referred to as non-probability sampling or purposeful sampling or qualitative sampling and involve selecting certain units or cases based on a specific purpose rather than random (Tashakkori and Teddlie, 2010). East Gonja District was purposively sampled following an earlier research in 2015 by Root and Tuber International Marketing Project on the Effectiveness of the Good Practices Centres models on cost/revenue/income per hectare investment outlays, employment





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creation and socio economic impact along the value chain. Data gathered during the research revealed apathy on the part of community members in utilizing the intervention which was expected to improve agricultural development in their districts. This therefore triggered the need for an investigation into the effects of decentralization on agricultural development since these interventions were supposed to be the responsibility of the entire assembly to ensure value for money.

Stage II: Stratified sampling was employed to select five distinct sample units. This was used because there was ensure representation of the subgroups. The strata were named as key staff of the Assembly; key staff District Office of Agriculture, Assembly Persons, Key staff of Non-Governmental organizations, and Farmers. The respondents were further stratified into males and females to ensure the proportion representation of males and females in the study.

Stage III: Proportional representation of males (50% of total number) and females (50% of total number) for four of the sample strata aside the FBOs. This proportion was used because of the small numbers of these distinct groups.

Stage IV: Random selection of 136 respondents (25% female and 75% male) from 210 farmers belonging to 10 FBOs using Krejcie and Morgan table as a guide. However, a conscious effort was made to proportionately have a gender balance in the selection of a total of 136 respondents through the stratification of the FBOs that had both male and female members.

Step V: The quantitative data were gathered from the 136 farmers in the survey, whilst the qualitative data were gathered from the 44 respondents who constituted the key informants as well as participants of the FGDs.

All selected members of the sub-groups were put together to constitute the total study sample of 180.

Table 3.2 is a table showing the summary of the study sample for the study.

Table: 3.2: Determination of Sample Size

Category of Stakeholders	Study pop.	Sex of resp.		Total No. sampled
		Female	Male	
Key District Assembly staff	16	2	14	8
Key staff of DoA	16	2	14	8
NGOs	5	0	5	3
Assembly members	50	2	48	25
Farmers	210	60	150	136
Total				180

Source: Author's construct, 2017



Table 3.3: Data Requirement and Methods

Research objective	Variables	Units of Measurements	Method	Tool
Perception of the Achievement on decentralization of A development	Participation in decision making	Number of AEAs	Survey	Questionnaire
	Transparency in governance	Level of Participation	Face to face interview	Interview guide
Constraints of c within the Agricultur district	Availability of resources	Number of meetings per year	Focus Group Discussion	Field notes
	Improved Productivity	level of demand driven interventions		Voice recorder
Reporting structures Agricultural develop decentralized departn	Improved Extension Services	Timely allocation of resources		
	Accountability	Level of openness in governance		
Decision making pr local level promoti development?	Income	Level of communication		
	Inadequate Extension Agents	Farmer-extension agent ratio	Survey	• Questionnaire
	Lack of Resources	Frequency of recruitment	Face to face interview	• Interview guide
	No Logistics for agricultural dev	Timely mobilization of funds	Focus Group Discussion	• Field notes
	Decline in farmers income	Timely release of funds		• Voice recorder
	No clarity of roles by stakeholders	Who is doing what at the district with regard to Agricultural development		
	Unavailability of markets for Agric produce	Commitment level of political head		
	No political will			
	Lack of understanding of the decentralization system			
	Strengths	Level of involvement of stakeholders	Face to face interview	• Questionnaire
	Weaknesses	Involvement of farmers in agricultural development at the DA	• FGD	• Interview guide
	Opportunities			• Field notes
	Threats			• Voice recorder
	Strengths	How are agricultural issues handled at the DA	• Face to face interview	• Questionnaire
	Weaknesses	Who is responsible for initiating agricultural development activities in the DA	• FGD	• Interview guide
	Opportunities	How important are agricultural development activities		• Field notes
	Threats			• Voice recorder

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Authors construct 2017.

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Table 3.3 is showing the data requirements and methods that were used for this study.

The table categorically shows the various research objectives detailing the variables used, the units of measurements, method used as well the tools used.

3.5 Data Sources

The research also relied on both primary and secondary sources of data. The primary source of data was from interviews conducted on farmers and the other stakeholders.

Other primary sources were discussions with institutions and personal observations that were made in the study areas.

The secondary sources, on the other hand were articles, journals, publications, unpublished works, reports from the district office of the Assembly and the district office of Agriculture as well as some key NGOs in agricultural development.

3.5.1 Method of data collection

Quantitative and qualitative data were collected to allow statistically reliable information obtained from numerical data to be supported and enriched by qualitative information from the stakeholder perspectives. Whereas the use of qualitative data allow for the exploration and understanding the meaning of individuals or groups ascribe to a social or human problem (Creswell, 2009), quantitative data was useful to quantify opinions, attitudes and behaviors and find out how the whole population felt about a certain issue (Leech, 2008).

Quantitative data were collected using the questionnaire (appendix one) and the qualitative data was obtained from the key informant interviews and focus group discussion. Quantitative data were collected using the semi structured questionnaire whilst the qualitative data was obtained from key informant interviews and focus group discussion.



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Focus group discussion was used in collecting data on perceptions of farmers on the achievement and constraints of decentralization. Focus group discussion was organized for farmers. Key informant interviews were conducted for the other four stakeholders in agricultural development which included key staff of the Assembly, key staff of the DoA, key staff of the NGOs and the Assembly persons for purposes of triangulation.

3.5.2 Instrument for Data Collection and Method of Administration

This section looks at the instrument for data and the method of administration.

3.5.2.1 Semi-Structured Questionnaire

A semi-structured questionnaire (appendix one) was used for the collection of quantitative and qualitative data. Researchers have used unstructured questionnaires to provide a general guide on the type of information to be obtained, but the exact formulation of the question is largely the responsibility of the respondent since it is the respondents' words that are used (Kathori, 1990). The semi-structured questionnaire has suffered some criticisms by scholars. The major criticism is that when questions are presented to users face-to-face, each respondent may have different interpretations of your questions, dishonesty on the part of respondents, and hidden agenda of respondents. Without someone to explain the questionnaire fully and ensure each individual has the same understanding, results can be subjective. For this reason, this study ensured that the research assistants who were used understood the language very well by being provided with sufficient training to understand exactly what was being sought and could therefore interpret the questions very well to the respondents. The seasoned Research Assistants also understood the dynamics in administering semi structured questions and so they were able to guard against some of the limitations in the use of the instrument.



3.5.2.2 Interview Guides for key Informants

An interview guide (appendix two) was used to collect data from four sampled key informant groups. The first interview guide was specifically for three distinct categories of sampled stakeholders in the assembly (Assembly staff, NGO staff and the key staff of the Agricultural department in the district). The second interview guide, also a combination of both open and closed ended questions, was used to elicit responses from Assembly members/persons in the district during focus group discussions.

3.5.2.3 Questionnaire Development

The questionnaire for the study was in four sections. The first part employed questions directed towards eliciting responses from farmers to questions on their perceptions of the achievement of decentralization. These were presented in the form of perceptive statements on a 5 point likert-type scale with the following response categories: 5 = Strongly Agree, 4 = Agree, 3 = undecided, 2 = Disagree, 1 = Strongly Disagree. Farmers were asked to indicate their levels of agreement with each perceptive statement.

The second part comprised a list of constraints that were presented for farmers to rank on a scale of 1 to where 1 represented the most serious constraints and eleven the least constraint. These constraints were gotten from an earlier pre-test in some districts in the northern region from farmers themselves.

3.5.2.4 Focus Group Discussions (FGDs)

Two Focus Group Discussions (FGDs) were organized; one for farmers and one for assembly members. The farmers comprised members of the following communities: Salaga 2; Bau 2; Bunjai 2; Latinkpa 1; Grunshie Zongo 1; Kalande 1; Kakoshie 1; Kakoshie Gonja 1 and Kitoe Nkwanta 1. The Assembly members also comprised



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twenty five members out the 50 Assembly members in the East Gonja District. Aziz (2015), argued that FGD is related to qualitative research which is to provide researchers with data which are not obtainable through documentation or record. Two different focus group discussions were organized to elicit in-depth information on farmers' and assembly members' perceptions on the achievements of decentralization of agricultural development with specific focus on the three forms of decentralization thus, administrative, political and fiscal.

3.5.2.5 Validation of Instruments

Validity is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform (Kimberlin & Winterstein, 2008). Face and content validity was used in the study. Face validity, which is described as the surface validity or appearance validity was used to ascertain whether the measurement procedure that were adopted in this particular study appeared to be a valid measure of the variable or construct. This type of validity is in the technical sense as it does not really look at what the test actually measures, but just looks at the face value (Anastasi, 1988). This was done using course mates who peer reviewed the instruments.

On the other hand, content validation looked at the extent to which the elements within the instrument were relevant and representative of the constructs measured (Haynes et al, 1995). In this study, professionals in the area of local government and agriculture were consulted for thorough validation of the instrument before commencement of the data collection.

3.5.2.6 Pre-testing of Survey Instrument

To ensure the reliability of the instrument, the questionnaire was pre-tested using a small sample of 15 respondents in East Mamprusi. The pre-test included the



following respondents: www.udsspace.uds.edu.gh planning officers, budget officer, deputy coordinating director, and NGO staff from RING Project. The pre-testing provided very useful clues on the need for modification in the various instruments. Analysis of the pre-test data was useful in helping to eliminate, reframe, re-arrange and add on to the questions to ensure reliability and consistency in the instruments.

3.5.3 Procedure for data collection

Face to face interviews were used for the survey. The questionnaires were administered by the researcher with the help of four assistants (enumerators) who were trained before the administration of the questionnaires. All the enumerators were selected based on their previous experience in survey.

3.5.4 Data Sources

The research also relied on both primary and secondary sources of data. The primary source of data was from interviews conducted on farmers and the other stakeholders. Other primary sources were discussions with institutions and personal observations that were made in the study areas.

The secondary sources on the other hand was from articles, journals and publications, unpublished works, reports from the district office of the Assembly and the district office of Agriculture as well as some key NGOs in agricultural development.

3.5.5 Data Analysis

The kind of data that were gathered and the variables involved required both descriptive and inferential statistical analysis. Both descriptive statistics and inferential statistics were employed in the analysis of the quantitative data gathered from the field. The data were processed using SPSS software (version 20), Minitab and MS Excel.



3.5.6 Methods of Data Analysis

This section looks at the methods of data analysis tools that were used in this study. The methods of data analysis have been divided into five parts. The first part looks at the socio economic variables and the second to five part is mainly on the various research objectives.

3.5.6.1 Determinants of Participation in Agricultural Development

Factors influencing farmers' participation in agricultural development were analyzed using multiple regression to see whether there was a relationship between the socio-demographic variables (sex, age, marital status, education and farming experience which were the independent variables) and participation in agricultural development which was the dependent variable.

The empirical model chosen for estimating the relationship between PAD and the socio-demographic variables was specified as follows:

$$Y(PAD_i) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon_i$$

Where:

Y = Participation in Agricultural Development (PAD)

β_0 = intercept

$\beta_1 - \beta_4$ = coefficients

X_1 =sex, X_2 = age, X_3 = marital status, X_4 = education, X_5 = farming experience



Table 3.4: Measurement of variables and the a priori expectations

Study Variable	Description	Measurement of variable	a priori expectation
Dependent Variable			
Y(PAD)	Participation in the interventions targeting Agricultural Development	(If participant = 1, otherwise 0)	
Independent Variable			
Sex (X_1)	Sex of Respondent	1 if farmer is a male, and 0 otherwise	-/+
Age (X_2)	Age of Respondent	Years	+
Marital Status (X_3)	Marital Status of Respondent	Marital status, single =0, married =1	-/+
Education (X_4)	Education of Respondent	Measured in years of access to formal education completed	+
Farming Experience (X_5)	Farming Experience of Farmers	Number of years the farmer has been farming	+

Source: Author's construct, 2017

3.5.6.2 The Perceptions of Farmers on the Achievement of Decentralization on Agricultural Development

In measuring farmers' perceptions of the achievement of decentralization on agricultural development (Objective 1), a five (5) point likert- type scale comprising perceptive statements was used to assess the level of agreement of respondents on an ordinal scale. The response categories on the scale ranged from 5 = Strongly Agree to 1 = Strongly Disagree.

Minitab was used to run a descriptive analysis to generate the results on the Mean, Coefficient of Variation and Standard Deviation. Likert type scale normally fails to measure the true attitudes of respondent and likely has a tendency of making peoples' answers to be influenced by previous questions, or will heavily concentrate on one response side (agree/disagree). Frequently, people avoid choosing the "extremes"



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options on the scale, because of the negative implications involved with “extremists”, even if an extreme choice would be the most accurate (La Marca, 2011). Responses from the focus group discussions and key informant interviews which were more qualitative in nature were transcribed and relevant portions quoted directly to support the quantitative data obtained from the survey. These methods were concurrently used because the use of open ended questions had a great potential for missing data (Singer & Couper, 2017).

3.5.6.3 Reporting Structures in the District that Promotes Agricultural development

The second objective examined how the reporting structure was influencing agricultural development in the East Gonja District. Qualitative data were derived from the open-ended questions on this objective which was analyzed using the thematic text analysis technique. Thematic text analysis is an extraction of meanings and concepts of data and includes pinpointing, examining, and recording patterns or themes and is one of the most common forms of analysis in qualitative research (Javadi & Zarea, 2016).

Similarly, Rubin and Rubin reiterate that, thematic analysis is very exciting as it allows for the discovery of themes and concepts from the interviews conducted. This technique was adopted to allow for a detailed explanation of the data and presentations of the various dimensions of the subject matter through interpretations. This method of analysis was also adopted on the basis that it could further afford the researcher the opportunity to bring to bear some of the intrinsic assertions that were revealed (Braun & Clarke, 2006).

These themes were further analyzed using SWOT which is an acronym for strengths, weaknesses, opportunities and threats in the District with regards to agricultural





www.udsspace.uds.edu.gh development. It was a very useful tool for generating options and assessment of future course of action (Johnson et al., 2008). A SWOT analysis also used as a guide to identify the districts strengths and weaknesses (S-W), as well as broader opportunities and threats (O-T). The use of SWOT analysis was to consolidate the positive and negative results from both within the Assembly and outside environment. The strengths were related to the internal positive capabilities of the Assembly, while the weaknesses are internal negative aspects of the assembly. On the other hand, opportunities are the external positive factors that have a potential that present opportunities for success and threats are the external factors that have the potential to harm the organization.

The themes identified under the strengths included clear legal frameworks showing clearly the powers of the various units under the assembly, presence of NGOs focused on agricultural development, presence of administrative staff and the ability of any departmental officer to handle the affairs of the assembly in the event a vacancy. The weaknesses identified were inadequate resources in relation to financial and technical. Other weaknesses also included poor communication between the Assembly staff and the decentralized department staff, poor budgeting and management control system and ineffective monitoring system.

The opportunities identified included availability of enormous resource potential, generation of area specific issues and opportunity to encourage the consumption of locally produced agricultural products and the resourcefulness and technical competence of staff. The threats identified include the aging population, bureaucracy, and corruption, the widening of the gap between the rich and the poor, continuous central government interference and the monopoly on the part of the assembly staff. These were then coded and interpreted with illustrative quotes. Field notes generated

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from the FGD in addition to any observed happenings were integrated into the analysis.

3.5.6.4 Decision Making Processes at the Assembly that Promotes Agricultural Development

Objective three (3) of this study sought to examine the decision making processes of agricultural development at the Assembly in two dimensions that is the period between 2004 to 2009 and then 2010 to 2016. The period 2004 to 2009 represented the period before the implementation of decentralization when the Department of Agriculture was fully responsible for agricultural development in the district. 2010-2016 represented the period after the implementation of decentralization when the agricultural development becomes the responsibility of the District Assembly.

A comparative analysis of the decision making processes for the periods before and after decentralization were used to appreciate whether the effects of decentralization have been positive or negative.

3.5.6.5 Constraints of Decentralization on Agricultural Development

Objective four (4) sought to examine the constraints of decentralization on agricultural development. Even though decentralization has the ability to cut complex bureaucratic procedures as well as increase government officials' sensitivity to local conditions and needs, farmers are still faced with a lot of challenges after almost a decade of the implementation of decentralization.

Preliminary contacts with key informants at Salaga and Bunjai led to the identification of various factors that could constitute constraints of decentralization on agricultural development. The lists of constraints were summarized under the three main forms of decentralization (Administrative, Political and Fiscal). These constraints were further specifically broken down into eleven as follows:



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Administrative decentralization recorded no AEAs visit in the last five years, farmers do not know where to get extension service delivery, AEAs not using modern technology, lack of uniformity in decision making by stakeholders and no market. On Fiscal decentralization, the constraints enumerated were lack of funds, no logistics for extension delivery, no farming inputs, farmers' income has declined and decline in productivity while lack of political will was the constraint associated to political decentralization.

Farmers were presented with the constraints and were asked to prioritize using the preference ranking methods. Preference or problem ranking is a participatory technique based on analyzing and identifying problems or preference stakeholders share. In order to implement improvements and solutions to problems that communities face, there is the need to first identify and analyze the problems and priorities stakeholders share (Gay, K., Stubbs, E., and Galindo-Gonzalez, S, 2016). The constraints were ranked as 1 = most important constraint to eleven = least important constraint. Ranking allowed for the identification of the most demanding issues to deal with.

Kendal Coefficient of Concordance (W) proposed by Maurice G. Kendall and Bernard Babington Smith were used to measure the degree of agreement between the rankings of constraints confronting the farmers in the study area. The Kendall's Coefficient of Concordance test is a nonparametric statistical procedure used to identify a given set of constraints or problems, from the most influential to the least influential as well as measure the degree of agreement or concordance among the respondents. W is a measure of the agreement among raters or judges assessing a set of subjects in ranked order (Legendre, 2010). It is used to assess the degree to



which respondents in a study provide common ranking on an issue with the same general property.

The limits for W must fall between one (1) when the ranks assigned by each respondent are assumed to be the same as those assigned by other respondents and zero (0) when there is maximum disagreement among the rankings by the respondents. From the preference ranking, the total rank score for each item was computed and W calculated using the formulae;

$$W = \frac{12(S)}{m^2(n)(n^2-1)} - mT \dots\dots\dots 1$$

Where n is the number of objects, m is the number of variables and T is a correction factor, S is a sum-of-squares statistics over the row sums of ranks R_i and R values computed first from the row-marginal sums of rank R_i received by the objects:

$$S = \sum (R_i - R)^2$$

For tied ranks T is;

$$T = \sum t^3 k - t,$$

t_k = the number of tied ranks in each (k) of groups of ties. The sum is computed over all groups of ties found in all m variables of the data table, $T = 0$ when there are no tied values and the equation becomes;

$$W = \frac{12(S)}{m^2(n)(n^2-1)} - mT \dots\dots\dots 2$$

W is an estimate of variance of the row sums of ranks R_i divided by the maximum possible value the variance can take; this occurs when all variables are in total agreement. Hence $0 \leq W \leq 1$

$W = 1$ represents perfect concordance/agreement and 0 indicates perfect disagreement in the ranking.

The Friedman's Chi-square statistics (X^2) is given by;

$$X^2 = m(n-1)W$$



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This quantity is asymptotically distributed like chi-square with $(n-1)$ degrees of freedom; it can be used to test W for significance. This approach is satisfactory only for moderately large values of m and n (Kendall & Babington, 1939; Legendre, 2010) as in this study.

3.5.7 Presentation of Results

Results were presented descriptively (frequencies, means and percentages) using tables and charts.

3.5.8 Ethical Considerations

As a way of ensuring that respondents were not in any way affected negatively by the research work, a conscious effort was made to inform and be provided with consent voluntarily, as well as ensuring that there was utmost confidentiality of information that was provided by respondents. Also, respondents' anonymity was strictly adhered to. A comprehensive introduction spelt out the objectives of the study to assure respondents of their confidentiality and anonymity as proposed by Creswell (2009). The East Gonja District Assembly was duly informed and permission granted before the commencement of the study. On the other hand, the respondents in the study were made to understand the aim of the research after which their permission was sought. All the respondents interviewed, freely granted their consent and not under any kind of compulsion to participate in the survey. Anonymity of respondents was considered by omitting names and assigning codes to the questionnaires.



4.0 RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents a discussion of the results from the field survey. These include the results of the socio-demographic characteristics of farmers, perceptions of stakeholders on the achievement of decentralization of agricultural development, constraints of decentralization of agricultural development, how the reporting structures are promoting agricultural development and then finally the analysis how the decision making processes at the local level are promoting agricultural development in the East Gonja District of the northern region of Ghana.

4.2 Farmer's Demographic and Socioeconomic Characteristics

Results on the demographic and socioeconomic characteristics of 136 respondents are presented in the figures below.

4.2.1 Sex of Respondents

Of the 136 respondents surveyed, 75 percent were males, whilst about 25 per cent were females. The unequal distribution of the gender orientation is because fewer females were in the FBOs that were used for this particular survey. This low number of females is attributed to the fact that most women farmers are not registered in the various FBOs in the communities. This situation of gender imbalance could further be attributed to the fact that farming is a male dominated occupation in the area.



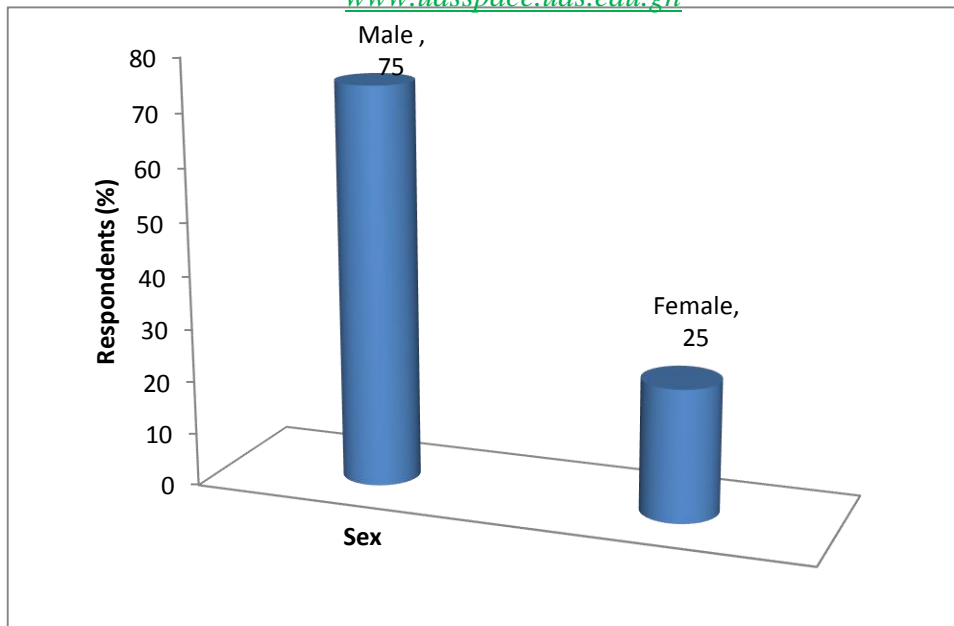
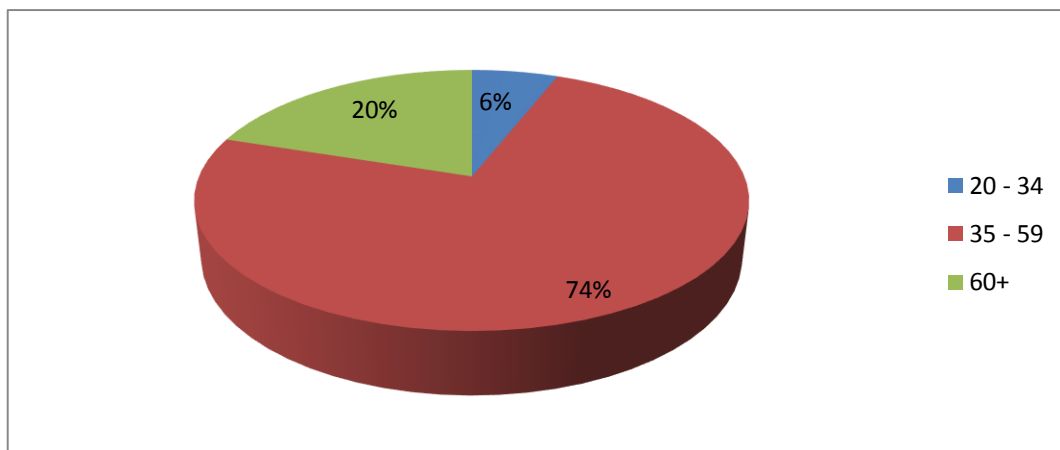


Figure 4.1: Sex of Respondents

Source: Field Data, 2017

4.2.2 Age of Respondents

Figure 4.2 below shows the age of respondents which were categorized into three groups (20 -34, 35 – 59, 60 and above years).



Mean - 49.96	SDev. = 10.045	N = 136
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Figure 4.2: Age of Respondent

Source: Field Data, 2017

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Even though, there are no universally acceptable age limits, the 20-34 years constitute the youth who are generally expected to be more energetic and enthusiastic to get involved in public activities than the other age groups. This group is likely to have a lot more persons who are still in school than any other group. The group between 35-59 years, who are adults in active public life, they form the socially and economically active population. Those who were 60 years or above are not normally expected to be active in economic and public life.

The results of the survey show that, the mean age of 136 respondents is 49 years with a standard deviation of 10.045. This is an indication that majority of the farmers on the average belong to the socially and economically active group and are capable of working hard to ensure the development of agriculture in the district. Six per cent of the respondents were within the age bracket of 20- 34 years. The second category of respondents who were categorized as adults were within the age bracket of 35 – 59 years and constituted 74 percent of the respondents. They form the majority of the respondents and are part of the active working population in the district. The third category of respondents in terms of the age bracket 60+ rerecorded 20 per cent and is part of the dependent population in the district.

The implications for the small number of the youth are that either the youth are not interested in agriculture, still in school or have migrated outside to seek for greener pastures. An aging farming population of 20 per cent means that more young people need to be encouraged to go into agriculture and see it as an active, profitable profession. By embracing and incorporating new technologies, authorities can encourage the youth to see beyond the stereotypes of traditional farming and help them view agriculture as an exciting and innovative industry.

4.2.3 Educational Level of Farmers

On the educational level of farmers, 107 respondents representing about 78 percent had no formal education whilst 19 respondents representing (about 14 per cent) had basic education. Five (5) respondents each, representing 4 per cent had secondary/technical and tertiary education respectively. See figure 4.3.

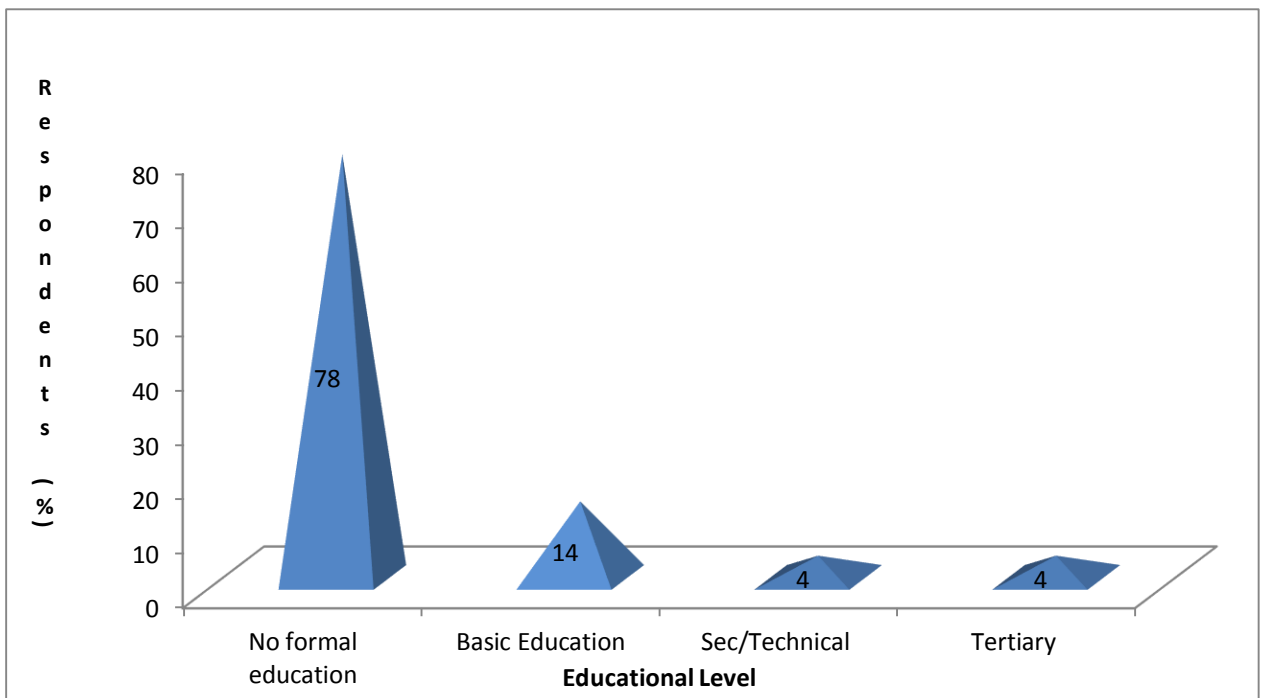


Figure 4.3 Educational Levels of Farmers

Source: Field data, 2017

4.2.4 Farming Experience of Farmers

Farming experience of respondents is a critical variable in determining the effects of decentralization in agricultural development. This is important because of the fact that decentralization of agriculture started about seven years ago and its effects could only be felt by farmers with about ten years and above experience in agriculture.

The diagram below presents results on the farming experience of respondents in the district. It indicates that 80 per cent of the respondents have farming experience



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between 1 – 20 years and were in the majority. However, farmers with 21 -40 years' experience were 47 in number (38.1 percent). Only 8.6 per cent have been farming for 41 – 60 years and might be retiring from active farming soon.

In general, the results reveal that the majority of the farmers used in this survey had been farming before the implementation of decentralization and are still farming. They are therefore in a better position to compare the two periods (pre and post decentralization periods).

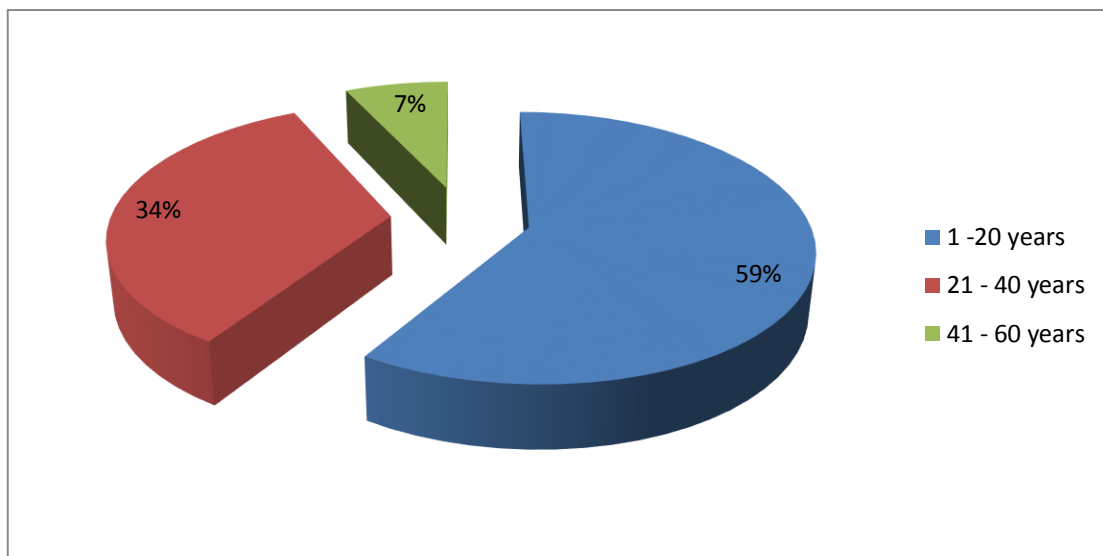


Figure 4.4 Farming Experiences of Farmers

Source: Field survey, 2017



4.2.5 Marital Status

The marital status of 136 farmers was taken and the results are presented in figure 4.5.

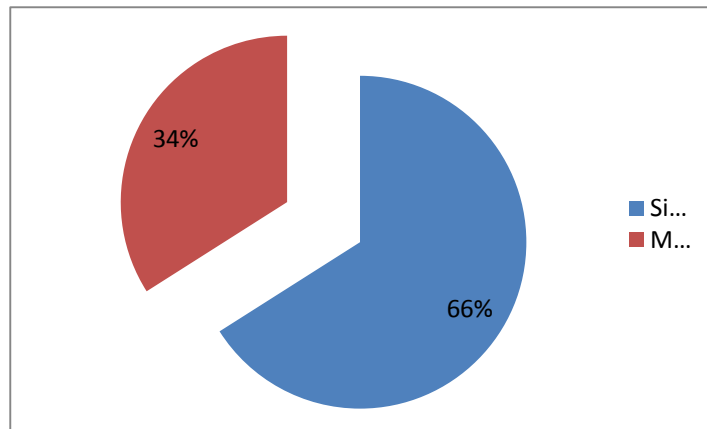


Figure 4.5 Marital Status of Farmers

Source: Field survey, 2017

The results in figure 4.5 indicate that out of a total of 136 respondents, 90 farmers, representing 66 percent were married while 46, representing 34 percent of them were single.

4.3 Relationship between Farmers' Socioeconomic Characteristics and Participation in Agricultural Development

This section was devoted to looking at the relationship that exists between farmers' socioeconomic characteristics and participation in agricultural development in the East Gonja District. A multiple regression analysis was conducted to help establish the relationship between the dependent variable (Participation in Agricultural Development) and the independent variables (S), Age (A), Marital Status (MS), Educational Level (E) and Farming Experience (FE). The results have been presented in tables 4.1 to 4.3 below.



4.3.1 Multiple Regression Analysis

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.650 ^a	.422	.416	.41727

Source: Analysis of field data, 2017

Predictors Sex, Age, Marital Status, Education, Farming Experience

Dependent Variable: Participation in Agricultural Development

Table 4.1 shows the R² for this model is 0.422 which implies that 42.20% of the variation in the dependent variable (PAD) can be explained by the independent variables (S, A, MS, E, and FE).

Table 4.2: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	52.722	4	13.181	75.702	.000 ^a
	Residual	72.256	415	0.174		
	Total	124.978	419			

Source: Analysis of field data, 2017

- a. Predictors Sex, Age, Marital Status, Education, Farming Experience
- b. Dependent Variable: Participation in Agricultural Development

From the results in table 4.2, the F-value of 75.702 is significant at the 0.05 level. This indicates that the overall regression model with these five independent variables (S, A, MS, E and FE) can well explain the variation of the dependent variables (PAD) (Coakes et al., 2010).



Table 4.3: Summary of Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficient		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	0.596	0.186		3.208	0.001
	Sex (S)	0.204	0.035	0.239	5.847	0.000**
	Age (A)	0.329	0.04	0.345	8.264	0.016*
	Marital Status (MS)	-0.121	0.039	0.125	3.086	0.202
	Education (E)	0.215	0.029	0.301	7.496	0.002**
	Farming Experience (FE)	0.134	0.012	0.112	0.465	0.043*

Source: Analysis of field data, 2017

*** means 1% ** means significant at 5%, * means 10% respectively.

The results of the analysis, as indicated in table 4.3 show that S, A, E and FE are the predictors of farmers' participation in agricultural development in the district. According to the results, A ($\beta=0.345$) has the greatest impact on participation in agricultural development. This can be explained as every unit increase in A will result in an increase of 0.345 units in PAD, holding other variables constant. Subsequently, E ($\beta=0.301$) has the second strongest impact followed by S ($\beta=0.239$). In contrast, MS ($\beta= -0.125$) has no significant impact on PAD. The negative coefficient value means that for every unit increase in MS, there is a decrease in participation of farmers in agricultural development.

Meanwhile, tables 4.1, 4.2 and 4.3 above show that there is a significant relationship between Age, Sex, Education and Farming Experience and Participation in Agricultural Development aside Marital Status.

About one-half of the world's population live in the rural areas of the less developed countries and the vast majority of them are poor and with no leverage to change their condition (Samah, 1992). In order to bring change to these people, there is the need to involve them in the formulation and implementation,



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and possibly evaluation of programmes that are intended to elevate them from such conditions. In this regard, Conyers (1982) suggested three reasons for participation; (1) a means of obtaining information about local conditions, needs, and attitudes, without which development programs and projects are likely to fail; (2) people are more likely to be committed to a development programme if they are involved in its planning and preparation; and (3) in most countries, participation is considered a basic 'right', that people should be involved in their own development efforts. The World Bank recognized the lack of participation as a reason for failure of many development attempts in developing countries (World Bank, 1993). The results in table 4.3 are discussed below.

4.3.2 Sex and Participation in Agricultural Development

Table 4.3 shows that the sex of respondents recorded a β of 0.239 with 5% significance level 0.000. These figures therefore indicate that the sex of farmers has a great impact on how they participate in agricultural development in their various communities. In other words, being a woman or a man influences how the person participates in activities regarding agricultural development. These results affirms SEND-Ghana (2009) report, which suggested that policies should recognize and address the distinct challenges faced by both men and women by ensuring which segments of society based on gender will benefit or be harmed, directly or indirectly, otherwise the gender gap pertaining to that policy will widen.

Triangulating the results with views generated from a focus group discussion revealed that women are normally unable to participate in decision making on issues related to agricultural development because of the time such meetings are organized. They argued that mostly community meetings are organized in the evenings when most



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women are either cooking or doing other household chores Okali, (2011) affirms that both men and women are involved in agricultural development, and this makes it important to understand their different needs and how this may change in the context of new policies. Studies in Uganda, Ghana, Kenya and Bangladesh by Kyazez et al, (2012) and Nyanon, (2015), suggest that women have less decision making role in agricultural development than men. A study by the World Bank (2003) revealed that though women make up some 60 to 80% of the agricultural labour force in Nigeria depending on the region and they produce two-thirds of the food crops, yet, men and not women make the key farm management decisions.

4.3.3 Marital Status and Participation in Agricultural Development

The above summary of regression coefficient indicates that the marital status of a farmer has no significant relationship with participation in agricultural development with a standard coefficient of 0.125 and a significant level of 0.202. These figures have an indication that marriage does not influence a farmers' participation in agricultural development. The result is in line with Neo (2015), who found out in his work that though the marital status plays a role in labour market attachment and wages, not all marital categories were important in determining participation, employment and earnings. This suggests that there are other important factors which determine participation other than marital status.

4.3.4 Age and Participation in Agricultural Development

The results in table 4.3 on the regression coefficients on the relationship between the age of farmers and participation in Agricultural development recorded a coefficient of 0.345 and 10 percent significant level of 0.016. These figures show that there is a significant relationship between the age of farmers and participation in agricultural development. This result is in line with Tansel (2001) who gave the indication that



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the participation rate is influenced by the farmers age and further indicates that there exist some pattern for men and women as women, labor force participation rates rise during the 15 to 25 age interval and decline afterwards due to family formation. After 25, they stay either constant or show a mild increase during the ages 35-39 and decline after ages 50-54.

For men, participation in the shift-down is attributed to long years of schooling and earlier retirement (Dayıođlu & Kırdar, 2010). Abdul-Hakim & Che-Mat (2011) carried out a study on the “Determinants of farmers” participation in Off-Farm Employment in Kedah Darul-Aman, Malaysia. The results show that one of the main determinants that influences the farmer’s decision to participate in agricultural development is a farmers age and is also consistent with the findings of Nnadi & Akwiwu (2008), Muhammad-Lawal, Omotesho & Falola (2009) and Akudugu (2012) who found age to be significantly and positively related to participation in an agricultural activity.

4.3.5 Farming Experience and Participation in Agricultural Development

The results in table 4.3 on the regression coefficients on the relationship between the farming experience of farmers and participation in Agricultural development recorded a coefficient of 0.112 and a 10 percent significant level. These results have the indication that there is a significant relationship between the farmers farming experience and participation in agricultural development.

The above result corroborates Tijani (2010) observation that the farming experience to a large extent affects farmers’ decision-making abilities as well as their understanding of the socioeconomic policies and factors affecting farming. This observation is also in line with Okpachu (2014) finding on the impact of the adult



education scheme on the www.udsspace.uds.edu.gh productivity of small scale rural female maize farmers in Potiskum Local Government of Yobe State. The study found out that farming experience was significantly related to level of participation.

Haile (2016), found out that 26.67 per cent of the participants with 10-20 years of farming experience participated in agricultural development, followed by 16.66 per cent with 21-30 years while 33.30 per cent of the participants had more than 30 years of farming experience. Among the non-participants, 38.33 per cent had 10-20 years of farming experience followed by 28.33 per cent with less than 10 years of farming experience. The findings of Haile indicated inconsistencies in farming experience and participation in agricultural development which seem to contrast the results of this study which recorded a highly positive significance between farmer's experience and participation in agricultural development.

4.3.6 Farmers Education and Participation in Agricultural Development

Table 4.3 shows the regression coefficients on the relationship between the farmers' education and farmers participation in Agricultural development. The results recorded a coefficient figure of 0.301 and significant figure level of 0.002 thus 5 percent level of significance. This means that there is a 5 percent significant level between the age of farmers and participation in agricultural development.

Education empowers individuals to have the sense of patriotism and offers people the need to be part of decision making especially decisions that affect their very lives. Education is the key to an individual's growth and subsequently the development of a particular community. The above results revealed that a farmers' level of education is highly significant with respect to participation in agricultural development.



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Farid et al., (2009) and Kahn et al., (2012) refutes this highly significant relationship between educational level of farmers and participation in agricultural activities even though several other studies affirm this assertion. For example, this is evident in Oladejo et al., (2011) and Nxumalo & Oladele (2013) who found a significant relationship between education and participation in agricultural development.

4.4 Perceptions of Farmers on the Achievement of Decentralization of Agricultural Development in East Gonja District

The study of farmers' perceptions is fundamental in developing an understanding of the effects of decentralization on agricultural development. The practices of decentralization in many countries have shown mixed results. For instance, a case in Indonesia has previously demonstrated that decentralization is a double-edged sword for development at the local level (Sutiyo & Maharja, 2017) and in the United Kingdom, Scott (2009), gave the indication that there is a vast difference between the purported benefits of decentralization and its actual effects on development. Based on this assertion, the study specifically examined the perceptions of farmers on the effects of decentralization on agricultural development in addition to the views of other key stakeholders in general.

In order to bring out better clarity on the perceived effects of decentralization on agricultural development, perceptive statements were formed to capture farmers' perceptions on the achievement of decentralization on agricultural development. Even though farmers' perceptions during the survey were basically on the achievement of decentralization of agricultural development, for purposes of triangulating the information gathered from the FGDs and key informant interviews, the study further looked at the achievement before and after the implementation of



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decentralization. Positive effects were stated in the form of achievements and farmers were then asked to indicate their levels of agreement with each statement. Farmers were also asked to give a reason (s) for choosing a certain level of agreement. In looking at the achievement a conscious effort was made to ensure that farmers' perceptions were looked at within the three forms of decentralization namely political, administrative and fiscal.

Each perceptive statement was read and explained to farmers' for better understanding. The results are presented in table 4.4.

From the proceedings of the FGD, achievement of decentralization is referred to in the local language as "Penepe be gomnanti be gomnanti be Tono". Achievement of decentralization from the perspective of participants is the benefits of governance at the local level for farmers.



Table 4.4: Farmers' Perceptions of the achievement of Decentralization in Agricultural Development

Statement	Mean	Std. Dev.
Administrative Decentralization		
Farmers voices are heard/interventions are demand driven	2.05	0.96
Farmers are involved in decision making on what to produce	3.31	1.23
Farmers are involved in the determination of Agricultural needs	1.96	1.05
There is enhanced communication	2.39	0.99
Farmers are involved in the choice of extension activities	2.16	0.99
Mean of means of Adm. decentralization	2.4	
Political Decentralization		
There is openness in governance	2.18	0.82
Fiscal Decentralization		
There are adequate resources for farmers	2.03	1.03
There are improved Extension services	2.12	0.83
There are improvement in Yields	2.53	0.94
Our incomes have increased	2.33	0.80
We have been exposed to modern extension technology	2.20	0.87
There is improvement in the distribution of farm inputs	2.42	1.05
Mean of means of the Fiscal decentralization	2.3	

Source: Analysis of field data, 2017

Strongly disagree {1}, Disagree {2}, Undecided {3}, Agree {4}, Strongly Agree {5}

The table 4.4 displays perceptions of the achievements of decentralization of agricultural development in the East Gonja District of the northern region of Ghana. From the table, the mean of means for the administrative decentralization recorded was 2.4 which had the indication that the farmers disagreed that there has been any administrative decentralization in the EDG. With regards to fiscal decentralization, the mean of means recorded was 2.3 which also meant that the farmers were not in agreement with the fact that there has been any achievement with regards to fiscal



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decentralization. Meanwhile, political decentralization which was just a single statement also recorded a mean figure of 2.18 which indicated a disagreement on the achievement of political decentralization. The results therefore show that all the farmers did not agree with the fact that any of the three forms of decentralization achieved any meaningful outcome in the area of agricultural development in the East Gonja District.

The perception that decentralization allows farmers' voices to be heard ensures, farmer participation in community action plans, provide adequate resources for farmers, ensures decision making on what to produce, improves in yields and enhances communication were platykurtic in nature, while the rest of the statements were leptokurtic. This means that, majority of the observations were distributed around the mean. Meanwhile, it is evident from Table 4.4 above that all the perceived achievements had a mean range of 1.96 to 2.42 with the exception of decision making on what to produce and improvement in yields that recorded a mean value of 3.31 and 2.53 respectively. These two figures also happen to be the only figures above the average mean figure and corresponds to the undecided response category. This indicates that almost all the farmers did not agree with the fact that any of the three forms of decentralization has brought about any achievement in agricultural development in the East Gonja District.

The above results were triangulated with data gathered from key informant interviews and supported the FGDs to ascertain the achievement of decentralization in agricultural development in the district. The following discussions look at these perceptions along the administrative, political and fiscal decentralization.



4.5 Administrative Decentralization

Administrative decentralization in agriculture entails the redistribution of authority and responsibility to farmers and all other stakeholders within the district. It was therefore based on this premise that the perceptions of farmers were sought in this regard and supported with reactions from other key stakeholders to ascertain the veracity of the effects of administrative decentralization on agricultural development. Below are the perceptions that were related to administrative decentralization.

4.5.1 Demand Driven Interventions on Agricultural Development

The results from Table 4.4 above are evident that the perception that farmers' voices are heard in the provision of interventions was positively skewed which meant that farmers disagreed with the statement that their voices were heard when it comes to agricultural development in the district. This implies that agricultural development interventions in the district are decided at the top and foisted on the beneficiaries without their input. The assertion that interventions were not demand driven confirms the findings of Etwire (2013), who observed that developmental efforts that employ the top-down approach with minimal input and involvement of target beneficiaries have long been recognized as an unsustainable and poor pathway to beneficiary empowerment and development. The report further reiterates that bottom-up approaches that view beneficiaries as partners utilize local experience and endeavor to empower target beneficiaries have been promoted in the past few decades (Etwire, 2013). This observation is further confirmed by Narayan (2000) who reported that farmers in 60 countries demanded for development processes that were demand driven rather than supply-driven. He further opined that, the greatest things that could make a difference in the lives of farmers should include direct assistance through community-driven programmes so they can shape their own destinies.



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The perceptions expressed by the farmers concerning demand-driven interventions were reinforced during both key informant interviews and the FGD sessions.

For instance, during a FGD, a 49 year old farmer from Bunjai in a reaction to the perception of demand driven interventions for farmers had this to say:

“Decentralization has come to worsen our plight as farmers. Why do I say this? Gone are the days when we used to have a lot of Agric Officers interacting with us to get what we want and then we would be provided with what we needed in a timely manner, but now what is happening? Nobody seems to care about farmers anymore. We have been left to our fate and so I won’t agree that interventions are demand driven” (Farmer, Bunjai, East Gonja District).

Also, some other farmers lamented that:

“We are now not even sure where to go and get our challenges handled and so I don’t think we are a part of the District Assembly system. Some 10 years ago we knew that the AEAs were always with us and took our concerns into consideration. However, in recent years, it is like nobody understands anything again. We have now been relegated to the background and since farming is not the priority of the local authorities, they do their planning and when it comes to the benefits they give it to the party loyalist to the detriment of farmers. Once you don’t belong to a political party that is ruling forget it. Your opinions are not important to anybody. The DoA is now unable to help us farmers as the department itself is no longer effective at all” (Farmer in a FGD at Kitoe, East Gonja District).

The results above are depicting that there has not been any proper sensitization on the concept of decentralization for farmers and most of the key actors in decentralization so most stakeholders are unable to comprehend exactly what the decentralization





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system is all about and feel relegated to the background to a system that is expected to bring governance to the doorsteps of the ordinary farmer.

The staff of the DoA were also of the view that in the past, there were more AEAs in the area, farmers were consulted regularly and their needs considered before the provision of any kind of interventions. According to them, the story has taken a different dimension in recent years as some areas do not even get AEAs visit even once in a year, which means interventions do not take into consideration the needs of the farmers. In their view decentralization does not allow for the provision of demand driven interventions.

However, in a key informant interview with one of the staff of the Assembly he expressed an interesting opinion when asked whether interventions were demand driven. According to him;

“The main aim of decentralization is to ensure that any kind of interventions that is being provided is demand driven. For example, the composite budgeting is the mechanism that has been put in place to ensure that beneficiaries of any kind of interventions are part of the planning process right from the inception of the intervention to the implementation stage. The farmers will testify to the fact that the DoA always liaise with the farmers to come out with their needs before preparation of the composite budget for the entire DA. The DA staff does not plan for any department, but rather all decentralized departments come up with their plans and then the plans are consolidated into District wide plans for submission. (DA Staff, East Gonja District).

The views from the staff of the Assembly contradict those of the other stakeholders. In the opinion of the other stakeholders farmers were provided with an enabling

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environment that allowed them to take part in decisions that affect them. This inconsistency in responses from the various stakeholders corroborates Devas (2005) observation that, there are arguments that decentralization in some countries has created a new brand of local elites that dominate and manipulate the local population.

Other staffs of the DA were skeptical as to whether interventions were demand driven. They explained that though theoretically decentralization was not a bad idea, the challenge was that the implementation in Ghana has been bedeviled with a lot of challenges including providing farmers with interventions that are supply driven. They also revealed that most of the plans that are prepared during the composite budgeting are sometimes just put aside when the funds are released and diverted to other projects that were previously not in the budget. They reiterated that, the politicians were not interested in activities that did not have the potential of winning them political votes and since the issues of agriculture were not considered as areas that could allow them retain power, they normally would not care so much about providing interventions that the farmer's need.

Furthermore, an official of one of the NGOs sampled for the key informant interview revealed that:

"I won't say decentralization has anything to do with interventions being provided based on what the farmers want. Donors normally have their priority and once the needs of the farmers fall in line with that, it is easy for them to implement. The difficulty we normally face is that sometimes it is not what the donors prioritize, that the farmers need and when that happens one can say that interventions that are provided are not demand driven, which is not our fault because they are holding the purse and our role is just to facilitate the process. However, in some instances, we



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are given the opportunity to do a needs assessment and with that one can say interventions are demand driven”.

These findings corroborate that of Crawford, (2008), who asserted that while the rhetoric of decentralization is about making democracy a reality, the actual reality is about the maintenance of central government control. This is fascinating as the very people preaching decentralization are not even interested in deepening democracy at the local level, but are rather interested in mobilizing the people to strengthen their control at the local level. For development to be complete there is the need to ensure that people take part in decisions that affect them. As farmers at the local level, they know what they want and should be given the opportunity to initiate whatever programme or activity that affects them. The irony of this kind of governance is that sometimes the farmers may abandon some of these interventions when they do not take active part in coming out with the programme.

An interesting development in the East Gonja District was a Gari Processing Unit (GPU) which, out of curiosity, was found to be a classic example of not involving beneficiaries in the design of interventions. This intervention was provided to the district for some years back without the gari processors patronizing the facility for very flimsy excuses among which was the issue of the high cost of raw materials. This challenge could have been curtailed if the beneficiaries were consulted at the inception stages. This observation is confirmed by UNEP (2008), who indicated that it is important to understand the characteristics of agrarian communities to enable the demand side approach to agriculture and even other developmental issues to be better addressed.

Kahonan & Lanyi (2001) summed this up when they posited that citizens should have channels to communicate their preferences and get their voices heard in local





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governments. To effectively influence public policies and oversee local governments, citizens need to have information about government policies and activities. They suggested the need for the media to play their watchdog role in ensuring that citizens' voices are heard in governance at the local level.

4.5.2 Improved Extension Service Delivery

Agricultural extension services are now a major activity and basic element in programmes and projects formulated to bring about agricultural development and improvement in the quality of the lives of the rural farmers (NDPC, 2011). This study, therefore, assessed farmers' perception of improvements in extension service delivery using perceptive statement to ascertain their levels of agreement. The mean figure of 2.53 for this statement is indicative of the fact that farmers were undecided. This implies that they could not tell whether extension had improved or not after the implementation of decentralization.

In a FGD with farmers, it was revealed that extension service delivery had reduced drastically with an alarming current figure of AEAs in the East Gonja District to four and about two of them were soon to go on mandatory retirement in 2017. The implication of this is that if the Assembly is unable to recruit people to fill the vacant positions there will only be two AEAs in the whole of the East Gonja District to attend to the over seven thousand farmers in the district. The DoA officials revealed that, they were aware of the ban on recruitment because of the IMF conditions which affected the whole nation. However, the East Gonja District was not going by the national directive that staff could always be replaced as the others went on retirement. One of them stated emphatically that:

“We have written several letters to the assembly to give us the green light to replace the AEAs who have retired but we have not received any feedback to such requests



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and the law does not allow private organizations' like the NGOs who could have supported in that direction to recruit for the Assembly" (**Official of DoA, East Gonja District**).

Another staff of the DoA reiterated that:

"Bureaucracy is killing the Agric department since this has affected the extension service delivery. Before decentralization the bureaucracy was not so serious, but now that the DoA is under the Assembly there are a lot of unfavorable bureaucratic mechanisms placed to slow down procedures in the Assembly especially when it comes to issues of agricultural development. It is ironic that from afar people think there is decentralization, yet in reality, what we have is re-centralization and not decentralization" (**DoA staff, East Gonja District**).

Other views gathered from the focus group discussions with the farmers were that prior to decentralization farmers were satisfied with the extension service delivery that was provided. Even though the numbers of extension visits were not as expected, the situation had retrogressed drastically. The farmers further opined that, AEAs in the past could visit farmers and provide them with advisory services regularly and this was a source of motivation for them. One of them bluntly summed it up thus:

"Prior to decentralization, when Agric Department was in charge of Agricultural development, the AEAs organized meetings with service providers (tractor owners) to deliberate on tractor charges per acre to reduce the financial burden on us. Now, after decentralization, there is nothing like that and we now bear all the cost" (**Farmer, Salaga**).

In a related development on what it means to have just four AEAs in the largest district in Ghana, officials of the DoA lamented that the farmers are using very dangerous chemicals to poison themselves and the general public because of the lack

of AEAs. According to the www.udsspace.uds.edu.gh DoA official, the farmers are not provided with the requisite training on how to apply the chemicals on their farm because of the absence of the AEAs. They indicated that the farmers are not aware of the dangers associated with the combination of some dangerous chemicals that they use in the food that the general public consumes. He added that the poisonous chemicals are not good for human consumption, but the challenge is that there are no extension officers to go out there to educate the farmers to curb this menace. One of the staff contended that they could not contain the outbreak of a disease that caused the sudden death of yam in the district because of the low number of AEAs. This affected yam production in the district and was the reason for the shortage of yam in the district and the northern region in 2016.

This trend is alarming and confirms SEND-Ghana (2009) report that suggested that there is the need for agricultural policies to aim at providing farmers with useful, efficient, and expanded extension services. This should go beyond the traditional extension where the focus was more on increasing production, improving yields, training farmers, and transferring technology to a more sophisticated modernized extension service. This can be done with the help of the entire set of organizations that support people engaged in agricultural production and facilitate their efforts to solve problems; link to markets and other players in the agricultural value chain; and obtain information, skills, and technologies to improve agricultural development.

Some additional observations by officers of the Assembly were that extension services are very crucial to agricultural development, but the challenge was that they are also handicapped in the sense that they work within thresholds and were not allowed to expend monies on certain activities like recruiting at the local level. They indicated that the ban on recruitment for the past four years has also affected the



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decline in the numbers of the AEAs in the district. They, however, indicated that the phenomenon was not peculiar to the East Gonja District, but is a national challenge as the current national extension worker- farmer- ratio stands at 1:1500 farmers. Kudiabor (n.d) contends that the number of Extension Agents is appalling nationwide and this is compounded by the absence of the right combination of logistics to discharge extension delivery.

The few extension agents left are also ill-incentivized, especially those working in very deprived and hard-to-reach communities. This has resulted in a demoralized, scarce and 'unproductive' extension service (Send, Ghana, 2016).

Interestingly, however, a study conducted in the Democratic Republic of Congo (DRC) by Ragasa (2015), on the factors affecting performance of Agricultural Extension contradicts the assertions by Kudiabor (n.d) and SEND-Ghana (2016) and further reveals that despite having one of the highest extension agent-to-farmer ratio and a pluralistic extension system, DRC fail to deliver knowledge and technologies to rural areas. This was attributed to other critical factors other than number of extension workers. These factors included lack of coordination, no unified and clear policy and mandate, lack of funding, aging and low competencies of agents, and lack of mobility and interaction of agents with key actors.

It is worthy to note that poor extension service delivery can be detrimental to the fortunes of farmers as agricultural extension has long been seen as a key element for enabling farmers to obtain information and technologies that can lead to agricultural development (Purcell & Anderson 1997, Anderson & Feder 2007). Hence, from a development policy perspective, investments in extension services are considered as a potentially important tool for improving agricultural development.



4.5.3 Improved Use of Modern Technology

Modern technology with its diverse applications can be a unique methodology to enhance agricultural development for the benefit of the increasing farmer population and the ultimate aim of meeting the Sustainable Development Goal of responsible consumption and production (Giovannucci, 2012 & FAO, 2017). Based on this background, responses were sought from farmers on their perception on improving the use of modern technology for agricultural development.

The results in 4.4 shows that the perception of farmers on the improvement in the use of modern technology was skewed positively with a mean of 2.20 and a standard deviation of 0.87 which implies that farmers disagreed with the statement that there has been improvement in the use of modern technology in the district. This is not good for agricultural development. Motes (2011) believes that without advancements in agricultural technology, humanity would not have progressed through the 20th century without major famines or devastating food wars. He further gives the indication that the phenomenon may still linger on if sustainable mechanisms are not put in place to salvage this issue. Concurring with this assertion, a United Nation (2013) report indicated that 70 per cent of this food must come from the use of new and existing technologies and methods. These technologies and methods must have no negative impact on the environment, animal welfare or food safety.

UCLG (2012) suggested that administrative decentralization is very critical in agricultural development, but the reality is that success stories can only be registered when the units have the financial and administrative backing of an external aid agency since the district assemblies are normally handicapped in terms of resources to ensure the realization of agricultural development.



4.6 Political Decentralization

Political decentralization in the agricultural sector involves empowering farmers' in the decision making on issues related to agricultural development. The perception of the achievement of political decentralization in agricultural development was therefore taken and the results are presented in table 4.4 above.

4.6.1 Transparency in Governance

Transparency is a key ingredient in bringing about accountability and trust which are necessary for the functioning of democracies (Grurria, 2016). It was therefore important to find out whether there was transparency in agricultural development in the East Gonja District. The results in table 4.4 have the indication that farmers disagreed with the statement that there is transparency in governance in the district and were skewed positively.

This result was evident in Ndiame (2015) who argued that local implementing organizations should be accountable to those people in whose name they claim to be working as to whether their interventions are really providing what farmers need in order to achieve their shared objectives. This perception about transparency in governance in the opinion of the farmers was not different from what was said by the participants in the FGDs. They observed that;

“It is disheartening now how nobody seems to be bothered about what happens to the farmer. It was the extension officers who used to visit us before the implementation of decentralization to provide us with information and then take feedback to the Department of Agriculture for them to prepare their plans. However, the story has changed now as some of the farmers if not because of the intervention of some NGOs are able to get one extension service in the whole year. How then are they planning



based on our needs? We www.udsspace.uds.edu.gh believe now they just do what they like to gradually kill the agricultural sector and be importing everything as that is what gives them what they want” (Farmer in a FGD, Grunshie Zongo, East Gonja District).

The concerns raised by the respondent are contrary to Puschra & Burke (2013), who enumerated some types of accountability mechanisms in governance. According to him, democratic elections are the most obvious form of ensuring accountability because it is only through such processes that the local authorities will have a listening ear for the people since if they do not listen, they will not be re-elected and so in such conditions the local authorities are constantly in touch with the electorate who includes the farmers. Other accountability mechanisms enumerated had to do with participatory performance assessments, participatory budget expenditure tracking, report cards and regular town hall meetings between the local authorities and the people they represent. Aside these measures, local authorities will always take the farmers who happen to be the electorates for granted and would rather focus on pleasing the central government since they appointed them.

These mechanisms are important in the sense that it ensures that farmers will feel included in agricultural development at the local level and this could improve trust among the farmers which are necessary for the functioning of democracies and market economies.

4.7 Fiscal Decentralization

Fiscal decentralization has to do with providing the public and private sector at the local level with adequate level of resources to make decisions about expenditure. The following analysis presents results from the survey corroborated by information from



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key informant interviews and FGD on the achievement of fiscal decentralization at the East Gonja District.

4.7.1 Farmers are provided with Adequate Resources

Inadequate and late release of funds and inadequate logistics is affecting the agricultural sector in Ghana and there is the need for government to focus on the agricultural sector and provide adequate budgetary allocations for the development of the sector (Syme, 2017). The budgetary allocation towards agriculture has consistently been inadequate and short of expectations despite the assumed interests of the respective governments in the past years.

The results gathered from the FGDs with farmers and assembly members as well as key informant interviews with key stakeholders on lack of funds are presented below.

In a key informant interview with a staff of the DoA, this was what he had to say:

I will say Agric issues are time bound and yet when we write memos the monies delay.

Before decentralization monies were released timely for the DoA to do their work.

Farmers day celebrations have become a fiasco as funds are sometimes released a day to the celebrations and yet auditors will follow DoA for quotations and VAT invoices which is sometimes a big implementation challenge. How do you go and look for quotations at that short notice (DoA staff, East Gonja District).

The above statement has an indication that agricultural development issues are not like other discipline where time is not a critical factor. There is the need for other stakeholders, especially those managing the assembly purse to be considerate when it comes to certain decisions regarding agricultural development.



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Another key informant revealed that:

“We sit together to plan for our various departments and submit a composite budget, but when it comes to implementation of those activities, it will interest you to know that the DA now selectively gives you money for part of the activities and implement the rest, especially the juicy projects. There are other activities that are hijacked by the DA without the knowledge of the DoA and you say we have decentralization, it is just re-centralization. Currently electricity to the offices of the DoA electricity has been disconnected for close to six months but nobody seems to be bothered. I have to carry my laptop to the house every day to charge it and come and sit in the dark office where all our information is locked up in the office computers. Tell me how we can work effectively under such inhumane circumstances?” (DoA staff, East Gonja District).

However, it is obvious that for decentralization to attract any meaningful achievement in enhancing participation and improve local level development there should be adequate resources.

Fiscal decentralization is not only about the transfer of funds from the central government to the local level, but also entails the judicious management of devolved resources at the local level and how they account for such funds.

It is not out of place when Kelly et al (2001), indicated that local governments are often not able to collect adequate levels of revenue from local taxation but rather depend on the central government transfer. They opined that the most common forms of local taxation in developing countries are property tax and business or service taxes.



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Based on this assertion, therefore, it is not surprising that most districts in Ghana, including East Gonja District are unable to achieve much development at the local level. There is the need to come up with area specific innovations to improve the Internally Generated Fund (IGF) which will help in boosting the agricultural sector since there will be available resources to undertake activities that will lead to agricultural development rather than always waiting on central government. This constraint seems to be an issue that transcends decentralization and affects several nations globally when Idode, (1980), argued that making decentralization work in Nigeria is a serious issue due to the untimely and inadequate release of allocated funds. Often the funds that are allocated to local governments are not all distributed. Constant delays in delivering those that are distributed force local governments to slow down or to cancel some projects entirely.

4.7.2 Improvement in Yield

Farmers' perception about agricultural development is linked to improvement in yields. The study therefore assessed yield using perceptive statements for respondents to examine whether there has been an improvement in yield before and after the implementation of decentralization in the agriculture sector. The results are presented in table 4.4 above. The results show a mean figure of 2.53 which mean that majority of farmers were undecided on the perceptive statement that decentralization had improved their yields or not.

4.7.3 Increased Farmers' Income

On farmers' perception about their income in relation to decentralization the mean of 2.33 was recorded. This means that the farmers disagreed that their income had increased in the past six years.



Table 4.5 shows the income levels of farmers in two separate scenarios, thus income before decentralization which covered the period 2004 to 2009 and the period after decentralization which covered the period 2010 to 2015. Farmers' income was measured by estimating the quantity of output sold in the years under review against the market prices. A paired t-test was used to analyze the income levels of farmers before the implementation of decentralization and after the implementation of decentralization.

Table 4.5: Farmers Income Levels before and after the Implementation of Decentralization

Income range	Before Decentralization (2004–2009)		After Decentralization (2010–2015)	
	Frequency	%	Frequency	%
Below 500	16	11.8	-	-
500 – 900	35	25.7	13	9.6
1000 – 2900	17	12.5	18	13.2
3000 – 4900	34	25	45	33.1
5000 – 6900	16	11.8	34	25
7000 and above	18	13.2	26	19.1
Total	136	100	136	100

Source: Field Data, 2017

Table 4.5 shows that from 2004 to 2009 about 16 of the farmers earned below 500 Ghana cedis, 35 earned between 500 to 900, 17 earned between 1000 and 3900, 34, 16 and 18 earned between the ranges 4000 to 5900, 6000 to 7900 and 8000 and above respectively.

The income levels of farmers from 2010 to 2015 the period after the implementation of decentralization, shows that thirteen (9.6%) of the farmers were earning incomes about 500 and 900 Ghana cedis, 18 of the famers earned between 1000 and 3900



Ghana cedis, whilst 45, 34, 26 of the farmers earned between 4000 and 5900, 6000 and 7900 and 8000 and above respectively. This is an ample demonstration of the fact that income levels of farmers have gone up after decentralization. Whiles no farmer earned less than GHC500.00, the number of farmers in each of the remaining categories had increased. This could be as a result that governance has been brought closer to the farmers where the local authorities understand the local area better and are able to provide area specific interventions which is bringing about improvement in the incomes of the farmers.

4.7.3.1 Effects of Decentralization on Farmers’ income

In order to determine the effect of decentralization on farmers’ income a paired sample t-test was computed and the results are presented in table 4.6.

Table 4.6: Paired sample T-Test of Farmer’s Income: 2004 to 2009 and 2010 to 2015

	Paired Difference					T	Df	Sig. (2 tail)
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the difference				
				Lower	Upper			
Farmers Income level 2004-2009 & 2010 – 2015	-.91912	1.52050	.13038	-1.17697	-.6126	-7.049	135	.000

Source: Field data, 2017

The results in table 4.6 indicate that there was a significant difference between the income of farmers before the implementation of decentralization and the income of farmers after the implementation of decentralization as the p-value is less than 0.05 (0.00) at the 5% level of significance. It is clear from this table that farmers’ income levels have increased after the decentralization.



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This means that decentralization has had a positive impact on the incomes of farmers as against the period before decentralization when farmers were earning less income.

4.7.4 Improved Distribution of Farming Inputs

The last perceptive statement on whether there has been an improvement in the distribution of farming inputs registered these results. Table 4.4 shows a mean value of 2.42 which has the indication that farmers disagreed with the statement that there has been an improvement in the distribution of farming inputs.

In conclusions, the analysis above looked at the perceptions of farmers in general and corroborated by views from the other key actors in agricultural development at the local level. The results above indicate that the district has made some efforts in implementing all three forms of decentralization in agricultural development. However, one can say that there has been an abysmal achievement based on the perceptions of farmers and the views of the other stakeholders used for this study.

According to (Stanton, 2009), even though all the three forms of decentralization are crucial, fiscal decentralization seems to be dominating as inadequate resources has trickled down effects on both the political and administrative decentralization. This assertion corroborates with this study which also shows fiscal decentralization cascading into all the other forms of decentralization making fiscal very dominant. This inadequacy is complicated by the fact that it is extremely difficult to mobilize sufficient resources at the local level coupled with the excessive local level demands.

4.8 The Reporting Structures before and after Decentralization

The success of any strategy in achieving its objectives depends on the structures that exist to facilitate its implementation (Alila and Atieno, 2006). Structure according to Armstrong (2005), incorporate a network of reporting mechanisms that specify the



roles and relationships in the process of ensuring that collective effort is explicitly organized to achieve specified ends in a given organization. This section therefore examined the reporting structure at the District Assembly level in relation to agricultural development. A comparative analysis was employed to examine the strengths and weaknesses of the reporting structures before and after the implementation of decentralization as well as the threats and opportunities (SWOT) associated with the structures. The period under review was about six years before the implementation of the LI 1961 when the Department of Agriculture became a decentralized department under the DA alongside other departments.

Table 4.7: Views of both the Staff of the District Assembly and Staff of the DoA of the Reporting Structure

Structure	Opinion of DA staff	Opinions of DoA staff
District Assembly	The structure is active, however, inadequate funds at the Assembly is hampering agricultural development in the district.	The structure is active, but the Assembly is focused more on physical projects that can win the politicians' electoral votes and not agricultural development which does not have any direct positive impact on their political ambition of retaining power.
DoA	The DoA is active and the Assembly normally liaises with the department when it comes to agricultural development and request for their inputs. Notwithstanding the low numbers of the DoA staff, which is not the making of the Assembly, there is always a conscious effort to ensure that agricultural development does not suffer. The Assembly normally liaises with the DoA to ensure smooth implementations of agricultural development activities in the district.	The DoA is partially active in the sense that the DA does not have confidence in the DoA. The Assembly does not involve the Agriculture staff and so do not even make efforts to help in promoting agricultural activities of the Assembly. The dwindling numbers of AEAs are also creating more challenges as farmers are not provided with extension service again and this is affecting the agricultural sector seriously.
FBOS	FBOs normally channel their issues through the agricultural department and the DoA will now bring it up for discussion at the Assembly level where such issues are tabled for discussion at the subcommittee level.	Partially active in the sense that the DoA lack basic logistics to be able to support the activities of the FBOs. The Assembly normally does not allocate funds for the activities of agriculture and this has a trickle-down effect on the FBOs.
Farmers	Active. Farmers concerns are channeled through the DoA which are forwarded to the Assembly for redress.	Not active. The farmers are now relegated to the background. Since the DoA was orphaned by the decentralization system, farmers are now left to fend for themselves in the area of knowledge dissemination and even financial support. Nobody seems to care about the agricultural sector now and so the farmers are also now poisoning themselves and poisoning the general public too with a very dangerous combination of chemicals that should not be mixed.

Source: Field Survey, 2017



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The views expressed by the stakeholders in table 4.7 shows how the DoA and the DA staff about the various reporting structures of the Assembly based on how they understood and interpreted them. The information above has an indication that the reporting structure is not as simple as one would have thought and could be the reason for some of the challenges that the agricultural sector is faced with. If the various stakeholders interpret the same structure differently, it means there is a gap somewhere. The results are in line with Idole (1980, who argued that, the clarity and simplicity of the local government structures influence the outcome of decentralization efforts. He further added that, in the Asian countries where decentralization was organized in a way that made their purposes and procedures uncomplicated as compared to countries where the procedures were ambiguous and complex.

Table 4.8 is a matrix indicating the strengths, weaknesses, opportunities as well as threats of the reporting structure at the district assembly with respect to agricultural development.



Table 4.8: SWOT Analysis of the Reporting Structure of the Assembly

Strength	Weakness
<ul style="list-style-type: none"> ▪ Legal and institutional framework clearly specifying the powers and responsibilities of local governments to avoid interference and overlapping with central government. ▪ Presence of NGOs focused on agricultural development in the district ▪ Presence of administrative staff of the DA ▪ The uniqueness of the system allow for competition in the appointment of the bureaucrats in the district where the vacancy in the highest position of the district that is the District Coordinating Director (DCD) can be contested by qualified individuals under the DA which include all decentralized assembly staff. 	<ul style="list-style-type: none"> ▪ Inadequate financial resources to support the DoA and the farmer as well as FBOs ▪ Existence of only a few AEA with almost no support for their development ▪ Complexity of the structure does not allow for quick decision making ▪ Inadequate capacity of the DA to be able to handle the new role that they have assumed. ▪ Missing or almost absent monitoring system for providing sufficient feedback for agricultural policy formulation ▪ Poor communication or tension between some institutions (especially DA and DoA). ▪ Greater apathy and absenteeism ▪ Misapplication and misappropriation of funds ▪ Poor budgeting and management control system ▪ Ineffective internal control system
Opportunities	Threats
<ul style="list-style-type: none"> ▪ Enormous resource potential available to generate revenue locally ▪ An opportunity to come out with area specific issues to suit local farmers' needs ▪ An opportunity to encourage the consumption of locally produced agricultural products to boost employment for the youth and reduce rural urban migration (Kayaye). ▪ Resourcefulness and technical competence of staff 	<ul style="list-style-type: none"> ▪ The local population is aging, and the trend to leave the rural areas continues ▪ Increasing bureaucracy ▪ Corruption ▪ The tendency to widen the gap between the rich and poor in society ▪ The threat of economic crunch affecting most of the development agencies ▪ Unavailability of revenue mobilization mechanisms to increase the IGF ▪ Continuous central government interference ▪ Monopolistic tendencies of the staff of the District Assembly

(Source: Field Survey, 2017)



4.8.1 Reporting Structure of the DoA under the District Assembly

The decentralization of MoFA had its genesis in 1997 which was based on a ministerial directive to empower DADU to plan and implement their own agricultural development activities and manage their own resources within the framework of the national policy of MoFA. This structure was in a limbo since the laws were not implemented to effect real changes in how things were being managed. However, the Departments of District Assembly (Commencement Instrument), 2010 (LI 1961) was promulgated for the commencement of the functioning of the decentralized departments at the district level as the Departments of the District Assemblies which brought agriculture fully under the District Assembly.

Decentralization is associated with the paradigm shift from the top-down approach of governance with the bottom-up approach of governance, which encourages demand-driven provision of agricultural development at the District Assembly level.

In line with the bottom-up strategy as advocated by proponents of decentralization, the starting point for any development activity, including the agricultural sector should begin with work plan emanating from the lowest level of district assembly.

With regards to agricultural development, the farmers as key beneficiaries are therefore expected to be the pivot around which agricultural development should revolve. The introduction of any kind of intervention or policy should emanate from them.

The identification and prioritization of the farmers' needs are prepared jointly by the farmers and the staff of the DoA. Farmers are consulted by the Assembly and since they are normally grouped into FBOs, it is imperative to focus on the respective FBOs to identify their priority needs and factor them into plans developed. The prioritized



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needs are then forwarded to the DoA where, working closely with the AEAs, they scrutinize and integrate these needs into DoA plans. These DoA-wide priorities are then sent to the DA where the DA thoroughly scrutinizes them to come up with district wide priorities taking into account their own plans of action as well as plans from other decentralized departments under the DA. The district-wide work plans are then submitted to the Regional Coordinating Council for onward submission to the National Development Planning Commission (NDPC) at the national level. The latter is mainly interested in the technical aspects of the work plans while the former focuses predominantly on the finances needed to execute the work plans.

Some staff of the DA were of the view that the reporting structures are quite effective as they always ensured that the farmers' needs were taken into consideration. According to them *the DoA is normally informed to prepare and submit plans for the composite budgeting at the Assembly and so they believe that the DoA collates farmers opinions and needs for the composite budgeting*". This meant that all the various units within the structure are given the opportunity to provide input for the comprehensive assembly plans.

DoA officials interviewed in East Gonja District, however, contrasted this assertion arguing that in reality the system does not conform to what the law stipulates. They lamented that normally, the DA can just come out with any intervention without due recourse to the laid down procedures. They explained that even though they have the technical expertise in agricultural development their opinions were not always taken. They cited the example of USAID under the RING Project, which was expected to be piloted in some communities in the district "never saw the light of day as the District



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Chief Executive at the time vehemently turned down the offer without due recourse to the structure”.

This varied assertion by the stakeholders implies that decentralization itself is not bad, however, in the opinion of Bonnel, there is the need for analysts to distinguish between transition problems and structural issues, i.e. those which pre-existed decentralization but may become more apparent after. The distinction is admittedly difficult when the process is still ongoing; and may be somewhat artificial as the former could become structural if not addressed early enough. Transitory difficulties distract attention from the deeper issues, which is a pity, since decentralization may be a unique opportunity to tackle those.

Aside these arguments, Boachie-Danquah (2011) & Kambootah (2014), posit that some sections of the public hold the view that decentralization has failed to achieve its main objectives of ensuring participatory local level development and therefore the “autocratic” centralized system of local government administration should be re-instituted.

However, Alila and Antieno (2006) in a contrary view observed optimism in agricultural development and that this could be enhanced only when a conscious effort is made to build the capacity of key stakeholders to perform the various crucial roles satisfactorily under the various structures that they occupy. They reiterated the need for new management structures to be put in place to reduce or eliminate the control of the political, economic or even social elite. This will ensure that agriculture where the majority of the population is employed participate in agricultural development.



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These arguments are in line with the sentiments that were expressed by the respondents in this study, which means the implementers of the decentralization policy should focus on transforming the citizenry from service users to policy shapers and make participation a legal right (Winter, 2004).

Comparing the robust agriculture before the implementation of decentralization and now dormant agriculture under the decentralization system some staff of agriculture bemoaned the looming catastrophe in agricultural development in the district if care was not taken to arrest what they termed as a systematic failure of the DA structure which is bedeviled with ineptness and political impunity in governance. Rondinnelli, Nellis & Cheema (1983) argued decades ago that the multiple levels of review and approval through which local plans have had to pass in many countries, created delays that discouraged enthusiastic participation in decentralized planning and management. Complexity of procedures, so it seems, consistently reinforces the power of the bureaucracy to veto or modify proposals and creates greater uncertainty and perplexity among the citizenry. This implies that, these structural challenges have been around long enough for the implementers of the decentralization to have looked beyond the theoretical dimensions, but rather ensured a more in-depth analysis of some best practices around the world and not to replicate the same.

4.9 Decision Making Processes and Agricultural Development at the East Gonja District

Decision making with regard to agricultural development at the District Assembly is expected to be pluralistic and demand-driven where the plans for the DoA is supposed to be prepared in a bottom-up manner. The approach in agricultural development is critical as they form the basis for budgeting and implementation by the DoA.



The district-wide work [plans](http://www.udsspace.uds.edu.gh) are submitted to the Social Services Subcommittee where Agricultural development issues together with other issues are deliberated on and key recommendations made for onward submission to the Executive Committee.

The Executive Committee represents the cabinet of the district assembly. It is chaired by the DCE with the chairpersons of the various subcommittees being members. At such meetings the DoA head and any other departmental head whose technical expertise is needed is then co-opted to participate in the discussion and recommendations are made for the General Assembly's approval or ratification.

The General Assembly is the final decision making body of the Assembly. At the sitting of the Assembly, major recommendations of the Executive Committee are presented and discussed and decisions taken. The technical aspects of the work plans are handled by the DoA while the DA focuses mainly on the finances needed to execute the work plans.



Table 4.9 shows the decision making process at the district assembly on agricultural development in the district.

Table 4.9: Decision Making Process at the Assembly

Decision making Process	DA Explanation of how the process is helping is helping to promote agricultural development
<i>General Assembly</i>	The Presiding member of the district leads the General Assembly in deliberating on the motion to either accept or reject it.
<i>Executive Committee</i>	The Executive Committee which is the fulcrum of administration in the DA is responsible for the day-to-day performance of the executive and coordinating functions of the DA and implementation of the resolutions or decisions made by the District General Assembly as well as to oversee the administration of the district including agricultural development projects. If agricultural development is not raised at the subcommittee level, the EC cannot do anything unless they are tabled for discussions. Once this is agreed on the EC will also forward its recommendation to the General Assembly for ratification.
<i>Social Services sub committee</i>	The Assembly persons normally table issues that are peculiar to their electoral areas for discussions and subsequent referral to the EC. For instance, when issues of agricultural development are raised they are forwarded to the social services subcommittee for deliberations. If members of the subcommittee deliberate on that particular agricultural development issue, recommendations are made to the EC for action

Source: Field data, 2017.



Table 4.10: Comparison of Decision Making before and after Decentralization

Period	Criteria Strength	Weakness
Before Decentralization 2004 – 2009	Responsive DoA Easy access to Extension Service Vibrant FBO	<ul style="list-style-type: none"> • High attrition rate of trained staff • Weak enforcement of laws • Lack of reliable data for decision making • Poorly motivated staff • Corruption
After decentralization 2010 – 2015	Broader Stakeholders Composite planning and budgeting	<ul style="list-style-type: none"> • Weak understanding of the new system by key stakeholders • Politicisation of agricultural sector • DoA unable to respond to farmers' needs • Donor interference • Weak coordination among officials • There is no agricultural subcommittee at the DA and so agricultural development issues are often not tabled for discussions • Apathy among key stakeholders • Corruption on the part of public officials who divert funds meant for agricultural development into their personal activities.

Source: Field data, 2017.

The Table 4.10 above depicts the Strengths and Weaknesses of the decision making process at the District Assembly. The plans that are normally developed by the DoA and seen as the departments priorities do not sometimes correspond with the national priorities which most of the time are politically inclined.

The other issue of concern has to do with how funds are accessed from the donor agencies in the DA. If the DoA has any plan it should reflect the priorities of the donor otherwise they will not be provided with any fund to implement such plans. Donors come with their agenda and so plans outside their agenda will not receive support for implementation. For most DoA officials interviewed, the challenge was about how to meaningfully interface the local and donor priorities, especially where



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the DA is not capable of funding any activity without support from either the national level or donor organizations.

The concerns expressed by the DoA officials were that when faced with a choice between prioritizing national and local level issues, preference is always given to the former. The consequence is that the local plans have to be revised to reflect the national ones accordingly. It was observed that the superiority of national over local priorities means DoA at the district levels are operating using plans with packages of intervention prescribed from the centre when in fact the plans were supposed to be developed on the basis of problems at the local level.

The major difficulty arising from this type of governance is that programmes implemented do not address the actual problems of the farmers at the local level. This is the case because according to DoA officials, most of the problems diagnosed during their needs assessment exercises tend to be area specific and as such the universal interventions prescribed by Ministry of Local Government and Rural Development (MLG&RD) do not address the real problems.

The view of nearly every stakeholder interviewed was that this defeats the logic of the new decentralization policy which advocates for pluralistic and demand-driven agricultural development.

Decentralization of agricultural development is therefore largely theoretical. The decision-making processes are further affected by the changes in the role of some staff of MoFA. In the past all departments related to agriculture were under MoFA but under the decentralization system some departments like the Fisheries are not under the Assembly. Some officials interviewed were of the view that this trend does not auger well for uniformity in programmes and activities.



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Another issue of concern had to do with what the DoA officials termed as bureaucrats in the decision making process at the district. They argued that decision making in the past were very swift as the stages were not so many. In recent years, however, when a request is made by farmers, as head of the Agricultural department the request will have to be forwarded to the district assembly and will still have to go through several stages and in instances where the request is not perceived by the DA as urgent, the request will not be honored immediately but will rather be left unattended for a long time until the Assembly subcommittee next sitting when such a request will then be tabled for discussions.

This procedure is affecting the agricultural sector very much as most of the issues are time bound and so the time the request may be granted the funds will not be needed anymore since the harm would already have been caused.

This challenge has virtually brought about a lot of apathy on the part of the DoA. They indicated that they normally know what to do to curtail such a situation but the bureaucratic tendencies of the new system leave them with no choice rather than holding back and not subjecting themselves to unnecessary interrogation by people they sometimes feel are not more qualified than them and also that they do not have the required expertise in agriculture.

The stakeholders lamented further that corruption is one of the biggest problems affecting the DoA in promoting agricultural development at the district level. Though in their argument corruption has been part of the system for a long time, the situation has compounded as the number of decision making processes have increased. At each stage of the decision making process, there must be some “leakage” of funds and this affects the final output. In the past, when decisions were mainly handled by DADU





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under MoFA at the district, there was more value for money, but now corruption of the public affairs is a phenomenon that is killing the system gradually. Funds meant for agricultural development sometimes do not get to be used for intended purposes.

Another issue of concern is that, now that agricultural development is being handled by the district assembly where the assembly members are key stakeholders, the staff of the DOA should have been taken through some orientation to enable let them understand the areas that they would be handling and take decisions on. Many of the Assembly persons do not appreciate the gravity of the responsibilities they have. Normally, the DA and the assembly persons work hand in hand and so once the DA does not see anything as a priority the results is normally is obvious long before the issue is tabled at the subcommittee. There is the need to ensure a balance in the kind of assembly persons that are appointed to the Assembly whereby appointment should be based on expertise in the various disciplines that are seen to be crucial in the development of the district.

The Assembly is a politicized environment as the leadership of the two most important decision making bodies are headed by political figures that are not accountable to the people but rather to the Assembly. The DCE is normally nominated by the President and gets prior approval of not less than two-thirds majority of Assembly members present in voting.

The Presiding member is also elected from among the members of the Assembly and is approved by at least two-thirds of all members of the Assembly. This puts development issues, especially the agricultural development in a perilous situation since it is not seen as something that can yield immediate benefits to the electorates who normally want the physical benefits from politicians.

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Also, this politicized leadership makes the people more accountable to the people who appointed them rather than the electorates who are normally affected by these decisions that do not favor them in most of the cases but rather favor the politicians in their quest to retain power.

Another crucial weakness of the new system in the opinion of the stakeholders interviewed had to do with very weak coordination among stakeholders in agricultural development. Though, they are expected to be partners in development and as such be able to coordinate their activities in a consolidated manner. There is almost always some sort of misunderstanding among them because they seem not to understand the system that they find themselves in. Some stakeholders like the DoA are sidelined when it comes to agricultural development in the district. The DA staffs take over the activities of the core staff of the DoA which does not encourage coordination among the other stakeholders.

Corruption in this study was seen as one of the biggest challenges hampering the decision making at the district. According to the stakeholders, funds expected to help boost agricultural development sometimes do not see the light of day. They gave the indication that the DA staffs are very smart and always able to manipulate and divert funds to areas they will be able to get their “10 percent kickbacks”. This is now very rampant and most of the officials at the DA level are very smart and dangerous as captioned by the DoA and NGO officials who indicated that until there is proper accounting procedures backed by very stringent punitive actions this catastrophe will not be stopped.



4.10 Constraints Affecting Agricultural Development under Decentralized System in East Gonja District

This section of the chapter identified and ranked the constraints of decentralization in Agricultural development in the East Gonja District of the Northern Region.

It emerged from the proceedings of the FGD that government decisions played a key role in restraining farmers from achieving the desired agricultural outcome that is needed to ensure agricultural development in the East Gonja District.

Farmers' views were sought independently regarding the constraints they faced before and after the implementation of decentralization. Various constraints were enumerated during the FGDs amongst which was lack of uniformity in decisions by stakeholders, no AEAs had visited in the last five years, lack of improved technology for farmers, decline in farmers' income, lack of financial support for farmers, agricultural development not a priority of the local authorities' and lack of logistics. These constraints were grouped under the three forms of decentralization namely, administrative, fiscal and political to assess the cross cutting constraints that the farmers are faced with.

These constraints were ranked using the Kendall's coefficient of concordance to test for the level of agreement among the ranking of the constraints.



The results of the ranking of the constraints faced by farmers under the decentralization system in the district is shown in table 4.11.

Table 4.11: Ranking of the constraints faced by farmers under the three forms of decentralization

Constraint	Mean Rank	Rank
Administrative Decentralization		
No AEA has visited farmers in the last five years	3.77	1
Farmers do not know where to get extension service delivery	5.45	3
AEAs are not using modern technology	5.95	4
Lack of uniformity in decision by stakeholders	4.59	2
There is no market for our produce	7.28	8
Fiscal Decentralization		
Agricultural Development is not a priority	6.56	6
Food insecurity	9.57	11
Low yield	7.28	8
Farmers' income have declined	6.08	5
There is lack of funds	6.87	7
Political Decentralization		
Politicians are not supporting farmers	8.11	10

Source: Field Survey, 2017

Sample size (N) = 136; Kendall's W= 0.198; Chi-Square = 261.323; df =11; Asymptotic significance = 0.000.; Rank 1 = Highest Constraint; Rank 11 = Least Constraint.

The Kendall's Coefficient of Concordance (W) was estimated from the study to be 0.198; chi-square statistic was estimated at 261.323 with 11 degrees of freedom and asymptotic significance of 0.000. Since the computed chi-square is greater than the chi-square critical, there is agreement among the rankings of the constraints by farmers in the East Gonja District of the Northern Region. Kendall's Coefficient of Concordance (W) estimated as 0.198 indicates that there is 19.8 percent agreement among the rankings of the constraints.

The discussions of the rankings of farmers' perception on the constraints of decentralization on agricultural development will precede discussions from both the focus group discussions as well as the key informant interviews for purposes of





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triangulation of the results. Below are the constraints discussed along with the way the farmers did the ranking.

4.10.1 AEAs Not Visiting Farmers in the Last Six Years

The results show that no AEA visit in the last five years had the highest rank with a mean rank of 3.77 and therefore the most limiting constraint of farmers in the East Gonja District of the Northern Region. A further probe to compare their opinions now to when Agriculture was under MoFA brought out very disturbing issues. They indicated that though in the past the AEAs were not many at least they had some visits by the AEAs once in a while even though it was not frequent. Their lamentations now had to do with the fact that some farmers for a long time feel the nonexistence of AEAs in the district.

In most of the communities visited the farmers said they had not even had a single visit by any AEA. Some areas were affected more seriously as highlighted by the farmers and even the other stakeholders involved in the survey. They were of the view that, the inadequate numbers of AEA and its effect on the number of visits had been there for a long time and therefore transcends decentralization. They further indicated that long before the implementation of the decentralization system, the number of AEAs had declined drastically and therefore did not want to associate the inadequate number of visits by AEAs to decentralization in any way. They also suggested the need for DA to take a keen interest in this aspect of extension delivery to boost the sector since they work with the farmers and should be able to appreciate the obstacles that confront them.

In an interview with one of the AEAs in the district his opinion on this issue was that;

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“The reason why the number of the AEA’s has declined is because of the fact that the government does not see extension service as a priority and this is our biggest challenge as a nation. Governments come and go and the extension service delivery is going from bad to worse under their very eyes. We need a more robust way of tackling these numbers of the AEA’s in the district and the country as a whole by involving other stakeholders (Official of the DoA, East Gonja District).

The assertion above means that the extension service delivery is critical yet duty bearers are not giving it the needed attention that it deserves. According to some officers of the DoA, this challenge can still be reversed if a conscious effort is made through collaborations with stakeholders to revamp the agricultural training colleges by ensuring that it takes an innovative trend that can attract people to pursue those courses, to train AEA who can fill in this gap. These findings corroborate that of Norton (2004), who observed that lack of systematic collaboration among government, educators and researchers has limited the effectiveness of and dwindling extension delivery in most countries.

Another officer from the DoA also shared his opinion on the visits of AEA’s to farmers.

The number of AEA’s is appalling and this is not allowing the officers to visit farmers regularly whilst other communities do not even get one visit within a farming season.

It is not the fault of the AEA’s at all. How do you expect just four AEA’s to cover a large area like the East Gonja District? We are handicapped and as such we cannot do anything unless recruitments are made to improve the current numbers that we have and that is where we come in as supervisors to ensure rigorous monitoring and evaluation to ensure that the AEA’s do their work and farmers get the needed support to boost agricultural development in the district (Official of the DoA).



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This observation is in line with Akis (2014), who opined that the quality of human capital in extension has dwindled in the past three decades because of the low investments in that sector coupled with inadequate training and educational institutions.

In a related development, another official of the DoA was of the view that:

“NGOs like RING and SPRING will have supported the DoA by recruiting more AEAs for the district, but our laws are stringent and does not allow for private recruitment of AEAs. This challenge could be minimized if some laws could be bent, but in our case this is just not possible” (Official of DoA, East Gonja District).

Similarly, this observation by the DoA official is related to what UNEP (2008) suggested, that the involvement of nongovernmental organizations in decision-making processes and the implementation of reforms has provided positive experiences in dealing with the demand side of extension service in countries such as Ethiopia and Senegal. The findings above are indicative of the fact that in tackling issues related to agricultural development, there is the need for a concerted effort, especially by NGOs who normally have a lot of best practices that have been acquired from other countries and can be used as benchmarks in the country especially when it comes to local level development. If the government provides an enabling environment for such best practices to be implemented, the result is normally progressive as these NGOs come with their own agenda and once the activities are in line with their agenda, their support is normally remarkable.

According to Annan (2012) extension services provided to farmers should not only be through visits by AEAs but also through non-visits by AEAs. It was revealed that farmers could receive the services through radio and television programmes and perform better than those who received personal extension visits. Contrary to this



view by Annan, the FAO, (www.udsspace.uds.edu.gh) (2012) outlined some key elements of an extension agent in the whole extension service delivery process. The report indicated that without an agent in the field to guide, direct and supervise local extension activities, there would be no extension service available to farmers. The agent's role and relationship with the farmers are the critical aspects of this process.

The report also revealed that, an effective agent should be able to visit and meet with farmers on their farmlands rather than being a bureaucrat. A strong extension service delivery is capable of improving the quality of what is being produced locally to meet the international standards. This goal can only be achieved by supporting the agriculture department to provide extension delivery support to farmers. The current conditions of work of public extension officers and the management of their efforts pose great challenges relating to the broader question of public service reforms, which have been very slow for largely political reasons. It is sufficient to note here that without a revamp of extension services, Ghana will be missing a key link in the chain to boost agricultural productivity (Nankani, 2009).

4.10.2 Lack of Involvement of Stakeholders in Decision Making

The second most limiting constraint was the lack of involvement in decision making by all stakeholders in the district with a mean rank of 4.59. The reality is that decisions that affect farmers are made by different actors in the DA (private and public) which should not be the case. The farmers attributed this constraint to the increasing dwindling numbers of the AEAs who under normal circumstances should be the facilitators'/liaison officers between any stakeholder and the farmers but their absence is really having an adverse effect on the farmers.



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On the other hand, staff of the DoA attributed the non-involvement of the stakeholders in decision making to decentralization. They posited that decentralization has made their work very difficult, and decisions are taken without recognizing that they have the technical know-how and need to be involved anytime decisions relating to the Agriculture sector were taken. Before the implementation of decentralization, decisions relating to agriculture were handled by DADU under the MoFA. However, since agriculture was decentralized the system seem unfair to the DoA as most of the decisions are taken at the DA level and sometimes the person spearheading the initiative does not have expertise in agriculture and such decisions do not favour the development of agriculture.

An observation by another official of the DA was that the whole idea about the decentralization concept not working had to do with the attitude and the mentality of people. According to the official, the districts with vibrant agricultural department have committed leadership. The leaders ensure that the farmers at the community level are engaged seriously in Community Action Planning (CAP) where their needs are identified before it comes to the District level for deliberation

This assertion was not different from European Union Rural Review (2015) report on improving stakeholder involvement. It revealed that effective implementation ultimately relies on the delivery of projects and other actions by stakeholders, especially the beneficiaries at the local level. Involving these stakeholders at an early stage in the formulation of policies and programmes can avoid barriers to successful implementation.



4.10.3 Farmers do not Know Where to Get Extension Services

The third most limiting constraint was that farmers did not know where to get AEAs to provide them extension service with a mean rank of 5.45. Although, there were few AEAs in the district the farmers said they could not contact them, especially those who were a bit far from Salaga town. The district is the largest district in Ghana and is so dispersed that sometimes when hit by crises related to their NGOs and private sector's participation in the delivery of extension service in their farming activities, it is always difficult if not impossible to get into contact with the AEAs. .

In an interview with some of the other stakeholders they revealed that there is need to come up with other innovative mechanisms that can allow farmers to access extension services aside the public extension services.

4.8.4 Outmoded Technology in Extension Service

The fourth most limiting constraint was that AEAs were using outmoded technologies in the provision of extension service to farmers. This fourth constraint was ranked 4th with a mean rank of 5.95.

This situation was explained with a lot of sentiments, especially the AEAs in the district. Their beef was that, before the DoA was put under the DA they were provided continuously with capacity building in modern technologies, but now they cannot even remember the last time they benefitted from such training. As they put it; *“How could we then be able to impart new technologies to the farmers when we also lack capacity in modern technologies?”*

In an interview with one of the key informants he lamented that;

“The few agricultural officers are ready to support the farmers understand trending technologies, yet basic logistics like motor bikes to enable them to travel into the



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hinterland is not available. Some AEAs just try to do some small sensitization on what they also know to farmers who are close to where they are and then abandon the rest not because they don't want to but because they cannot. However, the RING and SPRING projects are supporting the district since they now provide motorbikes and fuel for officers to travel. The issue of the numbers, however, is not allowing for wider coverage” (Official of DoA, East Gonja District).

The situation above indicates that the Agricultural sector faces challenges that go beyond the capability of the District Assembly. Agricultural development at the district level can only see change if the central government decentralizes more resources than it currently is doing. This observation is confirmed by Alila and Atieno (2006) who asserted that the inability of farmers to afford readily available modern technologies of farming is causing low productivity, reflected in low yields per acre of land. They further reiterate that when agriculture is technology-led, not only is food security achievable but also poverty alleviation is possible. Inability to afford new and readily available farming technologies, however, is blamed partly on poor access to financial resources, especially in a nation where the majority, and not only farmers, is poor and the financial markets have not developed to support agricultural investment.

4.10.5 Decline in Farmers Income

The fifth declining constraint was that farmers' income has declined since the implementation of the decentralization system with a mean rank of 6.08. This assertion is in contrast with an earlier affirmation by the farmers that their incomes had increased after the implementation of decentralization. What this means is that, there seems to be a conflict in what the farmers are saying and the reality on the



ground as the earlier paired sample t-test revealed that their incomes had gone up after decentralization.

Also, these discrepancies could actually be attributed to the fact that the income remained a general constraint to every farmer even though in the constraint analysis it is not amongst the first three constraints giving credence to the fact that income had increased after decentralization.

In a further interrogation just to get a better understanding about this issue, the participants in a FGD in Salaga were of the opinion that:

“Before decentralization, there was something called agricultural mechanization which was helping us a lot but now it is like nobody cares about farmers again”.

Farmers were provided with a lot of support in the area of subsidies, including farm inputs as well tractor services that reduced production cost and increased their income, but decentralization has come to change everything where farmers have to bear all the cost.

As summed up by one of the farmers:

“Now we just farm to pay debts as I can no longer farm the number of acres I personally used to farm. I used to farm about fifty acres, but now I can only farm thirty because of the challenges I am encountering” (**Farmer, Bunjai East Gonja District**).

When probed for further clarifications on how decentralization was linked to their income level as farmers, a farmer from Salaga elaborated by saying that:

“I am saying farmer’s income is dwindling because decentralization has come to worsen our plight as businessmen. Before the implementation of decentralization, the



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Agriculture Department was in charge of farmers' welfare and since they were aware of our needs, we were provided with quality interventions like the tractor service and input subsidies and even credit facilities, but the situation now is different as farmers have to bear all the cost. We have to farm less now since we cannot bear all the cost and this has really affected our income as farmers" (A Farmer, Salaga).

4.10.6 Agricultural Development not a Priority of the Assembly

The sixth most limiting constraint that was identified by the farmers had to do with local authorities not prioritizing agricultural development in the district. Agriculture is expected to be the engine of growth of every agrarian economy, but the challenge is that when it comes to the East Gonja District the reverse is true as postulated by the responses from the farmers as well as officers of both Agriculture and NGOs in the district. According to them Agriculture department does not receive priority as compared to the other departments of the assembly. The sector is underfunded and does not have a subcommittee in the district. Even though the Assembly gets a lot of support in that area, their focus is on other developmental projects like the physical infrastructure which can easily be seen by the electorates to earn them votes in elections.

4.10.7 Lack of Funds

The seventh constraint was lack of financial support with a mean rank of 6.87 which was seen in different perspectives by the different actors in the Assembly.

On the side of the farmers, their argument was that financial support that was initially given to them by MoFA and other organizations including NGOs were not forthcoming in recent years. They lamented that for almost a decade now they could not remember when any such support was given to them to help boost their farming





activities. These supports www.udsspace.uds.edu.gh in the past allowed them to undertake large scale farming but now they are unable to farm on a large scale because of the absence of such financial support.

On the part of the DoA their argument was that, the unavailability of funds is not allowing them to implement their core mandate of providing relevant logistical support to farmers. They reiterated that Agriculture is ineffective because of the slashing of allocation of funds to the agriculture sector by the central government. They added that inequity has created some apathy on the part of the Agricultural staff at the district. They complained that the inadequate resources have made them ineffective as they are no longer control the funds of their department. The role of the DoA in their opinion has been reduced to paper work and when it gets to a point where money is required they are relegated to the background. According to them the District Assembly was now fully in charge and their decision to either getting them resources or not was the preserve of the Assembly.

On the part of the DA staff, they expressed contrary view. One officer admonished thus:

“As a country, the decentralization policy is faced with enormous challenges because there is no monitoring and evaluation” (**District Assembly official, East Gonja District**).

An official from one of the NGOs argued that;

“Decentralization has been around for some time and therefore there should have been some stock taking to evaluate it to see what worked and what did not work” In my opinion, it is not bad at all as most nations have very good success stories. We can still make the system work by evaluating the system thoroughly devoid of politics and

with objectivity. Yes, we www.udsspace.uds.edu.gh have challenges in the implementation of decentralization especially when it comes to fiscal decentralization but some individuals sometimes exaggerate these issues for their selfish interest and that is where we need an independent team to interrogate the system after almost eight years of its implementation” (Official from RING Project, NGO, East Gonja District).

The observation above by the NGO official implies that indeed there are challenges, but as a country, there is the need to get to the root of the matter by soliciting for empirical evidence and to get the true picture and not be judgmental when there is no evidence. The sentiments expressed by the various actors above also indicate that there is the need for proper monitoring and evaluation mechanisms to be put in place to ensure that best practices are learnt and the bad ones discarded. In a related development another staff of the DA said that;

“The East Gonja District’s Internally Generated Fund is not good and this is the reason why the Assembly is unable to make enough resources available to the Department of Agric. We share in their grief, but the truth of the matter is that every department is facing the same challenge. We wish we could fund all the budgets prepared by the DoA, but the truth of the matter is that we need more funds from the central government to take care of most of these challenges that the DoA is faced with. (District Assembly Official, East Gonja District).

The above observation portrays a seemingly helpless situation for the assembly staff who understand that the DoA is facing a lot of challenges, but as a district assembly in charge of the overall implementation of the decentralization process they lack the needed resources that could have saved the situation that the agricultural sector finds itself in. One other DoA staff added his voice to the discussions by passionately lamenting that;



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“The lack of resources indeed, is the biggest challenge that the DoA is faced with. We have been relegated to the background by the decentralization system. In the past when we submitted our plans to MoFA, funds were transferred into the account of the department for us to take care of our activities. My sister, today the situation is not the same anymore.” (Official of DoA, East Gonja District).

The arguments above indicate that there is still a lot to be done at the local level when it comes to agricultural development. In line with this, Kahkonan and Lanyi (2001) suggested that for decentralization to increase allocative and productive efficiency, local governments need to have the authority to respond to local demand as well as adequate resources and proactive mechanisms for accountability. Because granting authority without adequate resources and prudent accountability can lead to corruption and lower productive efficiency. Decentralization needs to be accompanied by reforms that increase the transparency and accountability of local government.

The staff of the DoA opined that it is only when they are well resourced that they could support the farmers effectively.

According to them, the issue lack of funds is sometimes an artificial obstacle created by the staff of the DA. They explained that sometimes the money may be available, but the difficulty is that the Assembly sometimes feels reluctant in releasing the funds to the Agriculture department to do their work because agricultural development projects will not win votes for the politicians and so the politician will rather support the activities like infrastructural development that are more visible to win them political benefits.

This issue could be managed if local governments or administrative units with the legal authority are able to impose taxes, to improve on the tax base which is so weak



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and reduce the dependence on Central Government allocations and rather try to exercise that authority. There is a lot of potential in generating revenue internally to be able to take care of the local agricultural development activities.

Central government subventions are disbursed at a specific time frame and so if the assembly is faced with an issue that need urgent financial commitment it will have to wait until the transfers are made and especially the issues of Agriculture are normally time bound and there is the tendency to fail in resolving such a challenge.

4.10.8 Decline in Yield

The eighth limiting constraint of agricultural development was the issue of decline in yield. Respondents were of the view that; this could not be attributed directly to decentralization since other factors like land and rainfall patterns contribute significantly to yield.

These explanations notwithstanding, the farmers in a FGD explained that governance is about ensuring that issues affecting the governed are the responsibility of the governor, and therefore the DA should be held responsible for their low yield especially in recent years. According to them, before the implementation of decentralization the Assembly could have been pardoned since it was not their primary responsibility to ensure agricultural development, but now that agricultural development has become the responsibility of the Assembly they should be able to tackle some of the challenges affecting yield adversely.

On the part of the staff of the DoA, they believed that, the Assembly could provide adequate funds to the DoA to undertake research into measures that could improve farmers' yield levels which currently are very appalling. According to the staff of the DoA before the implementation of decentralization, DADU used to ensure that they



liaise with farmers in that respect but now the lack of funds for the department has compounded their woes.

This assertion is in line with Norton (2004) who stated that the recent unparalleled rates of growth of food production in developing countries owe much to the provision of agricultural research.

To establish the veracity or otherwise of the sentiments expressed by the respondents above, data on the average yield of major crops in the East Gonja District for the periods 2004 – 2015 were taken from MoFA office and has been presented in figure 4.5 a and b below. These major crops were maize, rice, sorghum, millet, cassava, yam, groundnut, cowpea and soybeans.

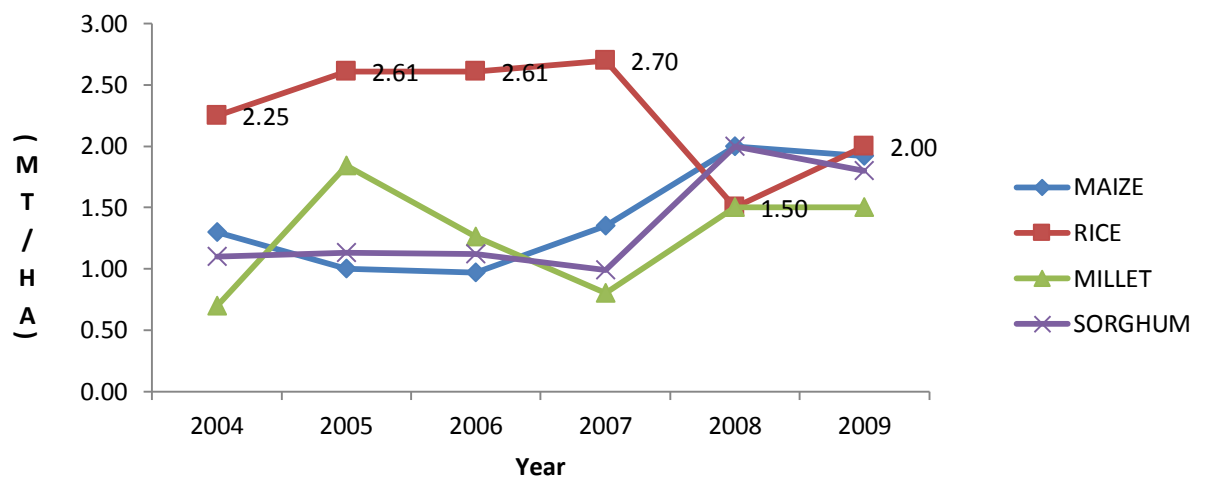


Figure 4.6A: Line Graphs showing Yield for Cereals in East Gonja District for the period 2004 – 2009 (MT/HA)

Source: Research and Info. Directorate (SRID), Min. Of Food & Agric, 2017



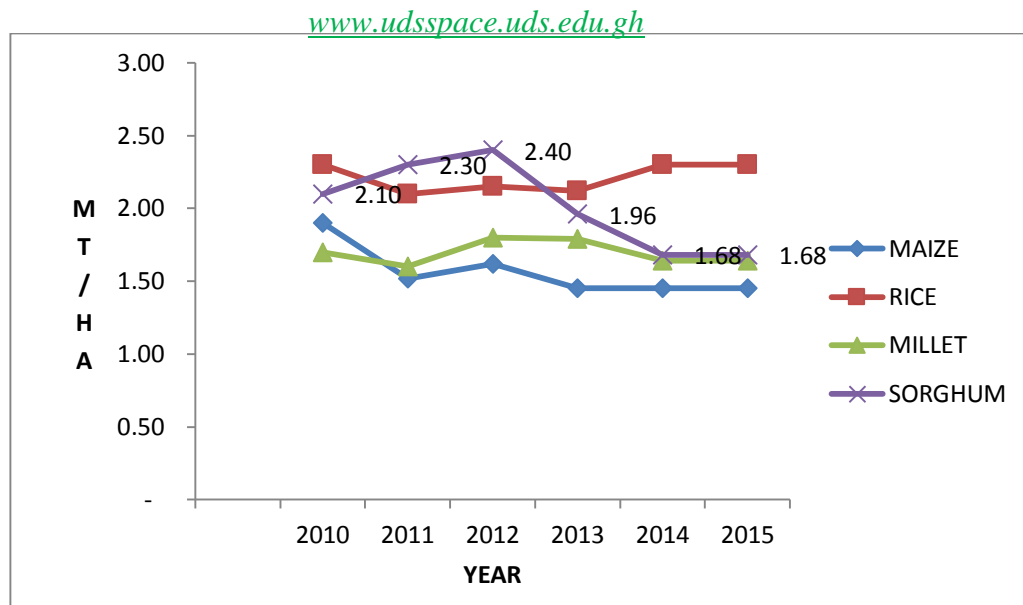


Figure 4.6B: Line Graphs showing Yield for Cereals in East Gonja District for the period 2010 – 2015 (MT/HA)

Source: Research and Info. Directorate (SRID), Min. Of Food & Agric, 2017

The bar graph shows the average yield figures of crops categorized as cereals that were produced for the period 2004 to 2009 which represented the period before the implementation of decentralization.

The mean for rice for the period 2004 to 2009 was 2.01, millet recorded 1.03, sorghum was 1.4 and that of maize was 1.42. For the period 2010 to 2015 the means were 1.3, 2.02, 2.46 and 1.91 for millet, sorghum, maize respectively.

For legumes thus groundnuts recorded a mean of 0.99, cowpea the mean was 1.67 and soyabeans recorded 1.67 for the periods 2004 to 2009 whilst the period 2010 to 2015 the mean figures were 2.46 for groundnuts and 1.92 was recorded for cowpea and 1.91 was recorded for soyabeans.

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Tubers recorded a mean of 9.71 for cassava and 11.6 for yam for the period before the implementation of decentralization while cassava recorded a mean of 13.86 and 13.1 for the period after the implementation of decentralization.

Generally, on the average, yield level for almost all the food crops has increased after the implementation of decentralization. This could actually be as a result of improvement in other variables like rain fall patterns and improved seeds and not necessary because of decentralization.

The result above has an indication that the yield figures fluctuated during both periods, but the implication is that the figures recorded were not consistent and this could be as a result of the influence of other factors that could have accounted for those variations. This is evidenced in Macueley (2015) who asserted that, aside the weak national institutions; there are other factors that account for low yields in cereals in Africa. He argued that these other factors include the extreme environmental conditions and resource constraints, low-input farming systems where these crops are grown. Furthermore, the issues of climate variability, change and land degradation are acute with a lack of progress the result of neglect. Also, Alila and Atieno (2006) confirmed the influence of the other variables. They however said that with the inconsistencies citing the immense role of government policies in the maize yield figures when they argued that the main cause of shortfalls especially in maize has over time resulted from the low use of fertilizers, lack of finance and the withdrawal of other services like extension by the government. Lack of guaranteed of markets for maize produce has compounded the problem as farmers have no incentive to invest in productivity increasing practices.



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This data on cereals were inconsistent with previous reports (Hafner, 2003; Brisson et al., 2010; Lin & Huybers, 2012; Hawkins et al., 2013), which analyzed specific countries using yield data at various levels. For all crops, yields were consistent as reported by Ray, Mueller, West and Foley, (2013), who analyzed a statistic-based global dataset of historical yields in 1960–2010.). Further, they also confirmed similar inconsistent results, thus providing even more evidence of the recent yield inconsistencies in yields.

The variations in the figures above transcend decentralization and it will therefore erroneous to attribute variations in yield to only the institutions in charge of agricultural development.

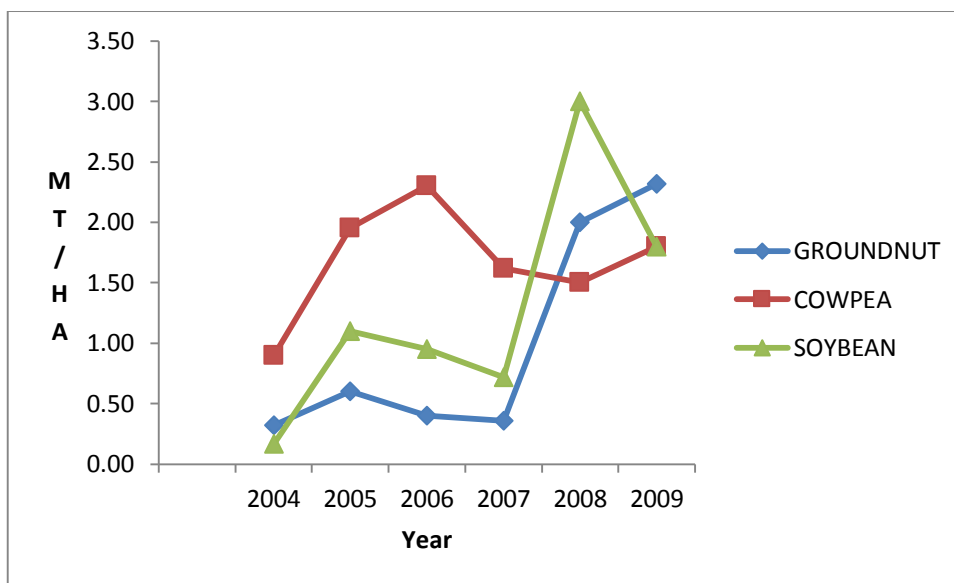


Figure 4.7A: Line Graph showing the Yield for Legumes in the East Gonja District for the period 2004 -2009 (MT/HA)

Source: Research and Info. Directorate (SRID), Min. of Food & Agric, 2017

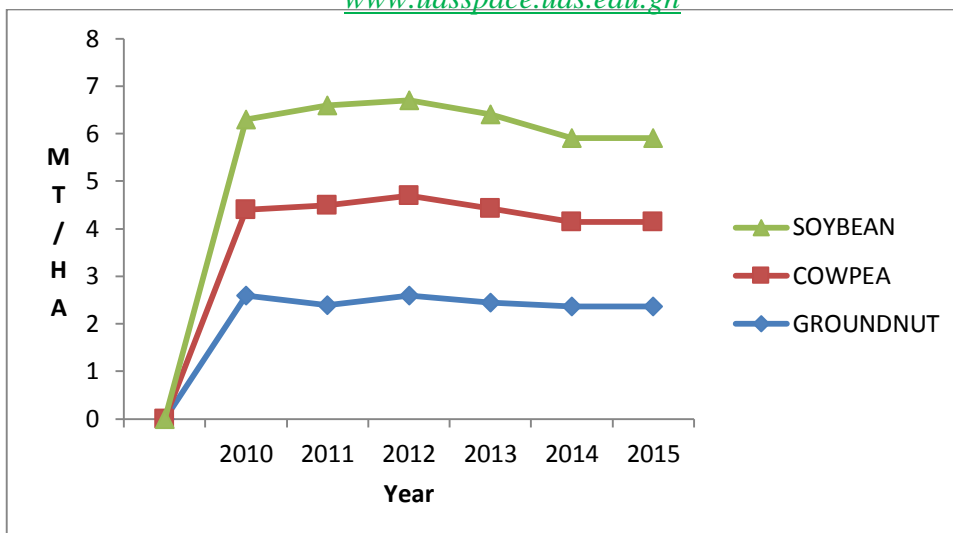


Figure 4.7B: Line Graph showing the Yield for Legumes in the East Gonja District for the period 2010 -2015 (MT/HA)

Source: Research and Info. Directorate (SRID), Min. of Food & Agric, 2017

The line graph 4.7A is depicting the figures that were recorded as yields for legumes in the East Gonja District for the period 2004, 2005, 2006, 2007, 2008 and 2009.

The line graph an implication that there are still adequate legumes for both domestic consumptions, which has grown steadily with the largest growth coming from soybeans and still one of the export commodities in the country (Flatt, 2017).

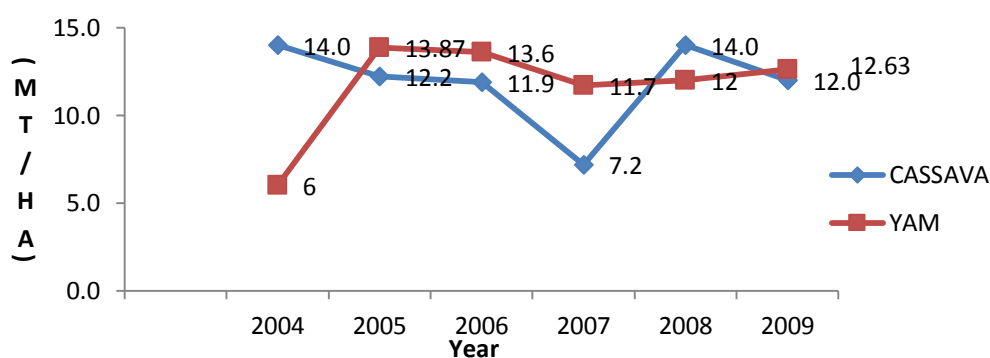


Figure 4.8A: Line Graph for Yield for Tubers in the East Gonja District for the period 2004 – 2009 (MT/HA)

Source: Statistics, Research and Info. Directorate (SRID), Min. of Food & Agric,

2017



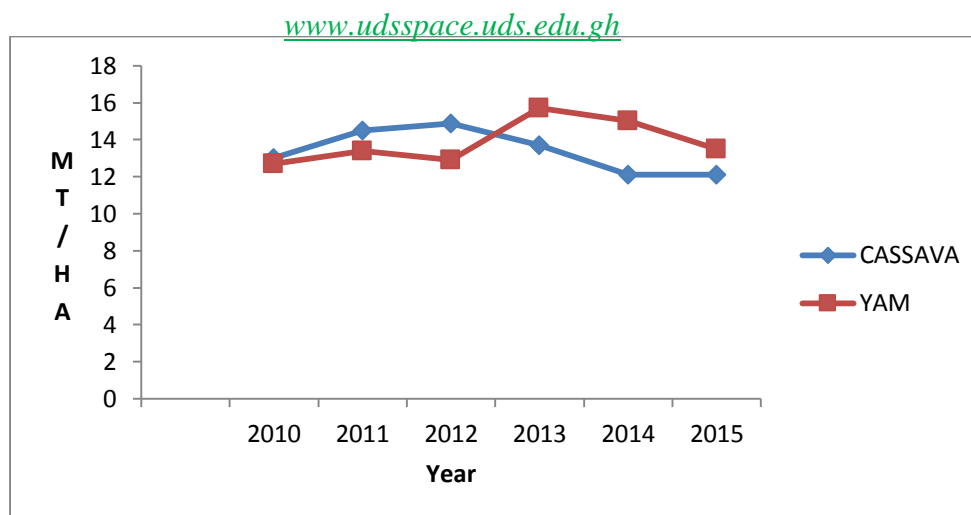


Figure 4.8B: Line Graph for Yield for Tubers in the East Gonja District for the period 2010– 2015 (MT/HA)

Source: Statistics, Research and Info. Directorate (SRID), Min. of Food & Agric, 2017

The line graph 4.6 A and B shows the yield figures of crops comprising cereals, legumes and tubers for the periods 2004 to 2009 and 2010 to 2015. These represent the periods before the implementation of decentralization. The figure also shows the mean figures for the various specific crops. This analysis just like the others discussed above, seem to have been affected by other variables rather than the governance system within that was being used. There was however, one very obvious trend that run through all the crops used for this study, which had to do with the average figures for both 2014 and 2015. Anytime, 2014 recorded any average yield figure for a crop in 2014, 2015 equally recorded the same. Conversely, (Mission, 2014) argues that, improvement in productivity after the introduction of programs can only be seen within 5 years of implementation. The actual training farmers receive can be completed within a year, but the first wave of this solution can be accomplished within a decade, with beneficial effects continuing for years to come (Mission, 2014). If this assertion is anything to go by then what it means that there is



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the likely hood that there could be changes in this average yield figures in some few years to come.

This trend needs to be monitored closely because improvements in agricultural productivity, create social and economic ripple effects. In other words, there is the likelihood that with an increase in incomes, small farmers can better feed their families, send their children to school, provide for their health, and invest in their farms which in turn make their communities economically stronger and more stable (Bill & Melinda, 2011).

4.10.9 Lack of Market for Agricultural Produce

The tenth limiting constraint was the unavailability of ready market for agricultural produce. The participants in FGD as well as key informant interviews were of the following opinion:

“Our maize and soya beans that we harvested two years ago are still lying down because we can’t sell them and when buyers come around to buy they prefer the fresh ones that have just been harvested and this is a big challenge to the farmers (Farmer, Latinkpa).

According to the DoA officials, the issue of ready markets for farm produce is a big challenge which needs concerted effort by all stakeholders to address holistically. In an interaction with the DoA officials, they revealed that:

“One of the biggest challenge confronting farmers lately is how to market their produce in the competitive environment that we find ourselves. There is the need to create market opportunities for farmers to sell what they produce, but currently the situation is worrisome as farmers are unable to sell their produce. When the department was autonomous there were some interventions targeted at supporting the





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farmers to sell their produce, but now because the department itself is struggling with their own teething challenges there is little they can do to salvage the situation. Sometimes even the quality of produce is a challenge. They cannot even be exported to neighbouring countries and this sometimes makes the farm produce go waste”
(DoA official, East Gonja District).

This assertion is corroborated by Norton (2004) who indicated that the new agenda for agricultural development sees government and the markets as complements rather than substitutes. He argues that the absence of markets or some form of market failures requires government to assume responsibility for the activity (Norton, 2004). The new agenda sees government as helping to create markets for farmers who form the majority of the populace in the rural areas and since the East Gonja District is in the rural area, the government in this case the District Assembly is expected to ensure that farmers have access to markets to boost agricultural development.

4.10.10 Lack of Political Will

The eleventh constraint in the survey was the lack of political will when it comes to agricultural development in the East Gonja District and recorded a mean rank of 8.11. The information gathered from the survey was that lack of political will to support the agricultural sector has virtually made the sector very dormant in the district. According to the farmers, lack of political will was one of the biggest challenges that they have been confronted with over the years and this they attributed to the fact that those who represent them are not accountable to them, but rather are accountable to the central government and so their interest is secondary to the duty bearers.

The NGOs on their part lamented that, now that the District Assembly is in charge of Agriculture, there are situations when the assembly does not buy into the ideas of the

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NGO who are supposed to be partners in development. They attributed this to the fact that agriculture does not seem to be the priority of the district assembly. They explained that politicians are interested in projects that are visible and not agricultural development projects. It is argued that political will has to be strong enough to tackle the issues of corruption and climate change. This can only be achieved through a strong combination of political leadership, right mental capacity, discipline, integrity and positive attitude. Overall, there is the need for accountability and sincerity of purpose on the part of duty bearers in a manner that will ensure the sense of purpose in the achievement of agricultural development (FAO, 2017).

According to IRIN (2008), Asia provides many examples of effective policy decisions by governments that boosted agricultural growth and led to the reaping of the fruits of the green revolution in the 1970s. African leaders' however, failed to tap into that momentum. The Asian governments provided farmers with credit, price support, and input subsidies. In sub-Saharan Africa, governments also intervened heavily in the markets.

4.10.11 Food Insecurity

The eleventh limiting constraint was the issue of food insecurity which recorded a mean rank of 9.57. Respondents ranked this constraint eleventh but key informants made up of DA key staff, key of DoA and the NGO staff were rather very emotional about the issue of food security. They lamented that food security is dire yet very critical for the survival of human beings and as such care must be taken to address issues of food security which according to them was becoming very alarming. A further probe from the farmers on the issue of food insecurity before the



implementation of decentralization and after decentralization yielded the following results which were analyzed using the paired sample t-test to compare the means.

Table 4.12: Effects of Decentralization on Food Availability

	Paired Difference					T	Df	Sig. (2 tail)
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the difference				
				Lower	Upper			
Food Availability 2004-2009 & 2010 – 2015	-.23529	.42575	.03651	-.30750	-.16309	-6.445	135	.000

Source: Field data, 2017

The results of the t-test in the table 4.12 indicate that there is a significant difference between the availability of food for farmers before the implementation of decentralization and the availability of food for farmers after the implementation of decentralization as the p-value is less than 0.05 (0.00) at the 5% level of significance.

This implies that food was more available before the implementation of decentralization as compared to food availability after the implementation of decentralization.

Table 4.13: Effects of Decentralization on Food Accessibility

	Paired Difference					T	Df	Sig. (2 tail)
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the difference				
				Lower	Upper			
Food Accessibility 2004-2009 & 2010 – 2015	-.25000	.60553	.05192	-.35269	-.14731	-4.815	135	.000

Source : Field data, 2017

The results of the t-test in table 4.13 indicates that there is significant difference between the accessibility of food to farmers before the implementation of



decentralization and the accessibility of food to farmers after the implementation of decentralization as the p-value is less than 0.05 (0.00) at the 5% level of significance. This implies that food was more accessible before the implementation of decentralization as compared to the accessibility to food after the implementation of decentralization.

Table 4.14: Effects of Decentralization on Food Utilization

	Paired Difference					T	Df	Sig. (2 tail)
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the difference				
				Lower	Upper			
Food Utilization 2004-2009 &2010 – 2015	-.30147	.46059	.03950	-.35269	-.3798	-22336	135	.000

Source: Field data, 2017

The results in table 4.14 indicate that there is a significant difference between the utilization of food by farmers before the implementation of decentralization and the utilization of food by farmers after the implementation of decentralization as the p-value is less than 0.05 (0.00) at the 5% level of significance. This implies that food utilization was better before the implementation of decentralization as compared to food utilization after the implementation of decentralization.



5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings, the conclusions drawn and the recommendations.

5.2 Summary of Findings

This study assessed the effects of decentralization on agricultural development. A survey research design was used to address the following pertinent questions. These include; what have been the perceptions of stakeholders in the achievements and constraints of decentralization on agricultural development? How are the reporting structures and decision making processes promoting agricultural development in East Gonja District? Data was taken from 136 farmers and 44 stakeholders on these issues using questionnaire, key informant interviews and FGDs. The analysis was done by comparing agricultural development in centralized and decentralization systems to empirically see if decentralization has brought some changes to agricultural development. The achievements, constraints as well as the changes made on the reporting structures as well as the decision making processes as a result of the implementation of decentralization on the sector were reported on the results chapter on this thesis

The results revealed that the farmers disagreed that there has been any achievement in all the three forms of decentralization, thus, administrative, political and fiscal decentralization in the East Gonja District. Even though some staff of the Assembly tried justifying that decentralization has been able to bring about the harmonization of activities at the local level, the general impression is that, the anticipated benefits of decentralization are yet to be felt in the East Gonja district. For instance the farmers



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indicated that interventions are still not demand driven, there is still no openness in governance and also resources are still not adequate for the farmers and as such

The reporting structure is also bedeviled with grave challenges like the absence of an agricultural subcommittee in the East Gonja District. Issues of agriculture are still discussed at the social services subcommittee where all matters related to social services are taken care of. Even though, the Local Government law 462 gives the assembly the liberty to constitute any subcommittee it deems necessary, agricultural subcommittee is yet to be given such priority.

Decision making processes are not adhered to, even though the Local Government Law stipulates the decision making processes. To date some key actors in the agricultural sector are not involved as they do not understand the system very well and are oblivious of the responsibilities that have been bestowed on them. For instance, most of the Assembly members who are expected to take critical decisions on agricultural development are themselves not aware about their crucial role.

The results also revealed that the most limiting constraint faced by farmers when it comes to decentralization and agricultural development had to do with the fact that farmers had not had a single AEA visit in the past five years whiles food insecurity was the least limiting constraint faced by farmers in relation to decentralization and agricultural development.

5.3 Conclusion

Though the decentralization of agricultural development is relatively new, it was still important to understand the direction of which this new concept was likely to shape agricultural development and to ensure that the direct benefits of decentralization are achieved. This study, therefore enlighten the understanding on decentralization and agricultural development. The study approach has been holistic by involving all



stakeholders in the agricultural sector at the grassroots level through to the assembly level.

- Generally, farmers in the East Gonja District disagreed that there has been any achievement in the administrative, fiscal and political decentralization. This implies that farmers are yet to feel the effect of decentralization in the district.
- The interpretation of the same reporting structure by the various stakeholders was different and could be the reason for some of the challenges that the agricultural sector is faced with. This has an indication that the reporting structure is not as simple as it appears.
- Farmers and agricultural officers' aside the district assembly staffs are of the view that decision making is still top-down in spite of the fact that decentralization encourages bottom up decision making processes.
- All the various stakeholders were of the view that the constraints of decentralization militating against agricultural development are enormous including the fact the;
 - Agricultural development issues are still discussed at general subcommittee's level instead of the constitution of a specific subcommittee on agriculture. Hence the Assembly Members of the district strongly feel that priority is not given to agriculture in the absence of specific agriculture development subcommittee.
 - Lack of markets, inadequate resources, absence of visits and low use of agricultural technology are the issues impeding the progress of agricultural development in the district.
 - Agricultural officers in the district perceive a lack of urgency on agricultural issues on the part of political appointees of the district



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which does not promote cordial reporting and communication links amongst them.

5.4 Recommendations

Based on the findings and conclusions drawn from this study, the following recommendations are proposed;

- The DA should create decentralization educational and awareness platforms across all communities of the district to enable farmers feel the contribution of administrative, fiscal and political decentralization.
- The DA should ensure that stakeholders understand the reporting structure in unison to curtail the current inconsistencies in the interpretation of the reporting structure.
 - Although there is evidence of the partnership and synergy between stakeholders, there appeared to be little effective co-ordination of the various actors involved. The DA and other stakeholders should work towards developing strong institutional activities by encouraging collaborations amongst all the key actors in agricultural development to guide and enhance this mutually beneficial partnership.
- There is the need to ensure that decentralization becomes a reality by ensuring that decisions really emanates from the farmers and not the recentralization that is currently being practiced at the district.
- The DA should as matter of urgency leverage the constraints affecting agricultural development down by constituting an agricultural subcommittee to handle issues of agriculture as the need arises since agriculture is a time bound activity and at times requires some urgency.



- Also there is the [need to recruit AEA](http://www.udsspace.uds.edu.gh)s to provide extension service delivery to the farmers. As an interim measure, the DA can partner the YEA to augment the low numbers of AEA's by recruiting and training the youth in extension methodologies so that they can help in the extension service delivery in the district.
- The district assembly needs to explore further to widen their revenue base to ensure the issue of resources is supplemented locally with what comes from central government coffers.
- The government seems to have a comparative advantage in the provision of extension services, at least, as perceived by the farmers themselves. Since the government alone cannot finance all extension efforts, it should provide an enabling environment for the enhanced effectiveness of other players. One possible and under-exploited resource with documented potential is the use of radio and television to broadcast programmes with extension content. Development practitioners are beginning to recognize the value of radio and TV in information delivery among farmers in several countries.
- There is the need to also introduce E-extension to boost the extension service delivery in the district.



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Appendix 1: Questionnaire for Farmers

Effects of Decentralization on Agricultural Development in East Gonja District, Northern Region, Ghana

Questionnaire for Farmers

INTRODCTION: INTRODOCTION: The administration of this questionnaire is purely for academic purposes. The study being undertaken leads to a partial fulfillment of the award of an M. Phil (Innovation Communication) degree by the University for Development Studies. Information gathered therefore shall be treated confidentially.

Please for each question in the various sections; indicate the chosen option(s) by ticking or filling the blank spaces with the most appropriate answers (where applicable). **Section ‘A’**

Background of Respondent

1.	Name of community	
2.	Sex of respondent	Male <input type="checkbox"/> Female <input type="checkbox"/>
3.	Age of Respondent	
4.	Farming Experience	
5.	Marital Status	Married <input type="checkbox"/> Single <input type="checkbox"/>
PARTICIPATION IN DECISION MAKING		
4.	Do have meeting at the community level?	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Who do you normally engage with at such meeting?	
	What are the issues on discuss at the meetings	
5.	How many times in a year are you involved in meetings at the district level	Not all <input type="checkbox"/> Once <input type="checkbox"/> Twice <input type="checkbox"/> Thrice <input type="checkbox"/>
6.	Are you aware of any agricultural interventions implemented	Yes <input type="checkbox"/> No <input type="checkbox"/>
7.	Before the implementation of any agricultural intervention, how are decisions made	Through community meeting <input type="checkbox"/> The Assembly identifies and implements <input type="checkbox"/> Farmers are only informed <input type="checkbox"/> Farmers are not consulted <input type="checkbox"/>
8.	Do you participate in the development of agricultural projects by the D.A. ? If yes mention the projects.	Yes <input type="checkbox"/> No <input type="checkbox"/>
9.	How were you involved? (Please tick as many as apply)	Project identification/needs assessment <input type="checkbox"/> Project design/planning <input type="checkbox"/>



		Communal Labour <input type="checkbox"/> Monitoring and Evaluation <input type="checkbox"/> Counterpart funding <input type="checkbox"/> Project implementation <input type="checkbox"/> Other (Specify)
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Section 'B'

Decentralization and its achievements in the Agricultural sector of East Gonja District

1. Have you heard that the agricultural department is now working under the district Assembly?

- a) Yes { }
- b) No { }

2. Please can you mention how you had the information about Agricultural Department now working with the Assembly?

- a) AEA
- b) Agricultural Department
- c) NGO
- d) Colleague farmer
- e) Assembly
- f) FBO

3. In your opinion, what would you say constitutes agricultural development?

.....

.....

.....

.....

4. What can you say about the following statements in relation to agricultural development?

- i. Strongly disagree {1}
- ii. Disagree {2}
- iii. Undecided {3}
- iv. Agree {4}
- v. Strongly Agree {5} provide a comment where necessary.



Perception statement on decentralization	1 (SD)	2 (D)	3 (U)	4 (A)	5 (SA)	Comment
Farmers voices are heard intervention provided are demand driven						
Farmers are involved in decision making on what to produce						
Farmers are involved in the determination of agricultural needs						
There is enhanced communication						
Farmers are involved in the choice of extension activities						
There is openness in governance						
There are adequate resources for farmers						
Our incomes have increased						
There are improvement in yields						
We have been exposed to modern technologies						
There is improvement in the distribution of farming inputs						

Section ‘C’

Constraints of Decentralization Agricultural Development in the EAST GONJA DISTRICT

Please can you rank the following perceptive statements that represent the constraints that hinder decentralization and agricultural development in the district using a scale of 1 to 10. Where 1 represents the most limiting constraint and 11 the least limiting constraint.

<i>No AEs has visited farmers in the last five years; Farmers do not know where to get extension service delivery; AEs are not using modern technology; Lack of uniformity in decisions by stakeholders; There is no market for our produce; Agricultural development is not a priority; Our food is insecure; We have low yields; our income has declined; There is lack of funds; and Politicians are not supporting farmers.</i>	
Constraint (ie 1,2, 3,4,5,6,7,8,9,10 and 11)	Comment (If any)



Food security

What can you say about the following statements in relation to food security in the EAST GONJA DISTRICT?

- i. Strongly disagree {1} ii. Disagree {2} iii. Undecided {3} iv. Agree {4}
- v. Strongly Agree {5} provide a comment where necessary.



Perceptions of farmers on food security	1 (SD)	2 (D)	3 (U)	4 (A)	5 (SA)	Comment
Food is accessible						
Food is available						
Food utilization						

Thank you very much!

Appendix 2: Interview Guide for Stakeholders (Assembly Staff/DoA/NGOs)

**Effects of Decentralization on Agricultural Development in East Gonja District,
Northern Region, Ghana**

Section ‘A’

Background of Respondent

1. Organization/Department.....
Position.....

Section ‘B’

Decentralization and its achievements in the Agricultural sector of East Gonja District

3. Have you heard that the agricultural sector in the district has been decentralized?
1. Yes { } 2. No{ }
4. What do you know about this concept of decentralization in relation to agricultural development? Please tick where applicable and provide a comment.
5. Please can you explain whether the following represents the achievements of decentralization in agricultural development and provide explanation is to how this is affecting the farmers in the area?

Achievement	Comment
Administrative Decentralization	
Farmers voices are heard/demand driven interventions	
Decision making on what to produce	
Determine Agricultural needs	
Enhanced communication	
Farmers involved in the choice of extension	
Political Decentralization	
Openness in governance	
Fiscal Decentralization	
Adequate Resources for farmers	
Improved Extension services	
Improvement in Yields	
Increase in income	
New Extension technology	



Constraint	Comment
Administrative Decentralization	
No AEAs has visited farmers in the last five years	
Farmers do not know where to get extension service delivery	
AEAs are not using modern technology	
Lack of uniformity in decision by stakeholders	
No market for our produce	
Fiscal Decentralization	
Agricultural Development not a priority	
Food insecurity	
Low yield	
Farmers' income has declined	
Lack of funds	
Political Decentralization	
Politicians not to supporting farmers	

Section 'D'

Contributions of reporting structures to the promotion of Agricultural Development within the decentralized department

6. In your view, has there been improvement in agricultural development as compared to the pre decentralization period?

- i) Yes { } ii) No { }

14. Give reasons to support your answer in question 1 above.....

.....

.....

.....



15. What structures at the district can you associate decentralization with that ensures the promotion of agricultural development?

16. How can you describe the performance of these structures in promoting agricultural development at the district?

.....
.....
.....

17. Are the various departments playing their supervisory roles in ensuring agricultural development at the local level?

.....
.....
.....



Decision making processes at the local level that promote Agricultural development

18. Do you agree that there are processes at the local level?

a. Agree { } b. Disagree { } c. Uncertain { }

19. What are the decision making processes at the local level that are promoting agricultural development?

Process	Explanation of how the process is helping to promote agricultural development



Appendix 3: Focus Group Discussion Guide for Farmers

1. Have you heard about decentralization?
2. How is decentralization linked to agricultural development?
3. What do you think has changed in your activities?
4. What can you say about your activities in farming in the past (before you heard that agricultural activities are now the responsibility of the DA.?)
5. Do you think your activities were better than now?
6. What are the activities that have improved?
7. What activities have not improved?
8. Do you take part in the decision making processes in the DA
9. Where to you go when you need any support?
10. Are these support forthcoming?
11. Who are the people you think are responsible for agricultural development in the District?
12. What do you think are the constraints to you as farmers?
13. What can be done to avert these constraints?



Thank you!

Appendix 4: Focus Group Discussion Guide for Assembly Members

1. Have you heard about decentralization?
2. How is decentralization linked to agricultural development?
3. What do you think has changed in your activities as Assembly members?
4. How are you supporting agricultural activities now that issues of agricultural development are now the responsibility of the DA.?
5. Do you think agricultural activities were better than now?
6. What are the activities that have improved?
7. What activities have not improved?
8. Do you take part in decisions related to agricultural development in the DA
9. Who are the people you think are responsible for agricultural development in the District?
10. What do you think are the constraints farmers are facing in agricultural development in the DA?
11. What can be done to avert these constraints?

