UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

THE ROLE OF LOCAL GOVERNMENT IN IMPLEMENTING THE PLANTING FOR FOOD AND JOBS PROGRAMME: A CASE STUDY OF NSAWAM–ADOAGYIRI MUNICIPAL ASSEMBLY

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INSTITUTE OF STATISTICAL, SOCIAL, AND ECONOMIC RESEARCH

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BY

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MA IN DEVELOPMENT STUDIES DEGREE

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DECLARATION

I hereby declare that this dissertation is my original work and that all literature used have been duly acknowledged. The study has not been submitted for the award of any degree or similar title in any institution either in Ghana or abroad.

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ABSTRACT

The objective of every agriculture policy is to improve agriculture production and food systems. Meanwhile, in the Local Government Act of 1993 (Act 462), agriculture services at the local level are ceded to the local government and the Departments of Agriculture became unit within the Metropolitan, Municipal, and District Assemblies (MMDAs). Given the importance of agriculture growth at the local level, this study investigates the role local government plays in implementing the Planting for Food and Jobs programme (PFJ) in the Nsawam Municipality. The study used a mixed method research approach to collect primary data by administering questionnaires to 100 selected farmers, scheduled interviews with 8 Local Government Officials, and 4 Focus Group Discussions with farmers. The SPSS software was used to analyze the quantitative data and the thematic analysis technique was used for the qualitative data.

The results revealed that the local government played a significant role in implementing the Planting for Food and Jobs programme in the Nsawam Municipality. Most respondents expressed satisfaction with the way the programme is being implemented and indicated the programme has increased their yields, improved access to extension services, fertilizers, and seeds. However, late delivery of the agriculture inputs, lack of logistics and equipment, lack of an organized system to regulate farmer's noncompliance, and inadequate staff, especially Field Officers were challenges that affected the roles local government played in implementing the programme. In line with the findings, the study recommends that the Departments of Agriculture within the MMDAs should be adequately resourced in terms of financial, human, and working logistics to undertake their functions. This will strengthen the role of local government in implementing the PFJ programme in the Nsawam Municipality, and across the 260 MMDAs in Ghana as a whole.

DEDICATION

This dissertation is dedicated to my parents, Mr. and Mrs. Abdulai, and siblings, Fatawu, Sumaila, Sawude, and Sabani, for their sense of love, responsibility, and sacrifice in many ways throughout my study at the University of Ghana.

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LIST OF ABBREVIATIONS

1D1F	One District One Factory
AAGDS	Accelerated Agricultural Growth and Development Strategy
ADB	Agriculture Development Bank
AEAs	Agriculture Extension Agents
AgSSIP	Agricultural Services Subsector Investment Programme
AHP	Analytic Hierarchy Process
AMG	Agriculture Manufacturing Group
ASIP	Agricultural Sector Investment Project
CPESDP	Coordinated Programme of Economic and Social Development Policy
CSOs	Civil Society Organizations
DACF	District Assembly Common Fund
DCE	District Chief Executive
DOA	Department of Agriculture
DTC	District Technical Committee
FAO	Food and Agricultural Organization
FASDEP	Food and Agriculture Sector Development Policy
FBGs	Farmer-Based Groups
FCDP	Food Crops Development Project
FGDs	Focus Group Discussion

FSP	Fertilizer Subsidy Project
GEPA	Ghana Export Promotion Authority
GPRS	Ghana Poverty Reduction Strategy
GSS	Ghana Statistical Service
HOD	Head of Department
IGR	Internally Generate Revenue
ISSER	Institute of Statistical, Social, and Economic Research
KNUST	Kwame Nkrumah University of Science and Technology
L.I	Legislative Instrument
LDP	Livestock Development Project
MCD	Municipal Coordinating Director
MCE	Municipal Chief Executive
MMDAs	Metropolitan, Municipal, and District Assemblies
MoFA	Ministry of Food and Agriculture
MTADP	Medium–Term Agricultural Development Programme
NAMA	Nsawam–Adoagyiri Municipal Assembly
NGOs	Non–Governmental Organizations
NTC	National Technical Committee
NTE	Non–Traditional Export
OFY	Operation Feed Yourself

OPV	Open–Pollinated Variety
PFJ	Planting for Food and Jobs
PNDC	Preventive National Defense Council
RTC	Regional Technical Committee
SDGs	Sustainable Development Goals
SDS	Sub–District Structures
SHS	Senior High Schools
SPSS	Statistical Package for Social Sciences
SRA	Social Research Association
WAAPP	West Africa Agriculture Productivity Programme
YAP	Youth in Agriculture Programme

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Agriculture remains a key driver of growth in most economies, especially in low–income countries such as Ghana. It has sustained the fixed role of making a critical contribution to economic growth, food security, employment, and foreign export earnings (MoFA, 2010). It is rare, if not impossible, for an agrarian economy to experience pro–poor modern growth without a productive agriculture sector. Due to the strong income and consumption linkages, the sector is shown to be more effective in reducing poverty (Krishna, 2004). However, having been a leading contributor for many years, with a contribution rate of 56% in the 2000s, recent growth statistics indicate that agriculture lags the service sector with a contribution rate of 21% (Fosu, 2001).

Nearly half of Ghana's population lives in rural areas, where agriculture is the prime occupation of the economically active group. Meanwhile, several pro-poor interventions have failed to transform the sector due to the ineffective strategy to link service provision (e.g., policies and programmes) with the implementing population. The main problem facing the farmers is low productivity, which is caused by a lack of access to extension services, markets, credit, and technology (ISSER, 2016; IMANI, 2017).

Unfortunately, in the face of these challenges, successive governments have implemented policies aimed at transforming the agricultural sector, yet not much has been achieved over the periods. Access to finance, land tenure systems, and post–harvest management remain a challenge (Quaye, 2008). In 1991, the Medium–Term Agricultural Development Programme (MTADP) was

introduced to promote institutional reforms that increase investments, market–oriented agriculture growth, and private sector participation in the agricultural value chain (MoFA, 2017b). During this period, projects such as Agricultural Sector Adjustment Credit, Agricultural Research Project, National Agricultural Extension Project, Agricultural Sector Investment Project, and National Livestock Services Project were instituted to increase output. In addition, the Ghana–Vision 2020 was launched in 1995. Within this framework, the Coordinated Programme of Economic and Social Development Policy (CPESDP) was implemented and as one might anticipate, agriculture played a key role (Valdés & Foster, 2010).

Consequently, the Accelerated Agriculture Growth and Development Strategy (AAGDS) was introduced in 2000 (Dzanku & Sarpong, 2009). This policy emphasized intensive crop production systems, particularly in areas of high agricultural potential. To achieve this, small–scale irrigation development and the use of modern inputs were prioritized. The Agricultural Services Subsector Investment Programme (AgSSIP), Rural Financial Services Project, and the Village Infrastructure Project, were designed to implement the AAGDS policy. Meanwhile, all these interventions failed due to the change of government in 2001 and the lack of a binding implementation plan for the local government administration.

The Food and Agriculture Sector Development Policy (FASDEP) was introduced in 2000 to provide a framework for the implementation of agricultural projects. However, some shortcomings include poor targeting of beneficiaries due to the failure to account for their peculiar conditions, weak problem analysis resulting from the lack of involving beneficiaries, and the lack of proper coordination among relevant ministries, departments, and agencies, especially implementation plan for the Metropolitan, Municipal, and District Assemblies (MMDAs) (FAO, 2000). In a similar view, the Agriculture Development Bank (ADB) initiated two policy frameworks to enhance

agriculture growth (Government of Ghana, 2005). The first one was the Food Crops Development Project (FCDP). The aim of the project was to help farmers access credit opportunities and improve food security. It incorporated activities which: (i) encouraged farmers to form associations for processing and bulk buying of inputs; (ii) introduced the farmer groups to credit; and (iii) provided equipment and training to field officers to strengthen extension services. Followed closely was the Livestock Development Project (LDP), which intervened in livestock production since they are predominantly income–generating activities carried out by smallholder operators in rural areas.

Meanwhile, in 2017, an agricultural intervention, Planting for Food and Jobs (PFJ), was introduced to drive growth in the agriculture sector. The programme's goal is to reduce poverty, improve food security, and create job opportunities through innovative agronomic practices (MoFA, 2017a; NPP Manifesto, 2016). Previous interventions have failed to transform the agricultural sector. How unique, in terms of impact, is the PFJ programme? The literature highlights that government policies on agriculture are propagandists in nature and practically ineffective as they [policies] focus on the supply of inputs at the expense of other components of the agricultural value chain (Kato & Greely, 2016; IMANI, 2017; Saffu, 2007).

Nonetheless, how are the MMDAs implementing the PFJ programme at the district levels? Under the Local Government Act 1993 (Act 462, section 86–126), the local governments are assigned with administrative powers to facilitate the implementation of government programmes at the local levels. As noted by Owusu (2008b), decentralization is expected to create different types of a center–periphery interactions over space. Some of such development projects include, for instance; agricultural equipment, irrigation systems, marketing, agro–service centers, and enhanced seed services. The local government, especially Department of Agriculture, has the authority to oversee the implementation of these projects in their jurisdictions. Their involvement in the planning,

implementation, and monitoring of the PFJ programme will improve the quality of growth of the agricultural sector. According to Bacho (2005), decentralizing the governance systems, combined with land reforms, have enhanced agriculture growth in states like West Bengal in China. The World Bank (2007) also stress that decentralization of administrative duties for agriculture and project management provide farmers with easy access to improved agriculture inputs. However, the link between agriculture policies and the implementing agencies, particularly at the district level is weak. This, therefore, motivates further research.

1.2 Problem Statement

Most developing countries, especially Ghana have as their primary goal to reduce poverty and attain food security in the shortest time in line with Goal 2 of the Sustainable Development Goals (SDGs) as well as the agenda 2030 principle of "Ensure no one is left behind" (World Bank, 2010). Nonetheless, the growing population combined with urbanization, has increased competition over access to agricultural lands (Smith, 2001). This triggers a new investment trend, with many lands being purchased for estate development. The Nsawam–Adoagyiri Municipal Assembly is one of the assemblies that serve as a commuter area for the growing number of people who travel to access the business city of Accra. With the spillover of growth from the Accra metropolis, areas that were rural in the 1980s are now urbanized (Owusu, 2008a).

Meanwhile, having access to land and security of tenure are key considerations in Ghana as most of the population are engaged in agriculture for their sustenance (Owusu, 2008b). Since inheritance laws and customs often overlap, the transfer of land to farmers is complicated (Owusu & Agyei, 2007 cited in Owusu, 2008b). In the Nsawam Municipality, about 65% of the active population are involved in agriculture (GSS, 2012). However, the pressure on the lands for residential growth

has coerced farmers to crowd out of agriculture to other sectors of the economy, particularly the service sector.

Therefore, an attempt to address the challenges in agriculture, the government introduced the PFJ programme (MoFA, 2017b). According to Owusu (2015), cooperation between the national and local government is essential to achieve extensive growth and the implementation of development-related projects. Despite the PFJ programme, food crops continue to have a large productivity gap, determined by the difference between the actual and potential output (ISSER, 2016). For instance, poor agronomic practices, low–quality materials, weak market linkages, and lack of extension services have remained a challenge (Quaye, 2008). The dilemma is whether the PFJ programme has met standards. If not, is it the failure of agriculture or the policy implementation?

In most part of Ghana, there are questions about the sustainability of the PFJ programme. Policy Think Tanks (e.g., IMANI), Civil Society Organizations (CSOs), and individuals have condemned the PFJ programme for failing to transform the agriculture sector since its implementation. ISSER (2017), for instance, asserts that agriculture policies similar to the PFJ programme have been implemented since independence but failed due to poor implementation. For Nwalieji & Igbokwe (2011), weak organizational capability of local government impedes the implementation of agriculture programmes in developing countries. Relatedly, Tetteh (2015) sees a weak information flow (e.g., lack of cooperation between the National Technical Committee, Regional Technical Committee, and District Technical Committee) and corruption, as hurdles to the effective implementation of policies at the local levels.

The local governments, particularly the district assemblies in Ghana have been empowered by the 1992 Constitution of Ghana and that of the Local Government Act, Act 462 of 1993 to have the

prime responsibility for the overall development of local communities within their geographical boundaries (Adu-Gyamfi, 2014). The role of local government with the power to make decisions regarding development at the local level has further been strengthened by the provision that "measures should be taken by parliament to enhance the capacity of local government authorities to plan, initiate, coordinate, manage and execute policies in respect of matters affecting local people" (Crawford, 2004, p.8). In line with these constitutional provisions, district assemblies as development agents are expected to play a lead role in initiating interventions to ensure the smooth implementation of the PFJ programme across the MMDAs in Ghana. What extent are the local governments involved in implementing the PFJ programme, given that they are the closest tier of government at the district level? This study, therefore, investigates this policy gap in the implementation of the PFJ programme at the Nsawam-Adoagyiri Municipality.

1.3 Objective of the Study

The goal of the study was to ascertain the role local government plays in implementing the PFJ programme, using the Nsawam–Adoagyiri Municipal Assembly as a case study. To achieve this, the study followed these objectives.

1) To determine the institutional framework in the Nsawam–Adoagyiri Municipality that guides the implementation of the Planting for Food and Jobs programme.
2) To find out how the Planting for Food and Jobs programme has shaped farmers and farming activities in the Nsawam Municipality.
3) To investigate the challenges local government face in implementing the Planting for Food and Jobs programme in the Nsawam Municipality.

1.4 Research Questions

The major question is whether local government played role in implementing the PFJ programme? The study addressed these following questions:

1) What is the institutional framework in the Nsawam–Adoagyiri Municipality that guides the smooth implementation of the PFJ programme in the Nsawam Municipality?
2) How has the PFJ programme shaped farmers in the Nsawam–Adoagyiri Municipality?
3) What are the challenges the local government face in implementing the PFJ programme in the municipal area?

1.5 Relevance and Justification of the Study

The study provides insight on the role local government plays in implementing the PFJ programme. This forms the basis for government to strengthen local institutions to implement government programmes at the district levels. In line with Gertler et al.'s (2011) concept of impact evaluation studies, this study assessed the impact of government interventions on agriculture. At the theoretical level, this study highlights the need for policymakers to reflect context–specific conditions of farmers when conceptualizing national policies (this substantiates the phrase that "not all good' policies for farmers are good for farmers). This is important since "an intervention is defeated when applied equally to people with different living conditions" (Helmsing, 2003:15). Despite the relevance, there is growing criticism against the PFJ programme with regards to its implementation plan and role in improving the agricultural sector. Some stakeholders labelled the PFJ programme as a disorganized scheme that lacks the potential to make the desired impact on farmers (Danso–Abbeam, 2018). Similarly, Kwarase (2017) affirmed that the five pillars of the

PFJ programme do not offer new solutions, rather, is a collection of old policies, which failed to enhance development within the agricultural sector.

Erstwhile governments have implemented similar policies, yet little has been achieved (ISSER, 2016). For instance, the Fertilizer Subsidy Programme (FSP) was introduced, in 2008, to increase productivity, but fertilizer application remains significantly low. There has been much expenditure to bring agriculture services closer to the districts. However, these services failed to serve farmers as per the objectives. Given this, it became crucial to assess the role local government plays in implementing agriculture policies, particularly the PFJ programme and the impact of these policies on smallholder farmers. The goal of the decentralization drive was for local governments to champion central government's policies in the local levels. To what extent has the local government championed these tasked? This is the motivation for the study.

1.6 Scope of the Study

Geographically, the study was conducted in Nsawam–Adoagyiri Municipality, which findings gave a conclusion on the whole district and Ghana as a whole, to some extent, since it is assumed that there is a uniform community in Ghana. The conceptual scope, on the other hand, refers to the context within which the study is conducted. This is related to the objective of the study, which is to examine the institutional framework responsible for implementing the PFJ programme and the effect of the programme on smallholder farmers, as well as the challenges local government face in implementing the programme. As a result, the research is limited to these boundaries.

1.7 Organization of the Study

The study is in five chapters. Chapter one presents the introduction, including background of the study, problem statement, research objectives, research questions, justification of the study, and

the scope of the study. Chapter two reviews related literature on the role of local government in implementing the PFJ programme and theories of the study. Chapter three has two sections. The first part describes the profile of the study area, and the second part discussed the methods and procedures for data collection and analysis. While chapter four presents the analysis and discussion of results. Finally, chapter five outlined the summary of findings, conclusion, and recommendation that would improve the implementation of the PFJ programme.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature on the role local government plays in implementing the PFJ programme. The researcher explored the local government system in Ghana, agriculture sector policies, the PFJ programme and its implementation framework, the impact of the PFJ programme on farmers, and the challenges local government face in implementing the programme. Relevant theories were explored and used to construct a conceptual framework. An empirical review of current debates in the literature about the relevance of government interventions on agriculture and the role of local government are reviewed.

2.2 Defining Local Government

As a concept, local government has been a subject of different definitions and interpretations. Tonwe (2011) traced the etymology of local government and explained that it emerged as an ancient institution with a changing conceptualization, which is seen as a political tool for grassroots governance. With the failure of national government to respond to the concerns of local people, local governance gained prominence in recent years. Local governance is established to bring the government closer to the people both spatially and institutionally and to give them a sense of involvement in the political processes that impact them (Ayee, 2000; Mohammed, 2015). The idea is to command local participation in development programmes.

Reflecting the different meanings of local government, two approaches emerged in the literature (see Forkuor & Wusu–Adjei, 2016; Adu–Gyamfi, 2014; Nwalieji & Igbokwe, 2011). The first

approach, which is adopted in comparative studies, considers institutions below the central level as local government. With the second approach, local government is associated with five characteristics – legal personality, specific powers to conduct a range of activities, significant budgetary and staffing autonomy subject to control, effective citizen participation, and localness. Each of these approaches have limitations. The first approach is so broad that it extends the scope of local government to include all institutions below the national government as local government, but the second approach is too narrowly focused and rather limit the scope of local government. Ryan & Woods (2015) and Mkparu (2008) think the features are deceptive because not all local governments allow for effective citizen participation.

Madukwe (2008) elaborates that local government comprises a non–sovereign community having the power to control affairs. This requires the presence of a local government with the authority to administer its affairs autonomously. Madukwe emphasized independence, but this impression is erroneous as the local government system in Ghana is not free from the central government's authority. They have relatively limited autonomy, due to the division of responsibilities for services between the national and local levels.

Sidgwick (2014) in his book, 'Elements of Politics', described local government as a government comprising some sub–organs with unique powers to enact regulations within their space. For Crawford (2004), local government is an aspect of a country's system of government that deals with local problems in a specific area. This kind of government does the "housework" so that life in these areas is affordable for its residents. Nonetheless, who should be referred to, as local government; Chiefs, Metropolitan, Municipal, and District Assemblies (MMDAs), Mayors, Regional Ministers, or MPs? These definitions appear to be one–sided and emphasized power and locality of control. Therefore, local government in this study refers to the MMDAs.

2.2.1 The Local Government System in Ghana

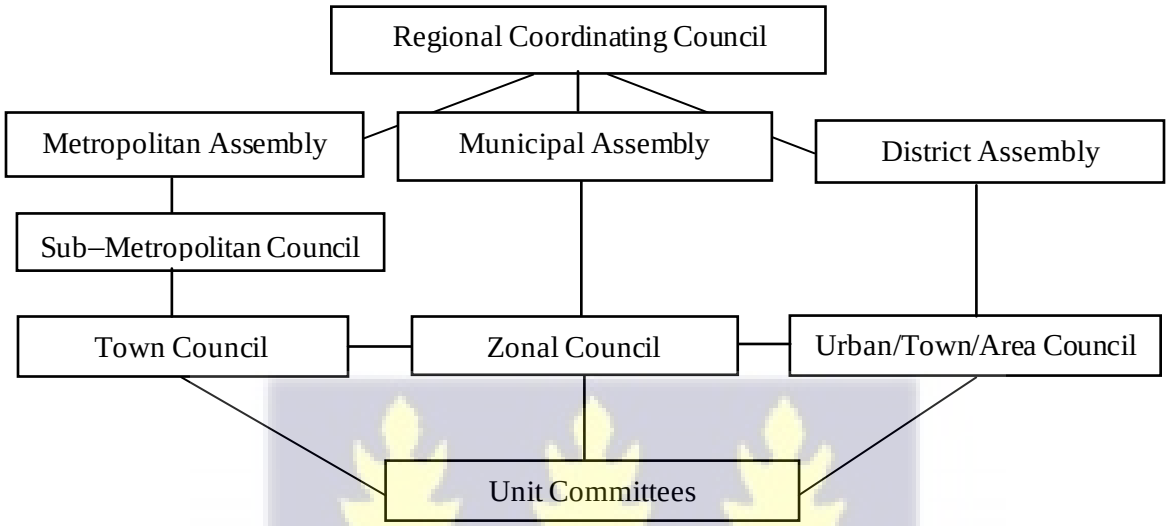
Ghana embarked on a decentralization, in 1988, as an important factor to drive more local–based approach to development. Ghana became a constitutional state with two spheres of government (national, and local). According to the 1992 Constitution, Article 241 (2), Parliament may create legislative provisions for the creation of districts. The President, through Legislative Instrument, is responsible for creating (or upgrading) these districts (Adu–Gyamfi, 2014; Owusu, 2015). The local governance system is enshrined in the Constitution and spelled out in the Local Government Act of 1993 (Act 462, formerly the PNDC Law 207) (Nkrumah, 2000; Owusu, 2009).

At the upper levels of local government, there are three types of assemblies– Metropolitan Assembly, a large town area with population of about 250,000; Municipal Assembly, a city with population above 95,000; and District Assembly, a local unit with population ranging between 75,000 and 95,000 (GSS, 2014; Owusu & Afutu–Kotey, 2010). As enshrined in L.I 1589, 1994, there are some Sub–District Structures (SDS), which do not hold legislative powers and undertake activities delegated to them by the assembly (i.e., they do not initiate development projects, but represent the voice of the masses at the grassroots by directing their concerns to the Assembly for redress). The SDS involve a 4–tier structure for Metropolitan assemblies, 3–tier structure for Municipal assembly, and 1–tier for District assemblies (see Figure 2.1) (Ayee, 2003; Owusu 2004; Forkuor & Wusu–Adjei, 2016). This is to improve participation of the local people in decision–making processes at the district level.

The municipal assembly remains the focus of this study as it is the highest political authority with legislative and executive powers at the local level (i.e., Nsawam–Adoagyiri is a municipal assembly, see profile in chapter 3). The assembly is made up of MCE, the head of the assembly;

assembly members representing communities within the district; and team of civil servants (Owusu, 2009; Forkuor & Wusu–Adjei, 2016).

Figure 2.1: Local Government Structure in Ghana



Source: Adapted from Forkuor & Wusu–Adjei (2016: 151).

2.2.2 The District Department of Agriculture

The Department of Agriculture is established within the MMDAs by L.I 1961 of the new decentralization systems (Smith, 2001). The functions include, for instance: (i) to transfer agricultural technologies, through the extension officers to farmers, to ensure food security and the generation of income; (ii) to assist in the design and implementation of agriculture need–based policies to help expand the growth of farmers towards achieving the goals of the Assembly; and (iii) to advise the Assembly on matters related to agricultural development (MoFA, 2017a).

At this level, the Department of Agriculture serves as advisory unit for the implementation of agriculture projects in the district. It is charged with developing monitoring and evaluation techniques for agricultural projects (FAO, 2015). "The head of the Agriculture Department

supervises the activities of the subordinates– the agriculture officers further supervise activities of the Agriculture Extension Agents (AEAs). The AEAs are the frontline technical personnel who are responsible for the dissemination of technology to farmers and act as a link between farmers and the Department of Agriculture" (FAO, 2015: 19).

2.3 Overview of Agriculture Policies in Ghana

Agricultural sector underdevelopment could lead to migration of labour from rural farm sector to non–farm and urban economies, on the grounds of Lewis's theory of development (Dang & Sui Pheng, 2015; Todaro & Smith, 2015). Governments in Ghana seem to understand this notion, and as a result, continued to implement policies towards reviving the agricultural sector. Notable among these policies is the Planting for Food and Jobs (PFJ), Food and Agriculture Sector Development Policy (FASDEP I and II), and Fertilizer Subsidy Policy (FSP) among others.

2.3.1 Food and Agricultural Sector Development Policy

The Food and Agriculture Sector Development Policy (FASDEP) was formed in 2002 as a broad policy to guide agriculture growth. The major purpose was to create a framework for modernizing the sector and making it a catalyst for rural transformation in line with the goal of Ghana Poverty Reduction Strategy (GPRS I) (Dzanku & Aidam, 2013). However, due to several restrictions, the programme could not achieve the expected results. Some of the challenges included inadequate categorization of farmers in an area with poor access to credit, limited infrastructure, and lack of access to output markets. These challenges incited an upgrade of FASDEP I to FASDEP II in 2007–2015. This upgrade was divided into seven broad categories: Human resource development, technology development, infrastructure development, commodity market promotion, financial services enhancement, cross–cutting concerns, and implementation framework (FAO, 2015).

FASDEP II was established as a policy goal for agriculture growth, ensuring that industry players are positioned to capitalize on agriculture sector dynamic potential.

2.3.2 Fertilizer Subsidy Programme: 2008–2017

In African, the texture of the soil has been identified as the poorest in the world (African Union, 2006; ReNAPRI[1], 2021). Due to financial constraints (or inaccessibility of inputs), farmers could not purchase and apply fertilizer to the farmlands (Wiredu et al., 2015). In sub–Sahara Africa, fertilizer is the most expensive in the world (Etwire et al., 2013; Takeshima & Liverpool–Tasie, 2015). In such cases, subsidy programmes become one approach to create an opportunity for farmers to improve fertilizer application rates. Governments in sub-Sahara Africa (e.g., Kenya, Tanzania, Malawi, and Zambia) have implemented subsidy programmes as a way of promotion growth in agriculture (Dorward, 2009).

Ghana, for instance, introduced the Fertilizer Subsidy Programme (FSP) in 2008 to improve fertilizer markets and foster private sector participation in agriculture (MoFA, 2016). To raise fertilizer usage from 8 kg/ha to the recommended 15 kg/ha by 2015 (now 25 kg/ha in 2021), the government supplied NPK and UREA with a 50% subsidy (Banful, 2011). The price of fertilizer was agreed upon with dealers and set for the season. The pay–out was primarily based on a coupon system, but logistical issues, including the fact that less than half of the coupons were released led to the cancellation of the coupon system in 2010. This, Houssou et al. (2017) stressed would

[1] ReNAPRI stands for Regional Network of Agriculture and Policy Research Institute. It is an institute that does extensive research on food resilience and sustainability in Africa. In 17th to 19th November 2021, ReNAPRI held an annual stakeholders conference in Ghana hosted by ISSER, University of Ghana, on the theme- Transform: Towards Resilient and Sustainable Food Systems in Africa.

address the issues of low intake rates, high transaction costs, and fertilizer diversion. By 2013, the position was that farmers with a maximum of two hectares of land were eligible for the subsidy.

According to Jayne et al. (2015), between 2011 and 2013, the FSP accounted for 40% of national fertilizer usage, while the number of farmers using fertilizer increased in tandem with an increase in fertilizer application rate from 8kg/ha to 13kg/ha. On the other side, there are reports of late fertilizer stock deliveries, implying that farmers do not always have access to fertilizer in time for the season. Lack of storage facilities and budget constraints were other challenges that hampered the government's ability to pay suppliers in time on multiple occasions (Yawson et al., 2010; Donkoh et al., 2016). The major crisis happened in 2013 when non–payment led to the temporary suspension of the programme, due to the fertilizer dealer's refusal to participate until the debts were cleared. Despite the amendments in 2013, which limited the programme to farmers with less than two hectares, many of the beneficiaries were large–scale farmers (Dzanku & Aidem, 2013).

2.3.3 The Planting for Food and Jobs programme

The agricultural sector of Ghana has grown slowly, expanding at 3.6% between 2010 and 2016, compared with an average growth of 7.2% in the overall economy (FAO, 2015; ISSER, 2016). Any growth in the sector is attributed to land expansion rather than raising concerns about productivity, especially given the growing level of urbanization in Ghana. In 2017, the government introduced the PFJ programme, which mirrors the then 1970 Operation Feed Yourself (OFY) and Fertilizer Subsidy Programme (FSP), to drive agriculture growth (MoFA, 2017a; NPP Manifesto, 2016). Aside the increase in production, the programme has an agenda to create jobs. It serves as a support package for farmers and other actors in the agriculture value chains.

At its inception, the PFJ programme targeted maize, rice, sorghum, soya, and vegetables (onion, tomato, and pepper). In 2018 and 2019, the crop coverage was expanded to include groundnut, cowpea, root crops, and some vegetable crops. As indicated in the 2017 budget statement[2], the PFJ programme is based on five pillars– namely, supply of improved seeds, supply of fertilizer at subsidized rates (50% price cut–off), extension services to farmers, E–agriculture (a technology platform that uses a database system to track and monitor farmer's produce), and post–harvest market opportunities (MoFA, 2017b; NPP Manifesto, 2016). Previous policies in agriculture have failed to alter the sector. In terms of impact, how distinctive is the PFJ programme? The literature revealed that government policies are propagandist because much focus is always on input supply at the expense of other components of the agricultural value chain (Kato & Greely, 2016; IMANI, 2017; Seepersad & Douglas, 2002; Saffu, 2007).

Despite the nitpicks at the PFJ programme, the accomplishments are, to some extent, notable. Reports from MoFA indicate that beneficiary numbers (the number of farmers who got the intervention) exceeded expectations. In 2020, 1.74 million out of 2.6 million farmers received the different inputs, and job creation improved from 863,500 in 2017 to 1,492,000 in 2020 (MoFA, 2017b). This suggests that the job creation targets were achieved, though, the definition of job creation is vague. It appeared that a simple multiplier formula was used to convert input supply quantities into crop outputs, which was then translated into estimates of the number of workers benefiting from the PFJ programme, either directly on the farm or indirectly along the agriculture input and output supply chains. Table 2.1 summarized the performance of the PFJ programme since its implementation from 2017–2020.

[2] The Budget Statement and Economic Policy of the Government of Ghana for the 2017 Financial Year. Presented to Parliament on Thursday, 2nd March, 2017 by the Finance Minister, Hon. Ken Ofori Atta.

Table 2.1: Achievement of the Planting for Food and Jobs programme

All activities of PFJs		**2017**	**2018**	**2019**	**2020**
Beneficiary farmers	Projected	202,860	562,400	1,123,500	1,682,000
	Actual	*202,000*	*677,000*	*1,183,000*	*1,736,510*
Job creation		863,500	1,036,200	1,243,440	1,492,128
Seeds Distribution (metric tons)					
Maize	Projected	1,339	9,114	17,753	18,617
	Actual	*2,370*	*4,029*	*9,031*	*13,951*
Rice	Projected	700	6,231	12,377	12,992
	Actual	*1,698*	*2,399*	*6,544*	*10,951*
Soybean	Projected	0	3,150	6,650	7,000
	Actual	*180*	*339*	*2,729*	*3,860*
Sorghum	Projected	0	1,185	2,502	2,633
	Actual	*147*	*35*	*0*	*300*
Vegetables	Projected	3.6	27.5	54.2	56.9
	Actual	*4.0*	*9.0*	*29.0*	*35.0*
Fertilizer Distribution (metric tons)					
All fertilizer	Projected	40,763	320,841	632,037	663,157
	Actual	*297,000*	*247,039*	*331,348*	*423,473*

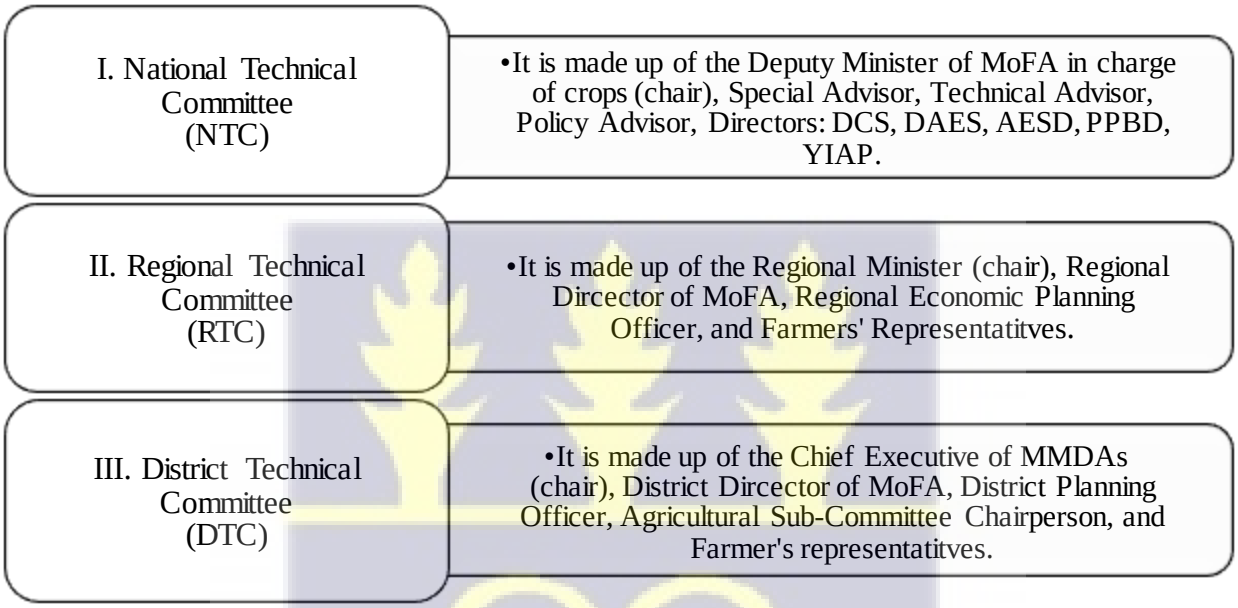
Source: MoFA cited in Pauw, 2021: 5.

2.3.3.1 Implementation framework of the PFJ programme

It is essential to emphasize that the PFJ programme is supervised by the Ministry of Food and Agriculture (MoFA). However, there are three–tier structures, "the National Technical Committee (NTC), Regional Technical Committee (RTC), and District Technical Committee (DTC)", that is used across the MMDAs to implement activities of the programme at all levels. The Deputy Minister of Agriculture in charge of crops, Regional Ministers, and Chief Executives of the MMDAs chair the NTC, RTC, and DTC respectively. The NTC makes significant national decisions about the course of operation of the programme. The RTC and DTC oversee the day-to-day implementation of the programme in their respective jurisdictions. According to MoFA

(2017a), the DTC is responsible for monitoring the activities of the PFJ programme and reporting to the RTC monthly. This means that the technical committee members are to track the progress of the PFJ programme and provide directives on how to implement the activities throughout the various value chains.

Figure 2.2: The 3-tier Implementation framework of the PFJ programme



Source: Adopted from MoFA, 2017b.

2.4 Impact of the PFJ programme on smallholder Farmers: Some perspective

Agriculture interventions in low–income countries like Ghana are aimed at improving farmer's use and management of agriculture inputs such as seeds, fertilizers, and pesticides, as well as improving links to input providers (Dunn, 2014). These interventions aimed to facilitate farmer's use of modern farming methods to increase yield and quality, improve crop and seed preservation, aggregate crops for sale, and expand their access to buyers (Goletti, 2005). But how many farmers

benefit from these projects? Some farmers still use crude technologies in their farms, they do not get adequate extension services, especially when disease attacks their farms.

Meanwhile, the West Africa Agriculture Productivity Program (WAAPP), which was funded by the World Bank, has aided 13 nations in generating agricultural technologies, paving the path for Africa's food security (World Bank, 2010). WAAPP created 116 innovations that have helped 2.5 million individuals in West Africa. This implies that agricultural policies have impacted farmers, but the farmers and project implementers have a poor coordination, hence the imbalances in impact. Helmsing (2003) acknowledged that the African condition (e.g., the nature of politics) deprives many farmers of the benefits of the projects. He cited an example that farmers in rural areas are mostly asked by the local authorities to pay monies before they can gain from the interventions. This politicization leads to the benefits being skewed along certain party lines.

Relatedly, official reports have opined that the PFJ programme has impacted farmers and other actors along the agriculture value chains. According to MoFA (2017b), 1.7 million farmers nationwide benefitted from the programme. The question is that, out of this number, what is the regional distribution? For Lambongang et al. (2019), the PFJ programme is only good on paper but practically ineffective on the ground. Farmers are still faced with challenges, which affect productivity. Many farmers do not receive the various packages of the programme (or receive them late). Mabe et al. (2018) maintain that the PFJ programme has been appreciated by all stakeholders (farmers and others within the agricultural value chain). Out of the five pillars, farmers are aware of the subsidy on fertilizer and improved seeds than E–agriculture, agricultural extension services, and market linkages. This lack of awareness affects farmer's enrolment in the programme.

For Danso–Abbeam (2018), the PFJ programme has a significant impact on job creation and food security. For instance, he observed that food security increased when farmers participated in the PFJ programme. The job creation is about extra labour for clearing farmlands, sowing, harvesting, and carrying produce to storage sites. Reports from MoFA (2017a) indicated many farmers applauded the PFJ programme for increasing yields and reducing cost of inputs. Related concerns such as the late supply of inputs and barriers farmers face in enrolling on the programme affect the impact of the PFJ programme on the farmers (though food security improved, few farmers are food insecure because their situations seemed mismatched with the condition for participation in the PFJ programme). This raise "red flags" on equity in the implementation of policies.

2.5 Challenges with the implementation of Agriculture policies: Some perspective

Agricultural policies which have been implemented in Ghana have failed (e.g., Fertilizer Subsidy Programme, Youth in Agriculture Programme, Food and Agriculture Sector Development Policy (FASDP I &2), among other). This has always been attributed to the implementing authorities, which failed to translated policy objectives into action. For instance, local governments have faced challenges that affected their roles in recent times. For this reason, they are not able to live up to expectations in most districts. Expanding on this, Madukwe (2008) opined that the failure of local government to perform their role is attributed to mismanagement of funds, misplaced priority, and absence of staff training. The local governments are not able to implement programmes because the national government always influenced their activities. Since the decentralization reforms in 1988 created a partnership between local governance and the national level, local government is controlled by the national government and not able to implement certain projects (Owusu, 2008a).

Policy analysts reported some challenges with the implementation of the PFJ programme. For Mabe et al. (2018), farmers and politician at the district level hoard and smuggle the agriculture inputs without any intention of using them. Since the PFJ programme was announced in advance, farmers delayed purchasing the inputs in anticipation of the subsidy. However, the inputs were delivered late at the district levels to boost the major season in the southern part of Ghana and plantings in the northern areas, reducing their value. Yawson et al. (2010) reported other challenges that affect the implementation of agriculture policies. These included delay in supply of inputs, lack of technical support on agronomic techniques, and inadequate extension services.

It is imperative to understand that local government serves as a powerful instrument for rapid rural development. Since they [local government] are the closest tier of government at the grassroots, any initiative taken is assumed to address specific needs of the people. Okafor (2010) asserts that lack of funds to the local government is a great hindrance to the successful implementation of programmes at the district levels. Most local governments are heavily dependent on funds from the government [e.g., District Assembly Common Fund, DACF] to champion development projects (Ayee, 2004). Due to budget constraints, the release of the funds, often, delays and projects at the district levels had to halt. The local government Act 1993 (Act 462) gives local government the powers to generate revenue internally (IGF) to finance projects. However, the inadequate revenue mobilization combined with mismanagement of funds by local government is an issue of concern to the central government (Ayee, 2003).

Meanwhile, the factors that impede local government effectiveness are multifaceted and center on operational elements arising from the attitude of implementers (e.g., politicizing the distribution of amenities, undue state intervention in the activities of local authorities, the phenomenon of bribery and corruption, and inefficiency on the part of local government administrators) (Gumel,

2009; Arowolo, 2008; Igbuzor, 2007). This poses a challenge in the implementation of agricultural projects at the district levels. Given this, Saffu (2007) justifies that corruption–related leakages in the allocation of funds have robbed local governments of the needed funds to ensure the implementation of development initiatives (e.g., the implementation of the PFJ programme).

Moreover, four challenges the local government face in implementing the PFJ programme were identified in the literature. They included, for instance; inadequate supply of the farm inputs at the right time, interference of politicians, cumbersome mode of payment, and lack of support from MoFA (Mabe et al., 2018). Messina et al. (2017) advanced that the challenges are often related to organizational weakness in the planning and implementation of government programmes. This supports the proposition that local governments have failed in the implementation of government policies. Frequent change of government officials and commissioners, most often than not, lead to the halt of many projects at the district levels, because local government officials newly appointed have different policy focus that influence ongoing projects (Kato & Greely, 2016). Nagarajan (2008) believes that the failure of projects is due to the implementation of multiple initiatives due to lack of effective prioritizing. Local government is loaded with tasks and most times find it difficult to appraise the progress of other projects (Oluwu & Wunsch, 2003).

Related, Potoski (2008) posited that projects are abandoned when the sources of funding dry up or when different governments decide to embark on new projects entirely. Justine (2012) identified budget indiscipline as the major cause of policy failures in the public sector (i.e., when projects are either not included in the budget or underfunded). This is typical in developing countries, such as Ghana where agricultural interventions failed in 2001 due to a change of government and the lack of a binding development plan, even in the rural areas where half of the population of Ghanaians are engaged in agriculture (Dzanku & Aidam, 2013).

2.6 Theoretical Underpinnings of the Study

The theories are used to describe the foundational perspectives and ideas that are related to the study. These play essential role in guiding the study process through the description of concepts and theories that explain why the research problem being studied existed (Adom et al., 2018). The goal of the PFJ programme is geared towards the improvement in agriculture output. However, approaches aimed at explaining the implementation of government interventions and the underdevelopment of the agriculture sector have been put forward. The study employed two theories, the Top–down and Bottom–up approach, to analyze the role the local government plays in implementing the PFJ programme.

2.6.1 Top–Down Approach

The Top–down approach (TDA) is propounded by Goggin et al. in the late 70s along with the bottom-up theory. In this approach, the central government plans and implement programmes and projects that target agriculture growth directly without consulting the local people (e.g., farmers) (Anderson et al., 1999). Since its inception, the approach to rural development consisted of top–down planning, implementing, and monitoring of activities. However, the TDA was not successful for most programmes of rural development because of too much bureaucracy, as experience has shown that centralized top–down planning can only be effective when the bureaucratic bottleneck is removed to allow for speedy implementation (Booth et al., 2005).

Many rural development programmes failed because they have been top–down and rigid technology solutions geared to replace, instead of complementing local initiatives (Mele, 2004; Hilliard & Wissink, 2000). This explains the reason why most farmers in the rural areas are not enrolled in the PFJ programme. The programme is directly implemented by MoFA, and the local

government is charged to ensure the day–to–day coordination and implementation. Sometimes, there are no proper plans to guide the implementation of government policies at the local level. However, a 3–structured implementation framework [National Technical Committee (NTC), Regional Technical Committee (RTC), and District Technical Committee (DTC)] was adopted by MoFA to ensure the implementation of the programme and provide connection between all spheres of government. This does not allow the district level to take major policy decisions of the PFJ programme, even if the packages are not what the farmers in the district want. The top–down directives lead to the reluctance of the local government to monitor and encourage farmers to enroll on the PFJ programme.

2.6.2 Bottom–Up Approach

Many countries around the world have made attempts to strengthen local governments. Ghana is one of these countries and had gone through decentralization processes, moving decision–making from the national level to the district levels (Asante, 2003). Robert (1983) is one of the scholars who advanced the bottom–up approach. This approach is the opposite of the top–down approach, in which the local people initiate the planning and built upon the principle of devolution of power for the management and monitoring of rural development activities (Blair, 2000). Booth et al. (2005) and Knickel et al. (2009) have highlighted the consequences of decentralization, which tends to elevate local elites while also perpetuating regional inequality. With the Bottom-up approach, projects from the central government are localized to reflect specific needs of the farmers. Kim (2008) argued that adopting a Bottom-up strategy will lead to efficiency in resource use, which is the goal of decentralization, underpins the applicability of the method to local governance.

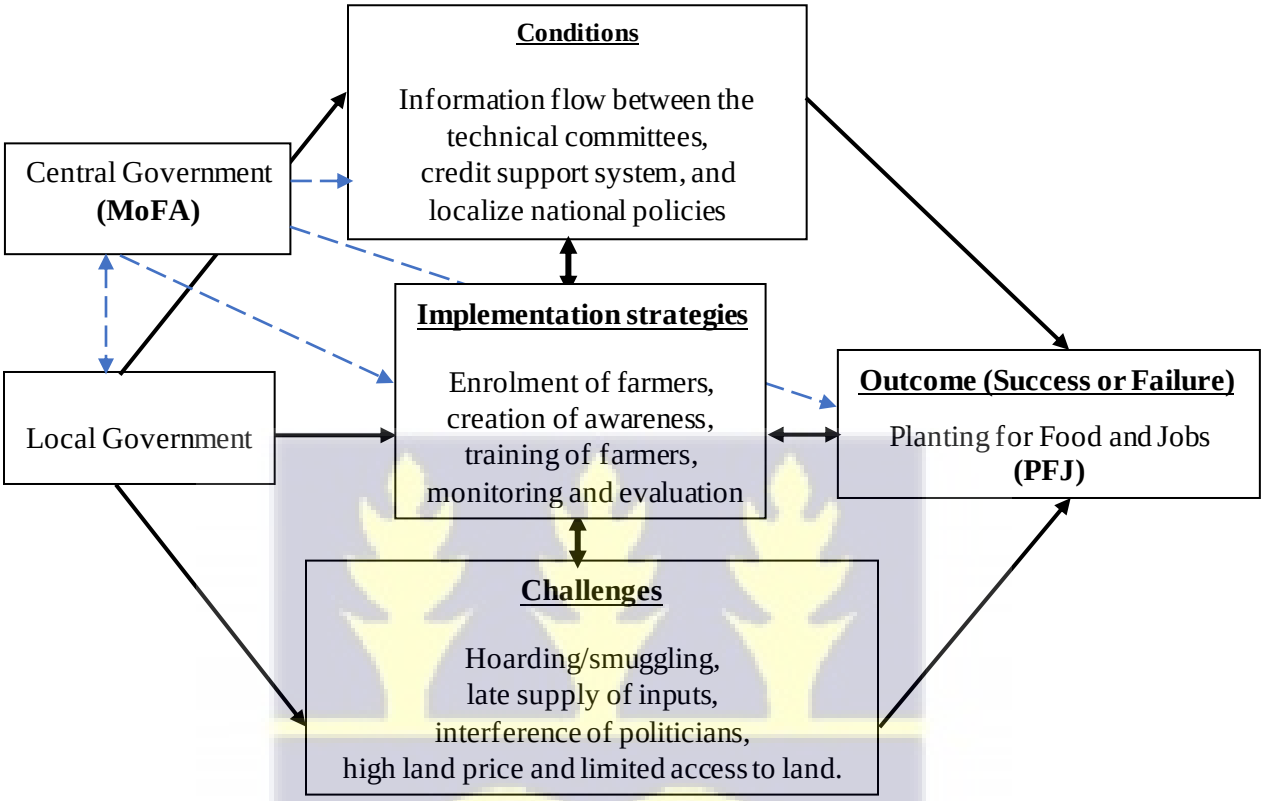
The relevance of this theory to the research is because power–sharing between higher and lower authorities protect grassroot members from being neglected by the center and as Mallya & Kessy (2013) argued, brings dignity, respect for human freedom, and unity of purpose in the development of a region. Another aspect of the Bottom–up approach that is relevant to this study is its emphasis on increasing the capacity of local structures and assessing their potential to manage grassroots development such as the implementation of the PFJ programme.

The two theories complement each other to explain the policy implementation framework at the district level and the study relied on both to draw analysis for the conceptual framework (see Figure 2.3). Meanwhile, the Top–down and Bottom–up approach is used in this research because, despite agriculture interventions focused on the use of technologies, production in Ghana remains poor. This emphasizes the need to involve all stakeholders to fast–track the implementation of policies. The Youth in Agriculture Programme (YAP), for example, was launched in 2009 to increase youth participation in agriculture but failed due to limited participation. The policy choice and implementation are inextricably linked since they are set by those in power (Booth et al., 2005; Keefer & Vlaicu, 2008). Dzanku & Aidam (2013) insisted that political leaders and CSOs should push for a shift in the policy institutions, which has traditionally been a top–down approach.

Similarly, Zecca & Rastorgueva (2014) noted that the Bottom–up method should be used in the linkage between central government and farmers for effective participation in major activities that affect them in the agro–food chain. This suggests that having the institutions is not sufficient unless other variables are considered. Further, the bottom–uppers claim that unless local implementers are given flexibility in the implementation process in line with local realities, the policy will certainly fail. According to Deleon (2002), the goals and actions must be implemented with specific attention to the individuals who will be directly (or indirectly) affected by the policy.

2.7 Conceptual Framework

Figure 2.3. Conceptual framework on the implementation of the PFJ programme



Source: Author's Construct.

The framework shows how the dual theories [Top–down and Bottom–up approach] were used to analyze the role of local governments in implementing the PFJ programme. The Top–down approach explains decision–making framework of the central government. This implementation framework is shown by the "sea–blue" broken arrows. This demonstrates how decisions at the state level influence the implementation of the PFJ programme. The involvement of the local government in implementing the PFJ programme is indicated by the black arrows. It depicts that, for local government to ensure the implementation of the PFJ programme, certain conditions (e.g., information flow between the technical committees, credit support system, localization of national

policies, and release of inputs on time) need to be created. These conditions influence the implementation strategies (e.g., enrolment of farmers, creation of awareness, training farmers, monitoring, and evaluation) to achieve a successful outcome. Nonetheless, the challenges (e.g., hoarding, smuggling, late supply of inputs, interference of politicians, and lack of technical support) can affect the implementation of the programme at the district levels. All things being equal, it may be argued that if the rate of farmer's participation in the PFJ programme increased, the chance of effective implementation at the district levels will be improve. Meanwhile, when beneficiaries feel the programme is being imposed on them, there will be challenges in the implementation as farmers will not show any ownership and commitment to the PFJ programme.

2.8 Empirical Review

The study explored views by scholars on the phenomenon of interest and how the different views shape the implementation of agricultural projects, particularly the PFJ programme. Studying the role of local government in the implementation of government policies is crucial in predicting future agriculture growth (Forkuor & Wusu–Agyei, 2014). There has been an increase in empirical research aimed at determining the influence of agricultural interventions and agriculture growth in recent years, which the role of local government in implementing government programmes became a subject of debate. This empirical review highlighted what has been addressed in the literature and what gaps remain to be filled.

To begin with, Fawzan (2019) is one of the primary researchers to empirically evaluate the PFJ programme. The author employed Logit regression to examine the factors that influenced farmer's participation in the PFJ programme in the Wa West District. He discovered that age, education, and financial access had statistical relevance in relation to farmer's probability to participate in the

PFJ programme. Relying on the Propensity Score Matching Technique, the author found that participation in the PFJ programme had a higher average food security than nonparticipation. This suggests that local government, particularly the Department of Agriculture, encourages farmers to join the programme, since there are more nonparticipants than participant on the programme.

On the contrary, Pauw (2021) investigated the evolution of input subsidy programmes in Ghana, with a focus on the PFJ programme. He reviewed the implementation plan for the PFJ programme using policy documents, such as beneficiary numbers, subsidized input quantities, and programme budget. The study found that MoFA lacks a method for tracking and reporting the impact of the PFJ programme. Most of the published data on the programme's marginal contribution to national crop output is based on estimates that involve assumptions regarding seedling rates, fertilizer use by crop, and beneficiary input use efficiency. Despite this flaw, the estimates demonstrate that the PFJ programme had a significant impact on crop productivity, a fact that requires further on–farm validation. The author stressed that the statistics reported on the PFJ programme's achievements are exaggerated and do not relate to actual on–farm outputs. This substantiates Lambongang et al. (2019) argument that the PFJ programme is a good policy, but not practical on the farm level, as it only provides inputs and not the other components of the agricultural value chain. This, therefore, requires that beneficiary targeting, interpretation of employment benefits, and regular monitoring of the impact be integrated into the PFJ programme to improve transparency.

Similarly, Lambongang et al. (2020) operationalized Sen's capability theory in maize–based agriculture system to examine how it [the theory] influenced farmer's participation in the PFJ programme. The authors used a probit model to investigate the impact of capability on the PFJ programme's participation, and they identified two types of capability– human and institutional capability. The study discovered that participation in the PFJ programme is influenced by the two

types of capabilities [i.e., human capability and institutional capability]. This suggests that the capability of farmers should be improved for them to participate effectively in agriculture interventions. This could be accomplished by improving infrastructure in remote areas, such as roads and markets. Meanwhile, Lambongang et al. (2019) used the Heckman Treatment Effects Model to investigate the impact of participation in the PFJ programme on maize yields. They found that those who took part in the programme had higher yields than those who did not (by about 4 bags per acre). However, some farmers continued to face obstacles such as late delivery of farm inputs and limited access to extension services. Therefore, the programme implementers, particularly MoFA should ensure that expanded access and timely delivery of inputs are enhanced.

In a narrow study, Ali et al. (2021) used the SWOT analysis and the Analytic Hierarchy Process (AHP) tool to assess the importance of the PFJ programme. Based on the various criteria ranked in the SWOT analysis, they reported that favorable environmental conditions and land availability were the strength; Inadequate financial services and climatic conditions were the weakness; High export potential relative to agricultural products in the country and the 1D1F initiative were identified as the opportunities; and negative ramification of climate change and the importation of food products were identified as threats. This analysis provided policymakers the factors to consider when developing agriculture policies. It also provides investors and other actors in the agriculture space with a comprehensive picture of the terrain they can invest and the regions that require special attention. However, to arrive at the factors under each of the quadrants of the SWOT analysis and their weightings, the authors interviewed 10 experts, it is essential to expand the scope to gain a wider perspective on the subject.

The findings of Tanko et al. (2019) further confirmed the conclusions made by Pauw (2021) and Mabe et al. (2018). They [Tanko et al.] explored the impact of the PFJ programme on rice

productivity in northern Ghana. The authors analyzed data acquired from the PFJ beneficiaries and non–beneficiaries who produced rice in the 2018 production season using the Inverse Propensity Weighting Estimation (IPWE) and the Local Average Treatment Effect (LATE). The study revealed a statistical insignificant increase in rice production income but a reduction in farm expenditure. This demonstrates that the agricultural innovations adopted under the PFJ programme had an impact on rice productivity. However, the model used could only account for the observed factors and, therefore, a source of bias in the estimation of the treatment effect. Government must work extensively with the local authorities and use the input subsidies to increase the number of farmer's enrolment in the PFJ programme.

In a similar study, Yakubu (2018) investigated the role local government plays in climate change adaptation and mitigation. He gathered data through key expert interviews with officials from the Departments of Agriculture (DOA) using a qualitative method. As adaptation methods to climate change, the study found that encouraging early maturing crop types, extension service to farmers, and fertilizer application were given top importance. Reduced food losses were a high priority in mitigation, except in the Central Gonja District, where it was graded moderate. Surprisingly, the challenges the Department of Agriculture (DOA) faced in response to the climate change were identified as inadequate number of extension agents, limited finances, as well as logistics and equipment. This called for DOA to be adequately resourced to carry out their basic tasks.

Meanwhile, in Uganda, Mumbere (2013) presented data to support the proposition that the local government plays minor influence in the implementation of government policies and programmes. He assessed the role of local government in ensuring the sustainability of agriculture projects in the Mukono district. A mixed approach was employed to collect data from 60 respondents through household interviews, focus group discussions, and key informant interviews. The author found

that local government does not monitor projects in the Mukono District. On the other hand, the findings illustrated that politicization of most programmes affected the implementation and sustainability of agriculture interventions at the district levels.

On the contrary, Sun & Collins (2013) studied the role local government plays in agriculture development in China with a focus on small–scale domestic pond aquaculture. They conducted 150 interviews with fish farmers and officials in 67 villages across the Shandong province using a qualitative case study design. They concluded that during the periods of economic growth, local government played an important role in the growth of small–scale agriculture and aquaculture production and allowed the market to become the driving force behind the development of pond aquaculture in China. This backs the schools of thought that local government plays important role in implementing agriculture programmes. The Chinese experience might have lessons for developing countries such as Ghana, where hunger is widespread, and farmers are a primary target for alleviating poverty.

In a study from Nigeria, Nwalieji & Igbokwe (2011) assessed the role of local government in agriculture development. The authors relied on participant observation as a primary source of data for the study. Their findings revealed that local government authorities in Nigeria have failed to meet expectations, resulting in an abysmal level of ineffectiveness. According to them, the failure is attributed to lack of financial autonomy, high level of corruption, and misplaced priorities. The authors, therefore, recommended that local government ought to look inward for better IGF to make them financially self–sufficient and that a bottom–up approach be used in the linkage between local government and farmers to ensure effective rural community–based participation in major interventions that affect them.

In the east African bloc, Warinda et al. (2020) looked at the impact of smallholder farmer's welfare through involvement in agriculture projects. They gathered information from 1,160 farmers (both participants and non–participants) in five different countries: Burundi, Kenya, Rwanda, Tanzania, and Uganda. The difference in net benefits accrued to the participants (as against non–participants) were determined using the Propensity Score Matching approach. In comparison, participants had higher crop and livestock productivity, increased household income, improved soil management, and access to biofortified foods than the non–participants. This acknowledged the role of farmers in the implementation of agriculture projects, hence for the PFJ programme to achieve its purpose, farmers need to be strengthened and motivated to participate in the implementation.

To conclude on this chapter, the literature review identified what has been done elsewhere, especially regarding the role local government plays in implementing agricultural programmes. The review of literature demonstrated that the PFJ programme and other interventions alike, in most cases, benefit few farmers. Notwithstanding, existing studies identified the general role of local government in most areas without narrowing down on the implementation of agricultural programmes. These gaps, therefore, gave the study the leeway to investigate the role local government plays in implementing agricultural policies with an interest in the PFJ programme.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

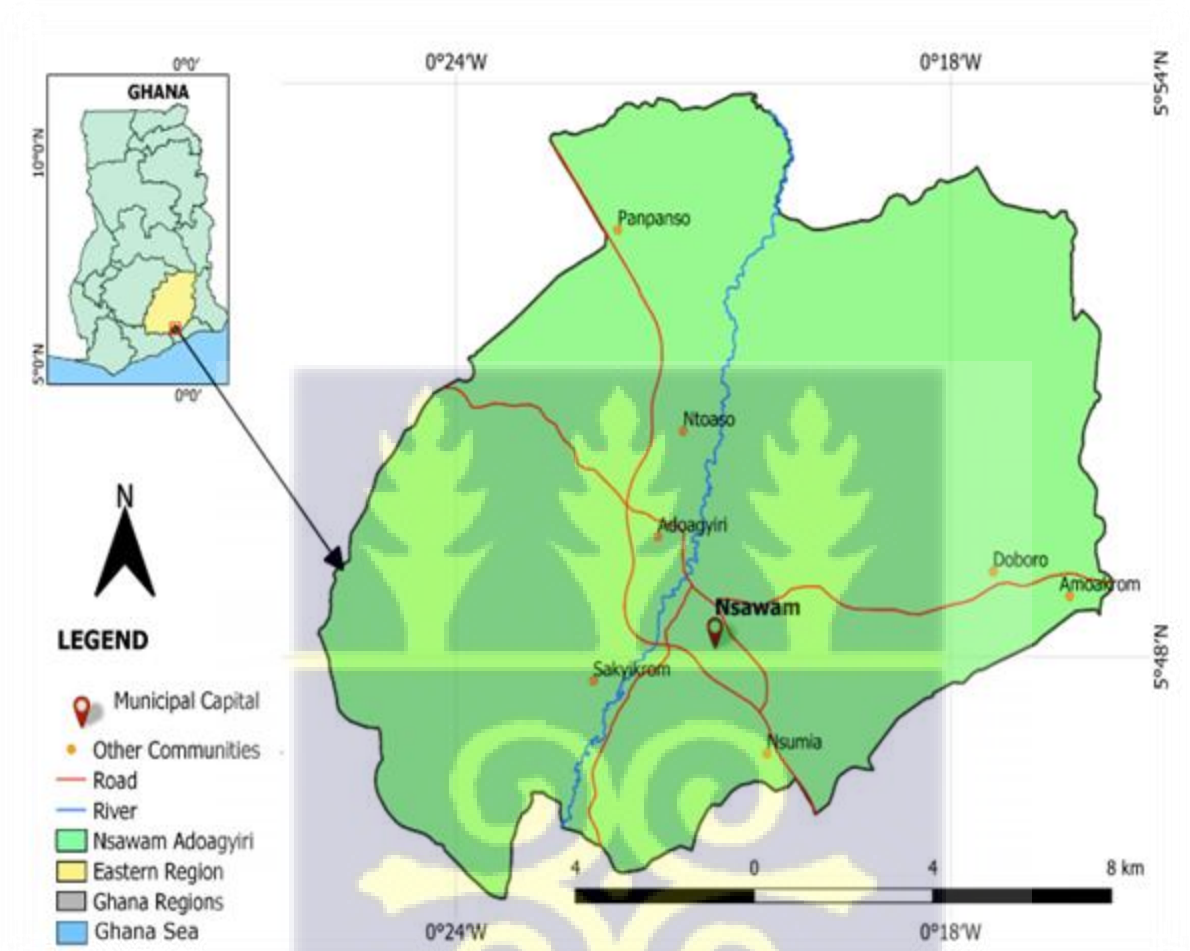
This chapter discusses the methodology and profile of the study. Basic elements that characterize and explain the settings of the Nsawam–Adoagyiri Municipality are presented. These elements include, the physical location, the relief system, agriculture, and the administrative outlook of the assembly. The methodology presents the research design, population of the study, sample size and sampling technique, data collection procedures, analysis method, and the ethical considerations. This detail the strategies used in investigating the local governments and their role in implementing the PFJ programme at the district level.

3.2 Profile of Nsawam–Adoagyiri Municipal Area

The Nsawam–Adoagyiri Municipal Assembly was separated from the then Akuapim South Municipality and established, by L. I. 2047, in 2012, with Nsawam as municipal capital. The municipality is in the south–eastern part of the Eastern Region of Ghana and lies on latitude 5°.45 N and 5°.58 N and longitude 0°.07 W and 0°.27 W. Out of the overall 19,323 square kilometre landmass of the Eastern Region, Nsawam–Adoagyiri Municipality covers a total of 175 square kilometres and about 23 kilometers away from Accra, the national capital (Ghana Statistical Service [GSS], 2014). This municipal area, in terms of spatial interaction, borders the north by Suhum Municipal Assembly, the south by Ga West Municipality, the west by Akim West District, and the east by Akuapem South District. The assembly is headed by the Municipal Chief Executive

(MCE), who serves as the political head, and the Municipal Coordinating Director (MCD), who serves as the administrative head.

Figure 3.1: Map of Nsawam–Adoagyiri Municipality



Source: Author's Construct.

Administratively, the municipality is divided into four different Sub-areas: Adoagyiri, Djankrom, Nsawam, and Panpanso. Other notable settlements are Doboro, Prisons, Amoakrom, Sakyikrom, and Atsikope. The population of Nsawam Municipality, according to the 2010 Population and Housing Census is 86000, comprising 42,733 (49.7%) males and 43,267 (50.3%) females. Urban population constitutes 50,864 (59.1%), while rural is 35,136 (40.9%) (GSS, 2014).

The economic activities and their percentage contribution to employment in the Nsawam Municipal area are– namely, commerce (28%), agriculture (37%), and industry (15%), and service (20%) (GSS, 2014). It appears agriculture is the largest employer of people, many of whom are engage in full–time farming, especially, maize, pineapple, pawpaw, mango, and other fruits. Commercial activities in the municipality includes the sale of food commodities, electrical appliances, and plastic products (Health Directorate Survey, 2013). Due to the hawking activities involving goods, Nsawam is one of the busy towns along the Accra–Kumasi Road. Sellers and buyers from far (and near) come to do commerce in Nsawam causing traffic jams on the major roads. The municipality holds two (2) market days in a week, Monday, and Thursday.

3.2.1 Agriculture, Relief system, and Ecological zone

Being endowed with nature's beneficence, the economy of the municipality is largely rural and agricultural. Most residents in this area engage in farming to support their socio–economic lives. The Nsawam–Adoagyiri Municipality, like the rest of the southern and coastal zones, has two major rainy seasons, which enable year–round farming based on rain–fed agriculture. It has two ecological zones: semi–deciduous forest and coastal savannah grassland (GSS, 2014). Common tree species include, Chrysophyllum Arcanum, Aningeriarobusta, and Mansoniaaltissima. The relief of the area is classified into three main divisions– namely, the Densu plains, Ponpon narrow lands, and Akwapim–Togo Range. The plains offer a good possibility of irrigation and mechanized agriculture. However, given the geography and inadequate drainage system, parts of the Nsawam–Adoagyiri Municipality are prone to floods.

The forest and savannah soil types in the municipality are suitable for the cultivation of crops, including pineapple, pawpaw, maize, cassava, plantain, yam, and vegetables (e.g., pepper, garden

eggs, onion, cabbage, and tomatoes). About 65% of the farmers practice mono–cropping, while 35% of them practice mixed–farming methods (GSS, 2014).

Agriculture in Nsawam is largely characterized by smallholder farmers. The number of households engaged in agriculture is 6,657 (31.4%) households out of 21,232 (i.e., 71.7% of the households in rural areas are into agriculture while 28.3% in urban areas are into agriculture) (GSS, 2014). Farmers make efforts to increase food production, but their efforts are thwarted by declining soil fertility, poor irrigation system, high cost of farm inputs, and other production constraints, such as lack of output markets, and lack of credit opportunities (MPCU Secretariat, 2018). Efforts are made to push agriculture development in the municipality by promoting Non–Traditional Export (NTE) crops, and mobilization of Farmer–Based Groups (FBGs) with assistance from Ghana Export Promotion Authority (GEPA).

Related, fertilizer subsidy is a programme undertaken by MoFA and Nsawam Municipal Assembly to help increase the quantity of agricultural produce. The programme is implemented in a way that is accessible to all farmers, both males and females. A total of 6,204 farmers benefited from this programme. This comprises 5,249 males and 955 females from seven local distributors (MPCU Secretariat, 2018). The local distributors are: Agrogate Ventures, 1st Village Enterprise, Maa Kodua and Chadans Enterprise, Eastlands Marketing Ltd, Anti Dave Ltd, Asono Agro Enterprise, and Nicoster Enterprise, all located at Nsawam and Adoagyiri. Relatedly, the PFJ programme is implemented in the municipality, and as such, Nsawam chose to focus on vegetable production, preferably, onions, tomatoes, and pepper. One noticeable thing is that farmers are yet to understand the idea. Hence, the need to create public awareness and more demonstration plots.

The Nsawam Municipality is one of the Peri–urban districts having a diverse range of small and medium–sized businesses. There are– "Nsawam Cannery (beverage and food), Blue Skies Limited (pineapple, pawpaw, watermelon, and mango beverages), Astek Fruit Processing Limited (fruit beverages and mineral water), La Gray Pharmaceuticals Limited (drugs), Africa Cola (fruit beverages), and Sunripe Limited (fruit beverages)" (GSS, 2014:43).

In addition, the municipality is a home to numerous historic, and aesthetic treasures. Mensaman and Baode both have waterfalls (GSS, 2014). The Baode waterfall has a pond with crabs, mudfish, and lobsters, as well as a preserved plantation, all of which contribute to ecotourism. There is also the Oboadakaso grove, which is made up of four naturally organized coffin–shaped rocks that are stacked on top of one another. Another site of historic importance is the shrine at Brekuso, where the parents of the founder of the Ashanti Kingdom, Nana Osei Tutu I, are said to have gone to seek the blessing of the gods before giving birth to the monarch, Otumfuo Osei Tutu II, (MPCU Secretariat, 2018). The Nsawam Municipality is blessed with two public Senior High Schools (SHS), St. Martins Senior High School, and Nsawam Senior High School.

3.3 Research Design

The study employed a mixed method (i.e., quantitative, and qualitative method) to examine the role local government plays in implementing the PFJ programme. For Creswell (2007), mixed method is a procedure involving the use of two (or more) methods in a study to understand a research problem. The quantitative method has the strength of producing accurate data that are mostly generalized to the population. However, it fails to produce detailed information on human attitudes and behaviour (Gorard, 2003; Bryman, 2008; McMillan & Schumacher, 2010; Olsen, 2004). With these inadequacies, the qualitative method provides a space for the respondents to

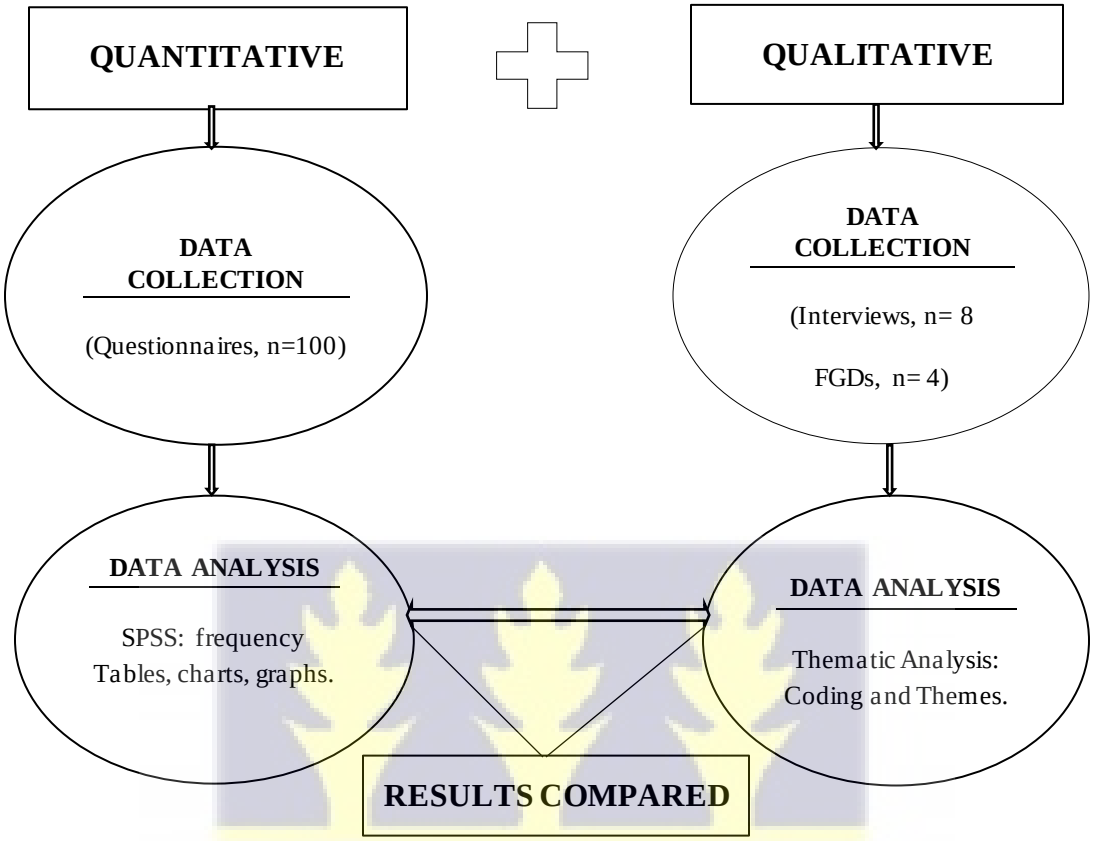
express their experiences and opinions about the PFJ programme. Nonetheless, data generalization is difficult, as the sample is mostly not randomized (Matthews & Ross, 2010).

The choice of the mixed method was driven by the fact that the study sought not only to examine the impact of the PFJ programme on farmers, but to understand the institutional framework and challenges the local government face in implementing the programme. For instance, Creswell & Plano–Clark (2007) argued that using a mixed method allows findings to be cross–validated and verified within a study. Recent literature stressed the use of a mixed method (quantitative and qualitative methods), instead of one (McMillan & Schumacher, 2010; Ivankova et al., 2007; Foss & Ellefsen, 2002). Therefore, fusing these approaches in this study neutralized the problems of one approach and strengthen the benefits of both approaches for optimum results. Nevertheless, it required a great effort to investigate the phenomenon with two separate methods.

To cross–validate the results, the study adopted the concurrent triangulation diagram[3] presented by Creswell & Plano–Clark (2007, as cited in Oti-Boadi, 2015) to demonstrate how both the quantitative and qualitative data were collected (see Figure 3.2). In the diagram, both qualitative and quantitative phase are treated with equal importance. Morse (2003) proposed a notation system for mixed approaches, which best describes the diagram as "QUAN + QUAL" strategy. The plus (+) sign implies that both methods [quantitative and qualitative] are used simultaneously; the capitalization shows that the methods are given equal importance; and the 'n' means sample size. The diagram shows the data collection methods, materials, and analysis of both quantitative and qualitative phase of the study.

[3] This triangulation diagram gave a general view of the PFJ programme by investigating it from different perspectives. It is not a research design, it only pictures how a mixed approach to research is carried out.

Figure 3.2: Visual Model of Concurrent Triangulation Mixed Method Design



Source: Adapted from Oti-Boadi, 2015: 64.

3.4 Population of the Study

A research population involves elements such as individuals, objects, and events, that meet the criteria for inclusion in a study (Bhattacherjee, 2012). For Anthony–Krueger & Sokpe (2006), population is a total number of the targets of the research. The population comes in two types, targeted and accessible. The targeted are the ones the study is interested in generalizing the conclusion to, and accessible is the population the sample is drawn (Creswell, 2009, 2013). In this study, the population includes all farmers, officials of the Nsawam–Adoagyiri Municipal Assembly, and other stakeholders within the agriculture value chains.

3.5 Sample Size and Sampling Technique

Babbie (2005) describes a sample as a subset of a population whose selection is based on the knowledge of the elements of a population and the research purpose. The sample selection was done in such a way that persons that meet a criterion was sampled. Overall, sample for the study included, officials of NAMA, leaders of the Farmer–based groups, Assemblymen, farmers enrolled on the PFJ programme, as well as farmers not on the programme. All these respondents have technical information and working knowledge in the implementation of the PFJ programme.

Table 3.1: Sampled distribution of the respondents

Respondents		Number (n)	Data instrumentation
Officials of NAMA	Director of Agriculture	1	In–depth interviews *(Key expert interviews)*
	Extension officers	2	
	Assemblymen	2 = 8	
Leaders of Farmers' Association		2	
Traditional rulers		1	
Farmers involved in the PFJ programme		100	Structured questionnaire
The PFJ programme	Participants	2	Focus Group Discussion (FGDs)
	Non–participants	2 = 4	

Source: Author's construct.

The sample size for the quantitative survey was determined using a statistical formula. The advantage of this formula centers on its simplicity and ability to determine the sample size of both categorical and continuous variables (Anokye, 2020; Taherdoost, 2017). The sample size was

derived from a population of 10,357 farmers, using a precision level of 10% [or an error margin (e) of 0.1]. (For the sample formula, see Yamane, 1967).

$$n = \frac{N}{1 + N(e)^2} \quad (1)$$

Where n is sample size; N is population of the target respondents; and e is the margin of error. Therefore, N = 10,357; e = 10% (or 0.1); and n =?

$$\text{Hence, } n = \frac{10,357}{1 + 10,357(0.1)^2} \quad (2)$$

$$n = \frac{10,357}{104.57} \quad (3)$$

n = 99.043 [100 to the nearest whole number, adjusted].

Therefore, the sample size used for the study was 100 respondents. For purposes of collecting the quantitative data, the study used a convenience sampling technique to sample the respondents. This technique was used because, according to Matthews & Ross (2010), it allows the researcher to obtain basic data and trends without the complications of using a randomized sample. The method is also speedy and easy causing it to be an attractive option to most researchers.

Meanwhile, four Focus Group Discussion (FGDs) were conducted for the qualitative phase to collate respondent's views on each of the five pillars of the PFJ programme. The respondents were 20, involving adult males and females (each session hosted five respondents). The sample selection of respondents, though, was influence by gender relation, it was primarily based on the availability and willingness of respondents to participate. These respondents are considered the external stakeholders (farmers who were, either, enrolled on the PFJ programme and dropped out or never

enrolled before). They are important to the study because their response authenticated the relevance of the PFJ programme and how, in practice, it is implemented.

Further qualitative data gathered from the officials of Nsawam–Adoagyiri Municipal Assembly [including all levels of MoFA staff, government agricultural research institutions, agro–input dealers, seed producers, aggregators, and farmers among others] were individually interviewed to get in–depth knowledge about their level of understanding of the PFJ programme, and the requirements for enrolling onto the programme. A sample of 8 officials was selected during the interview survey. The purposive sampling technique was used to sample the respondents. This sampling technique is suitable when researchers want to identify a particular case for in–depth investigation with less aim of generalization (Saunders et al., 2012; Neuman, 2003). The study used the sampling technique because respondents with the requisite knowledge of the PFJ programme and its implementation framework were targeted and the ones that could provide the needed information at the local government level.

3.6 Data Collection Methods and Procedure

Data for the study were obtained from primary and secondary source. Primary data for the study were collected from Nsawam Municipality using both qualitative and quantitative techniques. A closed–ended questionnaire was used to collect quantitative data, while interviews and Focus Group Discussion (FGDs) were used for the qualitative data. On the other hand, secondary data were obtained from journal articles, newspaper reviews, institutional documents, reports presented at seminars, and unpublished works relevant to the study.

With the data collection methods, the questionnaire was decided upon because it ensures a high response rate and requires less time and energy to administer (Creswell, 2013). However, its

validity and accuracy are questioned. Creswell (2009) thinks the respondents might not reflect their true opinions and valuable information might be lost as the respondents are not given the space to express their opinions but to select from pre–determined options[4]. The interviews and FGDs allowed the study to get the experience and views of the respondents through a dialogue. Each interview session was tape–recorded and supplemented with notes taken regarding the context of the interview. Bryman (2012) suggests that interviews ought to be tape–recorded so the interviewer can focus, follow important points, and ask probing questions where necessary. These procedures (i.e., the questionnaires, interviews, and focus group discussions), enabled the study to triangulate the responses and ensure high accuracy.

3.7 Data Management and Analysis Technique

The field data was collected using an audio recorder and notes taken for the interviews, and a hard copy format for the questionnaire. The audio–recorded was transcribed and categorized into themes to enable the analysis of the data. In line with best practice, the thematic categorization of the data was done to reflect the research objectives. To provide considerations for data access and long–term data security, answered hard copies of the questionnaire are scanned and the audio data generated are all stored on a hard drive. Data collected from the interviews and questionnaires were synthesized and analyzed using both qualitative and quantitative analytical techniques.

With regards to data analysis and reporting framework, the quantitative data was processed with the Statistical Package for Social Sciences (SPSS) software for analysis. Data were reported using descriptive statistics such as charts, graphs, and frequency distribution. The use of percentages and

[4] The interviews and focus group discussions resolved the issues in the questionnaire by given the respondents the chance to explicitly reflect their opinions about the phenomenon of study.

frequencies enable the study to present true data characteristics and findings with accuracy devoid of subjectivity (Creswell, 2013; Bhattacherjee, 2012; Bryman, 2008). Also, primary data obtained from interviews and FGDs were analyzed qualitatively using the thematic analytical approach. In the broad form, this analysis technique reports patterns and themes within the research data. Holloway & Todres (2003) argue that thematic analysis should be viewed as a first analytical method that researchers learn when tried to tackle diverse and complex qualitative problems. The narrations from interviews were used to strengthen the quantitative analysis.

3.8 Limitation and Delimitation

Traveling far distances to inspect farms on a regular basis was a problem to the researcher's academic work such as attending lectures, seminars, and submission of assignments. However, plans were rescheduled such that the data collection were done during vacation. The study would have yielded better results for appropriate generalization to be made on the role local government plays in implementing the PFJ programme in Ghana if it had been extended to cover more of the 260 MMDAs in Ghana. Due to the financial constraints, primary data were collected in only one district, Nsawam-Adoagyiri. These limitations, however, did not affect the outcome of the study.

Besides, there was difficulty in obtaining current data source that the study required since interest in investing in the production and publication of regular, accurate and timely data and statistics to facilitate effective assessment, monitoring, and evaluation of the outcome of government policies and programmes in NAMA was very lean among local authorities. Gathering accurate data on sensitive issues such as corruption in fertilizer distribution and award of contracts to the input dealers presented many challenges as the respondents were reluctant and felt uncomfortable sharing their opinions, beliefs, and experiences. This may be biased by social desirability because

the respondents would give responses which might be socially pleasing instead of accurately reflecting their thoughts, beliefs, or actions (Nancarrow and Brace, 2000). Because of this, there is a possibility for the validity and reliability of the measurement to bias the inferred conclusions. In social interactions like interviews and focus group discussions, there may be the tendency for respondents to give responses that are socially desirable. To avert this the researcher used the mixed data collection methods as well as data triangulation to ensure that the final data reflect the situation in the Nsawam–Adoagyiri Municipality.

3.9 Ethical Considerations

Every research necessitates that the researcher follows certain research ethics. According to the Social Research Association [SRA] (2003), researchers have obligations towards their subjects and must protect them from any harm that might arise due to their participation in the process. In collecting and reporting the data, the study was mindful of the ethical concerns. Similarly, to obtain authorization to conduct the research, the researcher sent a letter to the Nsawam–Adoagyiri Municipal Assembly [NAMA]. The purpose of the study was explicitly explained to the respondents, which enabled them to make judgments whether to participate in the study.

It is established that most respondents, sometimes, tend to withhold information that are relevant to the study due to the fear of being exposed. To address these ethical concerns, the study assured the respondents of confidentiality (i.e., no hint is left in the thesis that is traceable to any respondent) and sought informed consent before tape–recorded any interview session. Therefore, in the conduct of the study all these ethical standards were followed.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

The previous chapter addressed the study's research methodology and the study area. This chapter presents analysis and discussion of the survey and qualitative data. The SPSS[5] software, version 26.0 for windows, was used to analyze the quantitative data and results presented as descriptive statistics– in the form of frequencies and percentages. Pie charts and graphs were generated using Microsoft Excel. On the other hand, the interviews and focus group discussions were analyzed qualitatively with thematic analytical technique. To ensure confidentiality, identities of the respondents are not presented alongside their views. Analysis was done based on four main themes: the biodata of the respondents, the institutional framework responsible for implementing the PFJ programme, impact of the PFJ programme on farmers, and challenges local government face in implementing the programme. These enabled the study to determine the role of local government in implementing the programme in Nsawam Municipality.

4.2 Socio–demographic Characteristics of Respondents

The demographic characteristics explain the various features of the respondents that were sampled for the study. These characteristics enabled the researcher to determine how the results fit within

[5] SPSS is short for Statistical Package for the Social Sciences, and it's used by various kinds of researchers for complex statistical data analysis. The SPSS software package was created for the management and statistical analysis of social science data. It was originally launched in 1968 by SPSS Inc., and was later acquired by IBM in 2009

the general population of the study. A total sample of 100 respondents were surveyed to make observations and inferences about the population.

4.2.1 Gender and Age Distribution of Residents

To understand the gender and age distribution, the respondents were asked to state their sex and age category. This enabled the study to describe how the gender arrangement influence the implementation of the PFJ programme and the age of the farming population in the Nsawam Municipality, especially those on the PFJ programme. Table 4.1 shows the age and gender distribution of the respondents.

Table 4.1: Socio–demographic data of respondents

		Frequency	Percentage (%)
Gender of respondents	Male	74	74.0
	Female	26	26.0
	Total	100	100.0
Age of respondents	20 and below	0	0
	21– 40	28	28.0
	41– 60	57	57.0
	61 and above	15	15.0
	Total	100	100.0

Source: Survey Data, 2021.

The results show that about 74% of the respondents were males, while 26% were females. Though a greater proportion of women in Ghana are largely engage in agriculture, the finding suggests that

most farmers in the PFJ programme were males. This could be attributed to the traditional beliefs that regard men as breadwinners of families. This finding reinforced Nsiah's (2018) assertion that women's underrepresentation in agriculture is largely influence by discriminatory land tenure policies. While some African states acknowledge the significant role of women in agriculture, few have paid attention to land tenure systems, which have been discriminatory against women. Government needs to adopt gender–specific policies to address the socially structured gender division of labour and the legal discriminations against women. This will increase women's participation in future agricultural interventions.

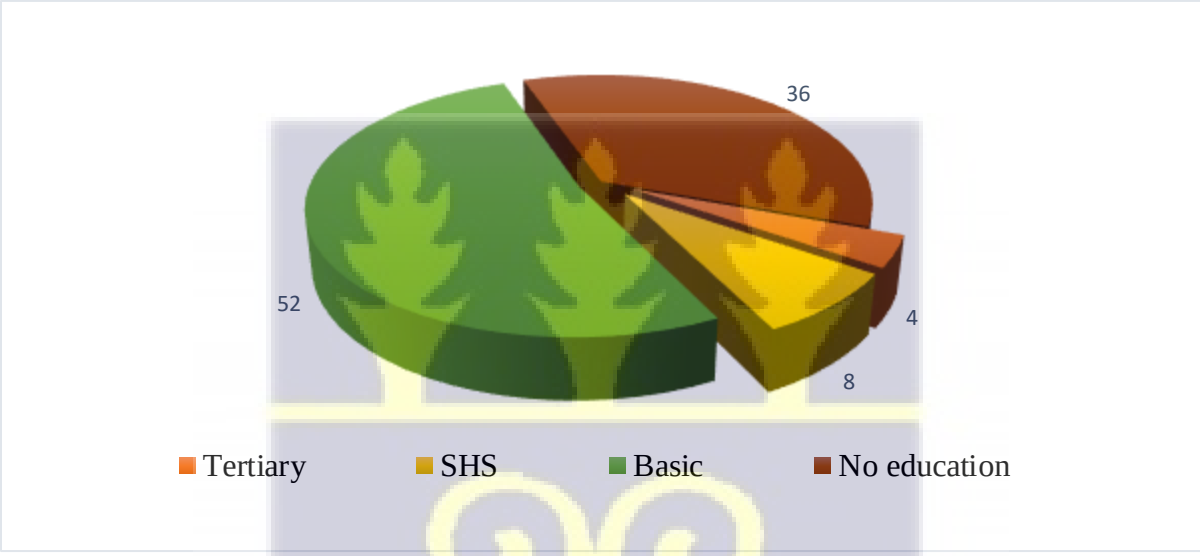
With the age distribution, the results indicate that, out of the 100 respondents surveyed, about 28% were between 21–40 years, 57% of them were between 41–60 years, and about 15% were 61 years and above. The mean age of farmers was 53 years, which is in line with previous reports by MoFA (2017b) that placed the average age of farmers in Ghana at 55 years. This implies that there is a relatively high proportion of the aged population engage in agriculture in the study area. This is contrary to the PFJ programme's goal of making agriculture an attractive occupation for the youth. This raises alarm for the need to increase youth's participation in agriculture to facilitate the implementation of the PFJ programme. Meanwhile, data from the interviews revealed some negative perceptions, such as farming not being profitable, as reasons why the youth are not engaged in agriculture in the Nsawam–Adoagyiri Municipality. A discussant narrated that:

> […The] my parents are hardworking farmers, yet we have no money to buy things we need. I am married now, and my father has asked me to go to Kumasi and find a better job to support the family. [……here in Doboro], you can farm three acres of maize and get only half an acre……and the fact that the rains are irregular, and no alternative irrigation system, make farming an unsafe occupation (A maize Farmer, 2021).

4.2.2 Education and Occupation of Residents

The study further explored the educational level attained by the respondents. This was to understand their level of knowledge in agricultural practices, especially how they understood the PFJ programme and the packages it provides. Educational level of farmers is important as it will enable them to adopt new technologies and eco–friendly farming.

Figure 4.1: Educational level of respondents



Source: Survey Data, 2021.

The results in Figure 4.1 show that 52% of the respondents either completed (or had) primary education. About 36% of them had no formal education, and few of them (8% and 4%) had attained a higher level of education, Senior High School [SHS], and tertiary institution, respectively. This implies a low level of education among the respondents in the Nsawam–Adoagyiri Municipality. This corroborates with the Ghana Statistical Service report that a proportion of the population in the Eastern Region of Ghana has a high illiteracy rate (GSS, 2012). According to Tanko et al. (2019), the famers with education and training can incorporate the latest scientific technology into

their operations. The results of enhancing their operations with these tools increases efficiency and the application of farm inputs. With the low education among farmers in the study area, the extension agents need to intensify plot demonstration training for the farmers. For example, fertilizer application methods, and soil health management techniques.

Also, to understand the main economic activities in the Nsawam–Adoagyiri Municipality that the respondents are engaged in, the study asked them to indicate their occupations (though farmers, some seemed to engage in other activities) and land size. This enabled the study to determine whether (or not) agriculture is a full–time activity for the farmers.

Table 4.2: Main Occupation of respondents

		Plots of land the respondents cultivate (in acres)			Total
		1–3	4–6	7 and above	
Occupational status	Teacher	4	5	1	10
	Farmer	57	10	0	67
	Trader	15	5	0	20
	Others	1	2	0	3
	Total	77	22	1	100

Source: Survey Data, 2021.

From Table 4.2, the results show that 67% of the respondents were peasant farmers, while 20% practiced petty trading. About 10% were teachers and 3% were involved in other economic activities and not seriously engaged in agriculture. Most of the respondents indicated that farming was their full–time activity. This explains that people with education were not fully engaged in agriculture, and this affects the implementation of the PFJ programme. For agriculture production,

land is an important resource to the farmers. From the result, about 77% of the respondents farm an average of 1–3 acres of land, while 22% cultivate an average of about 4–6 acres. Meanwhile, 1% of the respondents cultivated about 7 acres (or more). This implies that most of the respondents were peasant (or smallholder) farmers. From the data and in accordance with the researcher's expectation, land[6] in Nsawam–Adoagyiri Municipality was found to be costly and, in most cases, not available to farmers. Since Nsawam is a peri–urban area, there are expansions in human settlement and lands are bought for housing purposes. A farmer narrated that:

> I really want to farm on a large scale. However, lands are costly […. or not available] in Nsawam. Most of the lands are bought by estate developers for building and the owners do not want to release them to us. The few lands available are infertile due to the sand winding activities. […...So], I am managing a smaller land for my upkeep (A Cassava farmer, 2021).

4.3 Institutional framework for the implementation of the PFJ programme

The study investigated whether there is an institutional framework, at the Nsawam Municipal Assembly, responsible for implementing the PFJ programme. The results showed that since the programme is a flagship policy, the Municipal Department of Agriculture is responsible for its implementation at the district level. This justified the Local Government Act's (Act 462, 1993) descriptions that the Department of Agriculture (DOA) is established within the MMDAs to assist in the implementation of agricultural policies and programmes and advise the Assemblies on matters related to agriculture development.

[6] In relation to land ownership, about 75% of the farmers in the PFJ programme owned their lands, while 25% of them acquired lands through other tenure arrangements. Relatedly, many of the non–participants (64%) owned their land with the remaining 36% non–landowners. In other words, farmers who owned lands participated more than those that acquired lands through other tenure arrangements. But, generally, many farmers in the Nsawam Municipality farm on their lands (Survey result, 2021).

The analysis revealed that there is an institutional framework the Municipal Assembly follows in implementing the PFJ programme. This [institution framework] has a technical committee, which the Municipal Chief Executive (MCE) chairs. According to MoFA (2017a), these technical committees are responsible for monitoring the progress of the PFJ programme and providing directives on how to implement the activities. The study identified that the framework outlines the modalities for implementing the PFJ programme, i.e., how to get the input dealers, the amount farmers would pay for the subsidized inputs, and evaluation plans. During the interviews, the PFJ Desk Officer explained that farmers were registered manually, and the inputs distributed to them, especially in 2017 and 2018. But the system changed[7] and they now rely on input dealers, which farmers purchase directly from them at the subsidized rates and their biodata captured. These dealers are assessed to ensure they have the power to supply the inputs before they are contracted for services. He [PFJ Desk Officer] recounted that:

> […...yes], there is an institutional framework we follow in implementing the PFJ programme in Nsawam. The Department of Agriculture is the body responsible for implementing the PFJ programme on behalf of MoFA at the district level. After all the modalities are outlined for the year, we contract the input dealers to supply the inputs (seeds and fertilizers) to the farmers. The extension officers guide farmers by telling them what inputs are available and the dealers involved. It is an organized framework and working well" (PFJ Desk Officer, 2021).

[7] Change in the registration system in 2018 brought serious complications in the implementation of the PFJ programme. Now, farmers, whether within the Nsawam Municipality or without, can access the various inputs by just showing any national ID card. Whether the buyer is a farmer or not, the input dealers are in business and sell to everyone. This paradigm shift led to the hoarding of the inputs by farmers since their purchasing limit could not be regulated by both the input dealers and the PFJ officials.

Overall, it can be inferred from this study that there is an institutional framework at the municipal assembly responsible for implementing the PFJ programme. How effective is this framework? Surprisingly, some respondents expressed concerns about the institutional framework. During the survey, the study examined respondent's level of satisfaction with the way the programme is implemented in the Nsawam–Adoagyiri Municipality, and if the local government played active role in implementing the PFJ programme.

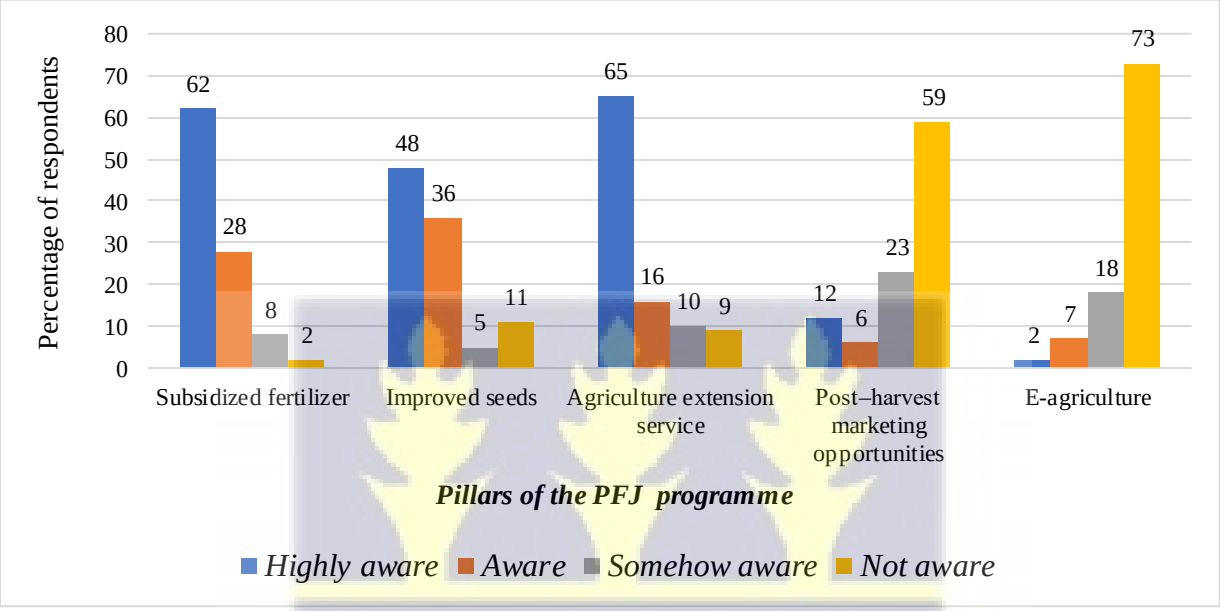
4.3.1 Respondent's perception on the implementation of the PFJ programme

Under this, questions were asked to determine the respondent's levels of awareness of the five pillars of the PFJ programme, and their satisfaction with the institutional framework responsible for implementing the programme. This gave respondents an opportunity to assess the programme's implementation framework. The results indicated a mix reaction among the respondents with the way the PFJ programme is implemented in the Nsawam Municipality. This is understandable since every programme has institutional challenges.

The implementation framework of the PFJ programme is based on five pillars– namely, the supply of improved seeds; supply of fertilizers at subsidized rates (50% price cut off); extension services to farmers; post–harvest marketing opportunities; and e–agriculture (a technology platform that uses a database system to track and monitor farmer's produce) (MoFA, 2017b). Evidence from the literature indicated that many farmers across Ghana knew only the fertilizers and seeds pillars. This made scholars conclude that the programme has been relegated to the distribution of fertilizers (Tanko et al., 2019). This prompted the study to survey respondent's levels of awareness of each pillar of the PFJ programme in the Nsawam Municipality. Surprisingly, the results point out that the respondents were not aware of all the five pillars of the programme. They [respondents] knew

about three pillars [fertilizers, improved seeds, and agriculture extension service; and not the other two pillars– output market opportunities and e–agriculture]. This syncs with Tanko et al.'s (2019) findings, except that the farmers had no knowledge of the extension service pillar in their study.

Figure 4.2: Respondent's level of awareness of the PFJ programme's pillars



Source: Survey Data, 2021.

From Figure 4.2, out of the 100 respondents surveyed, majority (about 62%, 48%, and 65%) of them were highly aware of the subsidized fertilizer, improved seeds, and extension service, respectively. While the proportion of respondent's level of awareness of these three pillars are in a diminishing rate of aware, somehow aware, and not aware, that of market opportunities and e–agriculture is the reverse. Shockingly, majority of the respondents (59%) were not aware of the market opportunity pillar. Followed closely was about 23% of them who were somehow aware of the market opportunity, and few of them (6%) were aware. For the e–agriculture, about 73% of respondents were not aware of this pillar, followed by 18% of them who stated they were somehow aware, and 2% were highly aware. These findings imply that, out of the five pillars of the PFJ

programme, farmers in the Nsawam–Adoagyiri Municipality are aware of the subsidized fertilizer, improved seeds, and agriculture extension service pillars and not aware of the market opportunities and e–agriculture pillars.

To further understand what influence the difference in the respondent's levels of awareness, it is important to determine the correlation between farmer's awareness of any two pillars. The study used the Spearman's rank correlation coefficients to do the estimation. Table 4.3 reports the results of the correlation matrix among the pillars of the PFJ programme.

Table 4.3: Correlation of respondent's level of awareness of the PFJ programme's pillars

	Improved seeds	Subsidized fertilizer	Extension service	Market opportunity	E–agriculture
Improved seeds	1				
Subsidized fertilizer	0.896*	1			
Extension services	0.168***	0.267***	1		
Market opportunity	0.307**	0.366**	0.403**	1	
E–agriculture	0.110***	0.197***	0.325**	0.519**	1

(** is strong relationship; ** is moderate relationship; and *** is weak relationship*)
$0 \leq r < 0.29$ implies weak correlation; $0.30 \leq r < 0.69$ implies moderate correlation; $0.70 \leq r < 0.99$ implies strong correlation; $r = 1$ implies perfect correlation; $r = 0$ implies no correlation.

Survey Data, SPSS output, 2021.

The result in Table 4.3 shows that there is a strong positive correlation between the subsidized fertilizer and improved seeds pillar of the PFJ programme [r = 0.896 or 87%]. This implies that a significant increase in awareness of the subsidized fertilizer leads to a resultant increase in awareness of the improved seeds pillar. This strong relationship was explained by the PFJ desk office, during the interview, that the Department of Agriculture frequently organizes meetings to

educate farmers on the application of the inputs [hybrid seeds and fertilizer]. The significant positive connection between these two inputs indicates that optimum yields are likely to be realized. This, therefore, explains why respondents indicated they were highly aware of the fertilizer and seeds pillar.

Meanwhile, correlating respondent's awareness levels of any other two pillars (such as improved seeds and market opportunities; subsidized fertilizer and market opportunities; extension service and market opportunities; and subsidized fertilizer and extension service) indicated a moderate relationship. These indicate that the influence in the level of awareness of any two other pillars is moderate. This is not surprising given that, in Ghana, none of the pillars has had a strong push in agriculture development. The study also found a significantly weak positive correlation between farmer's level of awareness of the improved seeds and agriculture extension service on one hand [r = 0.168 or 17%], and improved seeds and e–agriculture on the other hand [r = 0.110 or 11%]. This consideration and implementation of improved seeds and e–agriculture are relatively new developments in the agriculture space, which explains the weak correlation. However, none of the correlation coefficients were negative.

Once it was established that the respondents were aware of the pillars of the PFJ programme, the study examined whether farmers were satisfied with the way the programme is implementation in the Nsawam–Adoagyiri Municipality. From the analysis, a point must be made that many of the respondents were satisfied. A farmer remarked that:

> I am satisfied with the way the PFJ programme is implemented. As a farmer, even if you know the agriculture practices, you need the advice of experts to keep you in business. The Department of Agriculture has, through the extension agents, helped me. They connected me to the input dealers to get the fertilizers and seeds for my

> maize farm. They [programme officers] organize meetings to educate and advise us to take advantage of the programme. […to some extent] the programme is well implemented in the Nsawam Municipality (A maize Farmer, 2021).

This respondent's satisfaction, perhaps, makes sense because, according to Lambongang et al. (2020), farmers closer to output markets have easy access to the inputs and those with experience in similar intervention tend to enroll in the PFJ programme. On the contrary, other respondents maintained that the programme's purpose is good, but its implementation raises questions about sustainability. A dissatisfied farmer detailed that:

> […. for me], I am disappointed with the way the PFJ programme is being implemented. As a farmer, if your crops will do well, you need to plant with the rain or before the rain starts. But in our community, the inputs (seeds and fertilizers) are often brought to us late, and this affects our harvest. I have followed up for inputs and had none for this year. […..So], I had to rely on the ones in the open market. Even the politics in the programme is too much and need to be avoided if the programme should be successful (A Pineapple Farmer, 2021).

The results revealed that the respondent's perceptions on how the PFJ programme is implemented in the Nsawam–Adoagyiri Municipality are diverse and not different from the works of literature reviewed. During the interviews, the PFJ Desk Officer admitted that the farmers were many and most of them from remote communities have poor access to the inputs. This finding confirms Fawzan's argument that bad road networks limit farmer's ability to transport their produce to the output markets due to high transport cost involved. Normally, when output markets are available in farming communities, access to agriculture inputs are improved (Fawzan, 2019).

Evidence from the 100 respondents surveyed showed that about 62% of the respondents were satisfied. This category of respondents attributed their satisfaction to the benefits they derive from

the programme. However, 27% of them had a divergent opinion and explained that they were not satisfied. These respondents explained that (though they are enrolled on the PFJ programme) the programme had failed to provide what they need. About 11% of the respondents were undecided. This implies that they are not maximizing the best out of the PFJ programme. This mix feelings confirm earlier indications that, though the programme has reduced the cost of farm inputs, it has failed to cover agro–chemicals and protect farmers from climatic shocks. The responses on the level of satisfaction with the way the PFJ programme is implemented are shown in Table 4.4.

Table 4.4: Respondent's satisfaction level with the implementation of the PFJ programme

Variables		Frequency	Percentage (%)
	Yes	62	62.0
	No	27	27.0
	Neither Yes/No	11	11.0
	Total	100	100.0

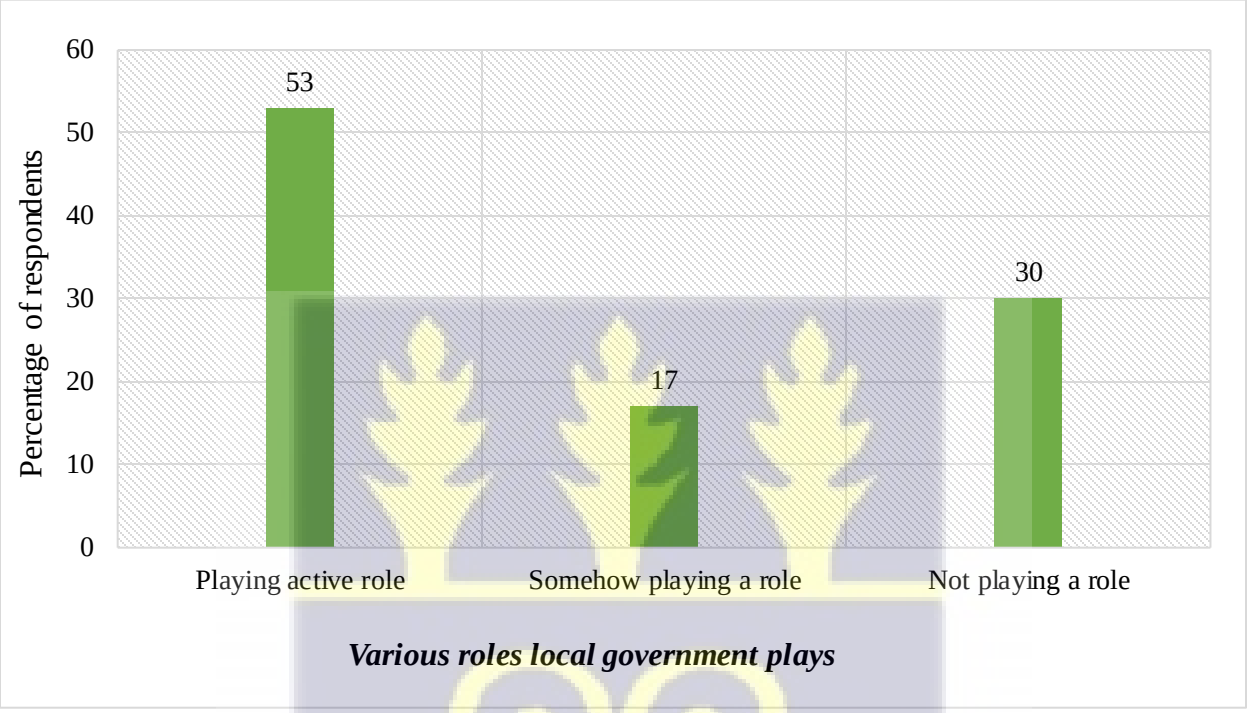
Source: Survey Data, 2021.

During the interviews, some farmers indicated they needed dams and not fertilizers and seeds. The reasons were that the seeds and fertilizers are important but not enough, especially when the rains are intermittent. This implies that there are institutional challenges with the implementation of the PFJ programme. But, from the results, it can be concluded that the farmers are satisfied[8], to some

[8] The level of satisfaction, though cannot be quantified, was used to measure the benefits farmers derived from the PFJ programme, in terms of their accessibility to the various inputs, such as seeds and fertilizers. So, farmers expressed how easy (or difficult) it was to access the inputs in the Nsawam Municipality. The researcher used 'YES' to designate that the farmers were satisfied and 'NO' for their dissatisfaction.

extent, with the way the PFJ programme is implemented. Similarly, once it was established that respondents were satisfied with the implementation of the PFJ programme, the researcher asked them to rate the role the local government plays in its implementation.

Figure 4.3: Role local government plays in implementing the PFJ programme



Source: Survey Data, 2021.

The results show that local government played an active role in the implementation of the PFJ programme with a rate of about 53%. This was countered by 30% of the respondents, who indicated that the local government do not play any role. However, few of them (17%) rated that the local government somehow plays a role in the programme's implementation. This entails that the respondents were skeptical about the role the local government plays in implementing the PFJ programme. Based on the findings, it can be inferred that the local government is instrumental in

implementing the PFJ programme. This could be the reason many of the respondents indicated they were satisfied with the implementation of the programme.

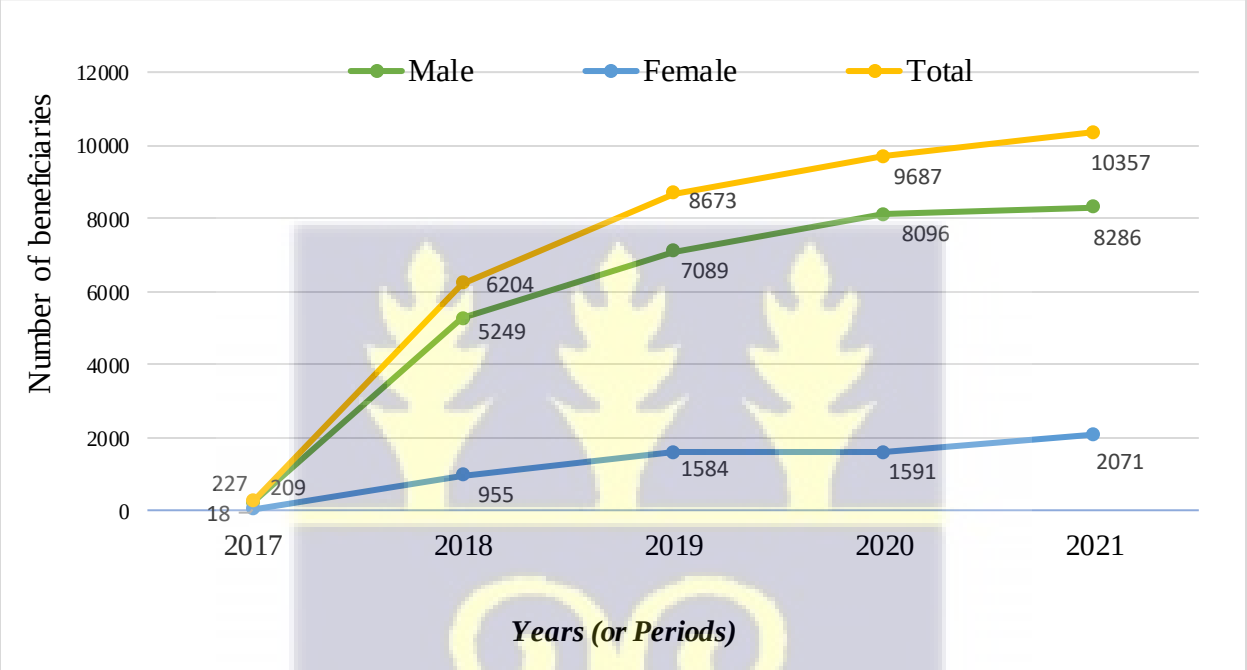
4.4 Effect of the PFJ programme on Farmers in the Nsawam Municipality

Once it was established that the respondents were satisfied with the implementation of the PFJ programme, and the local government played active roles in its implementation in the Nsawam Municipality, the study explored the kind of support systems the farmers derive from the PFJ programme as a whole and how these impacted farming activities. The results show that farmers were interested in the PFJ programme because of the benefits, but there were many nonparticipants (farmers who are not enrolled on the PFJ programme) than the participants (farmers who enrolled on the PFJ programme), which raised questions on the protocols for participation. For instance, the UREA and NPK cost GHC70 and GHC75 respectively, which is a concern to farmers in Nsawam. The input dealers indicated that fertilizers are costly, hence, cannot reduce the prices below the subsidy rate. Because of that some farmers, though the inputs are subsidized, cannot afford. Many prefer to pay in kind, however, that option is not part of the institutional arrangement.

The analysis further indicated that the PFJ programme created a labour market for farmers in the Nsawam Municipality. Most respondents expressed joy that the programme has increased yields and reduced the cost of agriculture inputs. This finding syncs with Lambongang et al.'s (2019) proposition that farmers who participate in the PFJ programme records higher yields than non–participants. However, the type of crops which record the increase in yields and the PFJ pillar that account for the increase were not investigated. Danso–Abbeam (2018) in a similar study observed that food security increased significantly when farmers participated in the PFJ programme.

To understand the extent of the impact, the study used the annual record document that contains the list of farmers purchasing the different inputs from the Nsawam–Adoagyiri Municipality to determine the trend from 2017–2021. This gave a clear picture of how farmers have benefited from the PFJ programme over the past 5 years of its implementation.

Figure 4.4: Trends in the impact of the PFJ programme on Farmers



Source: Data from NAMA, 2021.

The result in Figure 4.3 shows a gradual increment in the number of farmers who benefited from the PFJ programme. The programme started with 227 beneficiaries in 2017 and, thereafter, increased exponentially to 10,357 beneficiaries in 2021. This is an indication that the programme is well implemented in Nsawam Municipality, as variation in the increments from 2017 to 2021 is highly significant. This agrees with reports by MoFA that the number of farmers who got the inputs exceeded expectations at the national level. In 2020, 1.74 million out of 2.6 million farmers

received the different inputs, and job creation ranged from 863,500 in 2017 to 1,492,000 in 2020 (MoFA, 2017b). However, gender disaggregation of the data revealed that more men than women benefited from the PFJ programme. Though the number of women increased considerably from 2017 to 2021, an enormous gap existed between both gender in the level of benefits. With such skewed distribution towards the male farmers, a "red flag" is raised that future interventions should consider the affirmative action law to include female farmers, since they are often socially disadvantaged.

The analysis also revealed that a proportion of the respondents expressed that the PFJ programme is a timely intervention and the impact on their crops is enormous. They contended that before the implementation of the PFJ programme, they used to record low yields due to poor quality of seedlings and diseases attacks among others. But because the programme provides inputs (seeds and fertilizers) at subsidized rates, it has eased their cost of production. A farmer detailed that:

> Before the PFJ programme, I used to farm one acre of beans due to the cost of inputs. But now that I joined the programme and it provides fertilizers and seeds at relatively cheaper prices, I have added 3 acres of maize and hired 2 people to help me during planting and harvesting. This is a good thing for my family because I get money from farming and we have enough food to eat (Leader, Pokrom Farmer's Cooperative, 2021).

This is consistent with the response from the surveys, which revealed that the programme created intensive farming activities that result in the use of on–farm labour. Majority of the farmers in the Nsawam–Adoagyiri Municipality are not able to afford the cost of mechanized farming (the study refers to them as vulnerable farmers), hence relied on manual labour. A farmer stressed that:

> The PFJ programme has a great impact on farming activities. The improved seeds, especially the hybrid ones are costly, but with the programme, the farmers can afford them. Even aside from the programme creating mini jobs, it has reduced farmer's cost of production. […. now], farmers can access agriculture inputs and extension services easily (Leader, Apesika Cooperative, 2021).

It is obvious from the analysis that the PFJ programme increased yields and on–farm jobs. These jobs were listed to include, for instance; hiring people to harvest crops, weed, sow seeds, plough farmlands, and load farm output among others. It is important to note that the data did not establish the validity of the job creations, it only determined the "nature of on–farm" jobs created. However, some of the respondents indicated the PFJ programme has not benefitted them. They revealed that certain practices undermined the implementation of the programme. Challenges ranging from the late supply of inputs and the fact that the programme became costly to adopt were raised, hence, their frustration with the way the programme was implemented in the Nsawam Municipality. This is consistent with Yaro & Teye's (2017) assertion that agriculture inputs (emphasized fertilizers) for the PFJ programme since its implementation mostly delay. This caused farmers across Ghana to assume that the programme is practically ineffective. A farmer's leader argues that:

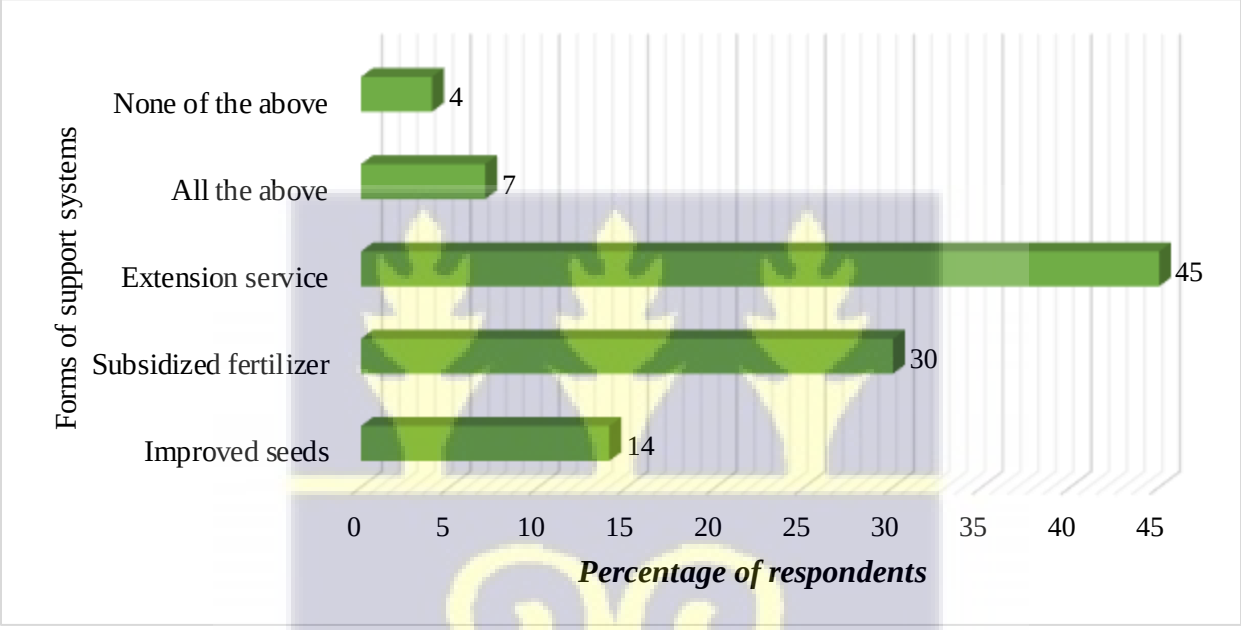
> …. indeed, the PFJ programme is only good on paper. In most cases, the extension workers visit the field only when there are inputs to supply. They pretend to be working harder but move around for a few hours in search of signatures to use as evidence that they have been to the field. What is annoying is that most of the inputs, like the seeds, are substandard and often do not germinate, notwithstanding, they inflate the prices (Leader, Apesika Cooperative, 2021).

The issue of inputs being inferior was confirmed by the PFJ Desk Officer. He explained that the seeds, especially the hybrid ones require a certain temperature to stay viable. When indications

show many of them (seeds) do not germinate, the Department of Agriculture investigated the issue and does seed–germination tests to ascertain viability before the seeds are sold to the farmers.

To understand the extent to which the PFJ programme has impacted the farmers, the study explored the kind of support systems farmers derive from the programme.

Figure 4.5: Support respondents derive from the PFJ programme



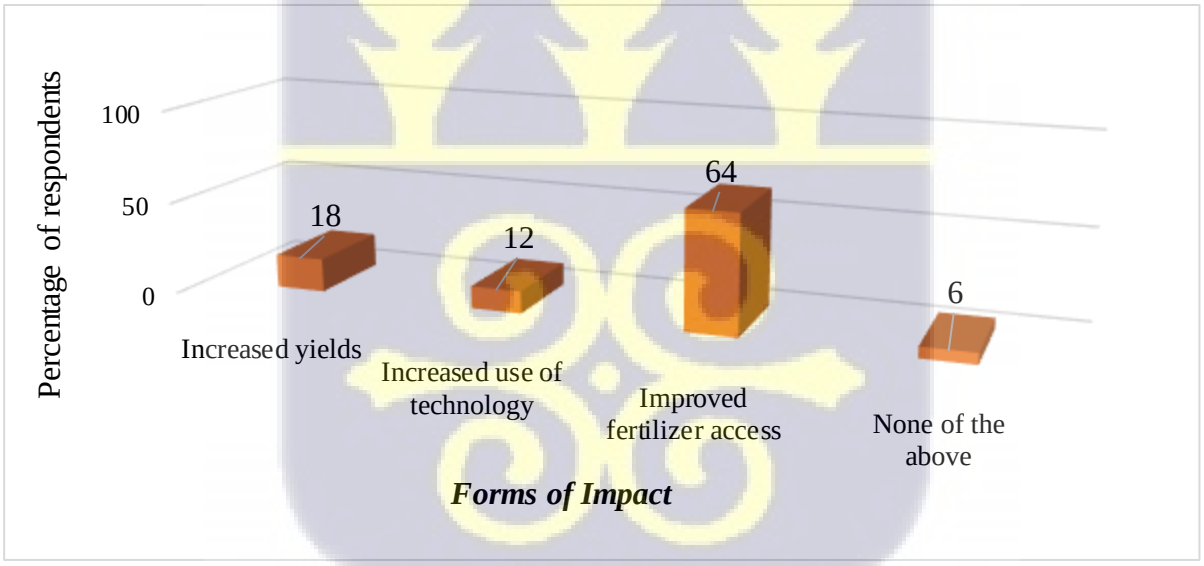
Source: Survey Data, 2021.

The results show that about 45% of the respondents had access to extension services, while 30% had access to fertilizers, and then 14% of them could access the improved seeds. Meanwhile, few of the respondents (7% and 4%) had all (or none) of the three support systems (Extension service, Fertilizers, and Seeds), respectively. This finding validates Figure 4.2. when respondents indicated they were aware of exactly these three pillars of the PFJ programme. This suggests that the kind of support packages farmers get from the programme are the pillars they are aware (since farmers

could not access market opportunities and e–agriculture service, they did not know about them). During the interviews, the PFJ Desk Officer reiterated that the programme has phases, and they are working with phase one, which is the supply of the three services. This implies that the implementation of the PFJ programme has been relegated to the provision of inputs (fertilizers and seeds) at the expense of other components of the agriculture value chain such as agro–chemicals, market opportunities, access to credit services, and protection from climate related shocks. This called for a review of the PFJ programme to re–outline the modalities to ensure sustainability.

The respondents were further asked to indicate how the support systems impacted agriculture activities in the Nsawam Municipality.

Figure 4.6: Impact of the PFJ programme on smallholder Farmers



Source: Survey Data, 2021.

The results show that about 64% of the respondents believed the PFJ programme has improved access to fertilizers. Few of them (18% and 12%) indicated that the programme has increased their yields and use of new technologies, respectively. While 6% stated that, though the programme

provided inputs, it has not impacted their farms. In line with this finding, one can infer that the programme has impacted the farmers. In the interviews, both farmers and the PFJ Desk Officer expressed the same concern. Meanwhile, these impressions are erroneous, because access to fertilizers (or improved seeds) does not guarantee success in agriculture. Though there are evidence that farmers who participated in the PFJ programme recorded high yields (Lambongang et al., 2019, 2020; MoFA, 2017a; Fawzan, 2019), what becomes the harvest when there are no output markets (or storage facilities)? Reducing the programme to the provision of seeds and fertilizers, which farmers criticized for being shoddy, affect the purpose of the PFJ programme.

4.5 Challenges local government face in implementing the PFJ programme

There have been issues and nit-picks with the PFJ programme since its implementation in 2017. This objective examined the kind of challenges that affect the role local government plays in implementing the programme in the Nsawam–Adoagyiri Municipality.

During the interviews, both farmers and local government officials admitted that there were challenges. Few of them [challenges] outlined as; late supply of agriculture inputs, lack of logistics such as computers and vehicles for staff, poor quality of inputs, lack of a system to control the quantity of inputs farmers can purchase, lack of compliance from farmers to the PFJ programme's modalities, fall armyworm infestations, and smuggling (or hoarding) of the inputs. This is consistent with conclusions in the literature that the factors that affect local government roles are multifaceted and center on operational elements arising from the attitude of the implementing authorities– i.e., politicizing the distribution of inputs; undue state interference in the activities of local authorities; and the phenomenon of bribery and corruption have consequence on government policies (Mabe et al., 2018; Gumel, 2009; Arowolo, 2008; Igbuzor, 2007).

Discussions with officials of the Nsawam Municipal Assembly revealed that the major challenge the local government face in implementing the PFJ programme was the late supply of inputs. They indicated that this problem was beyond the Department of Agriculture since the programme is implemented on behalf of the Ministry of Food and Agriculture at the district level. The PFJ Desk Officer particularized that the late supply of the agriculture inputs was a national concern[9] and affected their role in implementing the programme in the Nsawam Municipality. He remarked that:

> The PFJ programme is well implemented in Nsawam– we follow the modalities to ensure that farmers benefit. However, the main concern is the supply of inputs. Sometimes the inputs come when the farmers are mid-way into the season. The farmers are many, but the input dealers are few. Many input dealers join the PFJ programme but the late clearance of their debts by the government make them fall out, hence, the reason for the late supply (PFJ Desk Officer, 2021).

During the survey, the farmers insisted the delay in supplying the inputs affected the performance of their crops. Thus, these issues need to be addressed to improve the effectiveness of the PFJ programme. This finding corroborates a previous study by Yawson et al. (2010) and Donkoh et al. (2016), which posited that government failure to pay the input dealers on multiple occasions resulted in the suspension of the Fertilizer Subsidy Programme (FSP) in 2014. Another challenge the study found was the lack of logistics (computers, and motorbikes) for the staff. An interview with the agriculture extension officers revealed that the municipal assembly does not have

9 To understand why the agriculture inputs, especially the fertilizers delay, the researcher interviewed one of the input dealers in Nsawam and they detailed that the PFJ programme is under threat over debts owed them by the government, with some monies dating back to two years. The delay in payments, according to the supplier, is curtailing the progress of the PFJ programme, as many of the input dealers cannot fulfil their financial obligation to banks for credit acquired, thereby making it difficult to access new credits to continue importing fertilizer or purchase raw materials for farmers.

computers to keep records of the quantity of fertilizers and seeds distributed to farmers. The local government is not able to track the progress of the PFJ programme due to inadequate motorbikes for the extension agents. They depend on data from the agro–input dealers, which are often inflated as the input dealers do business with the programme. This Extension Officer narrated that:

> As an extension officer, I need to visit the farms to ensure that farmers apply the right quantity of the inputs, seeds, and fertilizers. However, there are no vehicles for our activities and the few motorbikes we have are all broken down. This affects our work and since we are not able to visit the farms, we do not know if the farmers got the subsidized inputs. Often, our allowance delays and we are not able to fuel our motorbikes, so we only come to the office, but not able to work (EO, 2021).

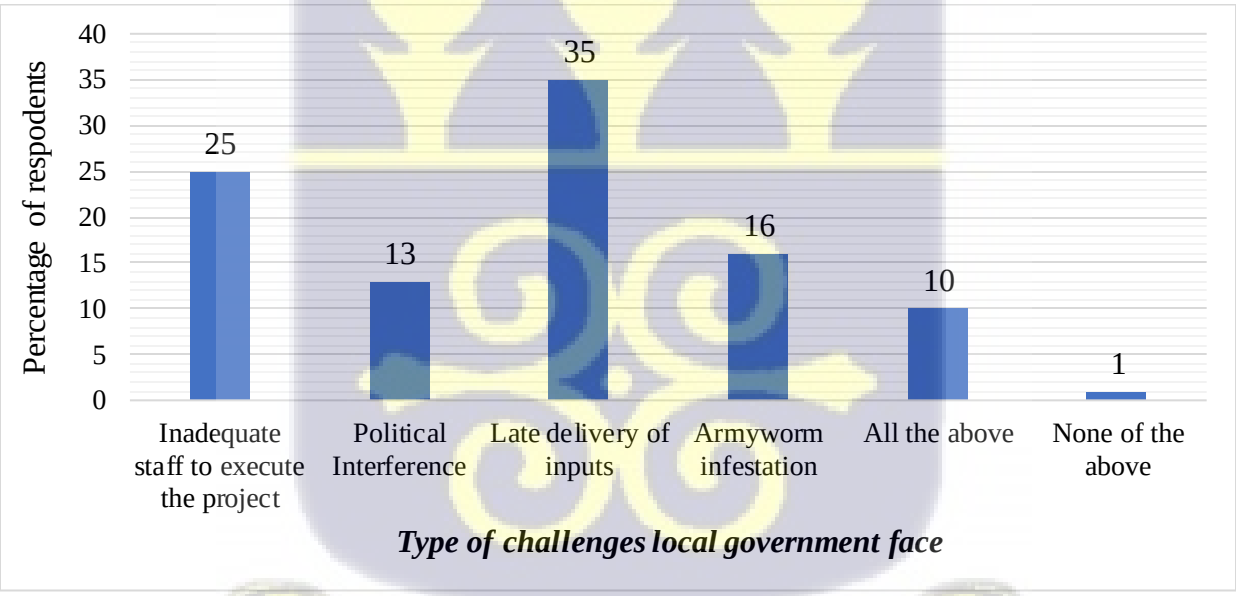
Also, the analysis revealed that a greater proportion of the farmers were not compliant. Many take advantage of the subsidy to purchase the inputs in excess and hoard them for use in the future. This agrees with the argument by Mabe et al. (2018) that farmers and politicians at the district levels, often, smuggle and hoard the agriculture inputs without any intention to use them. According to the PFJ policy document, farmer's participation in the programme is voluntary and as the manual registration system was withdrawn, it became a challenge for the local government to regulate the quantity of inputs farmers can access. This calls for the need to integrate a biometric system in the programme to regulate farmer's non–compliance. The PFJ Desk Officer narrated that:

> There is a challenge dealing with some of the farmers. No matter the limit set for farmers on the quantity of inputs, many break the protocols. A farmer will exceed the quantity in one input dealer and move to another dealer. Since the manual system is difficult to regulate the noncompliance, these excesses persist and affect our efforts in ensuring equity in the implementation of the PFJ programme. Showing an ID card as qualification for the inputs is not guaranteed that you are a

farmer, but that is the requirement. Government must make reforms to prevent these issues (PFJ Desk Officer, 2021).

To understand further the challenges that affected the implementation of the PFJ programme in the Nsawam–Adoagyiri Municipality, the researcher explored from the farmer's perspective what challenge affected the role local government plays in the implementation of the programme. It is important to note that the researcher presented these challenges in the form of multiple responses, because the interest was to know the challenge that concerns the PFJ implementation. During the interviews, some respondents reiterated challenges, which related to the cost of agro–chemicals, pesticides, and weedicides, which are not covered by the PFJ programme.

Figure 4.7: Challenges local government face in implementing the PFJ programme



Source: Survey Data, 2021.

As shown in Figure 4.5, it turned out that late delivery of inputs was the major challenge, identified by about 35% of the respondents. This corroborates Yaro & Teye's (2017) contention that inputs for the PFJ programme since its implementation have never been supplied at the right time. Also,

25% of the respondents indicated that the municipal assembly lacks staff, especially extension agents for implementing the PFJ programme. This means the provision of extension service to farmers were affected and the inadequate access to extension service limited farmers' access to information regarding their farming activities. Meanwhile, about 16% of the respondents emphasized Armyworm infestation. This is not covered by the PFJ programme but posed a challenge that undermines its implementation. About 13% of the respondents complained of political interference. This endorses Nweke's (2012) argument that local institutions play a substantive role in implementing government policies at the district level, but politicization has weakened them in living up to expectations. Based on the results, it can be inferred that the local government faced challenges that make them ineffective in implementing the PFJ programme.

Similarly, discussion with the respondents during the interviews revealed that the challenges local government face was attributed to how the PFJ programme was formulated. Many of them indicated that governments, over the years, have made policies without involving farmers in the design and implementation. To them, the PFJ programme does not reflect their needs, because it only provides fertilizers and seeds, which are often substandard, and failed to protect them from the severe climatic conditions. A farmer elaborated that:

> The PFJ programme is from Accra and does not reflect the needs of farmers. In agriculture, seeds and fertilizers do not necessarily result in high production. The inputs that farmers need are pesticides, weedicides, storage facilities, dams for irrigation, and credit opportunities. The politicians make policies without involving the farmers at the grassroots. The PFJ programme cannot survive in its current form, farmers are already tired of it, especially the fact that the inputs are supplied late. These issues make it difficult for the local government to influence the implementation of the programme at the district level (Leader, Pokrom farmer's cooperative, 2021).

This finding corroborates the argument by the Bottom–up theorists that projects from the central government should be localized to reflect the specific needs of the farmers. This is because, Farrington & Lobo (1997) explain the dangers of adopting a Top–Down Approach since centrally planned programmes always fail due to bureaucracy (e.g., FSP, YAP, AAGDS, etc.). Experience has shown that centralized top-down planning can only be effective when the bureaucratic bottleneck is removed to allow for local elites to implement them. This, therefore, implies that the PFJ programme needs to be reviewed and reformed and future intervention should adopt a more participatory approach, Bottom-up.

In this chapter, it is evident from the analysis that the Department of Agriculture is responsible for implementing the PFJ programme on behalf of MoFA at the district levels. The respondents were satisfied with the way the programme was implemented in the Nsawam Municipality and indicated that the local government played an active role in its implementation. Similarly, the respondents expressed joy for the subsidized inputs (fertilizers and seeds), though always supplied late, they indicated it has eased their cost of production. However, on the other hand, the active role local government played in the implementation of the PFJ programme was affected by some challenges and because of that, they cannot live up to expectations. Some respondents mentioned that the PFJ programme did not reflect their actual needs and that it was designed for political expediency without involving farmers in the design and implementation.

CHAPTER FIVE

FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The chapter summarizes the key findings and provides conclusion on the study. Also, it provides policy recommendations that could improve the implementation of the PFJ programme in the Nsawam–Adoagyiri Municipality, and Ghana as a whole.

5.2 Summary of key Findings

The study examined the role local government played in implementing the PFJ programme. It addressed three major objectives; (i) Investigate the institutional framework responsible for implementing the PFJ programme in the Nsawam–Adoagyiri Municipality, (ii) Assess the effect of the PFJ programme on farmers, and (iii) Explore the challenges local government face in implementing the PFJ programme. A mixed research method was used to collect primary data through administering questionnaires, scheduled interviews, and focus group discussions. The analysis was done using descriptive statistics for the quantitative data and narrative or verbatim quotes from the interviews and Focus Group Discussions for the qualitative data.

To determine whether there was an institutional framework that guides the implementation of the PFJ programme, the study found that Nsawam–Adoagyiri Municipal Assembly has an organized institutional system that they follow in implementing the programme. The study also realized that majority of the respondents were satisfied with the way the PFJ programme was implemented and attributed their satisfaction to the benefits they derived from the programme. However, aside from the satisfaction, the study provides supporting evidence for, but contradicts, previous research on

the role of local government in implementing the PFJ programme. The study confirmed the importance of local government in the implementation of agricultural sector policies, with 53% of the respondents reporting that the local government played significant role in implementing the PFJ programme in the Nsawam–Adoagyiri Municipality.

The second objective was to investigate the impact of the PFJ programme on farmers. Based on the analysis, it was revealed that the programme impacted farmer's livelihoods through increased yields and reduction in the cost of farm inputs. However, it was observed that more men benefited from the PFJ programme than women. The study also revealed that the PFJ programme created a significant number of jobs in the Nsawam Municipality. Meanwhile, with the kind of support system farmers got from the programme, there was a mixed finding on this question. On the positive side, the programme has increased farmers access to fertilizers, improved seeds (hybrid), and extension services. However, farmers complained that the inputs were substandard. Perhaps this is not surprising given that most of the hybrid seeds did not often germinate.

The last objective was to examine the challenges local government face in implementing the PFJ programme. From the analysis, the common challenge the study identified was the late supply of inputs. It was indicated that the inputs delay was beyond the Department of Agriculture since they implement the PFJ programme on behalf of MoFA. The respondents insisted that the inputs come mid-way into the farming season and the delay affect their crops performance.

Another challenge the study found was lack of logistics (e.g., computers, and motorbikes) for the staff, especially the extension officers. This challenge was critical to the local government's role in implementing the PFJ programme. The municipal assembly has inadequate computers to keep

records of the quantity of fertilizers and seeds distributed to farmers, hence, cannot track the performance of the PFJ programme.

The study also found that the farmers were not compliant. Many take advantage of the subsidy and unrestricted system to purchase the inputs in excess and hoard them for use in the future. There is a quantity limit on the inputs farmers can purchase, however, because the input dealers are many, farmers exceed their limits, and the local government finds it difficult to regulate. It was equally revealed that the challenges local government face is a result of the way the PFJ programme was designed. Many farmers indicated that governments, over the years, have made policies without involving farmers in the formulation and implementation. To them, the PFJ programme does not reflect their needs. It provides fertilizers and fails to provide agro–chemicals and environmental protection such as climatic shocks which are crucial in agriculture.

5.3 Conclusion

The study concludes that local government played a significant role in implementing the PFJ programme in the Nsawam–Adoagyiri Municipality. The findings indicated that the municipal assembly has an institutional framework that guides the implementation of the PFJ programme, and the farmers were generally satisfied with the support systems the local government provides. The jobs created by the PFJ programme were in the form of extra labour for clearing farms, planting, and harvesting. However, the number of youths that participated in the programme was clearly low. The youth in the research area reported a variety of reasons, including negative attitudes toward farming and its unprofitable nature. Farmers have generally praised the PFJ programme's significance in increasing productivity and ensuring food security. Evidence showed that the farmers were familiar with only 3 pillars of the PFJ programme (fertilizers, seeds, and

extension service). This means, the post-harvest market opportunities and e-agriculture was not known to the farmers in the Nsawam Municipality.

Despite the role local government played in implementing the PFJ programme, and the impact of the programme on farmers, there were various forms of challenges. Concerns relating to the late supply of inputs, lack of ownership and compliance by the farmers, and inadequate staff, as well as working logistics and equipment, were highlighted. The respondents were quick to point out that the PFJ programme failed to consider agro–chemical inputs such as pesticides and fungicides, credit opportunities, and output markets, which were critical to them. Evidence in relation to the literature, suggests that all local governments in Ghana are treated equally, notwithstanding the power imbalances. The role of local governments ought to be strengthened at all levels to enhance the smooth implementation of the PFJ programme.

5.4 Recommendations

Based on the findings, these policy recommendations are made to improve the implementation of the PFJ programme in the Nsawam Municipality, and Ghana as a whole.

Since the late supply of agriculture inputs was attributed to delays in debt payments, the study recommends that government should pay all debt owed to the input dealers. This will help the input dealers access new credits for the fertilizers by fulfilling their financial obligation to banks (i.e., pay back owed loans). In the long–run, government should partner with the Agriculture Manufacturing Group Ltd [AMG Fertilizers, a private sector fertilizer company in Ghana] to expand operation in making fertilizers available to the farmers.

To prevent the hoarding, smuggling, and excess purchase of the agriculture inputs, the government should consider the integration of a biometric system into the PFJ programme to regulate the noncompliance of farmers. This will help the local government and input dealers to check when farmers have exceeded the inputs limit. The mode of payment for the inputs should also include repayment in kind as an option. This will reduce the difficulties farmers, who cannot afford the in–cash payment, go through to market their products and pay for the inputs.

The Departments of Agriculture should be adequately resourced in terms of financial, human, as well as working logistics and equipment to undertake their functions. This will strengthen the role the local government plays in implementing the PFJ programme in the Nsawam–Adoagyiri Municipality. As a matter of urgency, the central government should shift recruitment powers to the Department of Agriculture to employ qualified Agricultural Extension Agents. This will improve their monitoring and evaluation of the PFJ programme to track performance at all levels.

It was evident in the findings that more men benefitted from the PFJ programme than women. In the short term, government through its agencies must engage in means–testing and proper targeting of farmers because, aside from the women underrepresentation, less vulnerable farmers seem to be cut-off from benefiting from the PFJ programme. This will ensure equity in the implementation of the programme (i.e., government should provide social protection to the poor farmers, especially those who want to expand production).

Government should not discontinue the PFJ programme. Besides the input subsidies, agriculture should be made cost–effective by investing in soil management, output market linkages, and credit opportunities. This will draw the youth into agriculture, which is the goal of the PFJ programme.

Government should also redirect the focus of the Agricultural Development Bank to its core mandate of giving soft loans to farmers to help boost agriculture production at the local level.

The study found that information regarding agriculture was a challenge in the study area. So, it is essential to establish a reliable data on the country's agricultural sector (the E–agriculture pillar should be actualized). This should be taken into consideration to create a single data base station for the whole country, including data on farmers. Interested parties will access this information to support their decision making. This will reduce the sector's risks, thereby giving banks and other financial institutions the assurance that their monies given to farmers will be returned.

5.4.1 Suggested Areas for Future Research

This study, though exhaustive within the study area, other important areas remain open for further research to enhance the implementation of the PFJ programme in Ghana.

I. The Abuja Fertilizer Conference in 2006 emphasized the importance of fertilizers in agriculture, especially in Africa. The fertilizer shortage (or poor quality) was identified as a challenge that affected the role the local government played in implementing the PFJ programme. The research could not establish why the shortage and its bad performance on crops. Further research should examine the implication of the fertilizer challenge on the sustainability of the PFJ programme using a wider geographic scope.

II. Farmers also complained of having different varieties from a single maize variety after planting, especially with the Open–Pollinated Varieties (OPV), and now prefer the hybrid variety (foreign), which is gradually collapsing the local maize seed production industry. Future research should be conducted to uncover its implications in the implementation of the PFJ programme.

III. The study was limited to Nsawam–Adoagyiri Municipality. Future research could adopt a more comparative approach to explore the role of the MMDAs in implementing the PFJ programme in their jurisdictions. This will enable generalization to be made about the performance of the PFJ programme since its implementation in 2017.

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APPENDIX I

QUESTIONNAIRE FOR FARMERS

The study examined the role local government plays in implementing the Planting for Food and Jobs Programme, using Nsawam–Adoagyiri Municipality as a case study. All the responses you provide will remain confidential and anonymous as part of the ethical standard of research. Please, tick {√} where is applicable to you. Thank you for your cooperation.

Section A: Demographic Characteristics of the Respondents

1. Gender of respondents: Male [ ] Female [ ] Other (specify)……
2. Age of respondents: 20 and below [ ] 21– 40 [ ] 41–60 [ ] 61 and above [ ]
3. Educational level: Tertiary [ ] SHS [ ] Basic (primary) [ ] No education [ ]
4. Occupational status: Farmer [ ] Teacher [ ] Trader [ ] Others [ ]
5. How many plots of land (owned or rented) do you have? (In acres)

   1–3 [ ] 4–6 [ ] 7–9 [ ] 10 and above [ ]

Section B: Institutional Framework Responsible for implementing the PFJ Programme

6. Do you think there is a framework the local follow in implementing the PFJ programme in this municipality? Yes [ ] No [ ]
7. Indicate your level of awareness of each of the following on a 4-scale measure **(4 = Highly aware, 3 = Aware, 2 = Somehow aware, and 1 = Not aware**

The Pillars	4	3	2	1
1. Subsidized fertilizers				

2. Improved and subsidized seeds				
3. Agriculture extension services				
4. Post-harvest marketing opportunities				
5. E-agriculture				

8. Are you satisfied with the roles the local government plays in implementing the PFJ programme?

Yes [ ] No [ ]

9. How do you assess the role local government plays in implementing the PFJ programme?

Playing active role [ ] Somehow playing a role [ ] Not playing a role [ ]

Section C: The Effect of the PFJ programme on Farmers in the Municipality

10. Are you enrolled on the PFJ programme? Yes [ ] No [ ]

11. Do you get support from the local government as a farmer? Yes [ ] No [ ]

12. What kind of support package do you get from the local government?

Improved seeds [ ] Subsidized fertilizer [ ] Extension services [ ]

Post-harvest market opportunities [ ] Others (specify)……

13. Does the PFJ programme has an impact on farmers in the municipality?

Yes [ ] No [ ] Neither Yes/No [ ]

14. How has the PFJ programme impacted farmers in the municipality?

Increased yields [ ] Improved access to seeds [ ] Increased the use of technology [ ]

Improved access to fertilizer [ ] All the above [ ] None of the above [ ]

Section D: The challenges local government face in implementing the PFJ programme

15. Do you have issues with lands for farming? Yes [ ] No [ ]

15. What are the issues with farmlands you faced?

Limited lands [ ] Infertile lands [ ] Lands are costly [ ]

Lands are inaccessible [ ] All the above [ ]

16. Are there challenges with how the PFJ programme is implemented in this municipality?

Yes [ ] No [ ] Neither Yes/No [ ]

17. What challenges do you think the local government face in implementing the programme?

Inadequate staff to execute the project [ ] Armyworm infestation [ ]

Political interference [ ] Lack of cooperation from farmers [ ] Other……

18. Has the challenges affected the local government roles in implementing the PFJ programme?

Yes [ ] No [ ] Neither Yes/No [ ]

APPENDIX II

INTERVIEW GUIDE FOR THE MUNICIPAL OFFICERS

The study seeks to examine the role local government plays in implementing the Planting for Food and Jobs Programme, using Nsawam–Adoagyiri Municipality as a case study. The confidentiality of your information is highly guaranteed. Thank you for your cooperation.

Institution……

Position……

Date of interview……

Section A: Institutional Framework Responsible for implementing the PFJ Programme

1.What institutional framework exist for implementing the PFJ policy? Indicate how it works

……

……

2. What roles does the local government plays in implementing the PFJ programme? Indicate how you play the roles……

Section B: The Effect of the PFJ programme on Farmers in the Municipality

3. How many farmers are in this municipality (e.g., how many are on the PFJ programme)?

……

……

4. What support services under the PFJ programme are provided to the farmers?

……

……

5. How has the PFJ programme improved farming activities in this municipality?

……

……

Section C: The challenges local government face in implementing the PFJ programme

6. What are the challenges the local government face in implementing the PFJ programme?

……

……

……

7. How has the challenges affected the institution's role in implementing the PFJ programme?

……

……

……

8. How has the challenges affected the impact of the PFJ programme on the farmers?

……

……

……

9. What interventions are implemented by the institution to ensure that the PFJ programme achieves its purpose in the municipality (i.e., Plans to ensure sustainability)?

……

……

……

APPENDIX III

FOCUS GROUP DISCUSSION

[Farmers Experience with the PFJ Programme]

The study seeks to examine the role local government plays in implementing the Planting for Food and Jobs Programme, using Nsawam–Adoagyiri Municipality as a case study. Important Note: Any information supplied will be treated as strictly confidential and identity of respondents will not be revealed– the information will be used strictly for academic work.

1. What are the key farming activities in this area?
2. What are the key challenges facing agriculture in this community?
3. What are the challenges with access to farmlands in this community? (i.e., issues with availability, appropriateness, affordability, and security)
4. Have you heard of the Planting for Food and Jobs programme?
5. What attracted you to enroll on the programme?
6. What does one need to do to be part of the programme?
7. Why didn't you join the PFJ programme?
8. Are there some who joined the programme but subsequently dropped out? Why?
9. What are your experiences with the PFJ programme (has it been impactful)?
10. How would you assess the roles the local government play in implementing the PFJ programme in this municipality? Satisfied, why?
11. What recommendations can you offer to make the programme better? (If there are challenges)
12. Which other similar programmes have you join before? What was your experience?
13. How are you involved in the implementation of the PFJ programme?