Implications of Competition Reforms in Maize and Bus Transport Sectors for Consumers and Producers in Ghana

CREW Project

CUTS International

Implications of Competition Reforms in Maize and Bus Transport Sectors for Consumers and Producers in Ghana

Prepared by

Institute of Statistical Social and Economic Research
University of Ghana
P.O Box LG 74
Legon, Ghana
Ph: +233.032.512502
Fx: +233.057.7699902
Email: info@isser.edu.gh/isser@ug.edu.gh
Web: http://isser.edu.gh

Published by

Consumer Unity & Trust Society
D-217, Bhaskar Marg, Bani Park
Jaipur 302016, India
Ph: 91.141.228 2821
Fx: 91.141.228 2485
Email: cuts@cuts.org
Web: www.cuts-international.org

Supported by:

First published: January 2015

#1504

Contents

List of Tables

List of Figures

Acknowledgments

CUTS is implementing a project entitled, 'Competition Reforms in Key Markets for Enhancing Social & Economic Welfare in Developing Countries' (CREW Project), in four countries: Ghana, India, Philippines and Zambia, and across two common sectors: Staple Food and Bus Transport with the support from DFID (United Kingdom) and BMZ (Germany) facilitated by GIZ (Germany). One of the main goals of this project is to demonstrate the benefits of competition reforms for consumers and producers, so that greater attention and support can be provided to this issue by policymakers based in developing countries.

Efforts of several people have gone into making this report a reality. Involvement in various forms, such as direct inputs, thought provoking discussions, timely reviews, incessant encouragement and guidance have been crucial, in development of the report.

First of all, we express our deep gratitude and appreciation to DFID (United Kingdom) and BMZ (Germany) facilitated by GIZ (Germany) for its extensive support and involvement in this project. Special thanks are due to colleagues at Nathan Associates.

The preparation of the report would not have been possible without careful guidance and handholding from our project advisors **Frederic Jenny**, Chairman, OECD Competition Law and Policy Committee, France and **Rughvir Shyam Khemani**, Principal, MiCRA, Washington DC.

Project Advisory Committee Members made valuable suggestions and provided guidance to improve the content of this report. A special vote of thanks goes to some of our PAC members namely **Eberhard Feess** (Professor of Managerial Economics, Frankfurt School of Finance & Management, Germany), **Natalie Timan** (Director of Economics, Competition and Markets Authority, UK), **Owen Gabbitas** (Research Manager, Productivity Commission, Australia) and **Tania Begazo** (Economist, Competition Policy Thematic Group, Investment Climate, World Bank).

This report has been prepared by **Patricia Aidam** and **Paulina Agyekum** for the **Institute for Statistical, Social and Economic Research (ISSER)** with overall guidance of **Felix Asante** (Director, ISSER). Insights and feedback from key national stakeholders of Ghana are also thankfully acknowledged.

We gratefully acknowledge the efforts of **Cornelius Dube**, **Neha Tomar**, **Shreya Kaushik**, **Appiah Kusi Adomako, Edayatu Lamptey** and **Steve Yeboah** for their diligence and hard work in assisting in research and finalising the report. We also appreciate the efforts of **Rajeev D Mathur** for editing, **Madhuri Vasnani** for proofreading and **Mukesh Tyagi** for preparing layout of the report.

Last but not the least, this report would not have seen the light of the day without the skillful direction and guidance of **Pradeep S Mehta**, Secretary General, CUTS.

Finally, any error that may have remained is solely ours.

Rijit Sengupta
Project Coordinator, CREW project

Abbreviations

AAGDS:	Accelerated Agricultural Development Strategy
ADP:	Agricultural Diversification Project
AgSSIP:	Agricultural Services Subsector Investment Programme
ASAC:	Agricultural Sector Adjustment Credit
ASIP:	Agricultural Sector Investment Project
BRT:	Bus Rapid Transit
CBD:	Central Business District
CBOs:	Community Based Organisations
CPESDP:	Co-ordinated Programme of Economic and Social Development Policies
CREW:	Competition Reforms in Key Markets for Enhancing Social and Economic Welfare in Developing Countries
CSOs:	Civil Society Organisations
CUTS CCIER:	CUTS Centre for Competition, Investment & Economic Regulation
CUTS:	Consumer Unity & Trust Society
DCR:	Diagnostic Country Report
DVLA:	Driver & Vehicle Licensing Authority
ECOWAS:	Economic Community of West African States
EDIF:	Export Development and Investment Fund
ERP:	Economic Recovery Programmes
FAO:	Food and Agriculture Organisation
FASDEP:	Food and Agriculture Sector Development Policy
FBDs:	Farmer Based Organisations
FBOs:	Farmer Based Organisations
FCBP:	Fisheries Capacity Building Project
FDI:	Foreign Direct Investment

GDP:	Gross Domestic Product
GIPC:	Ghana Investment Promotion Centre
GOG:	Government of Ghana
GPRS:	Ghana's Poverty Reduction Strategy
GPRTU:	Ghana Private Road Transport Union
GPS:	Ghana Police Service
GRTCC:	Ghana Road Transport Co-ordinating
GSE:	Ghana Stock Exchange
GSGDA:	Ghana Shared Growth and Development Agenda
ICT:	Information and Communication Technology
IFPRI:	International Food Policy Research Institute
ISSER:	Institute of Statistical Social & Economic Research
LBCs:	Licensed Buying Companies
METASIP:	Medium Term Agriculture Sector Investment Plan
MMDA:	Metropolitan, Municipal or District Assemblies
MMT:	Metro Mass Transit
MoFA:	Ministry of Food and Agriculture
MoT:	Ministry of Transport
MTADP:	Medium Term Agricultural Development Programme
MTTD:	Motor Traffic and Transport Department
NAEP:	National Agricultural Extension Project
NAFCO:	National Food Buffer Stock Company
NARP:	National Agricultural Research Project
NGOs:	Non-governmental Organisations
NLSP:	National Livestock Services Project
NRSC:	National Road Safety Commission
NRSS:	National Road Safety Strategy
NTA:	National Transport Authority
NTP:	National Transport Policy

OSA:	Omnibus Services Authority
PF Act:	Provident Fund Act
PPP:	Public Private Partnership
PPRSD:	Plant Protection & Regulatory Services Directorate
PSDS:	Private Sector Development Strategy
PSIA:	Poverty and Social Impact Assessment
QC:	Quality Contract
RTA:	Road Transport Authority
SAP:	Structural Adjustment Programme
SARI:	Savana Research Institute
SSATP:	Sub-Saharan Africa Transport Policy Performance
SMTDP:	Sector Medium-Term Development Plan
SRID:	Statistical Research and Information Directorate
STC:	State Transport Corporation
TSSP:	Trade Sector Support Programme
UNCTAD:	United Nations Conference on Trade & Development
UTAC:	Urban Transport Advisory Council
UTP:	Urban Transport Project
VELD:	Vehicle Examination & Licensing Division

Executive Summary

This report is a product of the diagnostic or research phase of the project entitled *Competition Reforms to Enhance Social and Economic Welfare in Developing Countries* (CREW project, www.cuts-ccier.org/CREW). This project is being implemented by CUTS Centre for Competition, Investment & Economic Regulation (C-CIER) with support from DFID (UK), BMZ through GIZ (Germany). The three-year project aims to demonstrate the implications of competition reforms on producers and consumers in order to attract the attention of policymakers in developing and least developed countries towards effective implementation of competition in key markets.

CREW project is being implemented in four countries: **Ghana, India, the Philippines and Zambia**, in two common sectors: bus transport and staple food. The project countries were selected keeping in mind the need to capture contrasting reforms and their implications across developing and least developed countries, whereas the sectors were selected because of the high impact they have on ordinary citizens (consumers and producers).

This report makes an attempt to assess the impact of reforms that were undertaken in the **maize** and **bus passenger transport** sectors on consumers and producers in Ghana.

Maize sector

A number of programmes were adopted by the Government of Ghana since late ’80s in order to address some of the teething challenges that Ghana was faced with in the agriculture sector, since independence - viz. low agricultural productivity, low rural income, malnutrition and rural poverty. One of the common features of these programmes was a strong (and consistent) focus on improving (annual) agricultural sector growth rate as a means to help move people out of poverty and food insecurity. There was also a strong shift in approach and policy towards the private sector and market forces to help the country achieve growth in the agriculture sector, by facilitating agriculture modernisation and better linking the agriculture sector (both input and output levels segments) to markets.

Maize has emerged as the most widely consumed staple food in Ghana in recent years. As a result of the rising demand for maize, farmers have found maize cultivation to be lucrative and sell their stock through an extensive network of private traders (market queens). These private operators control the procurement of maize and make their payments to the farmers immediately. This is a prime reason that farmers are happy to sell their produce to these private traders, and get their payments immediately. National Buffer Food Stock Company (NAFCO) was established in 2009 to mop-up any additional stock that the farmers are not able to sell in the market – and hence their share in procurement is less than 5 per cent. NAFCO was established with the objective of maintaining a food buffer stock, to help the country tide over a situation of food crisis. It has been operating through a network of 75 Licensed Buying Companies (LBCs). In view of the fact that NAFCO is envisaged as an entity to only help mop-up additional stocks of maize – the need for NAFCO to have such a large network of LBCs remains questionable. Further, there is hardly any assessment of performance of these LBCs – hence there seems to an absence of an internal drive for them to be efficient in reaching out to farmers in remote rural areas.

An impact that NAFCO has had on prices of maize is in terms of reducing the volatility in the price of the commodity. The average variation of prices between 2002 and 2008 was about 48 per cent, while that between 2009 and 2012 was about 31 per cent. NAFCO was established in the year 2009 – and the above data seems to indicate some impact resulting from NAFCO's (minimum support price) price setting functions.

The ***fertiliser*** sector was liberalised in 1991 leading to the abolishment of the government monopoly that was earlier responsible for importing fertilisers into the country. Soon after the opening up of the fertiliser import regime, a number of private players entered this market (and generally the agri-input market), as it presented a new business opportunity for them. However, the fertiliser market has been organised (due to the impact of the market forces) such that there are presently 6 private importers of fertilisers in the country.

Since 2004-05 there has been an increase in the importation of fertiliser in the country. One of the reasons was the consistent emphasis in agricultural sectoral strategies towards improving agriculture sectoral growth. For example, the primary goal of the Accelerated Agricultural Development Strategy (AAGDS) was to enhance agricultural growth rate from 4 to 6 per cent over the period 2001–2010. Application of nutrient was considered as one way to achieve these growth targets.

However, there were complaints by farmers about the quality of fertilisers and this was also reflected in the fact that in spite of considerable rise in the importation of fertilisers, there was no marked improvement in production. This prompted the Government (given the fact that it was spending considerable portion of its agriculture sector budget on the fertiliser subsidy) to put in place a strict fertiliser quality control regime. This was done through the enactment of the Plants and Fertilisers Act, 2010 – and the responsibility to implement the same was left in the hands of a dedicated department under the Ministry of Food and Agriculture – the PPRSD. Farmers now seem to be less wary of the quality of fertilisers and have seen some improvements. This has also increased the demand for fertilisers within the farming community.

A number of factors (internal and external) have consistently kept the price of fertilisers high in Ghana. In order to help the farmers achieve the above sectoral targets, the Government of Ghana was obliged to develop subsidy programmes for the fertiliser sector. Further, the Government decided on prices at which fertilisers would be sold by the private firms through a process of negotiation. This has of course resulted in considerable financial pressure on the Government, especially now – given that the Ghanaian Cedi has weakened considerably in the last couple of years. While some of the external factors (like the sliding exchange rate and rising international prices of fertiliser inputs) are difficult to address – it would be crucial for the Government of Ghana to identify domestic factors that have kept the price of fertilisers high. Two factors seem to emerge from the analysis - port handling and clearance and internal transportation costs. Some assessment is necessary to explore if these costs can be controlled – so that the cost of fertiliser to the farmers can be reduced. In view of the growing demand and rising prices, it would be impossible for the Government to continue subsidising fertilisers the way it has been done. Therefore, some alternative strategy would have to be adopted and cost-cutting done where possible.

Further, the farmers have to travel considerable distances to access fertilisers as the supply points (by the distributors) are located in the main cities/towns. This adds to the cost of fertiliser (as an input) for the farmers and reduced their margins from the sale of their stock. One way would be for the Government to work with the private fertiliser importing firms to strengthen the distribution network – to help in better reach to the farmers.

Ghana has recently adopted the ***National Seed Policy*** in the year 2013. This policy emphasises on the need for engagement of the private sector in helping farmers obtain good quality, certified seeds. A large majority of farmers sourced maize seed from traditional sources. This has implications on the productivity – as one cannot be certain about the quality of these traditional stocks. Given the strong focus on improving productivity, the Government of Ghana should explore the possibility of engaging private seed companies in providing seeds of high-yielding varieties (and not hybrid varieties). Efforts should also be made (simultaneously) to ensure that the local (traditional) varieties are preserved. Like the fertiliser sector, the Government would have to work out a strategy with the private seed companies to bolster their distribution network. This can perhaps also be done in partnership with farmers' organisations and other NGOs who work closely with the farming community.

Bus transport sector

Passenger road transport in Ghana is composed of three classes of vehicles - buses (large and small), minibuses and taxis. The buses service the longer routes with minibuses, while the minibuses and saloon cabs service the town centres and surrounding villages. The mini-bus segment have vehicles with a capacity ranging from 12 to 16 passengers, the medium buses have 18 to 24 seating capacity whilst the large bus has capacity of up to about 80 passengers.

The bus transport service (both inter-city and intra-city) is operated through both public and private service providers. Public transport in urban areas largely remains in the hands of smaller informal operators. Most of the private informal intra-city and some inter-city transport services are delivered by 'trotro' operators[1]. They do not run any schedules but will depart for their destination once the bus is full at a loading point.

Formal private bus service normally operates with medium and large buses along major inter-city bus routes. The formal bus operation for intra-city service is limited to school transport and transport for carting workers under special arrangements. The formal operations in the private sector for the inter-city bus service have newer fleet with defined schedules.

The prominent reforms undertaken in the transport sector are i) National Transport Policy (NTP) and ii) Road Traffic Ordinance.

[1] A trotro is a shell of a vehicle, usually a minivan or a medium bus that holds 12-24 people

The NTP adopted in 2008 covered all modes of transport with the vision to provide an integrated, efficient, cost-effective and sustainable transportation system responsive to the needs of society and effective for customer needs. NTP defined the policy reform in promoting private investments in the transport sector. Third draft Sector Medium-Term Development Plan (SMTDP 2012 – 2014) was aimed to facilitate private investment in the transport sector. A project under the NTP namely Urban Transport Project (UTP) is aimed at improving the mobility in the urban areas. The Road Traffic Ordinance 1952 provided for the regulations on licensing, road traffic control, and vehicle construction amongst others.

In this report four key components of the bus transport regime in Ghana have been analysed. These pertain to: subsidised public transport, liberalised transport financing, route rationalisation and road safety.

Subsidised public transport: Metro Mass Transit (MMT)

The objective of the MMT to provide cheap transport option for ordinary and poor commuters in the country has not been fully realised. Since the Government regulates price, MMT is not able to breakeven, thus limiting the number of operational fleet. This has impacted the availability of these buses. Majority of passengers interviewed reported that they (75 per cent) use private informal bus service as opposed to the MMT service (18 per cent) due to limited availability of the MMT. Yet some benefit to the passengers has accrued as the survey data revealed that 50 per cent of those who use MMT services are lower income earners (<US$122/month) as it is about 15-20 per cent cheaper than the informal bus services.

It emerges from the study that MMT services have potential but need to improve on its efficiency and accessibility. MMT can improve its reach by strategically deploying its expanding fleet especially to areas which are poorly serviced (or not serviced) by the private sector operators. This would help MMT find a 'niche' market.

There is a need to explore the creation of a sustaining business model for MMT. Finding a 'revenue model' for the entity seems to be a prime necessity – and it is good to note that this has been entrenched in the strategic business plan of MMT (2014-17).

Policy reform for promoting private sector bus transport financing

It is estimated that most of the informal buses in commercial operation are over 15 years of age.[2] Due to the high cost of new vehicles, vehicle owners are only able to afford relatively cheaper imported second hand vehicles from Europe, Japan and other countries.

There has been limited success in sourcing for private sector finance in the bus transport sector dues to various reasons. The main reason, however, was the lack of credit worthiness of the operators and their high defaulting rates. Moreover, due to high interest rates, it is difficult for the operators to procure finance. Most of the operators interviewed (94 per cent intra-city and 93 per cent inter-city operators) still used their own resources for bus

[2] According to the SSATP working paper 75 (2003)

acquisition. Only a handful (6 and 7 per cent in these markets, respectively) could access loan facilities.

Due to the social inclination of the bus transport sector, the government indirectly regulates the fares. Price regulation (fare determination) is done through the Road Transport Board using some level of negotiation with the transport unions. This process though is not transparent as it is based on the negotiating power of the parties. Most operators struggle to recover cost of new vehicle fleet resulting in differential pricing especially on intercity routes. They charge their own fares (even though illegal), with some operators charging higher by not subscribing to any union membership.

For the development of transport sector in Ghana:

- There is a need to find sustainable avenues of PPP engagement to develop infrastructure as well as services.
- Some form of restructuring, possibly in a business of leasing buses to private operators, will be required to increase the private supply in the service sectors of the economy.
- Also there are currently no tax incentives for private bus operators in Ghana. In order to realise the outcome of greater private participation in providing transport infrastructure and services, the Government of Ghana needs to identify some such 'incentive measures'.

Policy reform on routing (route rationalisation)

The Regulation 121 provides for private informal bus operators to operate under defined management structures by tendering on competitive fares, service levels, safety, etc. for sole operation on specific routes. But presently in Ghana, the regulation has not been fully realised.

Since the licenses being provided are not tied to a particular area, most of the profitable routes are being serviced. It has been observed that most operators who are members of unions are still allocated routes by their union in accordance with preference and ability to lobby. Some who are not union members ply on different routes at different times of the day and in a week as deemed lucrative. Most (55 per cent) ply on single route whilst 14 per cent ply on double routes. The remaining ply between 3 to 6 different routes at different time schedules.

In terms of the licensing process, it is fairly easy to obtain a license and permit in Ghana. About 45 per cent of intra-city bus operators indicated that they obtained their licenses within 2 to 3 weeks; whilst 28 per cent said that it took them a week.

To ensure proper availability of buses in Ghana, the Government had attempted to form small bus companies to tender routes and integrate the private informal bus operators. But such attempts have been rejected by the unions for various factors including the rejection of being under agency control and oversight of funding from an independent management source.

It is important for the sustainability of bus transport sector in Ghana, to integrate route rationalisation with route licensing. The impending National Transport Authority, being proposed by the Government of Ghana has this agenda on priority.

Road safety reforms

It is estimated that over 1,700 people die annually through road traffic accidents in Ghana, contributing to 1.6 per cent of GDP which is estimated to cost US$130mn. A leading reform towards road safety in Ghana was the establishment of National Road Safety Commission (NRSC) (Act 567 of 1999). But the quality limitations; driving and technical standards etc. have not been improved significantly. Preventive maintenance, which constitute a planned programme throughout the vehicle's life is largely absent for buses in Ghana. As such vehicles experience frequent breakdowns and ultimately fail to live up to the recommended technical lifespan.

The formal private bus operations are generally considered safer and more comfortable than the informal bus service that has bad accident records. The informal buses (Trotros) are uncomfortable, dirty and sometimes dangerous.

Less than a third (29 per cent) of the passengers acknowledged positive changes in bus services quality in the past few years. About a quarter (24 per cent) passengers attributed these changes in bus service quality to government intervention. This indicates that greater government intervention in regulating quality of buses would be essential.

Way forward

Some of the issues that emerge from the analyses of the experience in the two sectors, from a perspective of promoting competition and regulatory reforms in the maize and bus transport markets in Ghana are as below:

- Effective regulatory checks and balances are crucial for ensuring that benefits from a liberalised regime is derived by the beneficiaries (as evident from the experience in the fertiliser sector in Ghana).

- There is a need for the Government and private sector to develop arrangements and partnerships (PPPs) in certain key markets (an example is the Metro Mass Transit – which is in dire need of a 'revenue model' – something that can be achieved if private operators are allowed to attach their services).

- Identify ways and means for meaningful engagement of the private sector – such that it creates jobs and employment (especially for the youth). Incentives and schemes can be developed by the Government of Ghana to enable young entrepreneurs to enter the public (bus) transport sector – as it can provide good opportunity for them.

- Some anti-competitive tendencies seem to emerge in both the sectors – and need to be closely monitored by the line Ministries in consultation with the Ministry of Trade and Industry (in the absence of the Ghana Competition Authority).

- Civil society organisations should be encouraged to become champions of competition and regulatory reforms by engaging them in related processes in key sectors where reforms are required in the interest of the people and the country.

- Ghana should not delay in the development of the national competition regime in the country – including the national competition policy and the competition law – to be implemented by a well-endowed national competition authority.

1. Introduction

The process of competition is fairly weak in almost all the developing countries. All the competition inhibiting factors lead to considerable welfare loss – for both the producers as well as consumers. For example, government regulating input and/or output prices severely restricts the operational freedom for producers and their profitability. Significant barriers to entry into the market limits the number of players, resulting in a general loss in competitive fervour among the players and may lead to cartelisation, reduced operational efficiency, lack of innovation, etc. These also will have a significant adverse impact on the consumers, with non-competitive prices, inferior product quality, lesser number of choices, etc.

Against this backdrop, CUTS Centre for Competition, Investment & Economic Regulation (CUTS C-CIER) has undertaken a project entitled 'Competition Reforms in Key Markets for Enhancing Social & Economic Welfare in Developing Countries' (CREW Project, www.cuts-ccier.org/CREW). The project is being executed in Ghana, India, The Philippines, and Zambia and across two common sectors: staple food and passenger transport. This project endeavours to demonstrate the benefits of competition reforms for consumers and producers, so that greater attention and support can be provided to this issue by policymakers. The study is also directed towards framing a toolkit to identify areas that require competition evaluation and suggest ways that may promote competition enhancing reforms.

Project Objectives and Selection of Sectors

One common feature cutting across developing countries is the severe resource constraints under which the policy makers need to operate, and the difficult socio-politico-economical choices they need to make while choosing between various public policy areas. The project needs special mention as the focus is solely on the developing countries, where the evolution of fair, competitive markets has historically been slow. It has been designed to:

(a) draw policy makers' attention towards the competition restrictive impacts of various administrative rules/regulation/convention, legislations, etc.;
(b) establish the enormity of the adverse impact of such policy measures on both producer and consumer welfare; and
(c) demonstrate the considerable welfare gain possible from suggested policy reforms.

Staple food and bus transport sectors were considered for this study because of the significant impact they have on the daily lives of an average citizen. In Ghana, the Diagnostic Country Report (DCR) covers maize, the country's staple. The DCR aims to identify existing concerns of consumers and producers in the maize sector and propose market reforms to help address these concerns, and estimate benefits thereof. More specifically its objectives are as follows:

- review trends in the Ghanaian maize sector, particularly policies affecting the market and competition in various components of the maize value chain;
- describe the state of competition in the Ghanaian maize industry;
- assess the impact of past and current competition reforms (i.e. reforms enhancing competition in the market) on consumers and producers, and based on this assessment make recommendations; and

- identify concerns (of consumers and producers) and assess the potential impact of reform measures that can help address such concerns.

Meanwhile for passenger transport, the DCR focuses on bus transport services. The DCR examines:

- the institutional and regulatory framework governing the bus transport sector;
- identify major competition reforms in the sector, and analyse the impact of the reforms on the welfare of consumers and producers; and
- identify further priority reforms to improve competition and efficiency in the sector.

This DCR should be useful to policymakers and stakeholders in the competition reform agenda of Ghana.

Report Structure

Chapter 2: Background

The chapter first presents a brief discussion on the reforms in the overall economic policy in general and competition policy in particular in the light of the post 80s economic liberalisation. The chapter also deliberates on the overall policy paradigm and some recent changes in the focus sectors of staple food and bus passenger transport.

Chapter 3: Competition reforms in staple food sector (maize) and implication on beneficiaries

The chapter assesses the important reform measures relating to the maize market in terms of impact on market structure, competition and welfare on farmers and consumers. Further the chapter links the impact of the select reforms on the consumers and farmers.

Chapter 4: Competition reforms in bus transport sector and implication on beneficiaries

The chapter assesses the important reform measures relating to the passenger bus transportation market in terms of impact on market structure, competition and welfare on operators and passengers. The chapter also draws the linkage between the reforms and the impact on passengers and operators.

Chapter 5: Way forward

This final chapter summarises the way forward based on the key findings of the study.

2. Background

History of Economic and Private Sector Reforms in Ghana

After attaining independence in 1957, the Government of Ghana held the view that the country would be hampering its advancement to socialism if private capitalism were encouraged. Beginning 1983, this position was reversed as Ghana embarked on major social, political and administrative reforms through adoption of the Economic Recovery Programmes (ERPs). Within these programmes, promotion of private sector was an integral element to achieve economic development. The approach was to empower people to take entrepreneurial initiatives and help them to build businesses. This also set the pace for a comprehensive programme of opening up the economy to private investors, including foreign direct investments.

Some of the major reform programmes that helped enhancing the role of the private sector in the Ghanaian economy are enumerated hereunder:

- The Economic Recovery Programme (ERP)[3] launched in 1983, broadened the institutional support for the private sector in Ghana.
- Introduction of Structural Adjustment Programme (SAP) of the 90's[4] aimed to address the strong inflationary pressures on the economy.
- Fiscal adjustment plan of 1997 was aimed at inculcating fiscal discipline within the Ghanaian economy.
- Development of Ghana's Growth and Poverty Reduction Strategy (GPRS II, 2003-05) and the establishment of the 'Golden Age of Business' to promote the private sector development from 2000 to 2008.
- The introduction of the Shared Growth Development Agenda since 2009 and establishment of the Private Sector Development Strategy (PSDS-II, 2010-15) with the key objective to improve private sector competiveness domestically and globally.

The overall objective for private sector reforms was to bring a greater degree of focus and co-ordination to private sector developmental efforts. It was to identify and fill in gaps where private sector developmental challenges were not being met by:

- improving the investment climate;
- supporting economic transformation and innovations;
- increasing productivity;
- creating incentives for formal jobs; and
- increasing opportunities for the poor.

Certain key adjustments were made in policies, regulation and institutions to unleash the private sector in the country. A lot of them were undertaken in the second half of the 90s, and

[3] For examples of outcome of some privatisation measures in the transport industry under the Economic Recovery Programme, kindly refer to Annexure 3

[4] Specifically, the Enhanced Structural Adjustment Facility (ESAF) implemented since 1995

focussed on foreign investment promotion, reforming the regulatory framework, accelerating the divestiture programme and liberalising the financial sector.[5] Specifically, some of the most notable developments were:

- establishment of a free market system with increasing integration into the global economy which was combined with actions taken to facilitate greater foreign investments in some key sectors;
- adoption of private sector led growth with the role of the government as a facilitator rather than a participant in the market;
- development of a modern facilitative pro-business public service through public sector reform and strategic measures;
- improvement of micro-economic environment for investment attraction and financial sector reform under the financial sector strategic plan; and
- preparation of the Private Sector Development Strategies I and II to guide the process.

It also needs to be mentioned here that this period was characterised by the establishment of certain institutions which also facilitated the process of private participation in the economy:

- Ghana Stock Exchange (GSE) was incorporated in 1989 with trading on its floor commencing in end-1990.
- Ghana Free Zones Board, which was established in 1995 to enable establishment of free economic zones in Ghana.
- Establishment of the Ghana Investment Promotion Centre (GIPC Act 1994, amended in 2013).
- Development of the National Trade Policy of Ghana (2005).

Narrative on the National Competition Regime

Presently, Ghana does not have a competition regime (policy and/or law) in place, although a few efforts at developing competition legislation have been made over the years. The Ministry of Trade and Industry oversees all trade dealings and practices, including unfair practices. Two draft Bills had been prepared earlier: the Trade Practices Draft Bill, drafted in 1993, and the Draft Competition and Fair Trade Practices Bill in 2004. However, none of them could be developed into an Act of the Parliament.

The main source of legal authority towards competition was the issuance of the 'Protection against Unfair Competition Act, 2000' (Act 589), administered by the Minister for Justice. The Act 589 does not apply in the same way as a modern anti-trust or competition legislation would. It mainly covers guidelines on intellectual property and proprietary information, whether or not it is registered, as well as the protection against practices and activities which restrict competition. The Ministry of Justice under the Act is authorised to initiate or cause to initiate, the development of regulations aimed at protecting the consumers and producers of goods and services from unfair competition.

[5] https://www.imf.org/external/np/pfp/ghana/ghana0.htm

The Unfair Competition Act 2000 does not create any regulatory body or administrative process for the purpose of enforcement. It only provides a mechanism of seeking redressal by the aggrieved party through the normal process of the court. The court, then may award compensation or other equivalent suitable remedies.

The general principle, under the Act 589, is to ensure that conduct or activity in the ordinary course of business should not be: contrary to honest practices; anti-competitive; or constitute unfair competition. An activity or conduct includes an act, practice or an omission to act. However, the Unfair Competition Act does not provide a definition of "honest practices"[6].

The Act, although an important starting point, cannot regulate the general competition environment in Ghana. It does not have any provision, notification or approval with respect to restrictive business practices, mergers and acquisitions and unfair trade practices. There is a need for an autonomous body to perform the tasks efficiently. Given the economic and industrial progress of Ghana, the Act is out-dated and less relevant as many firms are now present in the Ghanaian market. The act does not lay down any principles for ensuring a level playing field of the various players providing goods and services.

Government of Ghana initiated a Trade Sector Support Programme (TSSP) in 2005. Establishment of Competition Law and Authority in Ghana was a part of this programme. CUTS was contracted to develop a new competition law for the country in 2008-9. The draft law was developed based on the existing frameworks and experience from other countries. However, this draft bill could not be mustered by the erstwhile Government in the Parliament. It was also suggested by UNCTAD to the Government, that the best way would be to first develop a national competition policy and then develop the competition law. This delayed the process of adoption of a competition law in Ghana. Together with Nigeria, Ghana is one of the few large economies of sub-Saharan Africa that still does not have a national competition law.

Later, the Ministry of Trade and Industry applied for funding from the Export Development and Investment Fund (EDIF) to draft the national competition policy document. The fund was approved and a local firm was assigned the responsibility to draft the policy document.

There is no information in the public domain about the development of the draft competition policy for Ghana and its present status. Neither is there any information about the process for adoption of the policy. From some of the internal sources, the process of development of the national competition policy seems to be on-going at the moment – and is likely to be adopted by the Government of Ghana in 2015.

[6] Adapted from 'Competition Law Africa' by The Bowman Gilfillan Africa Group

3. Competition Reforms in the Maize Market & Implication on Beneficiaries

This chapter has been organised into three components as under:

(i) Background of the agriculture sector

This section provides a brief historical account of the various strategies adopted from time to time by the Ghanaian government in the agriculture sector, with a focus on issues relevant for the maize market. Special emphasis has been given to highlight how the role of the private sector in the agriculture sector has evolved over the time and especially so in the maize market.

(ii) Relevant policy and institutional reforms in the maize market

In this section policies, reforms and institutions that are likely to have pro or anti-competitive impacts on various 'nodes' of the maize value chain have been discussed in brief.

(iii) Impact of policy and institutional reforms on beneficiaries along the maize value chain

This section analyses the above policies and institutional reforms (especially their pro and/or anti-competitive elements) and highlight their impacts on the ultimate beneficiaries in the maize market (i.e. producers/farmers and end consumers). This analysis has covered various nodes of the 'maize value chain' – and has been undertaken through primary and secondary data collection and analysis[7].

Background of the Agriculture Sector

As in a number of developing and least developed countries of sub-Saharan Africa, agriculture in Ghana is faced with a number of challenges including:

- reliance on rain-fed agriculture;
- low performing irrigated agriculture;
- low level of mechanisation in production and processing;
- high post-harvest losses as a result of poor post-harvest investment and management;
- low level and ineffective agricultural finance;
- poor extension services as a result of several institutional and structural inefficiencies; and
- inadequate markets and processing facilities.

Various reform programmes were designed from time to time by the Government of Ghana in the agriculture sector to address some of these concerns. The rest of this section provides a brief description of some of these policies.

[7] For the detailed methodology for research undertaken in Ghana, kindly refer to Annexure 2

(i) <u>Medium Term Agricultural Development Programme (MTADP)</u>

The first post-ERP agricultural strategy was the Medium Term Agricultural Development Program (MTADP), which was initiated in 1988 jointly by the government of Ghana and the World Bank. The key objective was to establish and support market-led growth in agriculture. Accordingly, the government reduced interventions in input and output markets to provide an enabling environment. The government also increased investments in public goods and services, including feeder roads, marketing infrastructure, irrigation, research, and extension[8]. The MTADP helped initiate key institutional reforms in the sector and bring some investments needed to achieve a higher growth rate in agriculture (about 4 per cent).

MTADP was able to provide good results on the ground, as food production kept well ahead of population growth (1994-97), with positive effects on rural and overall income, nutrition and poverty levels. The performance of traditional export and industrial crops was less positive, while non-traditional agricultural exports have shown remarkable growth, especially fruits and vegetables. Between 1991 and 1997 the export of pineapples increases by over 200 per cent. Cassava output has quadrupled, and maize has tripled. Cocoa production rose at an average annual rate of 4.3 per cent.

Effective implementation of MTADP motivated the Ministry of Food and Agriculture, Ghana to develop various follow-up sectoral programmes as presented below:

- Agricultural Diversification Project (ADP) (1991-1999)
- National Agricultural Research Project (NARP) (1991-99)
- National Agricultural Extension Project (NAEP) (1992-2000)
- Agricultural Sector Adjustment Credit (ASAC) (1992-99)
- National Livestock Services Project (NLSP) (1993-99)
- Agricultural Sector Investment Project (ASIP) (1994-2000)
- Fisheries Capacity Building Project (FCBP) (1995 to present), etc.

A long-term national development policy framework, Ghana-Vision 2020, was launched in 1995 before the end of the MTADP period.

(ii) <u>Accelerated Agricultural Development Strategy (AAGDS)</u>

Building on the achievements of the MTADP, the Accelerated Agricultural Development Strategy (AAGDS) was prepared in 1996 to enhance agricultural growth. This policy had as its primary goal increasing annual growth rate of the sector from 4 to 6 per cent over the period 2001–2010. Given that historically growth in the sector has been characterised by land expansion, the policy emphasised a more intensive crop production systems particularly in areas of high agriculture potential.

To achieve this, small-scale irrigation development and utilisation as well as the use of modern inputs and mechanisation were prioritised. The second core objective of the AAGDS was the promotion of high-value crops and diversification of agricultural exports. Non-traditional export crops were targeted as part of the export diversification drive.

[8] http://www.ifpri.org/sites/default/files/publications/ifpridp01006.pdf

Activities under the AAGDS fell under five strategic areas: (*i*) promotion of selected products through improved access to markets; (*ii*) development and improved access to technology for sustainable natural resource management; (*iii*) improved access to agricultural financial services; (*iv*) improved rural infrastructure; and (*v*) enhanced human resource and institutional capacity.

(iii) *Food and Agriculture Sector Development Policy (FASDEP I&II)*

In 2002, the Ministry of Food and Agriculture (MoFA) developed a 'Food and Agriculture Sector Development Policy' (FASDEP I). The objectives of this programme included food security, poverty reduction, supplying raw materials to industry and ensuring the sector's continued contribution to GDP, foreign exchange and government revenue. Reflecting the market orientation of government policies more generally, the private sector is seen to be the main engine that will deliver on these objectives.

The main break with the past was FASDEP's focus on a sector-wide approach to agricultural development, contrasting with the discrete project approach pursued in the past. FASDEP was designed to contribute to Ghana's Poverty Reduction Strategy (GPRS) via infrastructure development, the promotion of appropriate technologies, and improved extension services.

A Poverty and Social Impact Assessment (PSIA) of the strategic objectives for agricultural policy criticised FASDEP as a one-size-fits-all policy that does not take account of the diverse needs of different stakeholders in the agricultural sector, notably the very poor and women. Some of the shortcomings highlighted were poor targeting of programme beneficiaries due to failure to account for their peculiar circumstances, weak problem analysis resulting from the insufficient involvement of beneficiaries, and the lack of proper coordination among relevant ministries, departments and agencies.

Based on these, a second FASDEP (FASDEP II) was formulated in 2006 to serve as the framework for a relatively longer term policy agenda of achieving the agriculture sector component of the GPRS II. Accelerating modernisation of agriculture was considered critical, although it was not evident that any significant modernisation had begun.. The fundamental objectives of the FASDEP II reflect the expected role of agriculture in the GPRS II. Six objectives were set in the FASDEP II: (*i*) food security and emergency preparedness; (*ii*) improved growth in incomes; (*iii*) increased competitiveness and enhanced integration into domestic and international markets; (*iv*) sustainable management of land and environment; (*v*) science and technology application in food and agriculture development; and (*vi*) improved institutional coordination.

A Medium Term Agriculture Sector Investment Plan (METASIP) has been designed for implementing the medium term (2011-2015) programmes of the policy. The targets of the METASIP are to: (*i*) achieve annual sectoral growth rate of 6 per cent, and (*ii*) reduce by half the number of people living in poverty by 2015 (in accordance with the first target set in the Millennium Development Goals).

Maize Sector in Ghana

Maize is one of the most important cereal crops produced in Ghana and it is also the most widely consumed staple food in Ghana with increasing production since 1965 (FAO, 2008; Morris *et al*, 1999). In Ghana, maize is produced predominantly by smallholder resource poor farmers under rain-fed conditions (SARI, 1996). Maize is only the 4th largest agricultural commodity in terms of value of production in the year 2012 accounting for 3.3 per cent of total agricultural production value (SRID, Ministry of Agriculture, Government of Ghana, 2012).

Root crops such as yam, cassava and cocoyam, together with plantains are by far more important in terms of production value due to their dominance in the Ghanaian diet. However the importance of maize in Ghanaian diet cannot be overestimated. Ghanaians consume maize as a starchy base in a wide variety of porridges, pastes and grits. Green maize (fresh on the cob) is eaten parched, roasted or boiled and plays an important role in filling the hunger gap. The per capita consumption of maize in Ghana in 2012 was estimated at 43.8 kg/annum and an estimated national consumption of 1,949,897Mt in 2012 (SRID, 2012).

Although maize production occurs in all of Ghana's ten regions, the production figures obtained from Ministry of Food and Agriculture (MoFA) shows that from 2000 to 2012, about 82 per cent of total maize output come from five regions in three of the five agro - ecological zones (Table 1).

Table 1: Distribution of Maize Production by Region (2000-2012)

Regions	Agro-ecological zones	Output (MT)	%	Area (Ha)	Yield (MT/Ha)
Central	Semi-deciduous rainforest	192,069	13.68	104,984	1.83
Eastern	Semi-deciduous rainforest	405,377	19.77	176,825	2.29
Ashanti	Semi-deciduous rainforest	205,419	13.59	154,613	1.33
Brong-Ahafo	Forest savanna transition	570,350	26.22	244,922	2.33
Northern	Guinea savannah	209,353	8.73	139,214	1.50

Due to the dependence of production of maize on an increasingly erratic rainfall conditions, market for maize tend to follow the direct impact of these rainfall conditions on production. The situation is exacerbated frequently by the poor or non-existent post-harvest management and road infrastructure in the country. The situation is such that even in periods of good moisture conditions, inefficient storage systems often result in price pressures arising from glut at harvest time, high post-harvest losses and non-availability towards the end of the season.

Relevant Policy and Institutional Reforms in the Maize Market

This section presents a brief description of relevant policies and institutions (their purpose and functions) that are likely to have implications on various nodes of the 'maize value chain', viz. inputs, production, procurement, storage and distribution.

Fertiliser Sector Strategy and Reforms

For the purpose of this report, certain relevant aspects of the fertiliser sector strategy in Ghana were considered critical and have been examined (especially from the perspective of their implication on the farmers): (i) liberalisation of fertiliser import; (ii) pricing of fertilisers; and (iii) quality regulation of imported fertilisers.

The fertiliser sector reforms were undertaken by the Government of Ghana since early 1990s – a process which started by the abolishment of the government monopoly in fertiliser import and distribution in Ghana. A number of importers have entered the market now as the demand for fertiliser has grown in the country.

In addition to the liberalisation of the import regime, the country has also embraced a (related) legislation to supervise the quality of fertiliser imported into the country. There was a concern that in spite of fertiliser import increase–corresponding increase in production was not happening in the country. The achievement and maintenance of a standard level of fertiliser quality are essential to protect farmers and fertiliser businessmen as well as the well-being of the country as a whole. Benefits of fertiliser sector reform cannot be fully accrued by the producers (farmers) unless there is strict supervision of the quality of fertiliser entering the country resulting from such a liberalised regime.

The principal objective of a fertiliser regulatory system is, therefore, to help the farmer by ensuring that good quality fertiliser is made available leading to productivity gains. This would ultimately help consumers by improving food supply in adequate quantities.

The Plant and Fertiliser Act, 2010 (Act 803) replaced the Prevention and Control of Pests and Diseases of Plants Act, 307 of 1965. The purpose of the Act was to provide for efficient and effective plant protection; prevent the introduction and spread of plant pests; regulating against fraud in the production, sale, offer or exposure for sale of agricultural, vegetable and other seeds and regulate the importation, sale and production of fertilisers.

It was envisaged to also provide other benefits including: (i) promotion of further agricultural development in the country; (ii) ensuring continued improvement in fertiliser quality; (iii) access to useful data by farmers, extension workers, marketing specialists and other agricultural specialists concerned with the use of fertilisers; and (iv) financial protection for the government by minimising shortfalls in food staples due to inefficient or adulterated fertilisers.

The Plant Protection and Regulatory Services Directorate (PPRSD) was established in 1965 by an Act of Parliament, *Prevention and Control of Pests and Diseases, Act 307*. This agency is now responsible for implementation of the *Plants and Fertiliser Act, 2010 (Act 803),* and has been mandated to organise, regulate, implement and coordinate the plant protection services needed for the country in support of sustainable growth and development of Agriculture[9].

The Directorate looks after the following four aspects:

- Crop Pests and Disease Management
- Seed Inspection and Certification
- Pesticides and Fertiliser Regulation and
- Plant Quarantine

National Food Buffer Stock Company (NAFCO)

To ensure the security of Ghanaian farmers (especially small farmers) and insulate them against losses resulting from the anticipated increases in production as well as ensuring national food security, MOFA set up the National Food Buffer Stock Company (NAFCO) in the year 2009 with the following mandate[10]:

- to guarantee farmers an assured income by providing a minimum guaranteed price and ready market;
- to mop up excess produce from all farmers in order to reduce post-harvest losses resulting from spoilage due to poor storage, thereby protecting farm incomes;
- to purchase, sell, preserve and distribute food stuff;
- to employ a buffer stock mechanism to ensure stability in demand and supply;
- to expand the demand for food grown in Ghana by selling to state institutions such as the military, schools, hospitals, prisons, etc.;
- to manage government‘s emergency food security;
- to facilitate the export of excess stock; and
- to carry out such other activities that are incidental to the attainment of the above objects or such other duties as may from time to time be assigned by the Minister of Food and Agriculture.

It needs to be mentioned here that NAFCO was not envisaged to be a public ‘monopoly’ in the procurement market. The development of NAFCO was done appreciating the fact that a fairly strong private-trader (market queens) run procurement system was in existence in the country.

To a certain extent NAFCO was developed to supplement the existing system in the country. NAFCO still operates at 3 per cent of the total market share in Ghana. Hence the activities of NAFCO do not have any significant effect on the prices of maize and cannot be said to introduce any distortion of the pricing of the commodity in the country.

One of the other crucial functions of NAFCO was to stabilise the wholesale price of maize in the market–which had often been fairly volatile in the country.

[9] https://www.ippc.int/countries/ghana/basic-reporting/organogram-ghanaian-nppo

[10] http://gssp.ifpri.info/files/2011/11/MoFA-Program-Evaluation-Report.pdf

National Seed Policy, 2013

Agriculture productivity depends heavily on quality of seeds. The early strategy of seed sector development in Ghana was based heavily on public sector investments and subsidised seed supplies to the farmers. However, in the long-run the old strategies were difficult to monitor and less cost-effective.

This brought a shift in the approach towards the late 1990s with the closure of public owned Ghana Seed Company. The involvement of the private sector, which includes seed companies, seed producers, farmer based organisations (FBOs) and Community Based Organisations (CBOs), was encouraged and supported to lead in the commercial operations of the seed industry.

Government of Ghana, recognising the critical role of the seeds, adopted a National Seed Policy in 2013. The Government aims to harness the advantages of both the public and private actors to reform this sector. The main objective of the National Seed Policy, 2013 is to support the development and establishment of a well-coordinated, comprehensive and sustainable private sector-driven seed industry through systematic and strategic approaches which would continuously create and supply new improved varieties for use by farmers and, further, support successful seed production, certification, marketing and seed security systems which will form the basis for food security and support the overall development of the agricultural sector.

The policy will be applicable to all crops that are listed as priority crops of the seed sector including cereals (maize, rice, sorghum, millet); legumes (groundnut, cowpeas, soybean); roots & tubers (cassava, yam, cocoyam, sweet potato); tree crops (mango, orange); and fruits & vegetables (pineapple, plantain pawpaw banana, tomato, pepper, onion, okra, garden egg).

Although the development is gradual, the government aims to work towards accelerating the takeover by the private seed sector of certified seed production and marketing and will ensure that public sector operations in these activities are progressively minimised. The government does not interfere with prices of seed supplied by the private sector. The prices quoted by the seed producers are mostly based on the cost of production and packaging material for the seed.

<u>Seed Import</u>*:* In recent times, some private sector seed companies have imported hybrid maize seed stocks into the country to start the hybrid maize seed market. Also, although a rare occurrence, under emergency situations where the national seed system has been seriously compromised, seed imports have become necessary. A quality seed import programme to meet regular (non-emergency) needs, must be based on the following:

- a vigorous testing and demonstration process to identify adaptable and superior varieties and growing conditions;
- compliance with existing seed and plant quarantine legislations;
- conformity with international and regional protocols for seed trade; and
- seed must be accessible and affordable for farmers

Imported seeds must only complement locally produced stocks and not displace them. The main challenge in seed importation is that if it is not appropriately regulated it can negatively affect the local seed Industry, corrupt existing germplasm, introduce new pests and diseases and constitute a drain on scarce foreign exchange.

The seed policy also aims to minimise the over reliance on imports by encouraging the local seed industry to develop their output potential; to resource/strengthen national seed regulatory bodies to undertake their responsibilities, in line with facilitative international seed trade norms and acting within the West African seed trade harmonisation protocol; and to particularly encourage the national seed industry to come up with new varieties which can compete favourably with imports.

Mindful that international competition will present a healthy challenge for the development of a strong and credible national seed sector but also of the need to ensure maximum seed security through the establishment of a strong local seed industry, the following steps are envisaged in the policy:

- Government will encourage the local production of seeds to protect germplasm adaptability and plant health.
- Government will not institute barriers against seed imports, but will act to prevent dumping of untested seeds on the local seed market.
- Consequently, all seed imports will need to conform to laid-down provisions in the Plants and Fertiliser Act 2010 (Act 803).
- Government will encourage all seed companies which have to resort to imports of certified seeds of field crops (including hybrids), to have a short duration import programme and encourage development of hybrids locally.

Impact of Policy and Institutional Reforms on Beneficiaries Along the Maize Value Chain

This section analyses the above policies and institutional reforms (especially their pro and/or anti-competitive elements) and highlights their impacts on various nodes of the 'maize value chain', covering: inputs - production – procurement – storage – distribution.

Implication of Fertiliser Sector Reforms

Nature of market and availability of fertiliser

In the early 1990s, Ghana liberalised the fertiliser sector by abolishing the Government monopoly in fertiliser imports and distribution. Since then, many actors (importers, distributors, and retailers) have entered the market with relative ease.

Currently there are six main importers of fertiliser in the country[11], viz. Wienco, Yara Ghana, Dizengoff, Chemico, Golden Stork and AfCott. The importers do not have their own

[11] https://www.africafertiliser.org/CMSPages/GetFile.aspx?guid=da14ba32-26e0-4a84-810d-2446102c5d7d

distribution network down to the retail level but associate local enterprises as whole-sellers or retailers. They send the fertilisers from their privately owned distribution point to these associated, independent whole-sellers and then to the retailers.

Out of the imports, small volumes are re-exported to neighbouring countries. This is because Ghana is being used as a transit country by some of the surrounding land-locked (or land-linked) countries to secure their imports. In 2010, about 4 per cent of total imports was subsequently exported. On fertiliser used and crop types, it is estimated that about 30 per cent of fertiliser imported is absorbed by the food crops sector, followed by another 20 per cent by large industrial farms of plantation crops like palm oil, rubber, cotton, pineapple, and banana. The remaining 50 per cent is then consumed by cocoa.

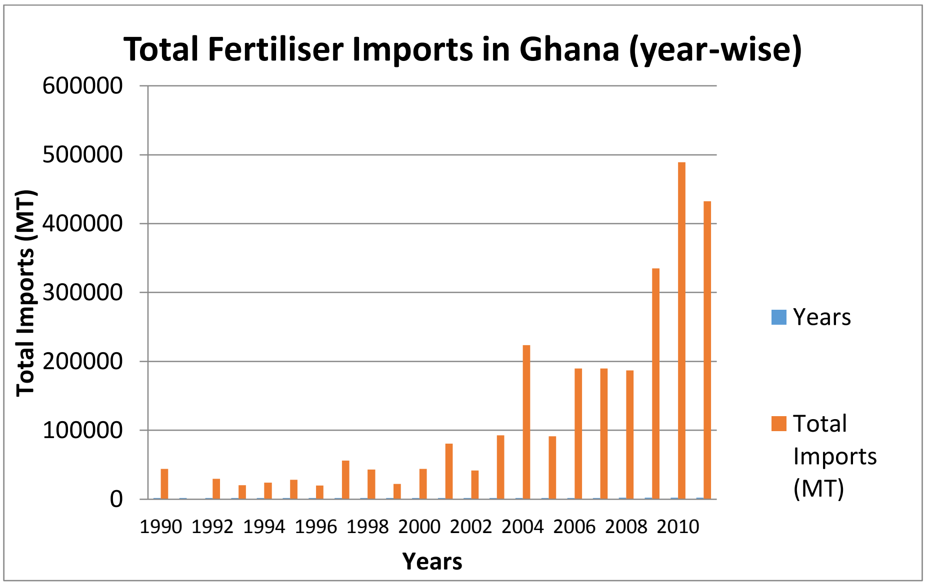
Table 2: Fertiliser Imports in Ghana (2000-2012)

Year	NPK	Urea	M. of Potash	SOA	SSP &TSP*	Nitrate*	Pot. Sulphate	Cocoa Fert.	Others	Total
1990	21,250	20,100	0	2,500	500				0	43,850
1991	0	0	0	0	0				0	0
1992	17,500	0	400	11,500	0				0	29,400
1993	10,000	0	2,000	7,600	560				560	20,160
1994	13,040	0	2,500	8,500	20				20	24,060
1995	9	4,250	3,400	9,000	200				1,990	28,140
1996	8,700	950	4,500	5,320	500				400	19,840
1997	37,080	1,850	5,450	10,700	0				1,083	56,163
1998	21,858	500	3,095	13,265	500				3,097	42,315
1999	3,602	-	8,066	4,800	3,500				2,025	21,993
2000	14,902	141	4,510	23,165	600				180	43,975
2001	49,287	2,500	4,147	22,628	700				1,586	80,848
2002	800	n.a.	18,484	20,047	1,656	n.a.	n.a.	n.a.	901	41,888
2003	18,890	500	23,440	25,715	n.a.	7.35	n.a.	19,500	4,027	92,807
2004	18,223	250	822	7,688	1,850	95,312	72,000	25,000	2,588	223,733
2005	38,978	4,540	1,000	15,000	1,000	157	135	12,000	18,496	91,306
2006	84,907	9,072	19	19,090	99	52,601	103	n.a.	23,988	189,879
2007	87,388	4,962	109	17,458	504	52,823	321	n.a.	26,029	189,594
2008	18,873	13,773	8,853	4,172	15,440	64,085	371	n.a.	61,463	187,030
2009	197,631	25,028	15,007	4,616	66,501	110	n.a.	n.a.	26,293	335,186
2010	30,560	11,521	16,079	12,077	52,117	236,547	n.a.	n.a.	130,314	489,215
2011	139,128	12,363	10,387	46,222	72,976	75,292	1,004	24,192	50,779	432,343

Source: Ministry of Food and Agriculture, Crops Services Directorate

Over time, there has been a sharp increase in the total volume of fertiliser imported into Ghana since the year 2003-04 as is evident from the Figure 1 based on the data in Table 2. The increase in fertiliser importation implies higher demand for fertiliser in the country, which has resulted from a growing demand for fertiliser (as seen in Figure 3).

Figure 1: Total Fertiliser Import in Ghana (year-wise)



At the retail end, it seems fairly challenging for farmers to access fertilisers given the distance to the supplier (see Table 3).[12] However, as it has been indicated later in this section such distances don't seem to deter farmers from accessing fertilisers as they have mostly (nearly 75 per cent of respondents) been dependent on private retailers for fertilisers. An easy explanation is that they must have benefitted from application of fertilisers – so they are not afraid of travelling such long distances to access the fertiliser supply points.

However, the need to traverse such long distances for the farmers to reach the fertiliser supply points mean that they spend considerable amount of additional costs (transportation costs) to access fertilisers that is available to farmers. These in most cases reduce the profit margin of small maize producers.

Table 3: Distance to Fertiliser Supplier (region-wise)

Regions	Avg distance to closest supplier (Km)	Median distance to closest supplier (Km)
Ashanti	42	41
Brong-Ahafo	84	76
Central	92	87
Eastern	80	86
Greater Accra	34	21
Northern	120	97
Upper East	120	30

[12] http://www.ifpri.org/sites/default/files/publications/ifpridp01024.pdf

Regions	Avg distance to closest supplier (Km)	Median distance to closest supplier (Km)
Upper West	197	108
Volta	130	127
Western	143	152
National Average	92	70

Source: IFPRI/IFDC (2009)

Pricing of Fertiliser and usage

In the '80s, the Government of Ghana provided input subsidies to farmers. The rate of the subsidy on fertiliser imports was as high as 65 per cent. Following the liberalisation of the fertiliser market in the 1990s, the subsidy programme was phased out. In 2007, however, global fertiliser prices began to rise, and the following year the Government introduced a new subsidy programme in partnership with the country's major importers. The high cost of fertilisers in Ghana is due to the following factors: cost of finance, marketing and distribution costs (high cost margins), inland transportation[13] and the exchange rate changes.

Some observers even point to the presence of a transporter's cartel which has implications on the cost of transportation and ultimately the end-price of fertilisers in Ghana as well.

The earlier subsidy programme which started with the introduction of a voucher system, had to be disbanded after 2 years as the result of operational deficiencies and delays in payment to importers. Beginning in 2010, a new programme was introduced whereby the Government and the importers negotiated a discounted price to be used for selling fertiliser in the local market. The remaining amount would then be paid by the Government directly.

Though, the effectiveness of this programme has yet to be determined – however from some feedback received from farmers, it seems that there have been some improvements on the availability of fertilisers on the ground. On another front, the problem of late payment to importers has not yet been resolved, and the resulting delays in fertiliser delivery persist, particularly in the south.

Further, due to a sliding Ghanian Cedi (GHC) against the US Dollar (US$), the government will have to deal with a fairly high fertiliser expenditure bill. Consequentially, there has been some delay in the announcement of subsidy to be provided by the government on fertilisers in the year 2015. Farmers and their groups have been anxiously awaiting this announcement.

[13] http://www.ifdc.org/r-d/research/ghana_tech_final111913/

Table 4: Fertiliser Subsidy Budget, Volume and Cost

Item		2008	2009	2010	2011	2012
Agriculture budget ('000 GHC)		97,131	202,632	255,886		
Subsidy amount		20,654	34,417	30,002	78,700	120,300
% Agriculture budget		21.3	17.0	11.7		
Total volume of fertiliser		43,176	72,795	91,244	176,278	176,000
Subsidy disbursement method		Coupon	Coupon	Waybill	Waybill	Waybill
NPK	Farmer pays	25	25	27		39
	Subsidy amount	26	26	18		37
	% subsidy	51	51	38		49
UREA	Farmer pays	26	26	25		34
	Subsidy amount	26	26	16		38
	% subsidy	50	50	39		47
SOA	Farmer pays	16	16	18		53
	Subsidy amount	18	18	16		18
	% subsidy	53	52	47		34
Per cent age of yearly average subsidy		51	51	42		

In 2008, 21 per cent of Ghana's public agriculture budget went to support the subsidy programme. Two years later in 2010, that proportion had fallen to 12 per cent. Despite the decrease in allocation, sustainability of the Government's subsidy programme is a concern.

Over the years, the volume of fertiliser subsidised by the government has increased drastically, and therefore the amount of government funds spent on subsidising fertilisers. Further, as a result of improve in quality there is an increased demand for (subsidised) fertiliser. The cost of imported fertiliser has continued to increase due to the rising exchange rates (especially over the last 2 years).

Quality Regulation and Impact on Demand

Prior to the newly enacted Plants and Fertiliser (PF) Act of 2010, the fertiliser sector was not regulated under any specific act. The Crop Services Directorate and Environmental Protection Agency shared the regulatory function, with importers, distributors, and retailers having to register prior to engaging in the sector. Very little monitoring of fertiliser quality within the country was undertaken; for example there are no certified fertiliser testing laboratories in the country. A study in 2011 had confirmed that despite increases in fertiliser imports in recent times, farmers' mistrust of fertiliser dealers had risen. This occurred as there had been instances of adulterated products in the market, including violation of truth in labelling in terms of contents, quantity, and quality (Fuentes, Johnson & Bumb, 2011).

Under the PF Act 2010, the regulatory responsibilities have been streamlined with the creation of a new fertiliser regulatory division under the PPRSD. This Act and its enforcement seem to have resulted in effective monitoring of the quality of fertilisers (being imported in the country by the private players), which is testified by an increased demand of fertilisers by the farmers.

Impact of Fertiliser Reforms on Beneficiaries
From the above discussion it is evident that the fertiliser sector in Ghana has undergone several reforms. Some of these reforms were undertaken to enhance private participation and competition in the market (import liberalisation), while others were undertaken (pricing and quality regulation) to ensure that enhanced private participation and competition results in positive outcomes on the ground.

Let us look at some of the implications of these elements of the fertiliser sector reforms on the ground (on farmers) as gathered from respondents on the ground.

Availability

- In spite of the distance to the supply points for fertilisers stated above, 75 per cent of the respondents obtained their fertiliser from private sources, which are located mainly in the district capital. The Government of Ghana needs to ensure that the positive trend in availability of imported fertiliser (as seen in the table 2 above) is maintained in the future as well, in order to ensure that it is able to meet the growing demand.
- Prior to the reforms, Government of Ghana was the sole importer and distributor of fertilisers in the country. After the reforms about 75 per cent of the respondents now obtain fertiliser from private sources. There is also increase in the number of private distributors and retailers of fertilisers across the country. This reflects that there are more options available to the farmers in terms of accessing the subsidised fertiliser in the country.
- Nearly half of the respondents (43.7 per cent) indicated that they had many options to obtain fertiliser from, while a fourth of them (25.7 per cent) said they had a few options. Only about one-tenth (9.3 per cent) of the respondents indicated that they had no options in terms of choice for obtaining fertilisers.
- Over 70 per cent of the respondents indicated that the supply of fertiliser was fairly reliable.
- The awareness among farmers about fertiliser subsidy programme implemented by the government was very high. Awareness was more among small holder farmers (about 90 per cent) while awareness about large scale farmers was about 65 Per cent. It was observed that large scale farmers who engage in other types of farming such as livestock and poultry may not need such inputs in their farming activities and also have the ability to buy the fertiliser at the market price unlike the small scale farmers

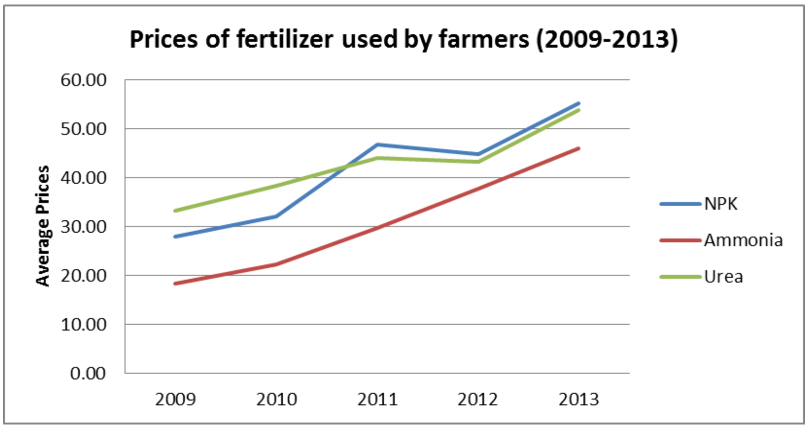
who cannot afford the market price will mostly depend on the fertiliser subsidy programme.

<u>Price</u>

- Most of the respondents (over three fourth) indicated that the price of fertilisers was still very high in Ghana. So, most of them (over 87 per cent) were keen that the subsidy programme continued. Despite the increased in prices of the subsidised fertiliser which was attributed to changes in the exchange rate, prices of the commodity would have been higher in the market if efforts were not taken to re-introduce the fertiliser subsidy programme in 2008.
- This programme has helped reduce real prices of fertiliser over time, the reason why more farmers were keen for the programme to continue.

The prices of fertiliser obtained from the respondent shows a persistent increase from 2009 to 2013 of all the major types of fertiliser used in the study area. The respondents identify NPK, SOA and Urea as the main fertilisers used in the area. Figure 2 shows the trend of prices of major fertilisers used in the area.

Figure 2: Prices of Fertiliser used by Farmers (2009-2013)



Source: Authors computation from field data

The objective of the subsidy programme is to make fertiliser available and accessible to small-holder food crop producers. However, the fact that supply of subsidised fertiliser ended at the district capital meant that small retailers who take fertiliser to the remotest parts of rural areas were left out. The elimination of these small retailers could emanate from the fact that the subsidy programme relies on a private-public partnership approach in which government uses existing private sector fertiliser distribution channels.

Consequently, those small retailers that are not directly linked to the fertiliser importing companies or other bigger distribution companies or retailers are automatically outside the subsidy programme. This could affect the volume of trade of those outside the subsidy programme but data was not collected to validate this. More so, issues of credit and logistical arrangement on the part of importers could also feed into the delay in fertiliser shipment to Ghana and consequently distribution to farmers.

There is a need for improving the distribution network of fertilisers in the country beyond the district capitals to ensure that end users (like the small farmers) are able to access the fertiliser more easily. Weaknesses in the distribution network have also been reported in other studies (viz. Banful, 2009). Any reduction in obtaining fertilisers (including transport cost savings) would help improve the margins of these farmers. The government and the private sector need to work this out.

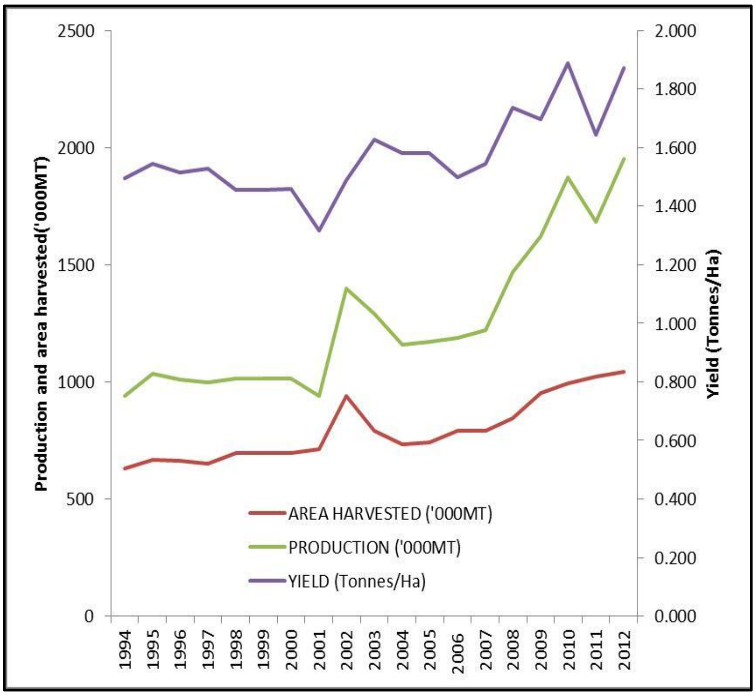
Quality

- Nearly all of the respondents (over 98 per cent) were very happy with the quality of the fertilisers. Only a third of the respondents complain that there has been deterioration in the quality of fertilisers over time.

In spite of the rising prices of fertilisers since 2007, owing to the Government subsidy programme and regulation of quality by the PPRS Department, the demand for fertilisers is on the rise, as is also supported by the high import figures.

Maintaining improved overall production levels and yields of maize in Ghana, is likely to have farmers exert higher demand pressure for fertilisers on the ground. This calls for greater supervisory roles of the PPRSD by application of the PF Act 2010.

Figure 3: Maize Production and Yield in Ghana



Though efforts towards yield improvement are vigorously being pursued, area expansion still accounts for a bigger portion of the country’s food production. In year 2008, maize occupied 22.49 per cent of the total arable land; this increased to 25.65 per cent in 2012 constituting 6.6 per cent of total food production in 2012. Total land area cultivated to major staples was 3,762,044 hectares in 2008, increasing to 4,062,521 hectares in 2012, thus an increase of 8 per cent and an average annual growth rate of 1.5 per cent. This poses a challenge in sustaining the gains in the light of negative environmental implications on available arable land. It is also a fact that, the rate of increase in area under maize cultivation is because of the availability of ready market due to high demand since technologies in yield improvement are expensive to adopt by the subsistence farmers.

Maize average yield recorded by MoFA in 2012 was 1.9 MT/ha against an estimated achievable yield of around 6.0 MT/ha. Figure 3 shows yearly average yield of maize from 1994 to 2012. It shows a gradual increase in yield for maize over the years. Coincidentally the country's two largest maize production regions also records the highest yield over the years. Brong Ahafo and Eastern Regions recorded 2.33 MT/ha and 2.29 MT/ha respectively. Ashanti Region recorded the lowest yield of 1.33 MT/ha after Greater Accra of 1.26 MT/ha. Efforts should be put in place to increase the yield of the crop in these regions if the country is to remain sufficient in the production of the maize.

Implication of National Food Buffer Stock Company's (NAFCO's) Activities

This section of the report assesses the performance of NAFCO *vis-à-vis* its objectives and main functions, based on secondary literature and data. Feedback gathered from respondents was also analysed to develop an understanding of the ground situation.

In March 2010, the Government of Ghana set up NAFCO, a completely state-owned-enterprise to buy, preserve, store, sell, and distribute excess grains (including maize) in warehouses across the country. The creation of NAFCO is a part of the strategy to reduce post-harvest losses, ensure price and supply stability and establish emergency grain reserves.

Some of the objectives of NAFCO that will be examined closely in this report are as enumerated below:

- Stabilisation of food grain supply and price: The creation of NAFCO was done to ensure stability of food grain supply and price which is of continuous concern to the government. According to the year 2009 data by SRID, the total domestic production of maize amounted to 1,619,600 MT with a demand of 1,197,000 MT, thus, showing a surplus of 422,600 MT which needed to be stored. In previous times such surplus used to get wasted. NAFCO was expected to mop up the excess food supply and release them to the market at appropriate times to ensure a continuous food supply and therefore stabilisation of food prices. It is of interest to know how NAFCO has played this role since its establishment.

- Macro-economic stability: Season-to-season variations in food grains production may result in high food prices which lead to upward pressure on wages with undesirable macro-economic consequence on inflation. NAFCO is expected ensure stability of food supply and prices and, therefore, help to reduce inflationary pressures.

- Price determination: Farm gate prices are determined by the post-harvest committee. The main aim of these farm gate prices is to protect the Ghanaian farmer by guaranteeing a secured income for them. They take into consideration the production cost to the farmer plus a 10 per cent profit margin. The farm gate price in 2012 for maize (100 kg) is GH₵ 45.

- Emergency creation of food reserve: Since a stabilisation policy involves the build-up of food stocks at the time of buying, this stabilisation reserve could also be used for emergency relief should the need arise.

NAFCO keeps two kinds of stocks, operational stocks and emergency government stocks. Operational stocks are the stocks used to run and operate the company, and the emergency government stocks, are stocks held for the government for use in emergency situations. The target quantities for 2012 for maize were 15,000 MT of white maize and 15,000 MT of yellow maize; 15,000 MT of paddy rice; 1,000 MT of soya. The emergency Government stocks include: 10,000 MT of white maize; 10,000 MT of milled rice; 1,000 MT of soya. The share of these stocks in an estimated production of 1.7 million MT is around 3 per cent.

Maize price trends and price stabilisation

Agricultural prices in different markets are often influenced by fluctuations in yield, production, seasonality and the general economic environment. Table 5 shows summarised statistics of unadjusted nominal wholesale maize prices in the six administrative regions of Ghana from 2002 to 2008. The highest variability in price was 54.16 per cent observed in the northern region market as indicated by the coefficient of variation while the lowest was per cent 43.06 per cent observed in the east region market.

Table 5: Descriptive Statistics of Regional Nominal Wholesale Maize Prices (2002-2008)

Statistics	Greater Accra	Central	Eastern	Ashanti	Brong-Ahafo	Northern
Mean	28.87	29.61	27.65	25.95	21.86	21.05
Standard deviation	13.68	13.53	11.91	13.16	11.43	11.40
Minimum	10.59	8.65	9.03	7.96	6.75	8.40
Maximum	82.00	75.65	64.56	78.16	60.39	56.67
Coefficient of var	47.38	45.71	43.06	50.73	52.27	54.16
Count	84.00	84.00	84.00	84.00	84.00	84.00

Source: ISSER (2014)

The average variability in regional price over this period (2002-08) was 48.8 per cent. The variations in prices were however approximately close to each other. The implication of the high variability index is that the price of maize fluctuates widely across seasons in all markets analysed. High price variability translates into unstable producer incomes which is capable of exerting a deleterious effect on production and production planning.

Table 6 shows the descriptive statistics of wholesale prices from 2009 to 2012. There have been significant increases in monthly average prices ranging from GH₵29.61/100 kg for central region to GH₵21.05/100 Kg for northern region. The average variability was 31.05 per cent for regional prices. However comparing the regional prices of the two durations show that the has been an increase in average wholesale regional maize prices while there has been a significant decrease in variation within regional maize prices which is measured by the coefficient of variation.

While there has been an overall increase of maize prices in Ghana –which can be attributed to production and adverse environmental causes – some sort of stabilisation in the price of maize was noticed. The average variation of prices between 2002 to 2008 was 48.8 per cent, while that between the period 2009 to 2012 was 31.05 per cent. This indicates that there was about 36.37 per cent decrease in variability in prices. The implication of such decrease is that prices are more stable in 2009 to 2012 compared to 2002 to 2008.

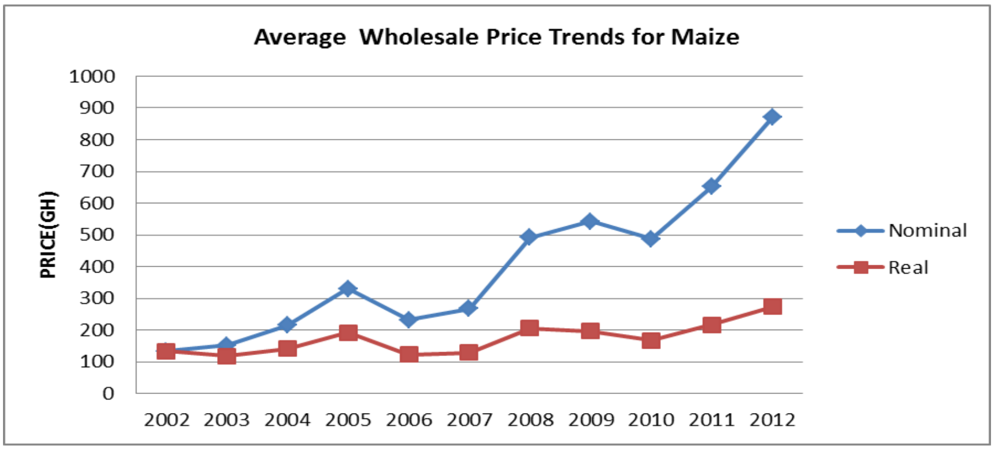
Despite the stability in prices during this period, attributing such stability to activities of NAFCO may be delusive since current figures show that total purchases of maize by NAFCO ranges between 2 to 5 per cent of the total maize supplied in the market. However, the establishment of NAFCO might have sent some signals to the market.

Table 6: Descriptive Statistics of Regional Nominal Wholesale Maize Prices (2009-2012)

Statistics	Greater Accra	Central	Eastern	Ashanti	Brong-Ahafo	Northern
Mean	74.94	76.65	68.39	72.11	55.27	46.85
Standard deviation	22.80	22.51	26.20	23.40	17.29	11.48
Minimum	45.50	41.81	4.90	43.33	32.05	32.44
Maximum	151.00	137.86	123.48	128.98	93.28	74.35
Coefficient of var	30.42	29.36	38.31	32.46	31.28	24.50
Count	48.00	48.00	48.00	48.00	48.00	48.00

Source: ISSER (2014)

Figure 4: National Average Wholesale Maize Price (2002-2012)



Source: Author's computation from price data

The wholesale prices vary periodically and portray trends and cycles or seasonal patterns which are depicted graphically. As observed in Figure 4, prices were at their highest level in 2005, 2009 and 2012. Such high and unstable food prices have negative effect on both consumers and producers.

Despite the fertiliser and seed subsidy programme, prices of other inputs such as agrochemicals, labour, packaging materials, farm implements etc. continued to increase during the period under study and this contributed to overall increases in cost of production and ultimate prices for food crops.

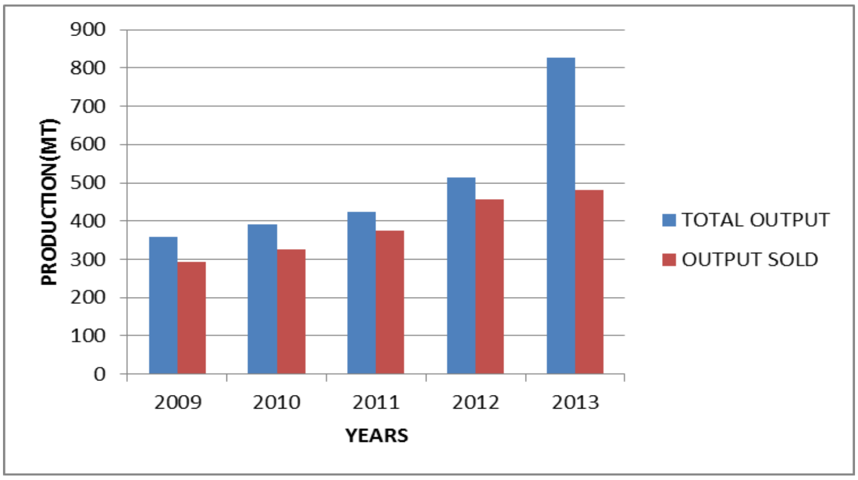
Price realisation by farmers

Existence of government support price

- A large majority of the farmers interviewed (over 84 per cent) were not aware of the government base price (NAFCO price). They complained that efforts were not made by the government to inform them of the 'base price' – and that this should be done through various channels for providing information.
- Nearly 90 per cent of the respondents were unaware of the price setting mechanism.
- The average retail selling price of maize in 2014 was GH₵ 100/120 Kg (range was GH₵ 55 to 130/120 Kg). Such a high range of selling price is a concern - and needs to be narrowed down especially through NAFCO's interventions on 'base price' information[14].
- A majority of farmers (nearly 64 per cent) indicated having multiple options to sell their produce, while over a third of them (above 36 per cent) indicated that they did not have any option.
- About 62.9 per cent of the farmers sold their product to the 'market queens' and 21.4 per cent sold to the local traders. 13.6 per cent of them sold to any available buyer, while 2.1 per cent sold to agro-firms.
- About 65 per cent of the respondents sold at major market such as Techiman and Ejura, while 35 per cent of the farmers sell at their homes or at farm gates.
- The average distance between selling point and the houses of the producer was about 21.4 km (ranging between 2 to 25 km, with a standard deviation of 8.3 kms).
- Over the years, the volume of maize sold in the markets has increased considerably (Figure 5) (from 293.7 MT in 2009 to 481.7 MT in 2013). This indicates over 60 per cent increase within 4 years (i.e., a 15 per cent annual sales growth volume – which is quite good).

[14] Minimum guarantee price of maize in 2012/13 season was GHC60/100kg bag (refer: http://mofa.gov.gh/site/?p=11087)

Figure 5: Total Output of Maize and Total Quantity of Maize Sold (2009-2013)



Source: ISSER Survey Data (2014)

- The farmers were also asked to rate current network of procurement entities - about a quarter of them (25.7 per cent) rated it very good and over half (52.9 per cent) rated it to be good.
- With regard to determination of price of the produce, 90 per cent reported they sell at market price which was determined by market queen/traders and 10 per cent reported the price is determined through negotiation between farmers and wholesalers.
- Nearly 60 per cent reported positive change in the nominal price at which they sell their produce meaning the prices have gone up, 22.5 per cent reported they observed negative change in price at which they sell while 18.6 per cent reported they have not observed any change, over the years 2009 to 2013.
- The farmers were asked to compare the current selling price (nominal) and the available minimum price. About 48.6 per cent indicated the market price is higher, 21.6 per cent indicated it was equal, 27 per cent indicated it was lower while 2.7 per cent of the respondents were not sure. This is confounding as a large majority of them had indicated their ignorance of the prevailing government guaranteed minimum price. So, a possible explanation could be that the 'market queens' and their agents convinced the farmers that the price at which they bought their produce is higher than the price that government (NAFCO) can offer.
- About 90 per cent reported the time difference between sale and payment is mostly short (one day), 8 per cent reported it often delayed (two weeks) and only 2 per cent reported said it mostly delayed (one month). The shorter duration between sales and payment explains why most farmers are compelled to sell their produce to the market women/traders which pay in cash.
- While majority (80.3 per cent) of the farmers have not observed any change in payment pattern, 17.6 per cent reported they have observed a positive change in payment pattern which means that their buyers pay them earlier than they used to, only 2.1 per cent observed a negative change in payment pattern. However, almost all the farmers were unable to mention any government intervention responsible for the changes observed.

Effectiveness in Procurement by NAFCO

Maize production over the period 1990-2012 shows that there was a general increase in production over the period even though there was a significant increase starting from year 2008 probably in response to high prices.

However, it was not possible to explain to what extent the production increase was due to the favourable rain patterns. The introduction of the fertiliser subsidy in 2008 and the high food prices could have stimulated supply response over the period 2008-2010. Despite the increase in production between 2008 and 2010, there was a drop in production in 2011 due to erratic rainfall after which there was an increase in production in 2012. Food production in Ghana for the last five years has shown an upward trend, thus increasing the country's potentials towards food self-sufficiency.

Network of Licensed Buying Companies (LBCs)

Given the difficulty of NAFCO to reach farmers in remote areas, 73 LBCs have been contracted by NAFCO to purchase maize and rice from farmers in the various villages at a minimum purchasing price (i.e. floor price) irrespective of location determined by NAFCO in consultation with the post-harvest committee within MOFA (IFPRI, 2011). LBCs are mandated by NAFCO to reach out to farmers at the farm gates. These LBCs buy the cereals from the farmers on behalf of NAFCO. A margin is added to the farm gate prices for the LBCs prices. The committee takes into consideration factors like transportation, sacks, drying, bagging, sewing and handling to come up with this margin.

However, as stated above NAFCO is able to procure something in the range of 2 to5 per cent from the market. Organisations like the Peasants Farmers Association of Ghana have lamented that their members are unable to engage with NAFCO as they did not have any presence (network) in the remote areas. The MoFA maintains that NAFCO should be viewed as the "last resort" by the farmers, if they are unable to find buyers in the open market[15]. The rest of the procurement of Maize in Ghana happens through private, open channels.

NAFCO Vs private marketing channels

Domestic maize trade relies largely on a network of traders linked by personal and ethnic ties. The so-called 'market queens', women engaged in maize trading, dominate the local and regional markets while larger groups of whole sellers engage in spatial arbitrage across regions/districts. As is evident from the analysis of feedback received from the farmers:

- The 'market queens' have a formidable network of agents who are fairly effective in procuring from the farmers.
- Often market price offered is 'thought' to be higher than the government price.
- Over time, the amount of maize being transacted in the market has gone up.
- The 'market queens' are preferred by the farmers as they pay the farmers immediately in cash.

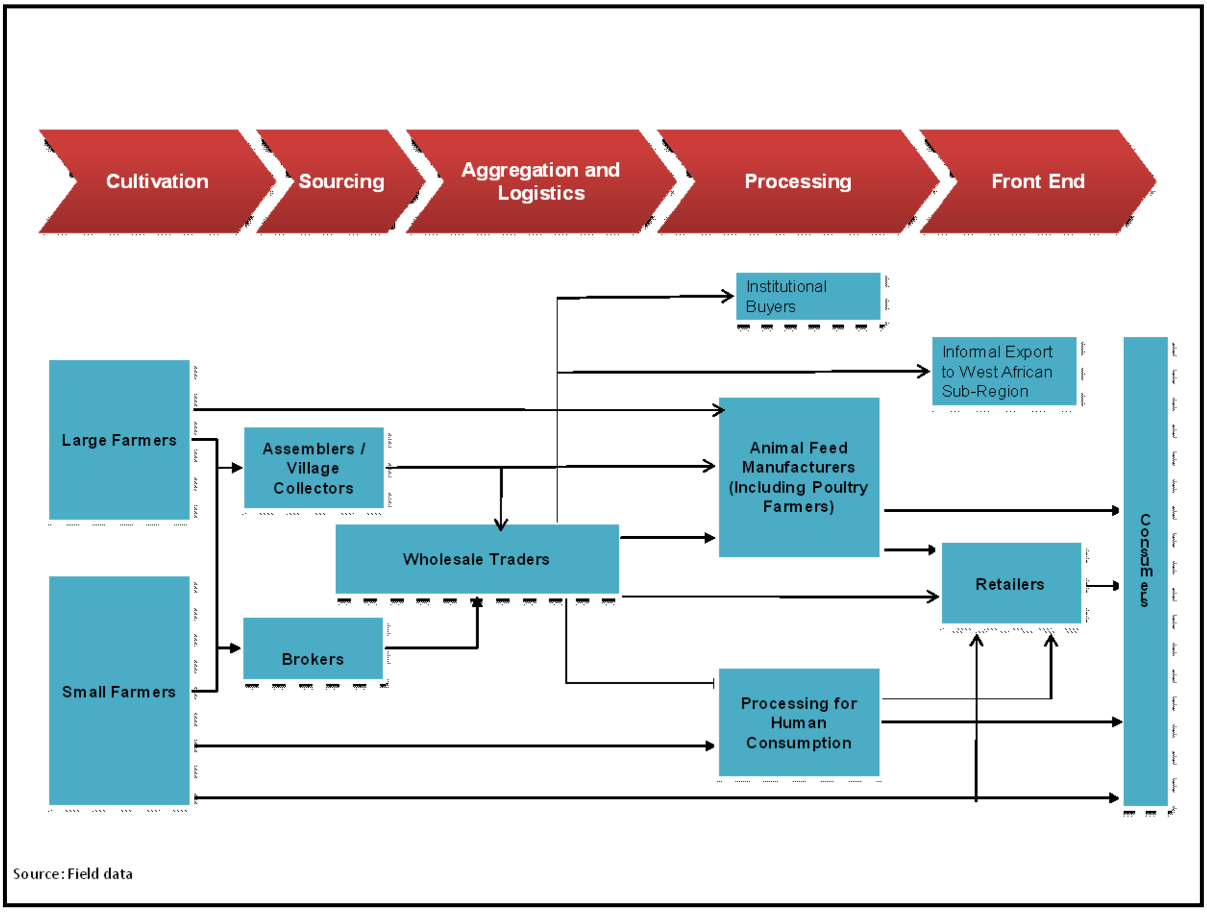
The maize supply chain is described in the Figures 3-6.

[15] http://www.ghheadlines.com/agency/business-and-financial-times/20130419/488961/where-is-buffer-stock-company-----farmers-ask----

Whole-sellers normally obtain their maize either directly from farmers with whom they have long standing relationships or from district assemblers, brokers. The local whole sellers then sell to long-distance traders serving urban markets throughout the country (FAO, 2006).

Techiman serves as one of the main feeder markets in Ghana because of the maize coming from the main producing areas in Brong-Ahafo. From Techiman the maize is then directed to Accra and/or Bolgatanga, to Burkina Faso, and/or Cote d'Ivoire. The other important feeder market for maize is Tamale located in the Northern Region.

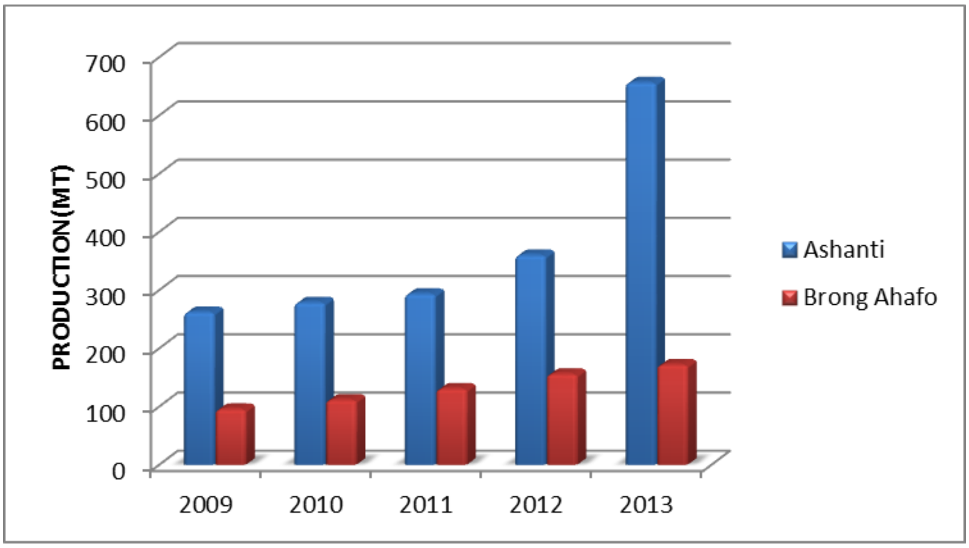
Figure 6: Maize Supply Chain in Ghana
(ISSER's Presentation, CREW NRG-I, Aug, 2013)



The average cost of production in 2014 in the area was GH₵1,247.0 per ha. The production of maize increased from 358.5 MT in 2009 to 825.69 MT in 2013 which represents a growth rate of about 24.8 per cent per annum in the two regions. Figure 7 depicting the trend of maize production in the two surveyed areas (Ashanti and Brong-Ahafo) in the past five years shows that maize production has increased drastically over the years in the Ashanti Region (Ejura) compared to gradual increase in the production of maize in Brong Ahafo Region (Techiman). This finding is however consistent with annual production figures published by the MoFA which shows that Ejura Township produces more maize than Techiman township.

However, this increase in production cannot be attributed to the activities of NAFCO, since their activities are not actually felt in the area.

Figure 7: Production Levels of Maize in Metric Tonnes by Responding Farmers (2009-2013)



Implications of the National Seed Policy 2013

The main objective of the National Seed Policy, 2013 is to support the development and establishment of a well-coordinated, comprehensive and sustainable private sector-driven seed industry through systematic and strategic approaches which would continuously create and supply new improved varieties for use by farmers and, further, support successful seed production, certification, marketing and seed security systems which will form the basis for food security and support the overall development of the agricultural sector.

Feedback was gathered from about 140 farmers in order to get an idea about the source (availability), price and quality of seeds used by them. Some of the results from this feedback would provide crucial inputs for the implementation of the National Seed Policy, by the MoFA.

<u>Seed usage and prices</u>

- Average seed usage (seed rate) in the area was about 27 kg/ha (range 20 kg/ha to about 36 kg/ha).
- Less than a tenth (7.1 per cent of the respondents) sourced the seed from government source, while nearly a quarter of them (22.9 per cent) obtained maize seed from private sources (retail shops). <u>70 per cent of the farmers sourced their seed from other sources (own seed from the previous year or other informal channels)</u>.
- Price of maize seed have increased from about GHC 1.5/kg in 2009 to <u>GHC 3.0/kg in 2014</u> (farmers reported this was very expensive).
- Over a third of the farmers (35.6 per cent) indicated that the price of maize seed in the market is expensive. This is in addition to the unreliability of public supply and the

relatively high prices of seeds from private sources (as lamented by the farmers) has forced farmers to rely mostly on their old stock or informal sources of seeds – which has implications on productivity.

- It was revealed that MoFA officials sometimes provided extension and technical advice through 'seed demonstration' camps, etc.

Availability of seed

- Nearly half of the respondents (47.9 per cent) reported that they had many options for obtaining seeds during the planting seasons, while about 30.7 per cent said that they had a few. Only the remaining 21.4 per cent indicated they have no option in terms of choices available to them for obtaining seed maize.
- To ascertain their view whether they have switched between public to private providers of seeds 95 per cent of the respondents said they have not changed their source of seed.
- Most of the respondents were weary of the fact that supply of seed by the public authorities was not reliable.

Quality of seed

- Based on two indicators (germination rate and yield) about 38.6 per cent of the farmers ranked the quality of seed as very good, while 45.7 per cent rated the quality of seed as good. 13.6 and 12.1 per cent of the respondents rated the quality as neutral and bad respectively.
- Only a handful (about 13 per cent) of respondents reported some improvements in the quality of seeds between 2009 to 2013. However, they were unable to cite reason behind such improvement.

From the above, it is evident that the MoFA needs to focus on the following in its implementation of the National Seed policy:

- Based on the large number of farmers (70 per cent farmers) who obtained seed from 'traditional stocks/informal sources MoFA should continually disseminate information on the benefits of using certified seed year after year and also facilitate demonstration trials for these farmers. But closely monitor the behaviour of these private players – especially in terms of the nature of seeds (better to focus on high-yielding than hybrid, GMOs) and their price.
- As in case of the fertiliser sector, focus on quality supervision of seeds would be crucial. Good quality of seeds (along with fertiliser and micro-irrigation) will ensure that the upward trend in maize production is sustained – which will increase a downward pressure on prices and also help the country avert food crisis.

Distribution and Availability of Maize

In Ghana maize distribution has been liberalised, thereby enabling consumers to obtain maize-meal from the open market.

Food availability and access, are attributes of food security, hence the number of markets in a district gives an indication of how easily food markets are accessible to community members. This, however, is not adequate to measure actual access which requires purchasing power. In 2012, a total of 2, 396 food outlets were available, giving an average of 99 outlets per region. This is a fall of 20 per cent compared to 2,984 markets and an average of 118 markets in 2011.

Table 7: Availability and Access to Food Outlets

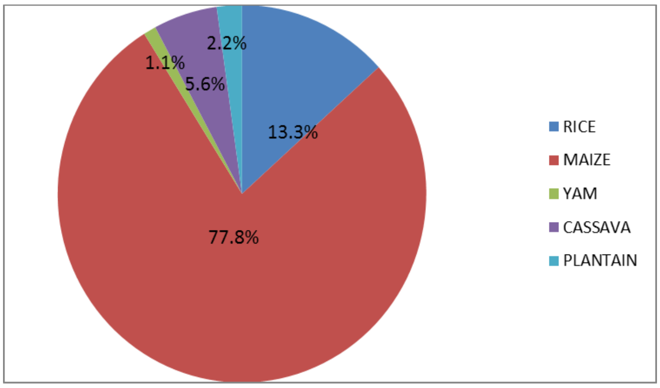
Regions	**Total market places (year-wise)**						**Average per district (year-wise)**					
	'08	*'09*	*'10*	*'11*	*'12*	*5yrs Avg*	*'08*	*'09*	*'10*	*'11*	*'12*	*5yrs Avg*
Ashanti	802	806	1755	1789	1196	1269.6	30	32	58	59	44.3	44.88
Brong-Ahafo	228	228	236	238	204	226.8	8	8	11.0	11	9.3	9.46
Eastern	171	174	218	277	285	225	10	10	10.0	13.0	13.6	11.32
Greater Accra	97	101	49*	50*	49	69.2	10	10	4.9	5.0	4.9	6.96
Northern	160	167	64*	65*	97	110.6	8	8.3	3.2	3.3	4.9	5.54

Source: MOFA-SRID, 2012

Consumption and expenditure information

- From the feedback of consumers, it was revealed that over 60 per cent of the respondents consumed up to 20 kg of maize per household, and spent about 10 per cent of their monthly income on maize staple food.
- Over three-fourths of the respondents (77.8 per cent) reported that they preferred maize, 13.3 per cent preferred rice, 5.6 per cent preferred cassava, 2.2 per cent preferred yam and 1.1 per cent only reported they preferred plantain. This actually confirms the importance of maize in the diet of the respondents in the study area.
- In Ghana there are no government retail stores for selling maize, so consumers buy from the open markets (as 85 per cent respondents reported) and other private shops (as 15 per cent respondents reported).
- Majority of consumers interviewed (nearly 90 per cent) reported that there has been an increase in the price of maize. The increase in maize prices was due to combination of factors like – high input costs (fuel, labour and fertilisers), and growing demand pressure on the staple due to population growth. Instability in maize prices may pose a serious problem to national food security.
- Over time, there doesn't seem to have been any significant improvements in the quality of maize (only 17.8 per cent of the respondents reported improvement in the quality)

Figure 8: The Preferred Staple by Consumers



Source: Author's computation from survey data

Concluding Remarks

i. Production

Maize production has increased from 2009 to 2013 partly due to liberalisation of the seed sector and the implementation of the fertiliser subsidy policy. Cost of inputs used in production has also increased over time due to inflation and partly due to changes in the exchange rate. Private entities are the major source of supply of fertiliser to the farmers. The private sector distribution network has not extended beyond the district capitals in most cases still limiting access to farmers in remote villages who also need the fertiliser.

There have been improvements in the quality of fertilisers as suggested by farmers probably due to the provisions in the reform for potential prosecution of importers and dealers with adulterated products, so extension of the distribution network by the private firms (through some sort of a public-private partnership approach) can help farmers improve their yield and production levels.

Private seed prices have also increased over the period due to emerging supply-demand gap, which has forced farmers to still rely on traditional stock and second generation certified seeds – which has implications on productivity. Further, reach of public seed stock is fairly limited due to the reform, and its quality suspect. Implementation of the National Seed Policy should be facilitated through input credit seed producers in such a way that it enhances the supply and usage of good quality seeds by the farmers – but which would require strict supervision by the PPRSD.

ii. Procurement

NAFCO's share in the procurement market is under 5 per cent - implying that it has very little impact in this market on farmers. Majority of the farmers are not aware of the price setting mechanism by NAFCO. Neither do they know much about the purchasing activities of NAFCO due to their limited operation in the sector. Most of the farmers sell produce to the 'market queens' – who seem to have a fairly formidable network, provide payments to farmers immediately on buying their products. Market prices are mostly higher than the 'minimum guaranteed price' set by the NAFCO.

As one representative of MoFA indicates, farmers need to look at NAFCO as the 'last resort'. If that is the case, then the idea of setting up a procurement network with 75 Local Buying Companies (LBCs) makes little sense.

The stabilisation of wholesale market price of maize cannot be attributed to the activities of NAFCO – as price variation reduced from 48 per cent (2002-08) to 31 per cent (2009-2012). Though, there was an increase in the wholesale price of maize as suggested due to increase in the cost of inputs and effects of adverse environmental changes in the region.

iii. Marketing and Distribution

Though there have been some improvement in the availability/supply of maize attributable to the subsidy policy, the quality has not improved while the price continues to rise in nominal terms. Mostly consumers buy their maize from open markets and get them grounded by their local (small scale) millers.

Recommendations

- Development of more extensive network by private fertiliser firms, facilitated by the government through the Ministry of Food and Agriculture.

- Availability of good quality seeds (high yielding variety) of maize for the farmers. Facilitation of private sector in this sector to be promoted, with the objective to ensure that all farmers are able to access good quality seeds easily.

- Strengthening of regulatory capacity of PPRSD – to ensure good quality seeds and fertilisers reach the farmers by setting up certified fertiliser and seed testing laboratories.

- Development of rural credit schemes by banks – to help farmers get credit at competitive interest rates and help reduce cost of production.

- Communication of government policies and programmes to be made more impactful by usage of ICT.

- Government should also improve provision of infrastructure to reduce transaction costs and improve market access.

- Close monitoring of the activities of the private traders, especially 'market queens' to ensure that they don't capture 'huge margins.'

- Further reduction in variation of wholesale food prices should be a focus of NAFCO by monitoring the operations of maize storage facilities in the country.

4. Competition Reforms in Bus Transport Market & Implication on Beneficiaries

Overview of the Bus Transport Industry in Ghana

Road transport is the most important mode of transport in Ghana handling 98 per cent of freight and 95 per cent of passenger traffic carriage. Buses constitute 60 per cent of vehicle fleet and carry 68 per cent of passengers. In 1969, all urban passenger transport services (of whatever ownership) were consolidated into the Omnibus Services Authority by means of the Omnibus Services Authority Decree (NLCD 337) which was repealed by NRCD 71 of 1972 to deregulate bus service operation. The Omnibus Services Authority which was retained as a state owned bus service operation to specified areas was later converted into OSA Transport Ltd. to afford greater contestability in the public transport industry.

The deregulation enabled a variety of owner drivers to join the industry with licensing authority given to the ‘‘the Driver and Vehicle Licensing Authority’’ (DVLA) which also certify ‘road-worthy’ certificate and a driver certificate whilst under the Local Government Act (No.462 of 1993), permit for road passenger transport is also granted by the Metropolitan, Municipal or District Assemblies (MMDA’s) of Ghana for operation in their jurisdiction.

Passenger road transport in Ghana is composed of three classes of vehicles - buses (large and medium), minibuses and taxies. The large and medium buses service the longer routes, while the minibuses and saloon cabs service the town centres and surrounding villages. The minibus segment have vehicles with a capacity ranging from 12 to 16 passengers, the medium buses have 18 to 24 seating capacity whilst the large bus has capacity of up to about 80 passengers. The bus transport service is operated through both public and private service providers and both intra-city bus transport and inter-city bus transport services are provided.

Bus transport in urban areas largely remains in the hands of smaller informal operators referred to as ‘trotro’ operators. A *trotro* is a shell of a vehicle, usually a minivan or a medium bus that holds 12-24 people. The *trotros* do not run any schedules but will depart for their destination once the bus is full at a loading point. The formal bus operation for intra-city service by private operators is limited to school transport and transport for carting workers under special arrangements. There is a very high level of formal operators in the inter-city service and they normally operate with medium and large buses along major inter-city bus routes. This form of bus operation for intercity bus service has newer bus fleets with defined schedules.

Policies, Regulations and Programmes Guiding the Bus Transport Industry

The mission or the task of the Ministry of Transport (MoT) is to provide leadership and an enabling environment for the development and maintenance of Ghana's transportation system. The process is guided by policies, legislation programmes and plans discussed as follows:

National Transport Policy: A National Transport Policy (NTP) covering all modes of transport was adopted in 2008 with the vision to provide an integrated, efficient, cost-effective and sustainable transportation system responsive to the needs of society and effective for customer needs.

Legislation on bus transport industry: The major regulatory frameworks in the sector include:
The Road Traffic Ordinance 1952 which gives regulations on (i) licensing, traffic signs, police traffic control, construction of vehicles, seats amongst others.

Others are the Road Traffic Regulations LI 953 of 1974; the Road Traffic Act 683 of 2004; the Road Traffic Act 761 of 2008 on enforcement in the road traffic sector; the LI 2180 of July 2012 which revoked Regulations, 1972 (LI 780); 1974 (LI 953); 1974 (LI 952); and Regulations, 1994 (LI 1592)].

Transport plans and programmes being implemented in the bus transport industry: The key transport programmes and plans being implemented to improve transport performance include the third Medium Term Development Plan and the Urban Transport Programme. An overview of these programmes is presented as follows:

Third Draft Sector Medium-Term Development Plan (SMTDP, 2012-14): The SMTDP is the corresponding implementation programme for the transport policy. In this plan the MoT has made an effort to harmonise the performance and review sector objectives set out in the Ghana Shared Growth and Development Agenda (GSGDA) to: i) create and sustain an efficient transport system that meets user needs; ii) create a vibrant investment and performance-based management environment that maximizes benefits for public and private sector investors; and iii) ensure sustainable development in the transport sector.

Urban Transport Project (UTP): The UTP is to improve mobility in areas of participating MMDAs through a combination of traffic engineering measures, management improvements, regulation of the public transport industry, and implementation of a Bus Rapid Transit (BRT) system.

Sectoral Regulatory Institution and Functions in the Bus Transport Sector

The bus transport industry in Ghana is governed at a Ministerial level for policy formulation and then at agency and departmental level for permits, licensing and enforcement. A brief overview of the various public and private institutions engaged with the bus transport sector is presented in annexure 6.3.

Relevant Policy & Institutional Reforms in the Bus Transport Sector

This section enumerates policies and programmes in the bus transport market, which have pro/anti-competitive elements of the bus transport market.

Policy Reform on Subsidised Public Transport - Metro Mass Transit (MMT)

The Policy statement for the establishment of a mass transit bus transport service is defined in the National Transport Policy of 2008 section 4.2.4.3. The SMTDP also indicates the Provision of Government to offer Subsidy for Public Bus Transport through the establishment of the Metro Mass Transit (MMT) within Section 4.2.12: 2012-14.

The Metro Mass Transit (MMT) was established in the year 2003 with 45 per cent share of the Government of Ghana and the remaining 55 per cent share of private investors to promote mass transit of passengers to reduce congestion; ensure transport affordability for the most vulnerable and excluded groups and increase accessibility. The idea was that a government-run public transport operation would place greater priority on affordable fares and service enhancement. The government would also have more direct control over fares, supply of services, and service quality. MMT service was thus established through Government acquisition of the liquidated physical assets of OSA Transport Ltd.

The rationale is that a subsidised transport operation will reduce public transport fares. This will lead to an extension of demand, as more people are encouraged to use this form of transport. The increased demand will be the combined result of the income and substitution effect. At a lower price, alternatives to public transport such as the private sector operations will appear more expensive (the substitution effect), and, assuming money income remains constant, cheaper public transport will result in an increase in real income (the income effect).

Policy Reform on Promotion of Private Sector Investment in the Transport Sector

The policy reform on promoting high investment in the bus transport industry is defined in the National Transport Policy (NTP) section 4.2.4.1. This policy became necessary because finance is a limiting factor due to the capital intensive nature of public transport operations. There is limited funding availability (local and foreign) to bus operators which inhibits their ability to replace their existing vehicle fleet with more newer and modern vehicles for efficient, comfortable and safe operations. The policy highlighted a two-pronged strategy as exploring PPP (Public Private Partnership) and 'concession' options for investment in transport and expanding private sector investment in the transport sector for increased service provision and improved efficiency.

Policy Reform on Routing (Route Rationalisation)

The policy requirement for route registration for commercial bus transit service is defined in regulation 121. It is to allow for private informal bus operators to operate under defined management structures by tendering on competitive fares, service levels, safety, etc. for sole operation on specific routes. The objective was to ensure a well-functioning market with increased competition in service provision which will introduce efficiency into the industry, enforce transport regulations effectively and improve performance standards for quality.

The pro-competitive elements of the above regulation (LI 2180 of 2012), is that allocation of bus routes will be based on 'needs' on the ground and route franchising through competitive tendering process. Tendering process would have to be handled by each municipality where bidders would be selected based on certain pre-determined selection criteria; and successful transport companies from tenders will compete to maintain their operation on specific routes by merit and not by lobbying.

The expected key benefits include intense competition as rival companies strive to increase market share by offering attractive services to customers, establishing themselves through aggressive marketing and providing high quality services, especially increasingly higher safety standards. The only market limitation is that strong companies will tend to grow stronger and will out tender weaker ones.

Bus Safety Regulation

Ghana has grappled with road transport safety over time. A considerable number of road traffic crashes result in fatalities. It is estimated that over 1,700 people die annually through road traffic accidents, contributing to 1.6 per cent of GDP which is estimated to cost GHC1.2tn or US$130mn. Where the MMT is concerned, between 2006 and 2010, an estimated number of 508 road traffic crashes were recorded. Out of this, 42 per cent was caused by poor driver behaviour, 8 per cent was caused by mechanical faults and 50 per cent was caused by third party mistakes. A road reform safety has, therefore, been defined in the following policy statements: (i) ACT 567 of 1999 on establishment of a National Road Safety Commission (NRSC); (ii) ACT 569 of 1999 which gives autonomy to the Driver and Vehicle Licensing Authority (DVLA); (iii) ACT 540 of 1997 of the Ghana Highway Authority (GHA) ; (iv) the Police ACT establishing a Motor Traffic and Transport Unit/Department (MMTD) to enforce Road Traffic Laws and Regulations and a new (v) ACT to establish a Road Transport Authority under the Ministry of Transport is on-going.

The objectives are to undertake nationwide road safety planning, education, advocacy and resource mobilisation for interventions; set standards for road safety equipment and ensure their compliance and co-ordinate, monitor and evaluate road safety activities, programmes and strategies amongst others. Set targets are to

- stabilise trend in persons Killed and Seriously Injured (KSI) by 2015;
- reduce persons Killed and Seriously Injured (KSI) by 50 per cent by 2020;
- focus on pedestrians and bus occupants; and
- save 10,000 lives and 70,000 injuries.

Implications of Competition/Market Reforms in the Sector on Beneficiaries (Operators and Commuters)

This section discusses the outcomes and impacts of the policy reforms in terms of pro and/or anti-competitive elements on the ultimate beneficiaries, i.e., producers (in-terms of market entry and growth) and commuters (in-terms of availability and reliability of service, fare and quality of services).

Bus Operation for Mass Transit with Subsidised Costs

The objective of the MMT to provide cheap transport option for ordinary and poor commuters in the country has not been fully realised due to the following factors:

Availability and reach of service

Though government subsidises the MMT with bus capitalisation, it also regulates prices which compel the service to generate minimum revenue. The price regulation is because the company has been promoted as a 'social enterprise' by the Government. Controlled pricing does not allow for cost recovery so the MMT is not able to break even. Also, the inability to break even does not enable effective bus maintenance regimes. This leads to the accumulation of a large fleet of un-serviced buses and the company consistently operates under capacity. For example, though there have been consistent increases in the number of the MMT fleet since 2006 from 586 to 1439 in 2013 (the fleet utilisation rate has ranged between 54 to 81 per cent, see Table 8). Also, since the buses are procured by the government and the service is run on public funds, there seems to be little incentive for efficiency and the sustenance of the MMT is uncertain.

Table 8: Fleet Growth of MMT

Year	2006	2007	2008	2009	2010	2011	2012	2013
Number of buses[16]	586	734	1025	1103	1113	877	1049	1439
Fleet growth (%)	-	25	40	7.5	1	(-) 21	20	-
Number of operational buses	359	399	559	618	697	713	809	N.A.
Fleet utilisation (%)	61	54	54.5	56	62.5	81	77	

Commuter Feedback on MMT Service Operation[17]

Some findings analysed from the commuters' feedback on the extent to which MMT has been able to fulfil its mandate are presented below.

- Majority of passengers (75 per cent) use private informal bus service as opposed to the MMT service (18 per cent) due to limited availability of the MMT.
- This is because MMT has only 5 per cent market share in the bus transport service.
- The intra-city service operation by private operators serves about 22 minor intra-city routes at varying travel distances whilst the MMT services only about 3 routes.
- Private buses performed much better in adhering to timetable especially on inter-city routes as compared to MMT buses.
- Majority of passengers (88 per cent) who use private informal intra-city bus services have fairly high monthly income levels (US$122/month and above) while 50 per cent of those who use MMT services are lower income earners (<US$122/month).
- Most female respondents (about 49 per cent) preferred the MMT due to the fact that the MMT buses have more space inside than the minivans, which enables them to carry their wares on the bus in comfort especially for traders and market women.
- 77 per cent of the respondents thought MMT was safe, while only 22 per cent of respondents felt a ride on a private bus was safe.
- MMT is about 15-20 per cent cheaper than the informal bus services which gives it a cost advantage over it competitors.

[16]It should be mentioned here that the number of operational buses per year was lesser than the number of MMT buses available

[17] The target group of respondents for MMT are intra-city (based in Accra) passengers and operators.

- With the exception of insurance and road worthy requirements, the MMT is not obliged to pay any taxes, thereby enjoying an unfair competitive advantage over the private operators.

Cost to the Exchequer

One of the concerns of the company has been its financial sustainability as it needs government intervention from time to time to help it stay afloat. MMT launched its 5-year strategic plan in May 2014, with an emphasis on seven basic objectives: (i) improve the safety of passengers and staff; (ii) improve customer service; (iii) expand access to MMT services; (iv) establish a great workplace; (v) increase profitability and attain financial sustainability; (vi) adopt environmentally-friendly practices; and (vii) attain ISO certification 9001. The company is demanding a bail-out package worth GHC58mn from government citing reasons that MMT is not allowed to operate as a commercial enterprise and cannot hike its rates[18].

From the above analysis it does emerge that MMT service has potential to help the ordinary and poor daily commuters – but it needs to improve in terms of efficiency and also expansion to meet the necessary demand. MMT can improve its reach by strategically deploying its expanding fleet especially to areas which are poorly serviced (or not serviced) by the private sector operators. This would help MMT find a 'niche' market.

It needs to be mentioned here that the World Bank run Ghana Transport Sector project has been fairly successful in increasing the road networks that are in relatively good condition by 57 per cent [19] - so MMT can leverage on this and help increase availability of service in otherwise poorly serviced routes.

There is need to explore the creation of a sustaining business model for MMT. Finding a 'revenue model' for the entity seems to be a prime necessity – and it is good to note that this has been entrenched in the strategic business plan of MMT (2014-17).

Policy Reform for Private Sector Bus Transport Financing

There has been limited success in sourcing for private sector financing for the bus transport industry. This is due to the lack of a dedicated strategy for the purpose. Some of the strategies implemented so far have been confronted with diverse challenges including the following:

Provision of Leasing Facilities

Government went into leasing arrangement with some leasing companies with the unions standing as sureties for investment recovery at special government negotiated rates for asset replacement of dilapidated vehicle fleet including private financing companies and insurance companies. This was the popular procurement scheme whereby an operator is given a leasing facility through government influence referred to as *'Work and Pay'*. The success of this

[18]Refer: http://www.justiceghana.com/index.php/en/2012-01-24-13-49-19/7-hot-news/7027-metro-mass-appeals-for-gh-58m-government-bailout-to-avoid-collapse (as seen on Feb 5, 2015)

[19]World Bank has approved an additional financing to the tune of US$ 25 million for further consolidating transport infrastructure in Ghana (see: http://www.modernghana.com/news/579354/1/ghana-world-bank-to-mobilize-new-fi.html)

arrangement has been hampered by high payment default rate which has caused some leasing companies to stop the offer.

Provision of access to bank loans: The usual providers of capital (banks, equity markets) operate sub-optimally because they have imperfect information on the private bus transport operators. Thus not only are bank loans not easily available for most informal private bus operators, the high interest rate on loans (about 52 per cent) also discourages them from using these facilities.

Establishment of PPP arrangements: Initial efforts at instituting some PPP mechanisms whereby government procured buses for operation by transport unions with a 'cost-recovery arrangements', were abused by the unions so could not be scaled-up as planned.

The lack of such regulatory oversight makes such arrangements unviable, in spite of its seemingly operational advantages. This points to the need for a well- defined regulatory framework for supervision and implementation of such arrangements.

Feedback from Bus Operators on Private Sector Financing

Availability of Government loan scheme to bus operators: Most of the operators (94 per cent intra-city and 93 per cent inter-city operators) still use own resources for bus acquisition. Only a handful (6 and 7 per cent in these markets, respectively) could access loan facilities. Out of this number, of the intra-city operators - 20 per cent benefited from government arranged private partnership schemes, 70 per cent arranged privately with financial institutions for facilities, whilst 10 per cent used private loan schemes.

Due to this, fleet holding is very individualistic at limited threshold. About 63 per cent of the bus operators in private informal intra-city service stream are single vehicle owners with about 25 per cent having 2 vehicles and just about 12 per cent more than 2 vehicles. This has resulted in a very informal form of bus service operational practices with little consideration for consumer welfare.

Ease of accessibility to funding sources: Whilst a formal loan scheme may take less than a year to secure, individuals generating funding from their own resources could take a long time. Most of the private operators interviewed (nearly 90 per cent) indicated that it is difficult to generate own resources for procurement of buses.

Rate of cost recovery: The reform initiative to develop private sector bus transport operation has not been matched with the setting of price levels through supply and demand. This is because bus fares are indirectly controlled by governments in a manner which tend to satisfy social rather than economic factors. Price regulation (fare determination) is done through the Road Transport Board using some level of negotiation with the transport unions. This process is considered subjective and imbalanced – as the agreed price (fare) would be based on the strength of the negotiating parties. Fuel prices are also determined in relation to international crude oil which keeps increasing (even when there is a decrease the effects on domestic fuel price is often slow and not much). This system of inconsistent price determination for fares and fuel prices leaves management of public transport always with a challenge.

The expected commercial returns from regulating prices for both private and public bus system for debt servicing under the reform initiative is not feasible for re-stocking. This is because operators recover marginal costs with limited profits no matter how conducive the leasing terms are. In order to maximise their profitability, some bus operators increase their revenue by overloading the vehicles which also has safety implications.

The only benefit in terms of pricing is that though, the MoT determines the prices in the passenger transport segment based on a notional cost of vehicle operating cost per passenger, it does not regulate the prices of passenger luggage. This is one area where the operators have room to set their own prices. The rates in this segment are market determined. This generates wide disparity in the prices of luggage within the same classes of vehicles, and also between the different classes of vehicles. The prices also vary from region to region. Personal judgement rather than objective measurement of weight and/or volume, and traffic flow play a major role in the determination of these prices.

Most operators struggle to recover cost of new vehicle fleet so it has generated price discrimination especially amongst intercity bus operators with some operators charging higher fares by not subscribing to any union membership.

Impact of private sector bus financing on the market: The minimum capital threshold for minibus acquisition which is the lowest vehicle class for operation is estimated at US$40,500 for a brand new vehicle and US$32,400 for a used vehicle. Once funding is secured depending on whether a vehicle is purchased locally or imported the time duration could range between a week to several months.

A large majority of buses are imported into the country. Only about 27 per cent of buses used by private operators are procured locally. About 73 per cent of buses used for intercity operation by private investors are imported mostly using their own resources. This makes the impact of foreign exchange on bus costs very significant. The recent downward slide of the Ghanaian Cedi against US Dollars since 2012 have increased the cost of imported buses manifold in Ghana, and taken it beyond the capacity of many 'potential' entrants.

Impact of reform on private sector financing on condition of bus fleet: The intra-city bus service market is still dominated by small private individual ownership operators who are able to afford second hand, light buses with small seating capacity. It is estimated that most of the informal buses in commercial operation are over 15 years of age[20]. Due to the high cost of new vehicles, vehicle owners are only still able to afford relatively cheaper imported second hand vehicles from Europe, Japan and other overseas countries.

Very few (about 4 per cent) buses were rated to be in very good condition by the operators. 50 per cent private operators and 30 per cent MMT operators rated their buses to be in poor or very poor condition. This indicated that about 90 per cent of the bus vehicle fleet for intra-city service is in poor condition.

[20] Supra Note 2

The government is still pursuing other Public Private Partnership (PPP) avenues for both transport infrastructure and service development. Supported by the World Bank, the Ministry of Finance and Economic Planning developed a National PPP policy for Ghana[21], which was adopted in the year 2011. The aim of this policy was promoting a combination of policy and legal reforms, financing mechanisms, incentives and institutional support to bolster private sector participation in the provision of public infrastructure and services through Public Private Partnership (PPP) arrangements[22].

Further, it has been long suggested that some form of restructuring, possibly into a business of leasing buses to private operators, will be required to reconcile this initiative with the stated Government policies on private supply in the service sectors of the economy (IBIS Transport Consultant Ltd., 2005). Further, there is currently no form of tax incentives for private bus operators in Ghana. In order to realise the outcome of greater private participation in providing transport infrastructure and services, the Government of Ghana needs to identify some such 'incentive measures'.

Route Allocation

The route registration and issuance of permits though on-going is with varied rate of success in all the participating MMDAs. Though, the DVLA issues a commercial vehicle license, a road worthy certificate and a driver certificate for any 'would be' vehicle operator, the local Government through the MMDA's issues permits for commercial transport operation in their jurisdiction. For so many years the route registration requirement is not enforced. Permits issued by the MMDA continue to be for whole license area not tied to specific routes.

This has created a situation whereby transport unions such as the Ghana Private Road Transport Union (GPRTU) which controls 85 to 90 per cent of the market[23] has assumed self-regulation in the sector and act to co-ordinate the activities of the wide range of private investors in the business. Other smaller bodies such as the Progressive Transport Owners Association and the Ghana Co-operative Transport Union, representing owners and mainly taxis respectively, have also since emerged.

Though the problem of the lack of enforcement of the route registration exercise still exists and unions still control the process, under the UTP pilot, transport units have been set up and equipped with staff in some Metropolitan, Municipal and District Assemblies (MMDAs) to undertake the exercise. The units also oversee the promulgation of bye laws aimed at transport regulation. Most of them are in the process of being gazetted. Sensitisation workshops have been carried out by the units in their respective assembly areas educating people on the need for transport reforms. The units have also undertaken some route registration exercises and developed data base of the various routes and operator operations.

[21] http://www.mofep.gov.gh/sites/default/files/docs/pid/ppp_policy.pdf
[22] http://www.mofep.gov.gh/?q=news/060713
[23] IBIS Transport Consultant Ltd (2005), "Study of urban public transport conditions in Accra, Ghana" under the auspices of PPIAF, The World Bank

It is anticipated that the establishment of these units will be expanded to more assemblies in the ensuing years.

This is indicative of the fact that the assemblies are beginning to assert themselves as the regulating authority. The success with the introduction of the permit is the measure of the MMDAs readiness to introduce higher levels of contract such as Route Service Contracts (RSC) for improved bus services. Another major benefit of the exercise is the development of transport services database for each assembly area. The information contained in these databases is a vital resource for transportation planning, monitoring and enforcement. However, its implementation has been rather slow and has been resisted by transport operators[24] and as of now there is no officially regulated mechanism for route allocation.

1. Impact of route licensing process and market entry: So far, route rationalisation has not been effectively implemented in Ghana. Under the current system, there is cherry picking where only profitable routes with high commuter demand are served better by the union members, mostly in the intra-city segment. Other routes that are not very profitable are characterised by limited transport availability.

It has been observed that most operators who are members of unions are still allocated routes by their union in accordance with preference and ability to lobby. Some who are not union members ply on different routes at different times of the day and in a week as deemed lucrative. Most (55 per cent) ply on single route whilst 14 per cent ply on double routes. The remaining ply between 3 to 6 different routes at different time schedules.

There is still no restriction on market entry for bus operation in Ghana. Anyone can still operate a bus anywhere, if he/she has some capital to invest in the bus industry to purchase old second hand vehicles of various forms and shape without any form of standardisation. There is very little expertise required in terms of educational skills to enter this market. The only requirement is still vehicular road worthiness and licensing certified by the DVLA with acquisition of operational permit with respective district assemblies.

2. Impact of route registration exercise on bus operation management in the industry:

The private sector bus operation has four main types of bus ownership:

(i) owner-driver of a bus, that is a driver who owns his own vehicle;
(ii) entrepreneurs who hire out buses to drivers;
(iii) entrepreneurs who have relatively large fleets and employ drivers to operate them; and
(iv) entrepreneurs who procure vehicles for management by a formalised fleet management set up.

About 63 per cent of the bus operators in private intra-city service stream are single vehicle owners with about 25 per cent having 2 vehicles and just about 12 per cent more than 2 vehicles. This establishes the fact that the industry is still dominated by small private individual ownership operators.

[24] http://www.myjoyonline.com/news/2013/October-19th/taxi-drivers-sue-ama.php

Efforts to encourage the formation of bus companies under common management to tender for routes have been rejected by transport unions on the basis of the following factors:

- rejection of agency control and oversight of funding from an independent management structure;
- uncomfortable organisational reforms or operational adjustments associated with the reform initiative;
- unfamiliar intensive contract administration;
- lack of set guidelines or requirements of performance indices; and
- the inability to enforce the initiative due to the challenge posed by non-registered bus operators who are restricted from operating on routes licensed by specific bus company through effective enforcement.

3. Feedback from operators on route licensing: In the section below, feedback from operators received about the licensing process has been presented and this provides some 'pointers' for the future, especially in terms of making it easy for operators to obtain license and enter the market.

Data on number of registered buses is not easily available in one place. From the data that was obtained, it is evident that there has been an increase (Table 9) in the number of buses in the country (in line with the increase in the number of other commercial private vehicles – as presented in Annexure 5). As seen, however, the increase in the number of licenses has been quite erratic and not consistent.

Table 9: Number of Registered Buses in Ghana by year

Year	Number of registered buses and coaches	Percentage growth
2000	5,469	
2001	2,676	-51%
2002	2,601	-3%
2003	2,916	12%
2004	4,882	67%
2005	5,585	14%
2006	7,399	33%
2007	9,791	32%
2008	11,737	20%
2009	8,810	-25%
2010	9,506	8%
TOTAL	**71,372**	

- Overall, it is not difficult to obtain driving licenses and permits. About 45 per cent of intra-city bus operators indicated that they obtained their licenses within 2 to 3 weeks; whilst 28 per cent said that it took them a week. About a quarter (26 per cent) respondents did indicate that it took them almost a month (4 weeks) and beyond to obtain their licenses.
- Opinion about the licensing process was quite mixed – while, 48 per cent of the respondents rated the process of obtaining a license as being fairly easy; 42 per cent rated thought it to be difficult.
- About half of the respondents complained that the process of license renewal had become more time consuming and that the process was fraught with a number of concerns including:
  - issuance of illegal and fake licenses at DVLA by middlemen ('goro boys') with increased costs; and
  - cumbersome process and expensive.
- Many respondents suggested introduction of electronic renewal system to address both the issue of corruption and facilitating a fast licensing process

4. <u>Impact of route licensing on commuters</u>: Feedback gathered from commuters and presented below, provides some idea about availability of private transport services:

- 73 per cent of the passengers interviewed were able to access private transport services within 15 minutes from their place of residence. It took 54 per cent passengers less than 5 minutes to access private transport services. This indicated that private services are readily available and have a wide reach-out.
- Nearly 60 per cent of the passengers have not seen any positive developments regarding availability of private buses in the last 5 years – so there is a lot of scope for improvement for the private operators. Some incentives/strategies from the government should be targeted towards this.
- Only an average of 30 per cent of passengers is of the view that there have been positive changes in the choice of vehicles they use to travel. Out of this, majority (38 per cent) are private informal bus users.

5. <u>Potential impact of route registration on the economy</u>: If fully implemented, whilst the licensing process will still conform to the Local Government Act (No.462 of 1993) with MMDA's issuing operational permits for commercial bus transport operation, the bidding process for route licensing will be very competitive. Especially, the specifications on use of large buses and the requirements for larger capital threshold with formal management structures will change the market dynamics of the industry.

These interventions might create entry barriers for small operators who do not join management units as well as those who are not able to win bids for specific route operation. There is also a possibility of losing bus companies resorting to operate on non-competitive routes and the potential for some current operators with small bus operators going out of business. However, this could be avoided by having these small operators to ply on other sub-urban routes which are not served at the moment. This would help create rural-urban linkages.

Also the re-organisation of informal bus operators under a formal management set up along with the introduction of competitive tendering for route operation might affect the operations of semi-literate operators with limited capacity and knowledge in market management.

It is expected to be one of the priorities of the impending National Transport Authority (NTA) to be established by the MoT to integrate a route rationalisation system in the licensing process.

Road Safety Reforms

Various activities to promote road safety in the transport industry have been and are being implemented:

i. Development of a National Road Safety Policy.
ii. Implementation of 3 multi component national road safety strategies and action plans on education, engineering, enforcement, emergency response etc. involving stakeholder agencies such as the DVLA, road agencies, Motor Transport and Traffic Department of the Ghana Police Service, the Ghana Ambulance Service, the Ghana Red Cross and the Ghana Fire Service.
iii. Promotion of road safety activities.
iv. Implementation of road safety activities.
v. Coordination of road safety activities by different agencies.
vi. Funding generation and resources development.
vii. Monitoring and development.
viii. Research and development and knowledge transfers.

Improved bus service standards are desired outcomes of competition reforms in the bus transport market. Ideally this should guide passenger preference which will in turn cause operators to improve their services. However, there are no set standards for efficiency in bus operation in terms of quality of service.

Though, some safety standards have been established this does not seem to have promoted safe, secure, comfortable, reliable and sustainable passenger transport in the country. Customers do not have the ability to demand high levels of service in the current state of affairs.

1. <u>Impact of safety policy on bus service quality</u>: Quality limitations; driving and technical standards etc. have not improved significantly. Preventive maintenance, which constitute a planned programme throughout the vehicle’s life is largely absent for buses in Ghana. As such vehicles experience frequent breakdowns and ultimately fail to live up to the recommended technical lifespan.

Service quality generally is poor in terms of safety, equipment performance, service availability, schedule adherence, severity of service disruption etc. Other service quality challenges relate to improper loading and parking due to the limited number of parking spaces and poor terminal infrastructure for ease of bus manoeuvring. This is caused by double-parking, high pedestrian volumes on walkways as well as at intersections and inconveniently located terminals for the intra-city service.

The formal private bus operation generally has buses that provide the best balance of safety, expense, speed and comfort, especially when travelling between major towns for intercity service. Many have air conditioners and video. They also provide scheduled service with advance ticketing system. The informal *Trotros* are considered very unsafe and have bad accident records.

As a rule, *Trotros* used for intra-city service are uncomfortable, dirty and sometimes dangerous. Appropriate and effective maintenance procedures and controls to ensure safe roadworthy vehicles, which will meet a defined level of reliability within economic cost levels is also compromised. Reactive repair maintenance procedures are preferred to preventive maintenance.

2. <u>Commuters feedback on safety policy</u>

- Less than a third (29 per cent) of the passengers acknowledged positive changes in bus services quality in the past few years. About a quarter (24 per cent) passengers attributed these changes in bus service quality to government intervention. This indicates that greater government intervention in regulating quality of buses would be essential.
- Feedback about improvements in safety was mixed – with about 36 per cent of the passengers indicating positive changes, while 28 per cent indicating that there have been negative changes (deterioration) in intra-city bus safety in recent years.

Observations of Fare Regulation Process on Policy Reforms

Bus transport fare could be a key indicator for generating competition in the bus transport industry. However, bus fares are set through consultations arranged by either Government or operator representatives for the purpose of fare setting when one party demands this. The Ghana Road Transport Co-ordinating Committee (GRTCC) formed in 2001 plays a coordinating role between the two entities. One of the major reasons for the establishment of the MMT was to regulate transport prices to meet the needs of the poor and vulnerable in society. The marketing benefit of this was to control excessive price hikes for profit making by private bus transport operators.

According to a study conducted by M/s Delloite in 2011, transport fares for intercity bus service is slightly cheaper than that of intra-city service at GHC 0.03/km and GHC 0.04/km respectively. The difference in fares for the MMT compared to the private bus operation industry is between 20 to 40 per cent cheaper for the latter (given it is subsidised), which gives an unfair cost advantage over it competitors. However, due to its poor network and smaller fleet size – private vehicles are preferred by the commuters, even if they have to pay higher prices.

The setting of fares is generally based on the components defined in the table10, below. The fare levels allow operators to provide reasonable quantity of services and earn some profit. This does not ensure healthy competition within the sector and passengers do not get good services for the monies paid. This can only change if Government provides the conditions for a competitive environment.

Table 10: Components of Bus Transport Pricing

Government charges	Inflation	Foreign exchange rate
Fuel	Salaries	Acquisition cost
Vehicle licensing	Social security contributions	VAT on acquisition cost
Road-worthiness	Staff medical expenses	Cost of capital (interest rate)
Tolls	Insurance	Tyres
	Overheads	Lubricants, maintenance

Over the years fares have been increasing at all levels of bus transport operation in Ghana. This is mainly attributed to increasing fuel costs and high cost of spare parts. Normally, the frequency of fare revision is about once or twice a year. However in situations of persistent fuel price adjustments government is compelled by unions to adjust fares more frequently.

- About 44 per cent of the private intra-city bus operators acknowledged that they subscribe to fare setting mechanism regulated by their unions as agreed with the Government.
- Some union drivers do not subscribe to Government approved fares as well as some floating drivers though this is illegal. The reasons assigned include low revenue generation and inability to recover cost. Other floating drivers in this category copy fare charges from others.

<u>Feedback on fare from commuters</u>

- Most passengers (75 per cent) were of the view that the fare levels of intra-city bus service providers were justified considering the level of service provided. Many passengers (over 54 per cent) were of the opinion that the fare levels of other alternative modes were higher than that of intra-city bus services.
- Over a third of the commuters in inter-city buses indicated that there has been some stabilisation of fares in the last 5 years or so.

Concluding Remarks

There seems to be a lack of incentive to increase services, improve service quality, create innovation and even lower fares, resulting in considerable disadvantages for passengers because there is little to keep local operators on their toes. This is further compounded by the fact that some of the pro-competitive reforms like the ‘route rationalisation’ could not be effectively implemented due to the resistance by the unions.

The fare-setting process too is not scientific and based on negotiations between the government and the ‘powerful’ unions. There are also no representatives of passenger welfare associations/consumer associations in these negotiations – to add the element of ‘commuter’ welfare in fare related discussions.

In a bid, therefore, to identify ways to improve services for passengers, the Government is taking the significant step in the establishment of the National Transport Authority (NTP) with the following objectives:

- to develop a legal and regulatory framework that will enhance regulation and oversight of road transport operations to achieve efficiency, effectiveness, safety, quality and overall affordability of road transport services in Ghana; and
- to institute the appropriate mechanisms for, the creation of the proposed Road Transport Authority (“RTA”) as envisaged for the transport sector under the Medium Term Development Plan 2011 -2014[25].

Recommendations

Some of the recommendations that emerged from the above discussion and analysis for developing an effective, efficient, safe, affordable transport sector (as also envisaged under the Road Transport Authority proposed by the Medium Term Development Plan, 2012-14) are enumerated as under:

- Develop strategies to enable easier access to financial support for entrepreneurs to enter the bus transport sector, as there is scope for further supply of buses.
- Interest rate on loan remains very high (at 52 per cent) and discourages potential entrants. The Ministry of Transport together with the Ministry of Finance and Economic Planning could design some incentives/schemes (low-interest rate loans) to promote potential entrants to enter this sector.
- Implementation of the ‘route allocation’ reforms in such a way that incentives are offered to operators who choose to operate in a non-services or poorly-serviced area (e.g. by relaxing their need for license renewal).
- Establishment of the Road Transport Authority and implementation of its proposed functions has to be taken up as a priority. One approach could be to take up 2-3 of the priority issues.
- Strict enforcement of ‘quality standards’ in the bus importation process – so that old, damaged buses are not permitted to enter the country.
- Attract foreign investors from emerging economies to set up bus manufacturing or assembling plants locally.
- Develop the ‘Research Unit’ proposed under the Road Transport Agency as a ‘Resource and Database Unit’ – so that all data pertaining to the road transport sector can be stored at one place.

[25] EU Delegation to Ghana supported Final Report of “Preparation of A Regulatory Body &Regulations To Improve Performance Of Ghana’s Road Transport Services”, report by Planet S.A., Greece (July 2013)

- Close supervision of the activities and behaviour of the powerful transport unions in the country.
- Engagement of civil society organisations/passenger welfare associations to engage in this sector – especially processes such as fare setting, safety awareness, research, etc.
- Enhancing bus travel opportunities at affordable cost for the less mobile, including the urban poor, non-vehicle owners, children, the elderly and the handicapped.
- Sustaining bus transport development initiatives, and make future development more proactive in respect of urban development, rather than being retro-active.

5. Conclusion and the Way Forward

From the discussion of policies, legislation and institutions in the two sectors (maize and bus transport), especially their impacts on the ultimate beneficiaries (farmers/operators and consumers/commuters) the following conclusions are made.

Concluding Remarks

Together with the recommendations proposed in each of the sectoral chapter, these conclusions (below) would form the part of the agenda to promote competition and regulatory reforms in these two markets in Ghana. CUTS along with its partner ISSER would develop a strategy based on these findings to take this process forward. This strategy would be discussed with national stakeholders in order to validate the proposed action and create an operational plan. The overall aim would be to benefit consumers and producers in these two sectors – as is the goal of the CREW project.

- **Strict quality supervision in liberalised markets – a must**

Evidence from the fertiliser sector highlights the benefits that can be gained from strict quality supervision in a liberalised regime. The Government of Ghana needs to maintain a strict enforcement regime (through PPRSD) under the Plants and Fertilisers Act 2010 – which has improved the quality of the fertilisers being imported into the country and is benefitting the farmers.

The transport sector can take a clue from this in order to improve the quality of the buses being imported into the country. A large chunk of buses are imported from overseas – and efforts should be made at the ‘point of entry’ to ensure that only buses that conform to ‘minimum quality standards’ are allowed to enter. Importers of buses would need to register, and the relevant authorities should closely monitor their stocks. This is an action point for the destination inspection department of the Ghana Standards Authority.

- **Managing Public Private Partnerships**

Several types of public-private-partnerships need to be envisaged and implemented. The PPP policy adopted in the year 2011[26] by the Ghanaian Government will provide the overall legislative and implementation guidance for rolling out some of these PPP arrangements. Some of the following seem to be useful for the country:

- Exploring the possibility to engage private operators in providing services to MMT. As has been suggested, it would be useful for MMT to find ‘niche markets’ – especially to link people in semi/sub-urban areas who are otherwise poorly or not serviced by bus transport. This would help reduce the dependency of MMT on the government funding. Some of these issues should be taken up in the implementation of MMT’s strategic business plan 2014-17.

- NAFCO has supplemented the privatised maize procurement process well – by acting as the ‘last resort’ for mopping up maize from farmers who are unable to find markets for their produce. NAFCO should develop some sort of a ‘performance based license renewal’ process for the Licensed Buying Companies (LBCs). This will help strengthen

[26] Refer http://www.mofep.gov.gh/sites/default/files/docs/pid/ppp_policy.pdf

the LBC network. Some incentives for these LBCs from reaching the 'last mile' should be devised.

- There is scope for strengthening the fertiliser distribution network, as the access remains difficult for remote, rural farmers. This is an area that the Ministry of Food and Agriculture (MoFA) needs to take up as a priority and chart out an 'operational plan' in consultation and in partnership with the private fertiliser firms. Credible NGOs working in partnership with the Government in the agriculture/rural development can also be engaged for achieving this.

- **Facilitating private participation in key areas**

Some incentive schemes would need to be designed to encourage greater private sector participation in some of the markets in each of the two sectors, as suggested below:

- The effective implementation of the National Seed Policy, 2013 would need active engagement of the private sector (private seed companies). The MoFA would need to design an enabling environment to facilitate this.

- In bus transport sector, a key reform measure is 'route rationalisation', which offers considerable challenge to the policy-makers, as it becomes difficult to balance the interest of consumers and producers in this process. Ghana needs to look at the experience of other developing countries which have successfully implemented route rationalisation in busy cities/towns – as this is an item that the soon-to-be established National Transport Authority is expected to handle.

- Schemes and programmes would need to be designed to make low-interest loans available for young entrepreneurs to enter the bus sector. This would help create jobs among the youth – the private bus sector remains an attractive industry for the youth. This sector has considerable potential to offer employment opportunities for the youth of the country – however, there are no incentives (credit facilities, tax incentives, etc.) or strategies (leasing of buses, etc.) to do so.

- **Curbing anti-competitive conduct and tendencies**

Ghana is likely to soon have a National Competition Commission. Some evidence gathered from the sectors hint towards possible anti-competitive conduct in the bus market and fertiliser sector as has been explained below:

- Closely monitor the behaviour of the transport unions – especially in terms of their engagement in fare revision and route allocation. These unions should not erect artificial entry barriers for small operators.

- Some observers indicated a cartel in the transportation sector (which is quite common in developing countries). This exerts upward pressure on prices (inland-transport), thereby making the cost fertilisers higher than they should be.

- Port handling and clearance cost is one of the highest cost components influencing domestic fertiliser prices in Ghana. It would be useful to closely examine this segment in terms of the players and their behaviour.

- **Role for civil society as reform champions**

It also emerges that CSOs/NGOs would need to play a key role as champions of competition and regulatory reforms (especially in these two sectors). In order to do so, they need to be engaged in some of the activities enumerated below:

- Undertake research in the transport sector, as research would be one of the key functions of the envisaged Road Transport Authority.

- The Ministry of Transport should consider inculcating some transparency in the 'fare setting process' by engaging credible and experience civil society organisations. The Ghana Road Transport Co-ordinating Committee (GRTCC) will be lobbied to activate this.

- Engaging in 'road safety awareness' programme as it has been undertaken in some of the other countries, especially by engaging NGOs to develop campaigns in schools and colleges.

- CSOs working in the agriculture sector (especially with farmers' organisations, etc.) could design programmes to help farmers from getting information about the 'minimum guaranteed price' (floor price) for various commodities like maize, etc. from time to time.

Way Forward

Together with its partners and associates in Ghana, CUTS has also been advocating for the adoption of a national competition regime in the country (both National Competition Policy and the Competition Law of Ghana). The Ministry of Trade and Industry has acknowledged the support and cooperation it has received over the last 7-8 years from CUTS and considers the organisation as its 'knowledge partner' on this subject.

A process for developing the National Competition Policy of Ghana is currently on-going – and the above conclusions/recommendations would be incorporated in this process. Evidence of benefits from pro-competitive reforms on beneficiaries (and adverse impact of anti-competitive policies and practices) would help initiate a debate about the necessity of a national competition regime in the country.

Specific recommendations would also be provided to both the Ministry of Food and Agriculture and the Ministry of Transport, so that they can form part of the implementation pathway of crucial policies and reforms planned by the Government.

Finally, the Ghanaian economy has been under a lot of pressure in the last couple of years. Some of the recommendations in this report provide suggestions on how the Government can facilitate private sector engagement in these two sectors – which will not only create employment opportunities for the youth - but also save precious Government funds.

FDI could be encouraged in bus manufacturing/assembling in Ghana, in order to improve the quality of buses plying on the Ghanaian roads, by engaging with some of the new emerging economic partners like China, India, etc.

6. References

Afful, D. (2011), 'The Challenges Confronting Private Bus Operators in Ghana', MBA, Dissertation

Aidoo en Etal (2013), 'Passenger's Satisfaction with Public Bus Transport Services in Ghana: A Case Study of Kumasi-Accra Route – Building and Road Research Institute Ghana (BRRI)

Chabeli J. Ramolis E: 'Competition issues in the Transport Sector in Lesotho'

Croppenstedt, A, M Demeke & M M Meschi (2003), 'Technology Adoption in the Presence of Constraints: The Case of Fertiliser Demand in Ethiopia'. Review of Development of Economics, 7(1), 58-70.2

Daramola, B. (1989), 'The Study of Socioeconomic Factors Influencing Fertiliser Adoption Decisions in Nigeria: A Survey of Oyo State Farmers', Fertiliser Research, 20, 143-151.23

David A Hensher and Gabriel Wong (2011), 'Different Approaches to Public Transport Provision, Journeys', November 2011

Desai, G M & S Bruce (1987), 'Fertiliser Market Development and National Policy in China and India: A Comparative Perspective', Paper presented to the IFA FADINAP Southeast Asia and Pacific Regional Conference, July 22-25, 1987, Kuala Lumpur, Malaysia

Desai, G M & V P Gandhi (1990), 'Policy Issues in Growth of Fertiliser Use in sub-Saharan Africa', IFPRI, Washington, DC, USA 21

Dzanku F. and Aidam A. P (2010), 'Agriculture Sector Development: Policies and Options', ISSER

Economics Programme Paper 99-01, Mexico

Estache Antonio and Gómez-Lobo Andrés, Limits to Competition in Urban Bus Services in Developing Countries

FOSU Kwasi Augustin (2013), 'The Economic Reforms of the 1980's and Ghana's Economic Development', EGN Presentation, ISSER

Ghana Living Standards Survey (2002)

Ghana's Private Sector Development Plan 1

Heisey, P W and W Mwangi (1996), 'Fertiliser Use and Maize Production in sub-Saharan Africa', CIMMYT Economics Working Paper 96-01, Mexico D.F.4

IBIS Transport Consultants Ltd (2005), ‘Public Private Infrastructure Advisory Facility Study of Urban Public Transport Conditions in Accra, Ghana’

IFPRI (2012), ‘Ghana Strategy Support Programme’, Working Paper 28 ‘Analyzing Profitability of Maize, Rice, and Soybean Production in Ghana: Results of PAM and DEA Analysis’

Kelly V, A Adesina & Gordon, A (2003), ‘Expanding Access to Agricultural Inputs in Africa: a Review of Recent Market Development Experience’, Food Policy, 28(4), 379–404.6

Ministry of Roads and Highways (2011), ‘Statistical and Analytical Report (Transport Indicators Database), 2005-2010

Ministry of Transport, ‘3rd Sector Medium-Term Development Plan (SMTDP): 2012-2014’, June 2011

Ministry of Transport: Europaid /127054c/ser/multi (2012), Preparation of Transport Sector Research Strategy, Climate Change Strategy and Cost Implementation

Morris, M L, R Tripp and A A Dankyi (1999), ‘Adoption and Impacts of Improved Maize Production Technology: A case study of the Ghana Grains Development Project’

National Policy Plan (2008), Ghana

NRSC (2010), ‘Statistics on Road Traffic Crashes & Casualties in Ghana, 1991-2009’, Easy Reference Edition

United Nations, (2001), ‘The Economic Regulation of Facilities and Services Transport infrastructure’, New York

Yeboah Albert (2009), ‘Business Failure in Ghana – The Case Study of Ghana Airways Limited’

Yobo, E (2003), ‘The Evolution of State Mass Transport in Ghana’, Public Management Research Institute

7. Annexures

Annexure 1: Definition of Key Terms

Some of the key terms related to the project have been defined below:

(a) **Competition Reforms:** The project has derived a working definition of competition reforms as an aggregate of the following components: (i) Enabling **government policies** designed to facilitate a level playing field (fair competition) in a sector, (ii) Well-designed **regulatory framework**, adequately resourced **regulatory institutions** and **effective actions** for promoting fair competition in a sector, (iii) Well-defined **competition legislation** and effective **enforcement** mechanisms. Five elements of competition reform to be focussed in this project include: **Policies, Laws, Statutory Instruments, Sectoral Programmes and Practices**

(b) **Consumer Welfare:** Effect of competition reforms on consumer welfare would be examined using the following indicators: (i) **Access:** Goods and services reach consumers in areas where they were not available earlier, (ii) **Quality/Price:** Good quality goods and services are available for consumers without any appreciable changes in prices of such good/services, (iii) **Choice:** New firms/products enter otherwise 'concentrated' markets, for the benefit of consumers, (iv) **Price:** Prices are reduced in a 'contestable market' to the relief of consumers, (v) **Time savings** by consumers

(c) **Producer Welfare:** Effect of competition reforms on producer welfare would be assessed using the following indicators: (i) **Access to essential services**: Firms can easily access infrastructure networks, etc., (ii) **Free movement of goods and services**: Mobility not affected by policies, practices (inputs & outputs), (iii) **Predictability of regulatory actions**: Legislations enforced by autonomous yet accountable institutions, (iv) **Cost savings**: Effective implementation of strategies to reduce costs, e.g. improved application of ICT tools, (v) **Fair market processes**: Easy entry and exit in markets; considerable 'ease of doing business', (vi) **Level-playing field**: principle of 'competitive neutrality' observed, (vii) **Transparency in market**: Well laid out policies and predictable implementation processes (market regulators)

(d) Consumer and Producer Welfare in the two sectors (staple food and passenger transport) is defined in the matrix below:

	Staple Food	***Passenger Transport***
Consumer Welfare	Availability of good quality staple food at right prices for ordinary consumers	Availability of good quality transport services to ordinary consumers at right prices within city (intra-city) to get to workplace, markets, college/university on a daily basis & also on busy inter-city routes
Producer Welfare	Participation of private entities in procurement, storage and distribution of staple food and how they benefit Right price and fair terms for producers (and their groups) in : both inputs and outputs markets	Ease of entry of 'new players' (an operator) in a specific geographic market for providing such services Fare and terms of service in case of Inter-city Transport services for small traders travelling to nearest market town to sell their produce

Annexure 2: Overview of Research Methodology for Ghana DCR

The approach to the study included desk studies, secondary and primary data collection, data analysis and reporting.

Desk Studies and Secondary Data Collection for the Bus Transport Sector

The desk study involved a revision of background information on the general characteristics of the transport industry in Ghana and a revision of the policy and regulatory reforms relating to bus transport in Ghana. The information was sourced from existing documentations on the areas of interest to this study as listed in the attached references to this report including international case studies of public transport service in both developed and developing countries to guide our case studies. Areas covered include:

- The overall transport policy for Ghana and the role of public bus transport services in meeting transport demand and supply;
- The history/introduction of mass transit public transport systems in Ghana;
- Ownership and management structure of the MMT and private bus operations; and
- Policy and institutional framework for the operation of the MMT and private bus transport service in Ghana; and operations (covering routes, service mix, bus schedules, fares, daily passenger volumes, staffing, service quality, ticketing, profit making, maintenance and sustainability.

Primary Data Collection and Analysis for the Bus Transport Sector

In order to obtain first-hand information about the characteristics of the bus operation systems and to validate information obtained from the literature review/desk study, field studies were conducted to gather information for reviewing the operations of the MMT Company and selected private operators. A mix of observation, consultations, forums/discussions, interviews and questionnaire surveys were used to gather information for reviewing the operations of the MMT Company and other private operators.

Data collected through consultations was collected from staff of the company and private operators (vehicle owners, operators/drivers, conductors, ticketing personnel, technicians, field officers, managers, union leaders etc.) for a broad overview of their operational characteristics.

Questionnaires were administered for inter and intracity bus operators to give an idea of levels of operations as well as various strategies being implemented by them as well as passengers who patronise the bus transport services on their level of satisfaction. The types of data collected included:

(i) The organisational and management characteristics of the MMT and selected private operators:

(ii) The characteristics of bus operation system such as:

- Trip and other characteristics
- Vehicle fleet characteristics
- Travel characteristics
- Passenger characteristics

Survey Locations and Sampling Strategy

i Sample Size: Data was collected to represent each bus transport operation service mix as proposed presented in Table A-1.

ii Sample frame: The sample frame included the MMT as a service provider and the passengers who use it on a selected route on which both service mix can be obtained viz – the Accra-Circle-Nsawam-Kumasi road corridor in Accra. As much as feasible, all categories of studies will be conducted on the same route for purpose of fair comparison.

iii Location of Study: The study was conducted along the Circle – Nsawam – Kumasi road corridor.

Table A-1: Sample Size

BUS OPERATORS			
INTRACITY BUS OPERATORS		**INTERCITY BUS OPERATORS**	
207 benz bus	15	207 benz bus	10
Urvan Minis bus	15	Urvan Minis bus	10
MMT	20	MMT	10
Sub Total	50	OA	10
		FORD	10
INTRACITY BUS PASSENGERS		INTERCITY BUS PASSENGERS	
207 benz bus	45	207 benz bus	30
Urvan Minis bus	35	Urvan Minis bus	30
MMT	70	MMT	30
		OA	30
		FORD	30
Sub Total	150		150
Total			400

Data Analysis: Information from documentations, transcripts from stakeholder consultations, and collated data from questionnaires were translated and presented by logical analysis in the appropriate statistical form for numeric and non-numeric information.

Scope of examination of the Staple Food Sector

The study employed a combination of quantitative and qualitative approach (but largely qualitative methods) to generate data about the perspectives of the farmers on the availability, accessibility, affordability and use of input such as fertilisers and certified seeds, credit and storage facilities. A total of 140 maize farmers (70 from Techiman and 70 from Ejura) in Brong Ahafo and Ashanti Region respectively and a total of 90 consumers were selected from three regions thus Greater Accra, Brong Ahafo and Ashanti Region were randomly selected and interviewed. Face-to-face interview of farmers was done using a semi-structured questionnaire with both closed and open-ended questions.

Socio-Demographic Characteristics of Respondents

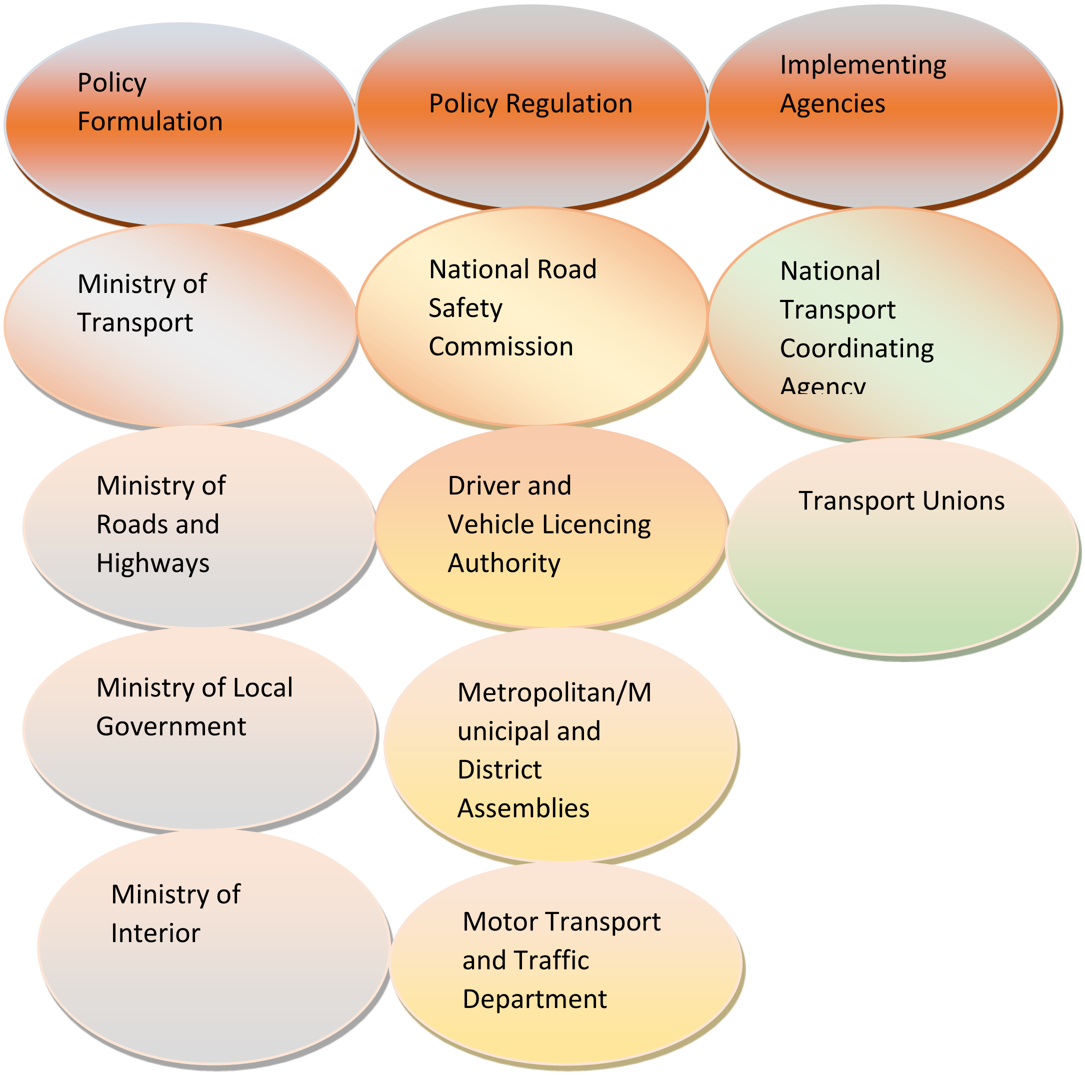
Farmers: A total of 140 farmers were interviewed in two regions, Brong Ahafo and Ashanti region.

The age of respondents ranged between 18 and 84 years. Percentages of female and male respondents were 15 per cent and 85 per cent, respectively. It is important to note that though as many women as men farm in these areas, the areas are predominantly patrilineal and therefore households are headed by men who also take most of the farming and investment decisions. On educational level, 0.7 per cent had no formal education, 82.8 per cent had some basic school education while 14.3 per cent had secondary education and 2.1 per cent had tertiary education. Years of maize farming experience ranged between 2 and 50 years. About 98.6 per cent of respondents farm maize for both domestic use and trade while only 1.4 per cent farm maize solely for domestic use.

Consumers: A total of 90 maize consumers were interviewed in three regions, Brong Ahafo, Ashanti and Greater Accra. Out of the 90 respondents, 34 were male (37.8 per cent) and 56 were female (62.2 per cent). This is because purchases of household are mainly by female in the household. The age of respondents ranged between 18 and 71 years. Also 57.7 per cent of the respondents had some basic school education, 27.8 per cent and 12.2 per cent of the respondent had secondary and tertiary respectively while 2.2 per cent had no education. The household sizes ranged between 2 and 20 people.

Annexure 3: Role of Various Regulatory Institutions in Ghana in Bus Transport

Regulatory Institutions in Ghana in Bus Transport



- **Ministry of Transport**

The Ministry is the custodian of the overall transport sector policy development. It was established in January 2009 by re-aligning the functions of the erstwhile Ministries of Aviation, Harbours and Railways and the Road Transport Services. Its policy is to create an integrated, cost-effective, safe, secure and sustainable transportation system responsive to the needs of society, supporting growth and poverty reduction and capable of establishing Ghana as a transport hub of West Africa. The MoT has responsibility for oversight of 15 'agencies'. It is faced with many operational and human resources challenges. Also, the increasingly diverse array of organisations involved in transport sector decision making means that coordination, communication and reporting activities are complex. It aims to increase capacity and resources and wishes to introduce new skills, operating systems and behaviour.

- **Ministry of Roads and Highways**

The Ministry is the custodian of road infrastructure and includes Ghana Highway Authority, Departments of Feeder and Urban Roads. It formulates the requisite policies, monitors and evaluates programmes and projects and aims to provide affordable, integrated, safe, responsive and sustainable road transport network that will meet the economic, social and environmental needs as well as national and international standards. Its seven Directorates are: Administration; Finance; Policy and Planning; Monitoring and Evaluation; Procurement; Human Resources and Development; Research Statistics and Information Management.

- **National Road Safety Commission (NRSC)**

The National Road Safety Commission was established by an Act of Parliament: NRSC ACT 567 in 1999, to promote best road safety practices for all categories of road users. The NRSC seeks to achieve its Vision and Mission by undertaking the functions which are spelt out in Section 1(2) of Act 567.

- **Driver and Vehicle Licencing Authority (DVLA)**

The Driver & Vehicle Licencing Authority (DVLA) is a semi-autonomous public sector organisation under the Ministry of Transportation. It was established by Act 569 of 1999 to be responsible for ensuring safety on our roads. Before the enactment of the DVLA Act, the Department was called Vehicle Examination & Licensing Division (VELD).The mandate of the Authority as provided in the DVLA Act is to promote good driving standards in the country, and ensuring safety of vehicles on roads and to provide for related matters.

- **Ghana Road Transport Coordinating Agency**

A proposed Road Transport Authority Bill, 2013 is currently being reviewed by the government. It is to establish an overarching regulatory framework for road transport operations in Ghana. It is also to establish the Ghana Road Transport Authority to regulate, coordinate and promote efficiency and high standards in all activities related to the operation of both passenger and freight road transport services in Ghana and for related purposes.

- **Motor Traffic and Transport Department (MTTD) of the Ghana Police Service (GPS)**

The Police Motor Transport and Traffic Department (MTTD) are responsible for enforcing traffic laws, in particular “moving” offences such as speeding, failure to obey signals and signs. They rely primarily on mobile patrols to fulfil their functions although the numbers of vehicles (cars, motorcycles) available for the efficient performance of their duties are severely limited.

- **Metropolitan, Municipal and District Assemblies (MMDAs)**

Guards, under the control of the Metropolitan, Municipal and District Assemblies enforce parking laws. They also direct traffic at busy intersections and act as crossing wardens at busy pedestrian crossings, particularly near schools.

* **Transport Operating Unions**

The GPRTU guards, together with other union officials, ensure orderliness at public transport terminals. They check driver behaviour, overloading and collect daily taxes on behalf of the Internal Revenue Service and ensure that buses only depart when full.

Examples of Private Sector Engagement in Transport Sector in Ghana under the Economic Recovery Programme

1. *The State Transport Corporation (STC):* It was established as a formal transit agency in 1909 to cater for the transport needs of the colonial administration. It became a corporate body by a Legislative Instrument, on March 09, 1965 to run commercial passenger services. A haulage division was created for both dry and wet freight alongside passenger service in 1968. It was later incorporated in June 1995 as a limited liability company under Ghana's Companies Code, 1963 (Act 179). Owing to operational inefficiencies, STC was put on sale under a divestiture program in 1996, as part of Ghana's overall ERP. The GoG, however, was unable to find any suitable buyer but in June 2000, the company was successfully divested with assets to Vanef Consortium but the legal ownership of the company was reverted to the state in 2001 following a change in political administration when the divestiture process was found to be fraudulent' (Afful, 2011, p.3).

2. *Bus Rapid Transit (BRT):* A pilot BRT subproject component was designed under the Urban Transport Project (UTP) for mass movement transit service from Central Business District (CBD) of Accra to Kasoa in the Central Region at lower-cost. It is jointly funded by the World Bank, *Agence Francaise de Developement*, the Government of Ghana, and the Global Environment Facility Trust Fund. It was expected to reduce travel time by 25 percent and also attract over 10,000 passengers during the peak hours and increase the productivity of buses and reduce carbon dioxide emissions. However the project stalled after the construction of a part of the road infrastructure due to cost overruns of over 200 percent that is from an initial cost of US$28mn to US$57mn. Another major challenge is the political will to implement the project in phase of strict resistance from transport unions.

Annexure 4: Number of Registered Vehicles in Ghana (year-wise)

Total Number of Vehicles Registered in Ghana by Category																	
YEAR	MOTOR CYCLE	PTE MV UPTO 2000CC	COMM MV UPTO 2000CC	MV ABOVE 2000CC	BUSES AND COACHES	R/C TRUCKS UPTO 16TONS	R/C TRUCKS FROM 16-22 TONS	R/C TRUCKS ABOVE 22 TONS	ART TRUCKS UPTO 24 TONS	ART TRUCKS ABOVE 24-32 TONS	ART TRUCKS ABOVE 32 TONS	AGRIC EQUIP	COMBINE HARVESTERS	CONS EQUIP	MINING EQUIP	PART. ID. MARK	GROSS TOTAL
2000	6,440	27,552	5,104	5,196	5,469	1,428	395	229	120	305	126	337	30	149	1	0	52,881
2001	6,058	17,953	5,568	5,343	2,676	861	367	234	136	251	122	303	4	136	2	0	40,014
2002	6,430	18,512	6,015	7,143	2,601	1,044	300	281	138	201	168	206	36	172	10	0	43,257
2003	8,777	20,564	5,110	7,778	2,916	914	292	326	116	447	510	158	77	46	29	14	48,074
2004	14,462	20,333	7,642	7,189	4,882	2,065	603	442	447	376	489	510	20	56	11	21	59,548
2005	15,136	22,949	6,686	8,715	5,585	2,457	420	543	551	374	454	140	192	68	7	142	64,419
2006	18,051	23,806	7,249	11,127	7,399	2,747	475	1,024	269	188	637	320	154	489	16	296	74,247
2007	20,320	29,633	7,757	15,296	9,791	3,586	669	1,240	160	342	659	259	154	151	11	300	90,328
2008	25,475	31,628	7,040	17,374	11,737	3,997	861	1,303	89	284	566	171	266	287	19	401	101,498
2009	27,581	25,128	7,868	17,414	8,810	3,130	933	1,120	134	414	352	1,411	195	159	17	332	94,998
2010	36,097	22,444	8,321	17,442	9,506	3,898	1,509	907	334	380	533	305	171	325	6	152	102,330
TOTAL	184,827	260,502	74,360	120,017	71,372	26,127	6,824	7,649	2,494	3,562	4,616	4,120	1,299	2,038	129	1,658	771,594

1983 2012 CUTS International

www.cuts-international.org