National Market Analysis to Inform the 2016/17 MVAC Food Security Response Options

Volume I- Main Report

A Study Report Submitted to:

The Malawi Vulnerability Assessment Committee
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Acronyms

ADMARC   : Agricultural Development and Marketing Corporation
AMIS   : Agriculture Market Information System
APES   : Agricultural Production Estimates Survey
CBT   : Cash Based Transfer
CSB   : Corn Soya Blend
DADO   : District Agriculture Development Officer
DoDMA   : Department of Disaster Management Affairs
EPA   : Extension Planning Area
FAO   : Food and Agriculture Organization of the United Nations
FEWSNET   : Famine Early Warning System Network
GIEWS   : Global Information and Early Warning System
GoM   : Government of Malawi
GTPA   : Grain Traders and Processors Association
kg   : kilogram
km   : kilometer
MoAIWD   : Ministry of Agriculture, Irrigation and Water Development
MT   : Metric Tones
MVAC   : Malawi Vulnerability Assessment Committee
NFRA   : National Food Reserve Agency
SPSS   : Statistical Package for Social Scientists
ST   : Secretary to the Treasury
TA   : Traditional Authority
ToR   : Terms of Reference
VSL   : Village Loans and Savings
WFP   : United Nations World Food Programme

Acknowledgements

Executive Summary

Rationale for the Study

The 2016/17 market assessment study was commissioned to bring out an understanding of how markets will function in 27 districts in the country during the consumption season. The assessment was to identify Traditional Authorities suitable for cash based transfers and those that are suitable for in-kind transfers. Such information is expected to help inform appropriate decisions of the Humanitarian Response Committee, Humanitarian Agencies and donors on whether and where to implement market based interventions or food assistance based interventions to help the people who are at risk of missing food entitlements due the effects of the delayed onset of rains, long dry spells and early cessation of rains.

Specifically, the study sought to, amongst others: (a) establish stocks of the staple cereals, pulses and cooking oil available at markets and current market prices in the major markets serving each affected Traditional Authority; (b) understand challenges faced by traders and other market players to supply key food commodities to markets in the affected areas; (c) assess how the traders will ensure the supply generated by cash based transfer interventions in the affected districts; (d) assess the appropriateness of market based and in-kind food assistance in the affected areas and recommend the appropriate response option for each affected TA (market based or in-kind food); (e) determine the level of competition and price setting behaviours of market participants; and (f) determine the physical and economic factors that may affect the smooth movement of food commodities along the supply chain for the reference period. These could include currency exchange regime, inflation, transport costs, road/rail conditions.

Study Approach

The assessment involved collection of data from large, medium and small capacity traders, wholesalers and retailers, of maize grain, pulses and cooking oil operating in different market centres in 27 districts of the country. It also involved data collection from key market actors at national level, namely Grain Traders and Processors, and National Food Reserve Agency. Primary data collection from traders was done in 10 days, from 13th May through to 23rd May 2016 using a structured questionnaire. This was followed by development of a Matrix of Recommendations on transfer modality options for the Humanitarian assistance per TA done in Salima from 25th to 29th May 2016; and thereafter, in-depth data analysis which is the basis for this report. From the 27 districts covered during the study, a total of 234 market centres were identified in 186 TAs. From these 234 market centres, a total of 524 staple food commodity private traders were identified and interviewed during the study, 76% (398)of these being male while the remaining 24% (126) were female.

Study Findings

Unprecedented competition for maize is on the market.

a) The Malawi Government intends to procure a total of 500,000 MT of maize through ADMARC and NFRA, while a similar figure of 500,000 MT is also mentioned by the private sector. This, therefore, shows that the 2016/17 marketing season is a year of unprecedented market competition between public and private players in the food industry.

b) Despite high demand for maize, from the reported 2.369 million MT production, only about 237,000-308,000 MT of maize could be available on the market. However, the actual amount of maize available on the local market is also affected by informal imports and exports. For the past three years, the country has had net imports of 40,000 MT of maize from neighbouring countries. Based on this estimate, this means that the country's total marketed maize surplus could range from 277,000 MT to 348,000 MT which still falls below the required Government maize purchases of 500,000 MT, not to mention the private sector requirements .

c) As of May 2016, the country had very limited stocks of maize. The NFRA reported to have just about 7,000 MT, while the staple food private traders covered under this study were estimated to have about 15,000 MT.

Emerging dynamics in the characteristics of Food Trade Players

a) Private trader analysis findings show that citizens with higher levels of education possibly graduates from tertiary education institutions, are also participating in the staple food commodity trade. This shows that food trade business is now being recognized as a worthwhile investment undertaking.

b) Instances of financing institutions supporting food trade business persons with business loans also confirm the positive developments for the food trade industry. Loan amounts of MK 70.0 million have been obtained to support agri-food trade.

c) Some few food traders reported to be providing food to their customers on credit of worth millions of Malawi Kwacha demonstrating the strength of their business. In any case, this is a positive indication for stakeholders who want the support of established private traders in implementation of humanitarian support initiatives.

Resilience of private traders

a) Inquiries into business experience finds that some traders have over two to three decades of staple food trading despite facing different challenges in their undertakings.
b) The fact that traders have travelled long distances of even up to 850 km from original districts to their current business places, means distance is not barrier when it comes to setting up and operating food trade businesses. What is important

is the ability to acquire the requisite capital, and having stable demand and supply conditions.

c) *Private trader activities continue to grow despite limited support from the Government. For instance, as have been established in the previous similar analyses, there are limited interactions with public institutions such as NFRA in terms of supply or sourcing maize from such institutions.*

Use of Voucher System

a) *About 30% of the traders are willing to participate in such a facility, with equal willingness expressed by both male and female traders. Limited information on the operations of the Voucher system makes some private traders have reservations on their possible participation in such systems.*

Extent of Market Integration

a) *There is strong co-movement of market prices which is evidenced by strong pairwise correlation co-efficients ranging from 0.60 to 0.94 for most key markets across the country.*

b) *Most private grain traders have diverse market sources with some of them reaching 5 source markets, implying that are active in terms of identifying and reaching out to source markets to meet effective demand in their markets. As such, on average, staple grain traders travel 33 km and a maximum of 800 km to the commodity source markets.*

Food Commodity Storage

a) *The majority of the small traders do not have own storage facilities. They rarely use storage facilities as they buy and sell immediately.*

b) *A few big traders do own huge storage facilities and hence are able to store grain across the marketing seasons. In so doing, such traders are able to release maize into the markets prices are 62% higher than the purchase prices. Compared with the 14% margin realized from immediate purchase and sell of maize, such big traders are able to realize significant profit margins from their business undertakings.*

Market Price Projections

a) *Traders' projections and statistical projections agree on the fact that the 2016/17 consumption season will have significant price increases. On their part, traders project the market prices for maize to reach MK 265/kg with a possible maximum of MK500/kg during the critical lean period of January- March 2017.*

b) *Holt Winters statistical projections using AMIS secondary monthly data, on the other hand, put the average price increases to reach MK250/ kg with a maximum of MK 340/kg for some volatile markets.*

c) *Stabilization of market prices will depend upon the extent to which the Government will be able to implement its planned market interventions. Otherwise, the projected maximum prices may actually turn out to become the average market prices in most market centres.*

Study Recommendations

Based on the findings, the study recommends measures to address the food insecurity crisis for the 2016/17 consumption season, and also long terms measures for sustainable food security conditions for the country.

Strategizing for 2016/17 humanitarian operations

a) *The 2016/17 humanitarian assistance for identified 6.5 million food insecure people to involve both in-kind food assistance for 73% (or 4.76 million) and cash based transfer for the remaining 27% (or 1.73 million). The specific TAs for which each of these interventions are to be implemented are in the Annex 5 of the report.*

b) *For the 4.76 million food insecure population to be targeted with in-kind food assistance, there is need for serious consideration of prepositioning of food assistance for at least 13% of such population located in TAs with difficult road conditions that become impassable during the rainy season. Such a need is also necessitated by the huge caseloads identified for the humanitarian assistance during the 2016/17 season.*

c) *With respect to the 1.73 million population recommended to be under cash based transfer option, about 23% (394000) of them could be considered for a switch to in-kind food assistance option during the course of 2016/17 consumption season. This population is from TAs where much as the private traders are vibrant, they face shaky food source markets which may affect their capabilities to sustainably meet the population food demand throughout the 2016/17 intervention period. This notwithstanding, implementation of such a switch will depend upon local market food security conditions and feasibility of the logistical arrangements of effecting such switches.*

d) *Stakeholders intending to undertake humanitarian assistance operations using the Voucher system are encouraged to do so considering that the private trader business community is amenable to such an approach. However, strong sensitization efforts are needed to bring the traders to the required levels of understanding.*

Regional approach to food security

e) *In view of the persistence of climate change induced food insecurity challenges that are likely to continue besetting Malawi and other Southern African member states for foreseeable future, there is need for a regional approach to dealing issues in terms of food trade in the Eastern and Southern African region. In particular, the Southern African member states need to agree on how to deal with the challenge of staple food trade ban policies.*

Strengthening of SGR operations

f) *The Malawi Government is urged to continue with its long term investments in food storage facilities, namely silos in line with the growing population and its attendant food security needs.*

g) *The national silos need to be well stocked with appropriate amounts of food reserves to minimize or reduce cases of huge food imports as is to be case during the 2016/17 consumption season.*

Institutionalizing trader data collection and dissemination

h) *There is need for institutionalized national system to collect, analyze and disseminate national stocks being kept by business players in different parts of the country. This is based on the realization that currently no one has definite idea of how much maize or other food grain are in the country.*

Some of the possible institutions homes for such an initiative could include MVAC Secretariat, FEWSNET or GTPA or even NFRA or any other institutional home where it can effectively discharge its duties of collecting, analyzing and disseminating data on market dynamics on stocks on grain, number of players involved, capital requirements, challenges being encountered, stocking and release prices, amongst others.

i) *The starting point could be a benefit- costs analysis of having such an institutional approach versus the status quo of undertaking annual market assessments. This could be followed by a register or documentation of all traders in all trading centres, whether they belong to an association or not.*

Capacity building for staple food traders

j) *Deliberate capacity building efforts for private traders should be considered. This should target the potential female and youth traders whom the study results show to be lagging behind in the staple food commodity trading businesses. This could be seriously considered under the Agriculture Sector Wide Approach which is implemented by both ministries responsible for Industry and Trade and Agriculture, Irrigation and Water Development. Such efforts could build on the stock of trading experience by some traders who have been in the industry for two or three decades as well as those that are able to access loans from lending institutions in the face of harsh economic conditions.*

1.0 INTRODUCTION

1.1 Background

Malawi continues to face numerous challenges that are negatively affecting the general food and livelihood security status amongst the poor and vulnerable households in the country. Extreme weather patterns, characterized by incidences of floods and prolonged dry spells have been affecting crop harvests for the past decade or so. For the 2015/16 growing season, the El Niño weather condition has resulted in prolonged dry spells in most parts of the South and Centre and some flooding in the North.

The negative effects of the 2015/16 El Nino conditions have been confirmed by the Malawi Vulnerability Assessment Committee (MVAC) conducted the Seasonal Crop Outlook Assessment conducted in March 2016 whose findings highlighted instances of the late onset of planting rains by 3-4 weeks for the southern region; 2-3 weeks for central region and on time for northern region, with very low amount of rainfall received in the southern region from the start of the season up to February, on average equal to one third of the last year's rains for the same period. For the 2015/16 growing season, the country has received at least three episodes of prolonged dry spells each lasting 4-7 weeks for southern region districts, 3-4 weeks for central region and about 2 weeks for the northern region districts. The District Agriculture Development Offices (DADOs) reported severe crop failure in some Sections of the EPAs across all districts in the southern region, moderate to severe crop failures in some central region areas and low prospects of irrigation in the southern and central region districts due to low residual moisture in dambo areas and almost dry rivers.

Further to the MVAC assessments, the Ministry of Agriculture, Irrigation and Water Development (MoAIWD) third round Agricultural Production Estimates Survey (APES) results show that the country will produce a total 2,369, 493 metric tons (MT), representing 14.7 percent decline in production as compared to the 2014/2015 production estimate of 2,776,277 MT and also 40 percent less than the 3.978 million MT of 2013/14 season. The country's maize requirement for human consumption, seed, stock feed, and industrial use is currently estimated at 3,205,135 MT as such it is projected that the country will face a maize deficit of about 835,642 MT.

MVAC has conducted its annual food security assessment in the country starting from the last week of April 2016 to determine the affected areas and required needs. The assessment has come up with actual numbers of affected people, their locations and time when assistance is required. There is need to determine modalities of transfer regarding in-kind food assistance or market based intervention. As a result, MVAC commissioned a market assessment which is expected to bring out an understanding on how markets will behave during the recommended assistance period in the affected areas. The market assessment is to assist in identifying areas that will be most suitable

for the adoption of a market based response[1] or in-kind food based during the intervention period.

1.2 Objectives of the Study

The objective of this market assessment is to bring out an understanding of how markets will function in 27 districts in the country during the 2016/17 consumption season. The assessment will identify Traditional Authorities (TAs) that are suitable to cash based transfers (CBTs) and those that are suitable to in-kind transfers. This is expected to help inform appropriate decisions of the Humanitarian Response Committee, Humanitarian Agencies and donors on whether (and where) to implement market based interventions or food assistance based interventions to help the people who are at risk of missing food entitlements due the effects of the long dry spells, early cessation of rains and floods.

The assessment will focus on large, medium and small capacity traders (wholesalers and retailers) of maize grain, pulses and cooking oil, herein referred to as 'food commodities'. The assessment will also discuss with market actors at national level. Specific objectives include:

- To determine the physical accessibility to markets affected floods.
- To determine the stocks of the staple cereals, pulses and cooking oil available at markets and current market prices in the major markets serving each affected TA.
- To understand challenges faced by traders and other market players to supply key food commodities to markets in the affected areas.
- To assess how the traders will ensure the supply generated by CBT interventions in the affected districts.
- To determine any potential inflationary risks associated with increased local demand arising from the use of market based interventions as well as understanding the reasons and drivers for inflationary pressures.
- To assess the appropriateness of market based and in-kind food assistance in the affected areas and recommend the appropriate response option for each affected TA (Market based or food).
- To determine the level of competition and price setting behaviours of market participants.
- To determine the physical and economic factors that may affect the smooth movement of food commodities along the supply chain for the reference period. These could include currency exchange regime, inflation, transport costs, road/rail conditions etc.

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[1] Market based responses include an array of response mechanisms which can include direct cash transfers, vouchers (value or commodity vouchers), support to market players such as traders for them to supply key products to remote areas, cash for work etc.

1.3 Organization of the Report

This report is organized as follows: The second chapter outlines the methodology of the study, while the third chapter discusses the regional and national food security context. The fourth chapter presents that private trader characteristics and agri-business conditions while the fifth chapter discusses the private trader food trade activities and their capacity to respond the relief responses for the 2016/17 consumption season. The sixth chapter interrogates the agri-business financing conditions while market integration between source and deficit markets is discussed in the seventh chapter. Chapter eight further examines the food commodity storage conditions with a focus on seasonal trends in stocking and stock release practices whereas the ninth chapter presents the price projections for the 2016/17 consumption year based on the field data as well as secondary data. Conclusions and recommendations are in chapters ten and eleven respectively.

1.4 Study Limitations

The study encountered a few challenges worth reporting. Firstly, there was time limitation for the study activities such that a study team had to cover 7 districts in 10 days. As such, not all markets could be covered. Secondly, in certain places, the study teams could not find traders because it was not a market day. In addition, in certain places, some traders were unwilling to participate in the study arguing that they see no benefit in such endeavours. However, with repeated explanations on the objectives of the study, such concerns were addressed and compliance was obtained. With the time constraint, the study teams could not wait for the market day. Notwithstanding the challenges, the study managed to collect almost of the relevant information required under the assignment.

2.0 METHODOLOGY OF THE STUDY

The study employed different approaches for data collection and analysis to derive the findings that inform this study. These include: review of literature, secondary data collection and analysis using different quantitative methods, and primary data collection and analysis from staple food commodity traders in market centers in 27 districts. The details of the specific methods are discussed in the sections below:

2.1 Literature Review and Secondary data Collection

Secondary data used in the study was largely provided by the National Food Reserve Agency (NFRA) and Grain Traders and Processors Association (GTPA). A checklist of questions was developed and used for this purpose. In addition, the study benefited from the Malawi Government official publications such as Annual Economic Reports, and Agricultural Production Estimates (APES), Agricultural Market Information System (AMIS). FAO and FEWSNET publications also provided useful data that informed the national and regional food security conditions for the study.

2.2 Primary Data Collection and Analysis

The primary data collection process involved the development of the data collection tools, followed by mobilization and training of research assistants on the use of the data collection tool and administration of the developed tools. The questionnaire used for data collection was developed with the input of MVAC members. It was modified with the input of the research assistants during the training and after pre-testing experiences.

Training of research assistants took place at Golden Peacock Hotel in Lilongwe City, and it run for three days, that is, 9-11th May 2016 with the last day dedicated to pre-testing and final review of the questionnaire based on the pre-testing experience. The training involved discussion of the objectives of the study and the motivation each of the specific questions in the questionnaire, techniques of questionnaire administration, use of the Androids for data recording, editing and submission of the data to the server, amongst others. MVAC members assigned to supervise the market survey data collection process also participated in the training programme, and these include representatives of: Ministry of Finance, Economic Planning and Development, Food and Agriculture Organization (FAO), Christian Aid, WFP and Ministry of Agriculture, Irrigation and Water Development (MoAIWD). Pre-testing of the data collection tool took place at Mitundu market centre in Lilongwe district. Thereafter, the final version of the questionnaire was uploaded on the Androids which were used for data collection.

2.2.1 Sampling

The study took place in 27 districts of the country leaving only Likoma district because of logistical challenges. In each district, the study teams consulted the District Agriculture Development Office (DADO) from whom they collected data on the key market centres serving each of the Traditional Authorities (TAs) in that district. The

teams then visited all the identified markets. At each market centre, the entry point for the study team was the market Chairpersons who were briefed on the study objectives and then requested to identify established staple food commodity traders at the market centres, especially those dealing in maize, pulses such as pigeon peas, cow peas and soy beans, and cooking oil. Once these market chairpersons were clear on the importance of the study, they then introduced the study teams to the staple food traders and also requested them to co-operate with the study team members by providing the required data.

Based on this approach, a total of **234** market centres found in **186 TAs[2]** in the 27 districts were identified and visited during the study. From these 234 market centres, a total of **524** staple food commodity private traders were identified and interviewed during the study. Male traders comprised 76% (or 398) of the identified private traders with the remaining 24% (or 126) being female traders.

2.2.2 Data Collection & Entry

The data collection processes run for ten (10) days, that is, from 13th May through to 23rd May 2016. The research assistants were grouped into four (4) study teams, to cover the Northern, Central, Eastern and Southern regions of the country. Each study team comprised a Survey Supervisor as team leader and four (4) research assistants. The supervisors were responsible for contacting the DADOs and market chairpersons. He/she had a letter of introduction from the MVAC Secretariat which highlighted the study objectives and the support required from the stakeholders.

With the use of WFP androids which are connected to the WFP data server, data entry was automated process- ie, each research assistant had to simply click on a submit data button upon completion of the questionnaire. This was done after the supervisor had checked and satisfied with the data for each respondent as recorded on the android. The use of the androids meant that data entry was an automatic process. The data from the initial set of questionnaires which had been submitted to the server was shared with the MVAC team members, while field work was going on, and feedback on areas that need corrections was accordingly provided to the field teams.

2.2.3 Data Analysis

Besides the data being collected and sent to the server some data was directly recorded on a Microsoft Excel sheet. The data analysis process for the study was on the two phases namely, finalization of the Microsoft Excel data with recommendations on the MVAC response options per TA for the 2016/17 Food Security Response Programme, and secondly, production of this detailed analysis report of field findings. The data from the WFP server was obtained in Microsoft Excel and then converted into Statistical

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[2] Much as the study visited 186 TAs in 27 districts, the actual 2016/17 MVAC responses cover 172 TAs from 24 districts. Details in Table 10.2 and Annex 5.

Package for Social Scientists (SPSS) for ease production of analysis tables as well as data cleaning.

2.2.4 Report Writing

As indicated above, the production of the Matrix of MVAC Response Recommendations was the first phase of the report writing process, and this was done immediately after the finalization of the field data collection process, that is, 25-29th May 2016 at Mpatsa Lodge, Senga Bay in Salima district. The second phase involved the use of the questionnaire data set in SPSS to produce statistical tables and figures which inform this report. This phase of the report writing process took place from 31st May through to 4th June, 2016.

3.0 REGIONAL AND NATIONAL FOOD SECURITY CONTEXT

The regional food security outlook is of great interest to Malawi because of the trade, price and income implications for the country. In this regard, its imperative to have an insightful overview of the regional food security condition that would meaningfully inform national stakeholders' policy decisions and actions in the dealing with the 2016/17 national food security and vulnerability conditions.

3.1 Regional Food Security Situation

According to SADC Secretariat (2016) report on SADC Regional Situation Update on El Nino Induced Drought, the SADC region is experiencing a devastating drought episode associated with the 2015/2016 El Niño event which has negatively impacting on livelihoods and quality of lives in the region. There has been delayed onset of the 2015/2016 rainfall season, followed by erratic rains patterns such that during the October to December 2015 period, which represents the first half of the cropping season, was the driest in more than 35 years in several southern parts of the region. In addition, higher than average temperatures were consistently experienced across the region during the same period.

As further pointed by SADC Secretariat (2016), the 2015/16 El Niño is having serious negative effects on the region because it follows closely on a previous poor rainfall season which was also a drier-than-normal season for most SADC countries, resulting in reduced crop production, increased use of stored food reserves and savings used to buy food and non-food including agricultural input commodities, reduced water levels, reduced pasture availability and increased strain on the revenue of most governments that were in the process of recovering from the earlier effects of global financial crises.

As a result of these conditions, four SADC Member States, namely Lesotho, Malawi, Swaziland and Zimbabwe have already declared national drought emergencies. In

addition, two member states, namely South Africa and Mozambique have declared partial emergencies. In total, the SADC region has about 41 million people, representing 23% of the SADC 181 population, facing food insecure challenges during the 2016/17 consumption season. Of these, 21 million are in urgent need of food assistance (SADC Secretariat, Press Release, 15th June 2015).

The countries that have not declared drought emergencies such as Tanzania and Zambia also do have national variations in food production and household access conditions. For instance, according to the FAO Global Information and Early Warning System (GIEWS)(2016), Tanzania is generally having favourable food security conditions across the country with pockets of food insecurity in some Northeastern regions that experienced three below- average harvests. In the case of Zambia, the country is expecting an increased crop production to 2.87 million metric tones up from 2.62 metric tones last year, and this is attributed to higher yields. This means that Zambia has the potential for maize exports as the estimated production translates to a surplus of 635,00o metric tones (http://www.bloomberg.com/news/articles/2016-05-03/zambia-predicts-surprise-2016-corn-crop-surplus-as-yields-rise). The surplus maize declaration is a reversal of the earlier warning by the country's policy makers that the country may need to import maize due to El Nino inducted drought. Notwithstanding the declared surplus, media reports from Zambia further indicate that the country has banned maize exports till September 2016 a month after the General Elections scheduled for August 2016.

In any case, the regional food security situation means that most member states will be looking forward to Zambia and Tanzania for maize to supplement their national food deficits. This will involve both formal and informal exports from the food surplus and stable production countries.

3.2 National Economic and Food Security Context

3.2.1 National Economic Environment

In 2015, the national economy registered a modest growth rate of 3.1% down from the 6.2% in the 2014 fiscal year. The slowdown in national economic growth rate reflects the economy's heavy dependence on the agriculture sector which has been heavily affected by the adverse climatic episodes characterized by erratic weather conditions that disrupted the 2015 harvest (Government of Malawi (GoM), Budget Speech (2016).Ultimately, the agriculture sector which is the mainstay of the national economy has registered a 1.6% decline with negative ripple effects to other sectors of the economy as well (ibid).

Unstable macroeconomic conditions persisted in 2015, just was the case in 2014, such that the annual average inflation rate for 2015 was at 21.8%, being a slight improvement from the 23.8% in 2014. The persistence of the inflationary pressures is attributable to the food insecurity conditions with the resultant food inflation, expansion in money supply and depreciation of the local currency against the major foreign currencies. The

role of food prices in national inflation rates is demonstrated in Figure 3.1 below which shows that food inflation pushing up headline inflation from mid 2015 when the country started facing the effects of El nino induced low staple food production levels.
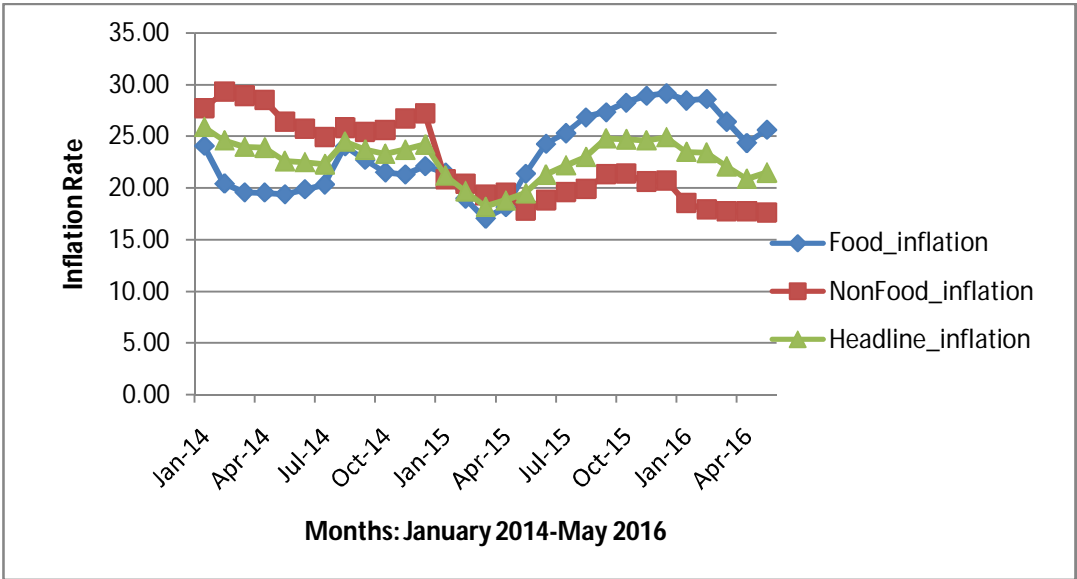
Figure 3.1: Trends in Headline Inflation: January 2014- May 2016

In terms of depreciation of the local currency, the GoM(2016) reports that the Malawi Kwacha depreciated fromMK450 per US dollar in February 2015, toMK765 per dollar a year later. While the currency latter registered some appreciation to MK672 per US dollar in the second quarter of 2016, this was not sustained such that the currency is back on a depreciation path, reaching MK745per US dollar by end June 2016.

Notwithstanding prevailing macro-economic challenges, the Malawi Government, in its 2016 Budget Statement, is optimistic that the situation will improve as it is undertaking some fiscal policy measures that have bearing on the macro-economic performance. These include containing the fiscal deficit to 3.9% of gross domestic product (GDP) down from the previous 6.2% of the GDP in 2014, and reducing domestic debt stock from 19.5% of the GDP in 2014 to 14.0% of GDP by end of 2015. Since the Government has committed to containing its appetite for domestic borrowing to avoid the negative effects, it is envisaged that the domestic debt stock would continue to decline to less than 12.5% of the GDP, which is an internationally acceptable threshold (GoM, Budget Statement, 2016). However, it remains to be seen if the proclamation of fiscal discipline to avoid further macro-economic injuries will be adhered to in view of the worst ever humanitarian crisis the country is facing whose greater proportion of financing is dependent upon the development partners to compliment the MK35.5billion that Government has already allocated for that purpose.

3.2.2 National Food Security Situation

3.2.2.1 Crop production Levels and Food Situation

Since Malawi is an agro-based economy, the crop production levels determine the food security as well as the general economic conditions. This means that the numbers of food insecure households in a given year is largely determined by the food crop production levels in that year. Table 3.1 below presents the national crop production levels in 2015/16 season with implications for the 2016/17 consumption season.

Table 3.1: The 2016 Crop Production Levels

Crop/ Year	2013/14 Final Estimates	2014/15 Final Estimates	2015/16 Final Estimates	% Change of 2015/16 against 2013/14
Maize	3,978,123	2,776,277	2, 369, 493	(40.4)
Rice	132,002	108,690	83,711	(36.6)
Cassava	5,102,692	5,012,763	4,996,843	(2.1)
Sweet Potato	4,209,699	4,324,873	4,463,710	6.0
Irish Potato	1,023,981	1,065,833	1,043,338	1.9
Sorghum	93,187	79,327	58,192	(37.6)
G/nuts	397,503	296,497	274,876	(30.8)
Pulses	716,163	711,354	723,133	1.0
Beans	n/a	188,745	157,769	-
Pigeon peas	n/a	335,165	371,114	-
Soya beans	n/a	120,952	136,910	-

Note: n/a is data not available

As shown in Table 3.1, the country is experiencing a decline in production of most food crops, namely maize, cassava, rice, beans, pulses, amongst others. For instance, the 2015/16 maize production levels are 40% less the 2013/14 levels. A few crops are expected to register some growth over the last year's production levels, and these include: the potatoes, pigeon peas and soy beans.

The national maize requirement is estimate at 3.2 million metric tones, hence the 2.369 million MT maize production registered in the 2015/16 season means that the country is having a maize requirement shortfall of about 835,000 MT. In view of 12.4% maize shortfall, His Excellency the State President, Professor Author Peter Mutharika, on 12th April 2016, declared a State of National Disaster in Malawi in order to mobilize local and international humanitarian support for the food insecure people.

Following the declaration of State of National Disaster, the Government plans to procure 500,000 MT of maize from local and international markets[3].Of this, 250,000 MT is to be sold through the Agricultural Development and Marketing Co-operation (ADMARC) while the other 250,000 MT is earmarked for the Strategic Grain Reserves (SGR). ADMARC started to purchase local maize for immediate sales in April/May 2016 and is being supported by Government to mobilize the required resources through Government guarantees for it to borrow from commercial banks.

The Government local maize purchases intentions, while having good motives, their realization must be viewed against the background of smallholder farmers' maize sale practices. Being a staple food crop, a large share of smallholder maize production is not traded but consumed by producer households hence Jayne, et al (2010) estimated that in the period 2003 – 2009, **only 10-13 percent of maize produced by smallholder farms was marketed**. In a normal harvest year, this translates to between 500,000 to 580,000 MT of market quantities of maize supplied. Using the same reasoning, it can be argued that for the 2016/17 marketing season, of the 2.369 million MT production, the available marketed surplus could only be about 237,000 MT to 308,000 MT.

Understandably, the actual amounts of maize available on the Malawi market are also affected by the formal and informal trade dynamics besides the national production levels. According to FEWSNET data, for the past 3 marketing seasons, that is, 2013/14 to 2015/16, the Malawi's average informal maize exports are estimated to be about 6,500 MT while maize imports are at 46,000MT. This means the country has been having a net gain of 40,000MT of maize from neighbouring countries. Assuming similar informal trade dynamics for the 2016/17 season (ie addition of 40,000MT of net imports), this means that the country could have between 277,000MT and 348,000MT of maize available on the market which has to shared between the private traders, ADMARC, and NFRA. In any case, this means that if Government planned purchases of 500,000 MT are to be fully realized, are likely to be from foreign sources.

It is also worth noting that with this food production shortfall, the Ministry of Agriculture, Irrigation and Water Development estimates that about 8.4 million people will require food assistance in the 2016/17 consumption season. On the other hand, the MVAC, using a survival threshold analysis, estimates that 6.49 million people would be in need of food assistance[4].

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[3]The international purchases target both regional markets and beyond in recognition that most Southern African states have also been affected by the El Nino weather conditions, hence having food deficits.

[4]The traditionally applied survival threshold approach defines a persons total income required to cover 2100 kcals per per person per day; costs associated with food preparation and consumption (i.e. firewood, salt, soap, kerosene, basic lighting, and expenditure on water for human consumption. On the other hand, there is a **Livelihood Protection Threshold level** which refers to the required support to households which survive the shocks without external support but would not be able to maintain basic livelihood expenditures such as school fees, clothes, agricultural inputs, amongst others. Using this Livelihoods approach, about 7.6 people are estimated to be in need of food assistance in Malawi.

The large numbers of food insecure populace in Malawi is largely due to the fact that the country has had two consecutive years of poor food harvest owing to the El Niño conditions. However, some of the neighbouring countries while also affected, have managed to register surpluses, but do effect food trade bans just as Malawi does. Now in view of the fact that the El Niño weather conditions are going to affect the Southern African states with different levels of food security impacts for the foreseeable future, this calls for a rethinking of the food trade bans with the region's member states.

3.2.2.2 Available Food Stocks and Planned Stocks Purchases

In view of the apparent national food security challenges characterizing the 2016/17 consumption season and the planned response actions, the capacity and activities of key players in the food security industry is critical for realization of response plans. The analysis, therefore, examines the actual maize purchase and stocking activities of the key stakeholders such as the National Food Reserve Agency. Table 3.2 below provides the details.

Table 3.2: SGR Maize Receipts and Drawdowns for July 2015 – May 2016& 2016/17 Restocking Plans (MT).

Depot	Carryover Stock as June 2015	2015/16 SGR Receipts	Total SGR	2015/16 SGR Drawdowns	SGR Losses	Available Balance, May 2016	Initial Restocking Plans	Revised based on Govt Plans
Lilongwe	46,299.46	43,989.09	90,288.55	82,974.06	154.53	7,159.96	134,800	217,700.3
Kazomba	168.544	0	168.54	165.50	0.3	2.74	3,000	4,845.0
Mangochi	135.106	0	135.11	130.00	5.08	0.03	5,000	8,075.0
Mzuzu	11.342	0	11.34	0.00	2.55	8.79	0	-
Limbe	3.031	0	3.03	0.00	3.031	0.00	6,000	9,690.0
Luchenza	5.75	0	5.75	0.00	5.75	0.00	0	-
Bangula	0	0	0.00	0.00	0	0.00	6,000	9,690.0
TOTAL	46,623.23	43,989.09	90,612.32	83,269.56	171.24	7,171.52	154,800	250,000.0

Source: National Food Reserve Agency, May 2016

As shown in Table 3.2, for the 2015/16 season, NFRA managed to restock 44,000 MT of maize, against an initial plan of 55,000MT. The 11,000 MT gap has been due to failure

by the contracted trading companies to source the maize and meet their contractual obligations. Despite having regional and satellite silo depots, the available reliable space for maize storage is Lilongwe Silos. The new metallic silos, with the planned storage capacity of 20,000 MT each are largely not is usable conditions, hence no stock storage is planned for Luchenza and Mzuzu silos during the 2016/17 consumption year.

According to NFRA, the available storage space in the SGRs can ably accommodate 154,800 MT of maize. However, with the Government directive of 250,000 MT as announced in Parliament, NFRA has no choice but to find space to stock the additional 95,200MT (or 61%) as directed. Essentially, this means that each of the storage depots has to increase stocks by about an average of 61%.

Discussions with the Grain Traders and Processors show that most big traders had just started procurement of maize for the 2016/17 season. The delay, when compared to the small traders, was due to the fact that the maize still had high moisture content. It was expected that when most of the big traders enter the market, they would be buying from the smaller traders who had entered the market quite early. Purchase statistics were not fully available at the time of the report compilation. However, the GTPA Secretariat had indications that a total of 500,000 MT of maize had been planned to be purchased during the season. Unfortunately, the Secretariat did not also have statistics on the volumes of commodity purchases for the last years citing lack of capacity to visit their membership to collect such data.

4.0 TRADER CHARACTERISTICS AND AGRI-BUSINESS CONDITIONS

In the pursuit of the national policy interest of having deep understanding of staple food commodity market functionality, the study undertakes an analysis of characteristics of staple food commodity traders and agri-business conditions. This involves investigations into the gender of traders, age, marital status, years of education, nationality, years of experience and distance to business place, type of agri-business being operated, main food commodities traded and determinants of agri-business investments. Insights from this analysis have implications for determination and implementation of 2016/17 humanitarian transfer options in the different geographical zones across the country.

4.1 Trader Demographics

4.1.1 Gender of Traders
With policy objective of the 50/50 campaign that Malawi is aiming to achieve, the study collected data on gender of staple food commodity traders. This serves as reference as to how much progress is being made towards the gender equality goal in terms of staple food commodity private trading. Table 4.1 has the details.

Table 4.1: Gender Distribution of the Staple Food Commodity Traders

Region	Gender of the Trader		Total
	Male	**Female**	
North	78(64%)	43(36%)	121
Central	200(86%)	32(14%)	232
South	120(70%)	51(30%)	171
Total	398(100)	126(100)	524

The study results in Table 4.1 shows that 36%, 14% and 30% of the staple food commodity traders interviewed in the north, central and south respectively were female. The results illustrates that there are challenges in terms of achieving the 50/50 policy objective in the staple food trade sector. The situation is worse in the central region were only 14% of the staple food commodity traders are female. This findings agree with those from other studies such as Garcia, et al(2006)on Agriculture, Trade Negotiations and Gender, who pointed out that long-standing constraints faced by women (especially those in rural areas), in terms of a lack of access to productive resources (land, credit, inputs, transport, extension services, storage, technical assistance, and market opportunities and know-how), prevent them from adopting new technologies or increasing their economies of scale. In other words, women are more vulnerable to trade constraints. This insinuates how much more effort is required to stipulate equal participation in the staple food commodity trade.

4.1.2 Age of Traders

The inclusion of the youth in activities contributing to development has always been a policy objective of the nation of Malawi. At this point, the outcomes of this policy have not been distinguishable. The research study sought information on the age of traders so as to know if the case is different in staple food commodity trade. Table 4.2 has the details.

Table 4.2: Age of the Traders

Region	Sex	Mean	Minimum	Maximum	Standard Deviation
North	Female	35.88	21	50	7.018
	Male	36.04	21	74	9.082
Central	Female	35.44	21	70	8.937
	Male	35.89	19	66	8.848
South	Female	38.71	23	65	10.907
	Male	38.91	21	70	8.987

From the Table 4.2, it can be seen that the policy objective is bearing average outcomes in the staple food commodity trade. This can be seen from a mean of 35 years for male traders and 36 years for female traders in the central region. Similarly, a study done by Elberi (2013) on rebuilding West Africa's food potential in the Western countries of Africa reported that the youth tend to have low capacity to sustain an investment in the staple food commodity trade. Additionally, they are more vulnerable to constraints of trade. There is need to encourage the youth to attempt staple food commodity trade activities through upgrading youth assisting policies.

4.1.3 Years of Education of Traders

The study did a further analysis on the education of the staple food commodity traders. The traders were asked the number of years the years of education completed. Table 4.3below has the details.

Table 4.3: Years of education of traders

Region	Number of Traders	Years of Education		Mean	Std. Dev
		Minimum	Maximum		
North	121	0	14	9.36	2.849
Central	232	0	16	8.71	3.397
South	171	0	16	7.77	3.566
Total	524				

The results registered a minimum years of education of zero in North, Central and southern region. A maximum of 16 years of education was registered in the southern region, 16 years in the central region and 14 years in the northern region. The northern region recorded the highest mean of 9 years followed by central region and then southern region. The fact that citizens with higher levels of education such as 16 years of education, being graduates from tertiary education institutions, are participating in the staple food commodity trade means the food value chain is being manned by well-informed cadre of players. From a humanitarian relief operations perspective, it means that traders with significant years of education are likely to be effective partners in transfer options such as use of vouchers, hence easing the implementation process of such transfer options. Additionally, traders with more years of education are more likely to understand market dynamics and any advancement in the trading sector.

4.2 Years of Experience in Agri-business

The work experience that a staple food commodity trader has can be determined from the number of years a trader has been operating. The number of years of operation exhibits the traders' view of seasonality and market functionality. The study sought to investigate on the number of years of operation of traders. Table 4.4 below has the details.

Table 4.5 : Years of experience in Agri-business

Region	Gender	Number of traders	Years of Trader Experience			
			Minimum	Maximum	Mean	Std. Deviation
North	Female	43	1	23	8.37	6.257
	Male	78	0	21	5.81	5.102
Central	Female	32	0	32	8.97	6.930
	Male	200	0	28	8.32	5.767
South	Female	51	1	36	11.22	7.436
	Male	120	1	31	11.24	7.148

Table 4.5 displays a maximum mean of 11.22 for males and 11.24 for females all in the southern region; it illustrates an overall minimum of 0 years and a maximum of 36 years. This indicates that traders in the Southern region have for long contributed to national food security objectives. This gives a positive suggestion of understanding of supply and demand dynamics by staple food commodity traders as they have operated long enough to have experienced such. As argued by Msiska and Jumbe (2015), the fact that the country has a cadre of well experienced traders implies partners who can be relied upon to attain food security objectives in their geographical areas of operation. The stock of experienced traders means that the country can tap on their experience as it seeks to develop strong and sustainable value chains for the food commodities.

4.3 Distance to the Business Place

As already discussed above, commitment of a staple food commodity trader to the business could be gauged from the distance travelled by trader to pursue trading activities. Traders were, therefore, asked the distance they had travelled from district of origin to their current business place. Further to that, the study inquired on the distance they usually travel from their homestead to the staple food business premise(s). Analysis results are in Annex Table 1.

From Annex Table 1, it is evident that traders are able move considerable distances to pursue trading activities. This was observed from the registry of a maximum of 850 kilometers in the Northern region, 500 kilometers in the Central region and 504 kilometers in the Southern region for distances from place of origin. A maximum 20, 20 and46 km distances from homestead was also registered for the North, Central and Southern region respectively. A maximum of distance of 850 km from place of origin shows that there are traders willing to move from place of origin to settle elsewhere for the sole purpose of conducting business activities.

4.2 Agri-business Conditions

The study investigated on the agri-business conditions in various locations. The investigation was based on data collected on type of agri-business being operated; this was based on scale of trade that is wholesale or retail. The determinants of agri-business investments were also investigated in addition to main food commodities being traded.

4.2.1 Type of agri-businesses being operated

To have full understanding of market structure, the study investigated the mode of operation of traders. In fulfillment of this quest, the traders were asked to state whether their businesses are wholesale only, a combination of wholesale and retail, and retail only[5].

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[5] Wholesale business enterprises refer to those that sell in large quantities, largely to other traders usually at negotiated lower market prices, while retailers are those business entities that sell to consumers from all walks of life. The combined wholesale and retail business entities are those that do both.
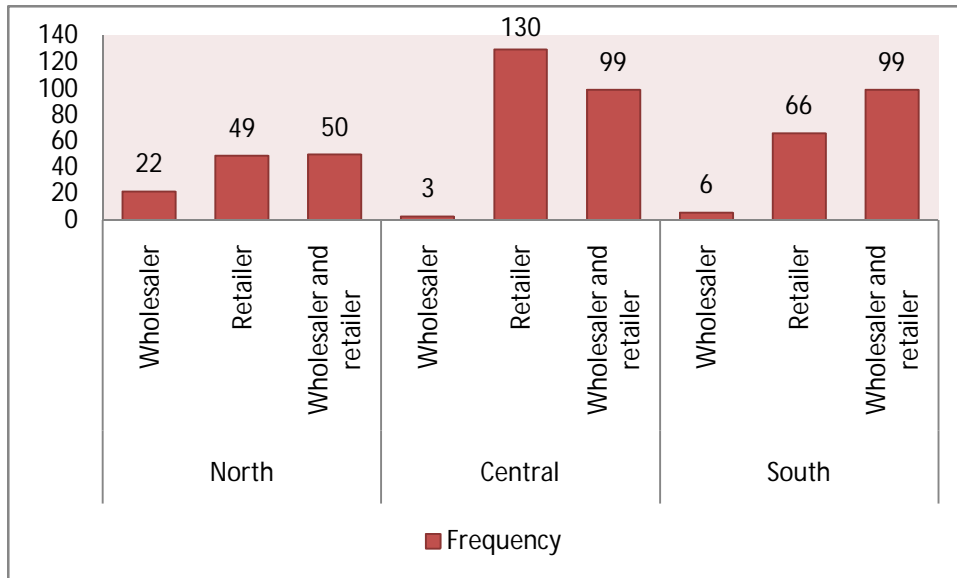
Figure 4.2: Type of business operated

As seen in table, a majority of traders are trading at retail and a combination of wholesale and retail. This is evidenced by a registry of only 3 wholesalers compared to 130 retailers and 99 trading at a combination of retail and wholesale in the central region, 6 wholesalers compared to 66 retailers and 99 trading at a combination of retail and wholesale in the southern region. The Northern region registered the highest number of wholesalers with 22 wholesalers out of a total of 121 staple food commodity traders. The increased operation at retail and a combination of wholesale and retail trade may have negative implications on the capacity and resistance to constraints of traders. Trading at low volumes implies low capacity hence less resistance to capital, storage or supply constraints.

4.2.2 Main food commodities being traded

The study collected information on the amounts or volumes of staple food commodities being traded in the various rural trading center and district center markets. Traders were therefore asked the main food commodities traded in for the level of business. These were such commodities that constitute at least 20% of the business incomes. Details are in Annex Figure 2.1 which shows that the majority of the sampled traders are selling maize. This is evidenced by the fact that 49.30%of the sampled staple food commodity traders selling maize in the Northern region, 47.30% percent in the Central region and 50% in the Southern region. Maize is the main staple food grain in Malawi, thus it has more demand than all the commodities listed.

4.2.3 Determinants of Agri-business Business Investments

For one to pursue a certain trade there are one or more drives leading to a conclusion. For this reason, the study sought to identify determinants of agri-business investments. To this objective, the staple food commodity traders were asked what factors they consider when opening up a business in a new place. Table 4.7 has the details.

Table 4.7: Determinants of agri-business investments

Factors	Responses	
	Number of responses	Percent
Demand and supply of the commodity	445	42.3%
Road infrastructure	64	6.1%
Security of the place	121	11.5%
Availability of competitors	63	6.0%
Amount of capital	214	20.4%
Storage facility	61	5.8%
Local prices	83	7.9%
Total	**1051**	**100.0%**

From the Table 4.7 above, the demand and supply of a commodity is the main determinant of agri-business investment. This is proved by 42.3% of traders mentioning demand and supply when asked what factors they consider when opening up a business.

4.3 Summary of findings for trader Characteristics and Agri-business conditions

The study results confirm low female and youth participation in staple food commodity trade. This therefore, calls for deliberate public support measures to empower women and youths to actively participate in different staple food commodity investments.

The findings show that citizens with higher levels of education such as 16 years of education, being graduates from tertiary education institutions, are participating in the staple food commodity trade. This means that traders with significant years of education are likely to be effective partners in transfer options such as use of vouchers, hence easing the implementation process of such transfer options.

In terms of distance from district of origin to the current place of business, the study results generally show that most traders had travelled long distances to their current business operating place. Analysis of collected data reveals that a majority of traders (48%of the sample) are trading at retail level. This may have implications on traders' capacity.

5.0 PRIVATE TRADER FOOD TRADE ACTIVITIES& RESPONSE CAPACITY

Further to demographic characterization of private traders above, the study interrogated the key trader activities and their market response capacity. This involved investigations into private trader marketing practices, their interactions with the public marketing institutions such as ADMARC and NFRA, their response capacity in the face of increased market demand, amongst others.

5.1 Trends in Private Trader Marketing Practices

With respect to market practices, the study sought to establish behavior of the staple grain traders. Specifically the analysis aimed at understanding the distribution of staple grain traders, quantities traded in a year current stocks and trader's interactions amongst themselves as well as with public institutions namely ADMARC and NFRA.

5.1.1 Trends in Food Trade Market Participation: 2015 -16

Investigations into market participation involved establishing number of maize, beans, cowpea, pigeon pea and cooking oil across the regions. Table 5.1 below shows the distribution of traders across the regions for staple food grain (maize) pulses and cooking oil.

Table 5.1: Distribution of staple food grain and cooking oil traders (2016 - 17)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Maize	79	2	100	14.72	18.306
	Beans	22	2	50	12.55	10.577
	Cowpeas	0				
	Pigeon peas	0				
	Cooking oil	17	3	38	11.12	9.784
Central	Maize	140	1	60	11.52	8.987
	Beans	43	1	25	11.44	6.322
	Cowpeas	6	1	20	10.50	7.007
	Pigeon peas	27	3	25	10.52	6.495
	Cooking oil	69	2	50	14.49	10.297
South	Maize	109	1	36	9.7	7.641
	Beans	40	1	40	10.53	9.312
	Cowpeas	2	4	30	17.00	18.385
	Pigeon peas	12	1	15	6.58	3.753
	Cooking oil	31	2	35	9.87	8.574
Total	**Maize**	**328**	**1**	**100**	**11.69**	**11.709**

Beans	105	1	50	11.32	8.475
Cowpeas	8	4	30	12.13	9.613
Pigeon peas	39	3	25	9.31	6.027
Cooking oil	117	3	50	12.78	9.939

As shown in Table 5.1 above, at the time of the study, on average the Northern region had the highest concentration of maize traders (15) per market centre while the Central region has the second highest concentration of staple grain traders with an average of (11) and a standard deviation of (9.0) while the southern region has the least number of maize traders (9.7) with a standard deviation of (7.6). Analysis results in Table 5.1 further show that more traders involved in beans in the Northern and Central regions while in the southern region cowpeas registered a higher proportion of traders. Pigeon peas registered the least number of traders possibly because the crop had not yet been harvested at the time of the study. The results show that Central region has a higher number of cooking oil traders (14) seconded by the Southern region (9.87) and lastly the Northern region (11). Results show that there is a higher staple food related business in the central region and thus showing likelihood of successful implementation of CBT in this region seconded by the Southern region.

5.1.2 Trends in Volumes of Food Commodity Traded

Further to showing distribution of staple grain traders, the analysis also sought to establish current state of volumes traders are handling in a month at the marketing centre. The analysis below in Table 5.2 presents estimates of volumes of staple food (maize) bought and sold in a month by private grain traders across the regions.

Table 5.2 Volume of maize traded in a month

Region	Volumes of maize bought per month (kg)				
	N	Minimum[6]	Maximum	Mean	Std. Deviation
North	73	18.00	375000.00	12267.50	49121.410
Central	132	0.00	300000.00	19708.71	41774.548
South	111	0.00	450000.00	23834.86	52820.200
Total	316	0.00	450000.00	19439.08	47647.699
	Volumes of maize sold per month (kg)				
North	80	0	1200800	26750.81	147469.484
Central	141	0	125000	10378.26	21825.003
South	112	0	1500000	33730.04	148834.601

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[6] The zero minimum values refer to the zero trading values for possibly traders who do not deal in such a commodity or for some reason did not participate in the market that given month.

Table 5.2 shows that staple grain traders in the Southern region are handling highest volumes in a month compared to the other regions. The analysis shows that on average 36 MT of maize are bought and 34 MT are sold. The Central region (14 MT bought and 10 MT sold) and the Northern region (5 MT bought and 27 MT sold) are in the second and third place respectively. Volumes bought in the Northern region might be lower compared to the other two regions because harvesting of maize had not yet been completed at the time of the study. The Southern region has higher sold volumes because of the higher demand for maize following sharp decline production in 2015/2016 growing season thus creating more demand.

Apart from establishing volumes of staple food (maize) in the country, the study also sought to determine volumes of pluses and cooking oil traded in a month across the regions. Table 5.3 below show the analysis of volumes of pulses and cooking oil traded in a month.

Table 5.3 Volume of pulses and cooking oil bought in a month (kgs &litres)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Beans	22	50	5000	1236.36	1480.516
	Cowpeas	1	0	0	0.00	0.00
	Pigeon peas	18	0	0	0.00	0.000
	Cooking oil	17	40	5000	1167.88	1557.301
Central	Beans	44	40	25000	3353.75	5552.197
	Cowpeas	7	0	1500	914.29	649.175
	Pigeon peas	37	0	15000	2125.68	3353.556
	Cooking oil	69	40	4800	722.03	832.165
South	Beans	42	0	20000	2847.60	4901.120
	Cowpeas	2	50	144	97.00	66.468
	Pigeon peas	14	0	4000	592.86	1185.142
	Cooking oil	31	80	8000	1077.42	1618.071

The results in the Table 5.3 above show that among the pulses beans are the most bought commodity by the traders followed by pigeon peas and finally cowpeas. On average, the Central region has the highest volumes of beans bought about 3.3 MT while on average beans traders in the Southern region bought 2.8 MT. Pigeon peas and cowpeas are in relatively lower quantities possibly because harvesting for these crops has either not yet completed or is still underway. The analysis shows on average more cooking oil was bought in the Northern region (1,168liters) although the sample and the standard deviation preclude an inference that a lot of cooking oil is being bought in that region much more that the Central and the Southern regions.

Table 5.4: Volumes of pulses and cooking oil sold in a month (kgs&litres)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Beans	22	0	5000	919.32	1466.613
	Cowpeas	1	0	0	0.00	0.000
	Pigeon peas	18	0	0	0.00	0.000
	Cooking oil	17	30	4000	901.18	998.004
Central	Beans	44	0	20000	2361.93	4394.186
	Cowpeas	7	0	1500	585.71	679.285
	Pigeon peas	37	0	35000	1740.54	5824.563
	Cooking oil	69	40	4800	688.19	815.570
South	Beans	42	0	20000	2838.43	4908.256
	Cowpeas	2	50	144	97.00	66.468
	Pigeon peas	14	0	25000	2200.36	6645.673
	Cooking oil	31	80	8000	1024.45	1602.607
Total	**Beans**	**108**	**0**	**20000**	**2253.37**	**4232.970**
	Cowpeas	**10**	**0**	**1500**	**429.40**	**610.045**
	Pigeon peas	**69**	**0**	**35000**	**1379.78**	**5207.424**
	Cooking oil	**117**	**30**	**8000**	**808.23**	**1101.752**

The results in the Table 5.4 above show that beans were the most sold pulses during the period of data collection. The analysis shows that on average, 2.25 MT of beans were sold per month by private beans traders in a month national wide. In particular, 0.92 MT were traded in the Northern region while 2.4 MT and 2.84 MT were sold in the Central and Southern regions, respectively. Average volumes of pigeon peas sold in the Southern region (2.2 MT) were higher than the Central and the Northern regions possibly because most of this crop is grown in that region. Table 5.4 also shows that average volumes of cowpeas sold in a month were higher in the Central region (5.9 MT), the Southern region registered about 0.1 MT. Average volume of cooking oil sold in a month was 808.23 litres. The analysis suggest that there is a significant amount of pulses and cooking oil being traded by private grain traders especially in the Central and Southern region as such most of the food insecure households can manage to buy these commodities from the market.

5.1.3 Food Commodity Stocks

In addition to determination of the traded volumes, the study sought to know the current volume/ stocks of staple grains currently held by the private traders. The volumes in storage for staple food (maize), pulses and cooking oil are presented below in Table 5.5.

Table 5.5: Current staple food grain and cooking oil stocks (kgs& litres)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Maize	70	30	100000	7573.50	19657.059
	Beans	36	20	450000	13132.19	74899.077
	Cowpeas	0				
	Pigeon peas	1	38	38	38.00	
	Cooking oil	18	20	120000	8041.67	28164.818
Central	Maize	124	30	250000	12763.95	32081.798
	Beans	73	10	200000	5914.48	25907.219
	Cowpeas	6	40	2500	763.33	1017.559
	Pigeon peas	0				
	Cooking oil	68	10	2000	155.00	283.653
South	Maize	102	30	86400	6371.08	12506.378
	Beans	46	15	5000	614.30	1117.267
	Cowpeas	3	10	50	30.00	20.000
	Pigeon peas	1	50	50	50.00	
	Cooking oil	30	20	800	146.90	201.563
Total	**Maize**	**296**	**30**	**250000**	**9333.53**	**24120.243**
	Beans	**155**	**10**	**450000**	**6017.90**	**40120.997**
	Cowpeas	**9**	**10**	**2500**	**518.89**	**884.130**
	Pigeon peas	**2**	**38**	**50**	**44.00**	**8.485**
	Cooking oil	**116**	**10**	**120000**	**1376.70**	**11204.966**

Results in Table 5.5 shows average volumes of staple grains held by the private traders. The study found that on average, private traders were holding about 9.3 MT of maize, with a maximum volume of maize recorded during the study of 250mt. Computations of the total volume of maize held by maize traders at the time of the study show that the traders had a total of about 15,000 MT of maize stocks as of May 2016.

The analysis results in Table 5.5 further show that traders in the Central region had a higher volume of maize stocks with an average of 12.8 MT of maize. Table 5.5 also shows that bean traders had an average of 6 MT of beans and about 0.5 MT of cowpeas. Volumes of cooking oil are comparable in the Southern and Central region 146 litres and 155 litres respectively, while the Northern region registered larger volumes of about 8000 litres.

5.1.4 Private Trader Market Practices

5.1.4.1 Competition amongst Food Commodity Traders

Further to determination volumes being held by the staple grain private traders the study also investigated how the traders are competing across the regions. Figure 5.1

below show the extent of staple grain traders' competition amongst themselves across the regions.
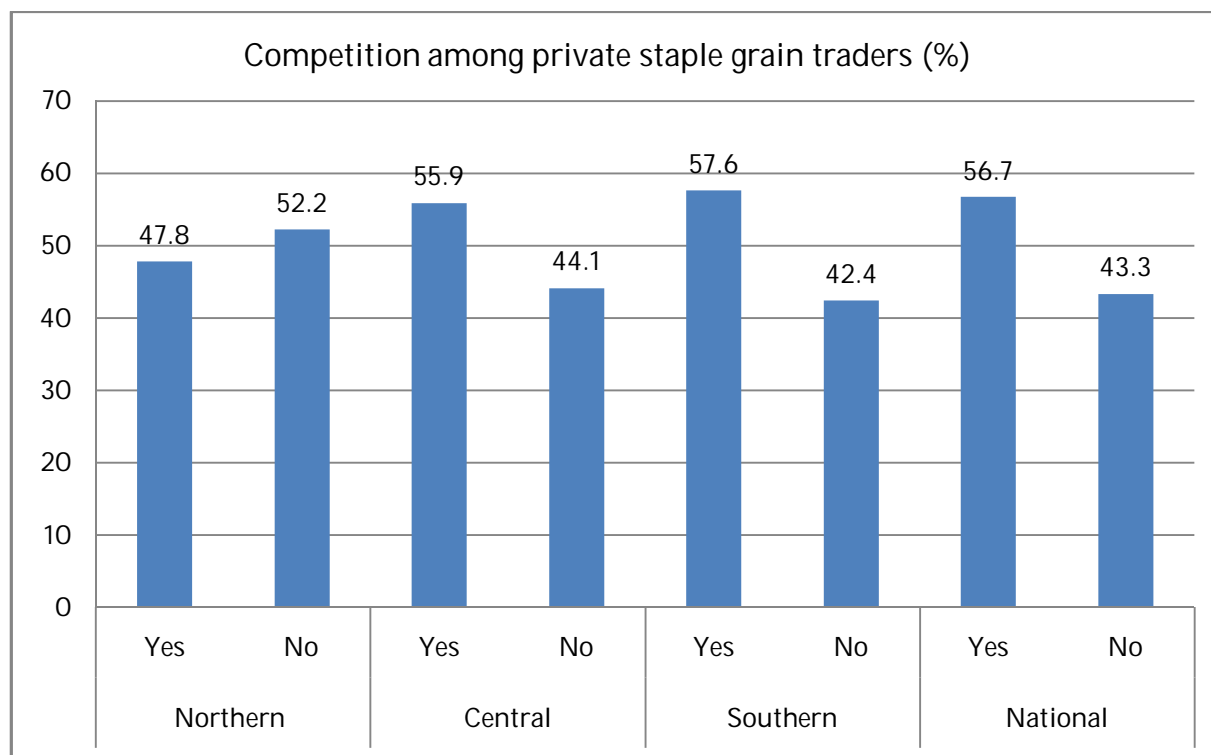
Figure 5.1: Competition among staple grain traders

Result in Figure 5.1 above show that there is competition among grain traders. Analysis shows that about 57% percent of the traders reported to be having competition with other fellow staple grain traders. Staple grain traders in the southern region reported highest level of competition (57.6%) compared to 55.9% in the central region and 47.8% in the northern region. The analysis therefore shows that the staple grain business has competition although it is not very high. Higher competition can have a positive impact on implementation of CBT because staple food grain prices will less likely increase to disadvantage beneficiaries of CBT.

5.1.4.2 Internal Trader Support Systems

Apart from the determining the existing competition among the staple grain traders, the study inquired on the support these traders render towards each other. Given that traders have similarities in many aspects such as means of transport, storage space, price dynamics and customers the study sought to establish how the traders work together. Table 5.6 present type of support traders offer each other.

Table 5.6: Support among staple Grain Traders

Type of support	Responses			
	North	**Central**	**South**	**Total**
Setting of selling prices	68 (37)	133 (38.1)	98 (36.2)	299 (34.3)
Transportation	16 (8.7)	37 (10.6)	23 (8.5)	85 (11.6)
Storage security	9 (4.9)	19 (5.4)	21 (7.7)	49 (6.0)
Sharing customers	28 (15.2)	53 (15.2)	62 (22.9)	143 (17.3)
Borrowing money	42 (22.8)	71 (20.3)	48 (17.7)	161 (20.5)
Selling on each other's behalf	21 (11.4)	36 (10.3)	19 (7)	76 (10.3)

Figures in parenthesis are percentages

Results in Table 5.6 show that the most common support private staple grain traders render towards each other is joint setting of price at the market. The analysis in Table 5.6 show that 34% support each other in price setting and the Central region (38%) was the highest followed by the Northern region. Another type of support was borrowing of money among traders. This type of support is more prevalent in the Northern region (23%) followed by the Central region (20%). Sharing customers (17%) assisting each other in transportation of commodities (12%) and sale on each other's behalf (10%) were other type of assistance that were found in the study.

5.1.2 Private Trader Interactions with Public Food Marketing Institutions

5.1.2.1 Government Support to Private Traders

The study also interrogated on the interaction between stage food grain traders and public institutions namely ADMARC and NFRA. This was to demonstrate extent of trading activities between private staple grain traders and the public institutions.

5.1.2.3 Supplying to ADMARC and NFRA

The analysis below presents outcomes of the inquiry on the proportions of staple grains that private traders supply to ADMARC. Results in table 5.7 presents details on the staple grains is being traded between private traders and ADMARC.

Table 5.7: Staple food grain traders' supply to ADMARC

Region	Response	Maize	Beans	Cowpeas	Pigeon peas
North	No	78 (79.6)	72 (92.3)	38 (100)	35 (100)
	Yes	20 (20.4)	6 (7.7)	0 (0)	0 (0)
	Total	98 (100)	78 (100)	38 (100)	35 (100)
Central	No	161 (84.3)	155 (97.5)	108 (100)	90 (100)
	Yes	30 (15.7)	4 (2.5)	0 (0)	0 (0)
	Total	191 (100)	159 (100)	108 (100)	90 (100)
South	No	108 (85)	82 (100)	32 (100)	30 (100)
	Yes	19 (15)	0 (0)	0 (0)	0 (0)
	Total	127 (100)	82 (100)	32 (100)	30 (100)
National	**No**	**347 (83.4)**	**309 (96.6)**	**155 (100)**	**178 (100)**
	Yes	**69 (16.6)**	**10 (3.1)**	**0 (0)**	**0 (0)**
	Total	**416 (100)**	**319 (100)**	**155 (100)**	**178 (100)**

Table 5.7 shows that private staple grain traders generally supply maize and beans to ADMARC. From the analysis, about 17% of the traders supply maize and about 3.1% supply beans to ADMARC. The results show that Northern region has a higher proportion of grain maize traders (20.4%) supplying to ADMARC seconded by the Central region (15.7%) which was slightly above the Southern region (15%). The analysis shows that private staple grain traders do not supply as much pulses as maize. The analysis shows that about 8% in the Northern and 3% in the Central region supply of beans to ADMARC.

Further to inquiry on the proportion of traders supplying to ADMARC, the study also sought to determine the quantity supplied by the 17% of maize traders and about 3% of the bean traders identified in table 5.7. Results in table 5.8 below show quantities that were supplied to ADMARC by the private grain traders.

Table 5.8: Quantities of staple food grains supplied to ADMARC by private traders (kgs)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Maize	20	0	450000	29117.05	100110.465
	Beans	6	350	20000	4366.67	7689.452
	Cowpeas	0	0	0	0.00	0.000
	Pigeon peas	0	0	0	0.00	0.000
Central	Maize	29	150	193500	21781.03	43979.164
	Beans	4	20	10000	4380.00	4262.738
	Cowpeas	0	0	0	0.00	0.000

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
	Pigeon peas	0	0	0	0.00	0.000
South	Maize	19	400	60000	11421.00	14654.801
	Beans	0	0	0	0.00	0.000
	Cowpeas	0	0	0	0.00	0.000
	Pigeon peas	0	0	0	0.00	0.000
Total	Maize	68	0	450000	21043.97	61270.270
	Beans	10	20	20000	4372.00	6237.446
	Cowpeas	0	0	0	0.00	0.000
	Pigeon peas	0	0	0	0.00	0.000

Table 5.8 shows that, on average, private grain traders supply about 21.043 MT of maize to ADMARC. Northern region registered highest average quantity of 29 MT seconded by the Central region 21.78 MT which was comparable to Southern region 21.043 MT. As earlier pointed out, beans are the only pulses that private trader's sale to ADMARC. On average the analysis shows that 4.372 MT of beans were sold by the private grain traders to ADMARC with the Central and Southern region registering a comparable volume of 4.38 MT and 4.372 MT respectively.

Apart from investigating the grain traders supplies to ADMARC, the study also sought to understand if private staple grain traders' supply to NFRA. Analysis in table 5.9 shows the result.

Table 5.9: Staple food grain traders' supply to NFRA (kgs)

Region	Response	Maize	Beans	Cowpeas	Pigeon peas
North	No	91 (96.8)	63 (100)	34 (100)	24 (100)
	Yes	3 (3.2)	0 (0)	0 (0)	0 (0)
	Total	94 (100)	63 (100)	34 (100)	24 (100)
Central	No	108 (98.9)	140 (100)	94 (100)	88 (100)
	Yes	2 (1.1)	0 (0)	0 (0)	0 (0)
	Total	110 (100)	140 (100)	94 (100)	88 (100)
South	No	119 (100)	69 (100)	29 (100)	27 (96.4)
	Yes	0 (0)	0 (0)	0 (0)	1 (3.6)
	Total	119 (100)	69 (100)	29 (100)	28 (100)
National	No	390 (98.7)	272 (0)	157 (100)	139 (99.3)
	Yes	5 (1.3)	0 (0)	0 (0)	1 (0.7)
	Total	395 (100)	272 (0)	157 (100)	140 (100)

The analysis results in Table 5.9 show that there are fewer traders supply maize and cowpeas to NFRA compared to ADMARC. Table 5.9 shows that only 1.3% of the traders indicated to have supplied to NFRA while about 0.7% of the traders ever supplied

cowpeas to NFRA. Results of Table 5.10 below presents quantities of staple grains private traders supplied to NFRA.

Table 5.10: Quantities of staple food grains supplied to NFRA by private traders (kgs)

Region	Commodity	N	Minimum	Maximum	Mean	Std. Deviation
North	Maize	5	220	60000	14744.00	25589.894
	Beans	0				
	Cowpeas	0				
	Pigeon peas	0				
Central	Maize	2	1500	2000	1750.00	353.553
	Beans	0				
	Cowpeas	0				
	Pigeon peas	0				
South	Maize	0				
	Beans	0				
	Cowpeas	0				
	Pigeon peas	1	40000	40000	40000.00	

Analysis results in Table 5.10 shows that traders in the Northern region supplied about 14.744 MT while in the Central region traders supplied about 1.750 MT and traders in the Southern region supplied about 40 MT of pigeon peas. The results of this analysis suggest that there is little interaction between private staple grain traders and public grain cooperation namely NFRA and ADMARC. In fact, the majority of the staple grain traders targeted in this study do not trade in larger quantities that are required by institutions like NFRA unlike ADMARC that accept relatively smaller quantities. This finding show that much as some traders do supply to public institutions such as ADMARC and NFRA, most of the traders sampled in this study do not adequate capacity to suffice bigger markets like NFRA and ADMARC, hence they concentrates on supplying to direct consumers in the markets where data was collected.

5.2 Private Trader Response Capacities

The study inquired on the capacity of traders to respond to increased demand in case CBT is implemented as intervention to address food shortage. The study also inquired on the period that capable traders to respond can take to restock when they are exhausted. Further inquires were made on the constraints that limit traders' ability to expand and type of assistance that can help them expand.

5.2.1 Private Trader Projected Capacity to Respond to Increased demand

Interrogations were made on expandability of staple grain trader business for maize, pulses and cooking oil. This inquiry was motivated by the need to know the ability of traders to respond to increased demand in order to establish the ability of traders to

respond to cash injection into the local economy without causing inflationary impacts. Table 5.11 has the details.

Table 5.11: Trader's ability to respond to increased demand for commodity

Region	Response	Maize	Beans	Cowpeas	Pigeon peas	Cooking oil
North	No	28 (38.9)	15 (30)	10 (66.7)	5 (62.5)	5 (20)
	Yes	44 (61.1)	35 (70)	5 (33.3)	3 (37.5)	20 (80)
	Total	72 (100)	50 (100)	15 (100)	8 (100)	25 (100)
Central	No	87 (61.7)	52 (57.8)	14 (66.7)	8 (61.5)	38 (50.7)
	Yes	54 (38.3)	38 (42.2)	7 (33.3)	5 (38.5)	37 (49.3)
	Total	141 (100)	90 (100)	21 (100)	13 (100)	75 (100)
South	No	70 (56.9)	43 (63.2)	21 (84)	21 (95.5)	26 (55.3)
	Yes	53 (43.1)	25 (36.8)	4 (16)	1 (4.5)	21 (44.7)
	Total	123 (100)	68 (100)	25 (100)	22 (100)	47 (100)
National	**No**	**185 (55.1)**	**110 (52.9)**	**45 (73.8)**	**34 (79.1)**	**69 (46.9)**
	Yes	**151 (44.9)**	**98 (47.1)**	**16 (26.2)**	**9 (20.9)**	**78 (53.1)**
	Total	**336 (100)**	**208 (100)**	**61 (100)**	**43 (100)**	**147 (100)**

The analysis shows that about 45% of maize traders indicated that they can increase volume of maize if demand at their market increases. The result in the Table 5.11 further show that about 47% of the bean traders, 26.2% of cowpea traders and about 21% of the pigeon pea traders could expand their volumes of grains beyond their current state if demand can increase at their markets. Of the three regions, about 61% of the maize traders in the Northern region, 43% in the Southern region and about 38% of the traders in the central region indicated to have potential to expand their staple grain business to accommodate increased demand. This result, therefore, shows that staple grain traders in the Northern region have higher potential in increasing business level in case an intervention like CBT can be implemented. Results from Table 5.11 also show that more than half of the maize traders in the Southern region operate at their full capacity while in the Central region the proportion is slightly above half. Similar pattern is observed in beans traders and cooking oil while 74% and 79% of cowpea and pigeon pea traders could not expand their volumes being traded regardless of increased demand at their market.

5.2.2 Expected Time for Responding to Demand Increase

In addition to determining the expandability of staple grain businesses, the study also investigated the period that traders can take to restock their storage with grains. This was to determine how long can the private traders take to resume supply of staple grains of the volumes at the market can be exhausted in case of increased demand. Table 5.12 below shows gender disaggregation of the refill period from the traders.

Table 5.12: Period staple grain traders take to refill stock at the market.

Gender	Period	Maize	Beans	Cowpea	Pigeon peas	Cooking oil
Female	Within one week	17 (54.8)	16 (59.3)	2 (66.7)	0 (0)	11 (68.8)
	Within two weeks	10 (32.3)	8 (29.6)	1 (33.3)	1 (100)	1 (6.3)
	Within a month	2 (6.5)	3 (11.1)	0 (0)	0 (0)	4 (25)
	Longer than one month	2 (6.5)	0 (0)	0 (0)	0 (0)	0 (0)
	Total	31 (100)	27 (100)	3 (100)	1 (100)	16 (100)
Male	Within one week	62 (52.1)	43 (63.2)	7 (53.8)	5 (62.5)	43 (71.7)
	Within two weeks	34 (28.6)	15 (22.1)	3 (23.1)	1 (12.5)	7 (11.7)
	Within a month	14 (11.8)	8 (11.8)	1 (7.7)	0 (0)	6 (10)
	Longer than one month	4 (3.4)	0 (0)	0 (0)	1 (12.5)	2 (3.3)
	I can't promise	5 (4.2)	2 (2.9)	2 (15.4)	1 (12.5)	2 (3.3)
	Total	119 (100)	68 (100)	13 (100)	8 (100)	60 (100)

The analysis in the Table 5.12 above show that 55% of female maize traders manage to restock their storage with a week compared to 52 %of male staple grain traders. Despite the population of female traders being slightly higher its sample size is relatively lower compared to men. The analysis further shows that within two weeks 32.3% of the female maize traders can restock their storage against about 29% of the male traders. Table 5.12 shows a different pattern to the restocking period of maize by the private grain traders. For instance male beans traders (63%) could restock within a week against 59% for female traders. Similarly, 63% of the male traders could restock their storage for sale within a week. Cooking oil traders show that 72% can return within a week while 69% female cooking oil traders can return within a week. These findings show that staple grain traders and cooking oil traders are connected to their source markets such that they can return with the required staple grains within a week. This, therefore, has positive impact on CBT implementation because traders can restock the market easily.

5.2.3 Constraints to Capacity to Respond to Demand Increase

Apart from inquiring on the staple grain trader's ability to replenish their stocks and the period within which they can restock, the study also sought to determine what traders consider as constraints to expanding their businesses in order to accommodate increased demand. Figure 5.2 below gives the details of the reported constraints.
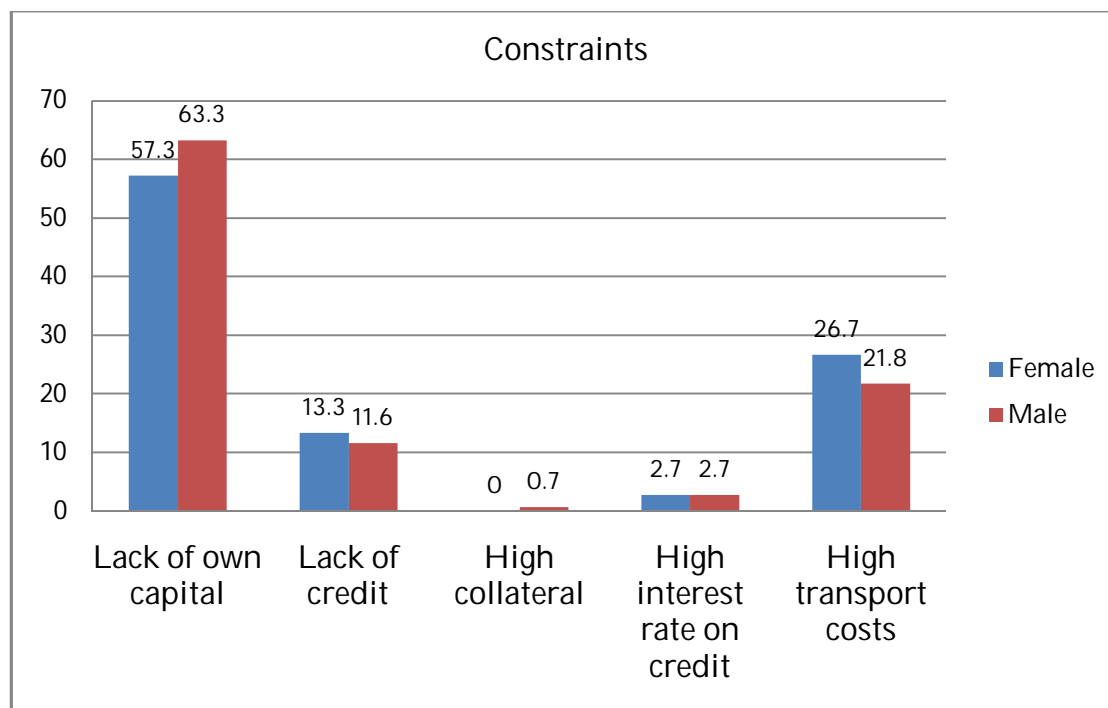
Figure 5.2: Constraints to respond to increased demand

The analysis in Figure 5.2 shows that both male and female staple grain traders identified capital as the main limitation to expanding their business in order to accommodate increased demand. The results show that about 63% of the male traders cited capital as a constraint while about 77% of the females identified the same. Apart from the capital constraint both gender identified high transportation costs and lack of access to credits as other constraints to expanding business. The analysis above shows that in general private grain traders are like to fail expanding their business because finance related limitations. This finding can therefore inform implementation of CBT considering the targeted population and period that it will need supplementary food.

Further to the constraints that private staple grain traders identified, the study also investigated the type of assistance that traders consider vital in expanding their businesses. Figure 5.3 below presents type of assistance that both male and female private stale grain traders acknowledged.
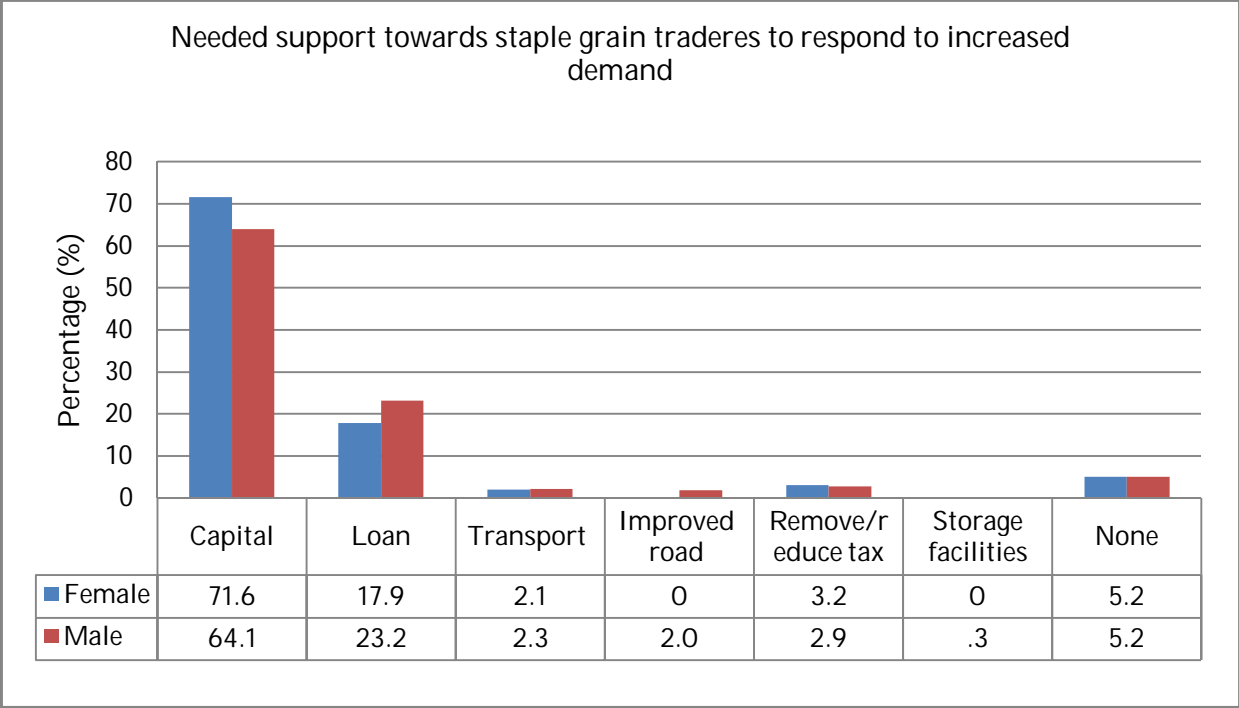
Figure 5.3: Required Support to Increase Capacity to Respond to Demand Increase

As earlier pointed out, trader identified capital as the main constraint that can limit their ability to expand if demand can increase in their markets. Figure 5.3 shows that both male (64%) and female (72%) staple grain traders mentioned capital as the primary needed support for the private traders to respond to increased demand. Similarly, 23 % of the male traders and about 18% of the female private traders indicated that leans can increase their ability to expand. Other minor form of assistance were means of transportation and need for improved roads. The other forms of assistance include reduction or complete removal of tax on food and food related products. Very little percentage cited storage facility not necessarily that most of the traders have warehouses but it might as well be the volume they trade in a given period of time does not need large storage facilities.

5.3 Summary of Findings on Trader Private Trader Food Trade Activities& Response Capacity

In conclusion, this chapter shows that the Central region has a higher proportion of staple grain traders than the other two regions. Analysis results show that higher quantities of staple grains are sold in Southern region compared to the other two regions. This finding therefore shows that although traders are concentrated in the Central and Northern region most of the maize is being bought in Southern region. This shows that staple grains are being bought and transported to the Southern region. This also shows that during the period of the study Central region was the source of staple

food for the Southern region while the Northern region could not register higher quantities possibly because harvesting is still underway. This chapter therefore shows that the Southern region has food deficit and thus more in kind food assistance is needed in this region unlike the other two regions.

There is competition among traders in all the regions. Higher competition is reported amongst traders are operating in the Central region compared to other regions due to the fact the bulk of food commodity trading is taking place there. Despite existing competition among the private staple grain traders, they also support each other especially in setting uniform price across the market and borrowing each other money.

There is little interaction between private grain traders and the National grain institutions namely ADMARC and NFRA. Results of the study show that a higher proportion of traders can restocking their markets within two weeks despite constraints like lack of sufficient capital to operate at full scale. This analysis, therefore, shows that traders are connected to each other and also connected to the source markets. Implementation of CBT therefore can be effective regardless of small volumes reported during the study because private traders can restock within a short period of time.

6. TRADER AGRI-BUSINESS FINANCING CONDITIONS

Business conditions determine business growth and stability. In recognition of this fact, the study sought to understand the private trader financial activities. More specifically, the study inquired on how the traders interact with the financial institutions, their capital requirements and constraints for food commodity trade. It also inquired on the traders' mode of selling the commodity trade.

6.1 Trader Interactions with the Finance Institutions

6.1.1 Source of Business Capital

In order to gain deep insights into trader financing activities, the study collected data on the source of traders' capital for the running of the agri-business. This was meant to understand the size of the business and their potential to expand. Table 6.1 below shows some of the major sources of the private traders' business capital.

Table 6.1: Major source of the staple food business capital

Current Capital Source	Gender		Total (%)
	Male (%)	Female (%)	
Profit from Other Businesses	187 (47%)	59 (46.8%)	246 (47%)
Crop Sales	108(27%)	30(23.8%)	138 (26.3%)
Savings from Salary/Wage	43 (10.8%)	5 (4%)	48 (9.2%)
Loan	9 (2.3%)	19(15.1%)	28 (5.4%)
Remittances	12 (3%)	8 (6.3%)	20 (3.8)
Fishing	1(0.3%)	0 (0%)	1(0.1%)
Sale of Goods and Assets	33 (8.3%)	2 (1.6%)	35 (6.7%)
Sales of livestock	5 (1.3%)	3 (2.4%)	8(1.5%)
TOTAL	**398 (100%)**	**126(100%)**	**524 (100%)**

According to Table 6.1 above, it is evident that the highest proportion (47%) of staple food commodity traders finances their food trade businesses from profits arising from other businesses. This is seconded by 26.3%of businesses being financed from farm crop sales. Other major sources of business capital include loans, savings from salary, sale of assets, remittances, amongst others. The diverse sources of business capital means that granted the opportunity for increased effective demand such as cash transfers, business owners are able to mobilize   finances for the staple food commodity businesses. A gender disaggregation analysis indicates that more female traders (67.9%) use loans as a source of financing their business than their male counterparts (32.1%. This means that given a chance for loans more female traders are likely to get into the business than the males.

6.1.2 Traders with Bank Accounts

One of the indicators of business vibrancy is the ability of the business to interact with banks including having bank accounts. Therefore, the study interrogated on whether the sampled traders have a bank account or not. See Table 6.2 below for more details.

Table 6.2: Traders with Bank accounts Or Not

Region	Whether trader has a bank account		
	Yes (row total %)	No (row total %)	Total (%)
North	73(60.3%)	48(39.7%)	121(100%)
Centre	108(46.6%)	124(53.4%)	232(100%)
South	63(36.8%)	108(63.2%)	171(100%)
Total	244(46.6%)	280(53.4%)	**524(100%)**
Gender			**Total(%)**
	Yes(row total %)	No(row total%)	
Male	202 (50.8%)	196(49.2%	**398(100%)**
Female	42 (33.3%)	84 (66.7)	**126(100%)**
Total	**244(46.6%)**	**280(53.4%)**	**524(100.0)**

According to Table 6.2 above, 53.4% of the sampled traders do not have bank accounts with any bank whilst only 46.6% have accounts with the banks. The Northern region has the highest proportion of traders with Bank accounts (60%) whilst the southern has the highest proportion of staple food commodity traders without Bank accounts (63%) From the analysis, gender disaggregation indicates that more male traders (51%)have accounts with banks than those without(49%) whilst the female traders have more traders without accounts (67%) than those with accounts (33%). This simply shows that if a cash based transfer is issued through the banking system, many male traders are likely going to find it easy to work with the banks than the female traders. Based on these results it could also be justified that most of the female traders that have accounts with the banks opened the accounts only with a sole purpose of accessing loans in the banks not necessarily for the running of the business. This is evident in that the number of female traders operating businesses using loan finances is higher than the male traders.

6.2 Capital Requirements & Constraints for Food Commodity Trade

6.2.1 Capital Requirements to Operate Food Commodity Trade

Every trader has an idea of the required capital to operate a business trade which gives a picture of the level of operation of the business. Therefore, the study also interrogated the sampled staple food commodity traders on the amount of capital required to operate the food commodity trade. This is illustrated in the Table 6.3 below.

Table 6.3: Amount of Capital to operate a Food Commodity Trade

Region	Capital Base		
	Min[7] (MK)	Max (MK)	Mean (MK)
North	0	50, 000,000.00	2, 818,060.09
Centre	0	100, 000,000.00	3, 559,084.51
South	0	60, 000,000.00	3, 478,381.89
Gender Analysis	Min(MK)	Maximum(MK)	Mean(MK)
Male	.00	100,000,000.00	4, 045,647.46
Female	.00	22,000,000.00	1, 084,128.76

From Table 6.3 above, the average amount of capital required to successfully operate a food commodity business venture is higher for the male traders (MK 4.0 million) than the female traders (MK 1. 08 million). The gap between the two is in agreement with the fact that many female traders are limited in trading due as argued before. This simply means given an opportunity for an increased demand for the food commodity through cash based transfers, the large portion of trader beneficiaries from the initiative would be male traders than females because of their ability to expand through capital requirements.

Table 6.3 further shows differences in amounts of capital requirements by the male traders and female traders. While it is not clear why this is case, one possible explanation is that male traders do engage in relatively diverse commodity businesses than their female counterparts who tend to specialize in one venture. For instance, it was observed during the study that some male traders such as DHL Investments at Luchenza are engaged in both trading in the food commodities as well as transporting the commodities. Regional analysis indicated that the Central region staple food commodity private traders have the highest average capital requirement (MK 3. 6 million) than the other regions. This simply reflects the extent of commodity availability.

6.2.2 Trader Efforts to Acquire Agri-Business Financing

There is a big difference between the capital required to run a business venture as suggested by the traders and the actual amount of capital traders are able to mobilize to run their staple food commodity ventures. This gap can be bridged in many ways and one of them is through loans. Therefore, the study interrogated the traders' access to business loans. Details are in Figure 6.1 below.

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[7]The zero mean values refer to cases where the trader was not able to state the actual figure/ amount of money required, and also those traders who do not require any further financing at all.
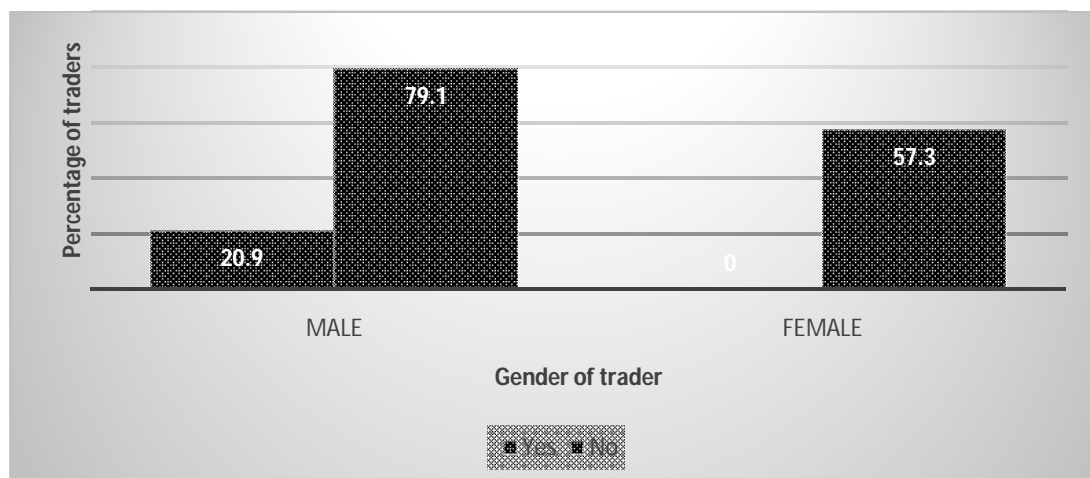
Figure 6.1: Trader attempts to get a loan

From the sampled staple food commodity private traders, only a population of 26% traders has ever attempted to get a loan from different financial service providers. This means the largest population of traders (74% of the sampled traders) has never attempted to get a loan from any financial institution. Based on gender, more female traders have ever attempts to get loans (43%) than the male traders (21%). This confirms the earlier findings in Table 6.1 which indicated that more female traders operate their staple food commodity trade using loan finances than the male traders.

For the traders who are able to access some business loans, the study also inquired of the sources or categories of financial service providers of the loans being accessed. This was done to identify the nature of financial institutions that are able to reach and support the capitalization of the staple food commodity trade in the country. The Table 6.4 below gives details.

Table 6.4: Sources of Loans obtained by Traders

Gender	Loan Sources					Total (%)
	Bank (%)	Micro Finance (%)	VS&L (%)	Friends Or Relatives (%)	Others (%)	
Male	33	35	8	19	25	**120**
Female	11	19	15	7	19	**67**
Total	**44(23.5)**	**54(28.9)**	**23(12.3)**	**26(13.9)**	**40(21.4)**	**187(100)**

From Table 6.4 above, the loan provision to the traders is primarily dominated by the Micro finance organizations (29%) followed by banks. In all institutions, the male traders are dominant except in the VSLs which show that the female traders (65%) have more access to loans in the organization than the male traders (35%).

Further to the loan sources, the study also inquired from the traders the amounts of capital that they have obtained from the finance institutions listed in table 6.4 above. This is illustrated in the table below.

Table 6.5: Amount of Loan obtained by traders

Region	Amount of Loan obtained(MK)		
	Min (MK)	Max (MK)	Mean (MK)
North	100.00	7, 000,000.00	458, 896.40
Centre	0	70, 000,000.00	3, 256,875.00
South	5, 000.00	3, 000,000.00	258, 281.00
Gender	Min(MK)	Maximum(MK)	Mean(MK)
Male	0.00	70,000,000.00	1, 813,000.00
Female	5, 000.00	5,000,000.00	281, 040.40

Table 6.5 shows that while some traders have not accessed loans for their businesses, some have acquired up to MK 70.0 million for their businesses. On average, female food commodity traders obtained lesser (MK281, 040.40) than the male counterparts (MK1, 813,000.00). This shows that given an opportunity to get loans, the male traders are likely to get bigger loans than the female traders hence justifying the variation in the size of their trading.

It was also established during the study that while many traders have ever attempted to get a loan for their agri-business, but for various reasons they did not manage to do so. A regional analysis of access to loans shows that traders in the Central region were more active in obtaining loans than the rest of the regions with an average of MK3, 256,875.00. The southern region traders were the lowest with an average amount of MK258, 281.00 below the Northern Regions MK458, 896.40. This is an indication that central region traders have more access to loans than the other regions hence and giving them an upper hand in terms of trader expandability in times of demand increase.

The study further sought to appreciate the interests on the loans obtained by traders. The summary of the interest rates is given in Table 6.6 below.

Table 6.6: Interest Rates for the Trader obtained Loans

Region analysis	Interest rate (%)		
	Min (%)	Max (%)	Mean (%)
North	10.0	50.0	24.5
Centre	4.0	45.0	23.8
South	7.5	58.0	19.7
Gender Analysis	Min (%)	Maximum (%)	Mean (%)
Male	4	58	22.3
Female	10	50	21.3

From the Table 6.6 above, it is evident that the average loan interest rate for the sampled Northern Region traders is higher recording a 25%. Though the Southern region has the lowest reported average interest rate, it reported the highest maximum interest rate of 58% among the three regions. There is no difference between the loans interests for female and male traders.

Apart from the interest rates, the study also interrogated the loan repayment period. Different institutions have different repayment periods for different amounts of loans. This also helps determine who gets a loan and how much they will obtain. Details of the repayment periods for the different loans obtained by the commodity traders were collected and summarized in the Table 6.7 below.

Table 6.7: Loan Repayment period

Type of Analysis	Repayment Period (Months)		
	Min	Maximum	Mean
Regional Analysis			
Northern	1	24	6
Central	0	60	9
Southern	0	48	5
Average	**0**	**60**	**6.7**
Gender Analysis			
Male	0	60	8
Female	0	18	4
Average	**0**	**60**	**6**

From the results on Table 6.7 above, most traders are given on average, 6 months to finish paying the loan back. The results further show that Central region traders had the opportunity to access long term loans with repayment period of 9 months, with a maximum of 5 years.

The results further show that male traders have access to loans with higher repayment period of 8 months than their female counterparts (with 4 months). Male traders could take even 4 years repaying the loan against 1½ years maximum for female traders.

6.2.3 Constraints of Accessing Agri-Business Finance

According to results in Table 6.5, not all the traders who attempted to get a loan managed to do so. Some traders have not even attempted to get the loan. Therefore, the study sought to understand the possible reasons why traders were not given loans when they attempted to and why some did not even attempt to get a loan. The Figure 6.2 below summarizes the responses from the various interviewed traders.

Figure 6.2: Reasons for not obtaining Loans

According to figure 6.2 most of the traders (37.6%) are afraid of loans. Based on their responses, the effects of not being able to pay back a loan is a big contributor to the traders' fear of business loans. The implications of failure to repay loans such as loss of property, loss of social status in the community and many more are a deterrent to obtaining loans. The high interest rates also played a major role in preventing 20% of the traders from seeking loans from lending institutions.

6.3 Model of Commodity Selling

How a trader sells his/her products determines the size of the trading. The study, therefore, sought to establish the extent of private traders sell their commodities on credit, and involvement in voucher system. It also sought to find out the willingness of traders to get involved in the voucher system if such an opportunity availed itself.

6.3.1 Private Traders Experience with Credit Sales

Inquiries into traders' experiences with credit sales simply involved asking them if they have ever sold their commodities on credit to any of their customers. Sales on credit are not just a reflection of a marketing strategy but also capacity to wait for payments without having the business collapsing due to delayed customer payments. Figure 6.3 below has the details of traders' responses.
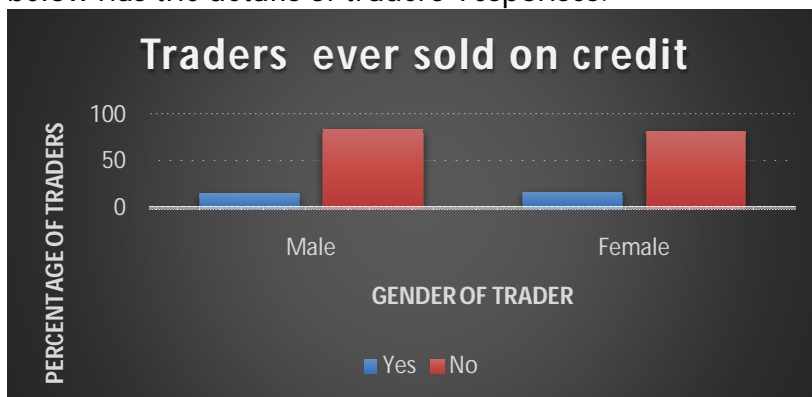
Figure 6.3: If trader has ever sold commodity on credit

40

Analysis results in Figure 6.3 shows that a larger proportion of staple food commodity traders do not sell their commo0dity on credit. 85% and 82% of the male and female traders, respectively, do not sell their commodities on credit. For the few traders that engage in credit sales, the average sales of the month before the time of study were also of interest. Details are in Table 6.8 below.

Table 6.8: Total sales on credit for previous month

Type of Analysis	Total Sales on credit (MK)			
Regional Analysis	Min (MK)	Max (MK)	Mean (MK)	Total(MK)
North	0	600,000.00	101,630.00	121
Central	0	1,000,000,000.00	60,149,971.00	232
South	0	20,950,000.00	467,339.00	171
Gender Analysis	Min(MK)	Max(MK)	Mean(MK)	Total
Male	0	1,000,000,000.00	17, 756,937.00	126
Female	0	350, 000.00	51, 945.00	398

Table 6.8 above indicates that the Central region traders have ever sold more commodities on credit (MK60.o million) than the other regions. A gender analysis shows that male traders are able to supply on higher credit amounts (MK18.0 million) compared to their female counterparts (MK 52,000). The regional and gender variations in provision of commodities on credit also reflect the capacity of the businesses. In any case, the findings demonstrate the fact that while most traders involved in the staple food markets have serious constraints, there are a few others who have the capacity to supply large amounts of commodities on credit, hence can be relied upon in public procurement activities.

Since these sales are not evenly distributed within the year, the study also inquired the months of the year in which the credit sales are highest. Details in Figure 6.4
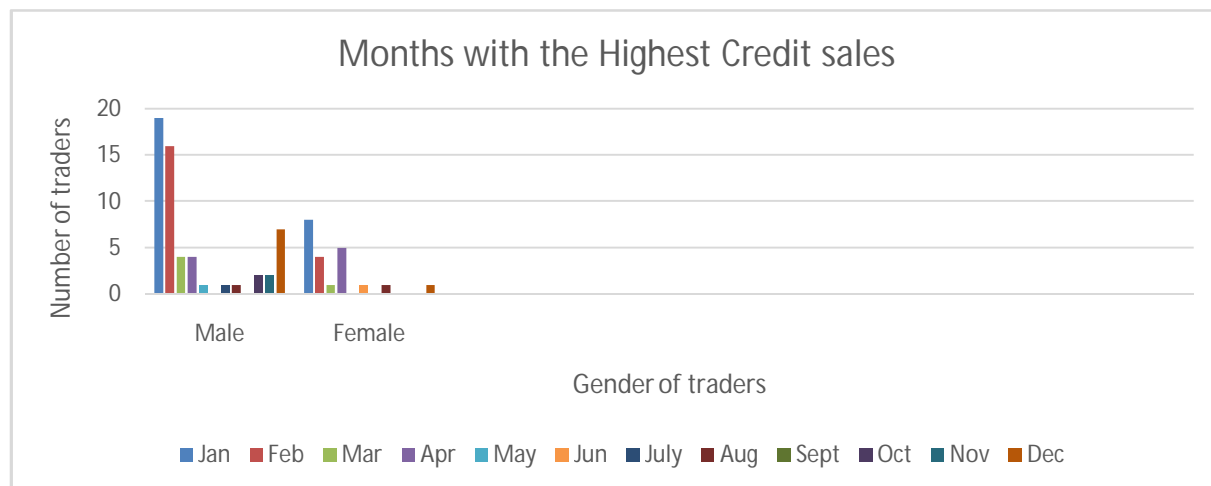
Figure 6.4: Months with the highest credit Sales

From Figure 6.4 above, traders have the highest credit sales in the months of January to March which is the critical lean period. This further demonstrates the fact that some food traders are reliable food security partners that can be relied upon to provide food commodities to their customers during the critical food shortage times.

6.3.2 Private Traders Experience with Vouchers

The study also sought to understand the traders experience with Vouchers by inquiring whether the trader has ever used vouchers or not, sales made from vouchers and if they are comfortable to use them. It is envisaged that the traders experienced with Voucher system can effectively inform the cash based transfer systems. Figure 6.5 below shows the number of traders who have used vouchers before.
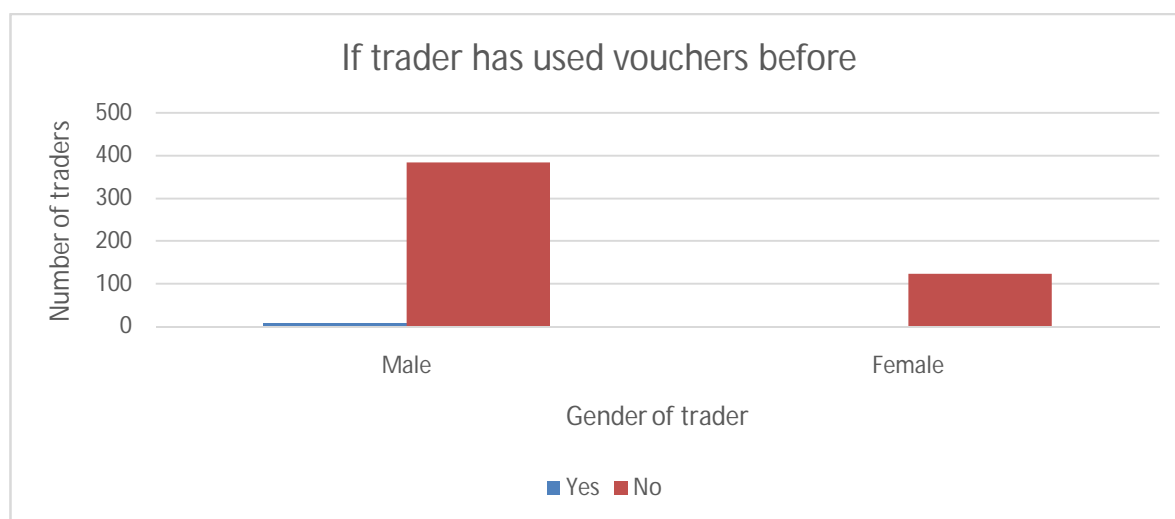
Figure 6.5: Traders ever used vouchers

Findings in Figure 6.5 show that the majority of the sampled traders are not conversant with the use of vouchers for sales. Only 1.4% of the sampled traders reported to have sold staple food commodities using vouchers. In addition, of the few traders who have used vouchers, most of them are males. This has a direct implication on whether the trader would actually participate in a voucher system. Furthermore, for the very few traders who have participated in a voucher system, inquiries were made of the money values involved. Table 6.9 below has the details.

Table 6.9: Trader Sales on Voucher Credit

Gender	Total Sales on Voucher Credit (MK)			Total
	Mean	Maximum	Minimum	
Male	**393, 833.00**	1,000,000.00	0	126
Female	0	0		398
Average	**393, 833.00**	**1,000,000.00**	**0**	**524**

As shown in Table 6.9, on average, the 7 male traders who have used vouchers before have only made sales of MK393, 833.00 with a maximum sale of MK1.0 million. This means though the proportion of traders who have used vouchers before is small (1.4%), such the traders have been provided with significant support to boost their business opportunities.

6.3.3 Private Traders Position on Vouchers

Further to inquiries on whether traders have ever used or participated in any voucher scheme, the study also investigated the traders' willingness to sell their commodities using vouchers. Table 6.10 below gives the results.

Table 6.10: If trader is willing to sell commodities using vouchers

Regional Analysis	If willing to sell using vouchers or not		Total(%)
	Yes(%)	No(%)	
North	25(20.8%)	95(79.2%)	120(%)
Central	50(22.4%)	173(77.6%)	223(%)
South	89(54.3%)	75(45.7%)	164(%)
Total	164(32.3)	343(67.7%)	507(100%)
Gender Analysis	Yes (%)	No (%)	Total (%)
Male	124(32.4%)	259(67.6%)	383(100%)
Female	40(32.2%)	84(67.8%)	124(100%)
Total (%)	164(32.3%)	343(67.7%)	507(100%)

Table 6.10 above indicates that 32% of the traders are willing to sell their staple food commodities using vouchers. A regional analysis shows that the Southern region has more traders willing to sell commodities using voucher (54%) compared to other regions which reported less than 25% of the responses. A gender disaggregated response pattern shows equal willingness amongst both male and female traders in participating in a voucher system given an opportunity to do so. For the traders not willing to participate in a voucher system, they indicated lack of information on how it operates, and limited business capital which cannot allow them to provide supplies on credit with possible uncertain periods of payoffs.

6.4 Summary of Insights on Trader Agri-business Financing Situation

While most traders complain of limited capital sources, the study finds that they are able to explore diverse sources to obtain business capital with profits from other businesses being the major reported source. This means that granted the opportunity for increased effective demand such as cash transfers, business owners are able to mobilize finances for the staple food commodity businesses.

The fact that more male traders have bank accounts compared to their female counterparts means that in the event of implementation of a cash based transfer system that is implemented through the banking system, many male traders are likely going to find it easy to work with the banks than the female traders.

The findings also show that some traders are able to supply goods worth MK60.0 million on credit despite the general challenges facing the agri-food trade community. This means that, there are some few others who have the capacity to supply large amounts of commodities on credit, hence can be relied upon in public food security and humanitarian interventions.

Inquiries into traders' willingness to participate in a voucher system show that about one-third of the traders are willing to participate in such a facility. The majority of such responses are from Southern region based traders. A gender analysis shows equal willingness by both male and female traders. The analysis results show that an effective civic educations system targeting the traders has to precede an implementation of a voucher system.

7.0 MARKET TRENDS AND INTEGRATION

This chapter discusses the food commodity market trends and study's interrogations into connectedness of the grain private staple grain traders to the market sources. It further inquires on distances and physical accessibility between the markets (source and destination market) and if the source markets have been affected by the disasters and if that has had repercussions prices between the source and the destination markets.

The commodity flow patterns from one place to another imply that some markets tend to be source markets while others are destination or consumption markets. Source markets tend to be located in geographical zones with adequate production levels while the consumption markets are usually in deficit areas. In the case of maize, the patterns of commodity flows are presented in the Figure 7.1 below.
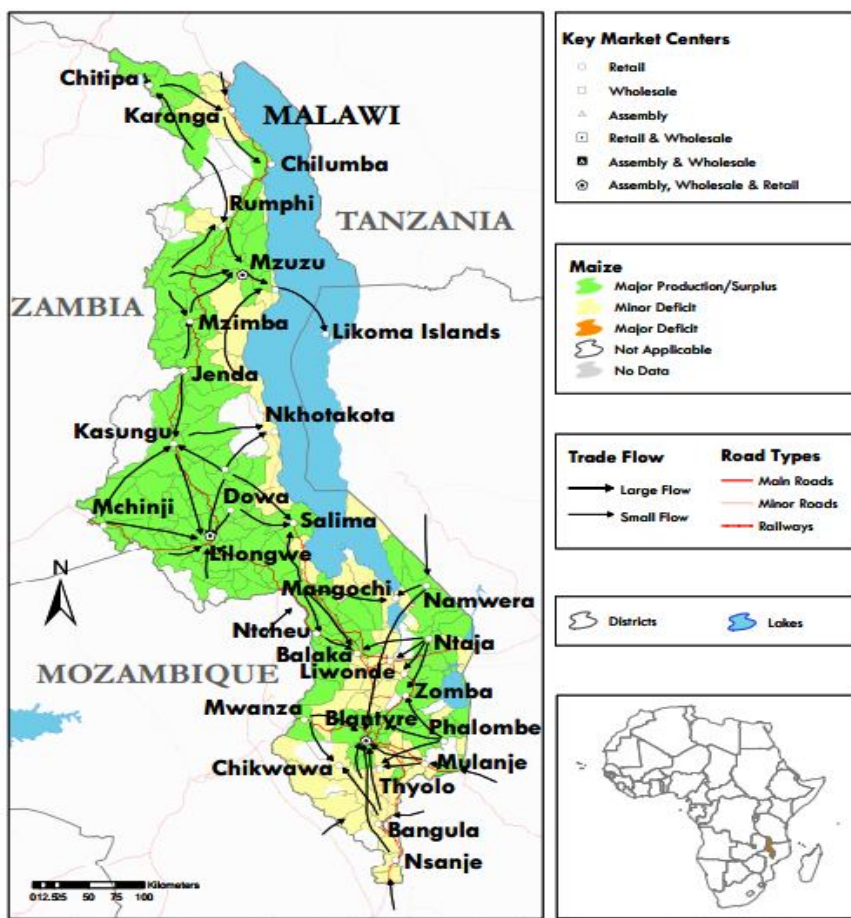
Figure 7.1: Map of Malawi showing flow of commodities
(Source: FEWSNET)

According to Figure 7.1, the maize production and marketing dynamics demonstrate that some geographical zones are usually main maize sources from where the commodity flows to consumption markets which mainly comprise urban centres such as

urban centres and drought prone areas. There are regional patterns in the maize flows with Karonga and Mzuzu, Nkhata Bay and Likoma being destination markets for maize produced from Chitipa, Rumphi and Mzimba. In the Central region, the Central region districts of Mchinji, Dowa and Dedza tend to be source markets for Lilongwe city, lakeshore districts of Nkhotakota and Salima. In the Southern region, while some isolated places such as Namwera, Ntaja,Phalombe and Mulanje act as source markets, most districts are destination or consumption markets and these include, Zomba, Blantyre, and the Lower Shire Valley districts of Chikwawa and Nsanje.

7.1 Price Trends and Market Integration

The commodity flow map in the above Figure 7.1 implies price differentials between source and destination markets. In order to confirm the extent to which this is true, the study undertakes a time series analysis of monthly maize price data for selected key source and destination markets (using AMIS data). Figure 7.2 below has the details.
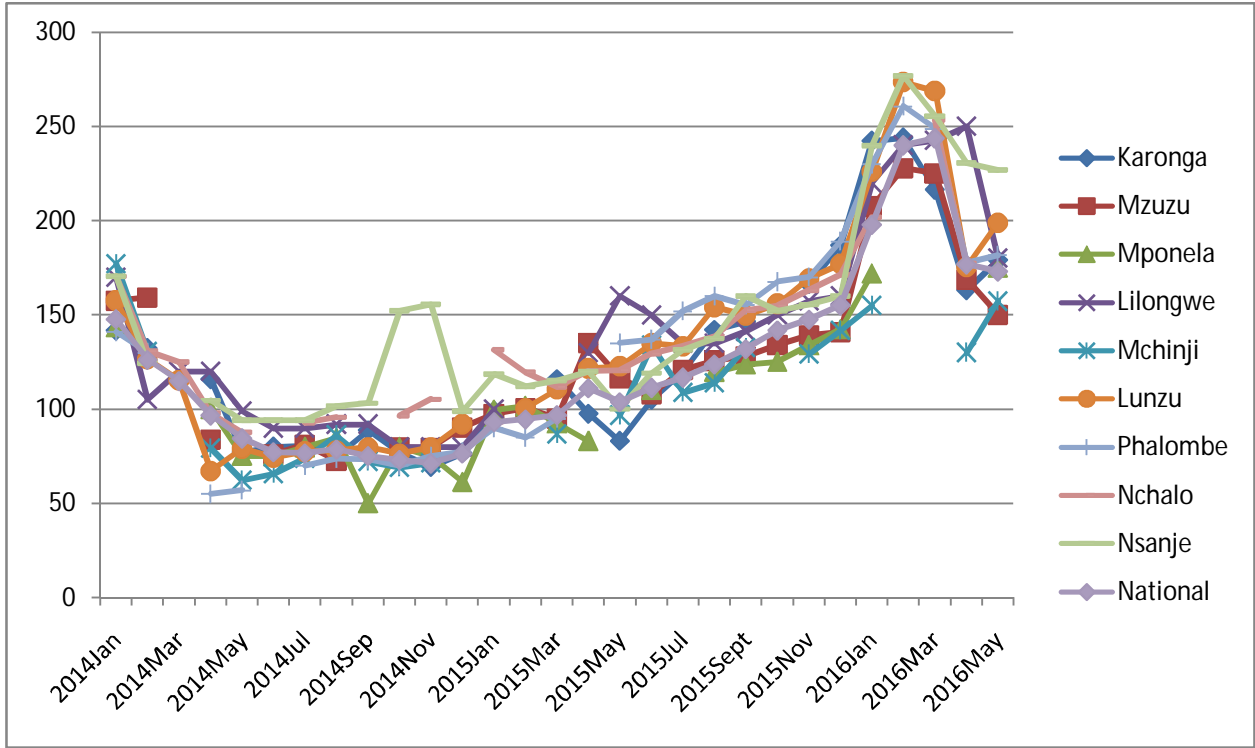
Figure 7.2: Price Trends for Key Markets: January 2014- May 2016

As can be observed from Figure 7.2, there is generally co-movement of maize market prices across the different markets. Notwithstanding the price co-movements, maize prices are relatively lower in traditional source markets such as Mponela and Mchinji compared to key traditional consumption markets such as Lunzu and the Lower Shire Valley markets, namely Nchalo and Nsanje.

Further inquiries into the extent of market integration in the country are undertaken by computing a pairwise correlation co-efficient matrix for maize as a key staple food commodity. The correlation co-efficients for the key markets are in Table 7.1 below.

Table 7.1 Price correlation of maize prices between the markets

Market	Karonga	Mzuzu	Mponela	Lilongwe	Mchinji	Lunzu	Phalombe	Nchalo	Nsanje
Karonga	1								
Mzuzu	0.941	1							
Mponela	0.961	0.973	1						
Lilongwe	0.931	0.956	0.978	1					
Mchinji	0.764	0.873	0.906	0.900	1				
Lunzu	0.931	0.960	0.954	0.932	0.876	1			
Phalombe	0.921	0.926	0.926	0.900	0.837	0.993	1		
Nchalo	0.932	0.974	0.974	0.939	0.911	0.978	0.956	1	
Nsanje	0.762	0.843	0.746	0.706	0.609	0.775	0.750	0.817	1

The price correlation matrix results for monthly maize price data for the period January 2014 to May 2016 as presented in Table 7.1 shows that monthly market prices are strongly correlated, thus confirming market integration across markets. The high correlation co-efficients of 0.60 to 0.94 for the various markets imply that markets in one market strongly respond to changes that take place in another market in a different part of the country. However, it must be stated that the foregoing analysis is only for urban key centres and does not include rural areas hence we cannot conclude from Table 7.1 how rural prices relate to urban markets and vice versa. In addition, this analysis does not tell whether there are differences between short run and long run price responsiveness between different markets. In any case, the analysis results show that public price interventions in the key markets, through ADMARC or NFRA market operations, could help in containing price trends not only in the intervention market but in corresponding integration markets.

7.2 The 2016 Market Dynamics in Selected Source Markets

7.2.1 Number of source markets for food commodities

The analysis sought to determine number of source market from where private staple grain traders buy. This attribute was sought to establish number of reliable markets from where the grain traders depend on to supply in the markets where they are operating. Table 7.2 below presents the average number of markets available to the traders for each of the staple grain of interest in this study.

Table 7.2: Number of source markets for the staple grains

Commodity	N	Minimum	Maximum	Mean	Std. Deviation
Maize	29	1	16	4.72	4.210
Pigeon peas	23	1	16	4.78	4.512
General beans	12	1	10	2.67	2.570
Cowpeas	11	1	10	2.82	2.639

This study shows that pigeon peas and maize have more source markets compared to the other grains. Analysis shows that on average pigeon peas have about 4.78 and maize has about 4.72 source markets. General beans and cowpeas also have more than one source markets. On average beans have 2.67 and cowpeas have 2.82 source markets. Traders have relatively higher number of points from where they source staple grains indicating that traders are not dependent on one market from where they can stock their sale points. This attribute has positive impact on implementation of CBT because traders can rely on relatively more source markets to a maximum of 16 for maize and pigeon peas.

7.2.2 Prices in Source Markets

The study also inquired on the price dynamics for the source markets and the outlet markets from where data was collected. This was to show how prices change between the two markets (source and destination). Table 7.3 below shows analysis of the price patterns for the staple grains.

Table 7.3: Prices in source and visited markets

Commodity	Type of Market	Prices (MK/kg)				
		N	Minimum	Maximum	Mean	Std. Dev
Maize	Source market	29	100	200	138.10	22.297
	Visited market	29	100	300	156.90	34.832
Pigeon peas	Source market	23	80	650	184.30	153.489
	Visited market	23	75	600	158.26	142.507
General beans	Source market	12	300	1000	661.67	219.910
	Visited market	12	300	800	540.00	163.485
Cowpeas	Source market	11	200	900	636.36	230.316
	Visited market	11	200	740	484.55	181.128

Table 7.3 shows that there not significant price variations between source and destination market for maize. The analysis shows that on average traders were buying maize at MK 138/k in the source markets and are offering about MK 157/kg to their customers in their markets, representing a 14% traders margin. The price patterns for pulses however have higher variations between the source and destination markets. For instance, on average, general beans are bought at MK 540/kg by the traders in the source markets and are being sold at about MK 662/kg to their customers in their respective markets.

Surprisingly, pigeon peas and cowpeas are being bought at a higher price from the sources and are sold at a lower price in the destination markets. On average, traders are sourcing pigeon peas at MK 184/kg and sale at MK 158/kg while cow peas are sourced at MK 485/kg and are being sold at MK 636/kg. The small price variation for maize has a relative advantage for buyers given that they do not pay a lot for the services along maize value chain thus converting their income to volume of maize. If this pattern continues it will enhance effectiveness of CBT in areas where it will be implemented.

7.2.3 Disaster Incidences and Effects in Source Markets

This country has been going through a series of the impacts of *El Niño* and increased intensity of the impacts of climate change for the past years. This study, therefore, sought to determine whether source markets were affected by these occurrences. Figure 7.3 below shows the analysis of the markets that have been affected by the disasters during 2015/2016 growing season.
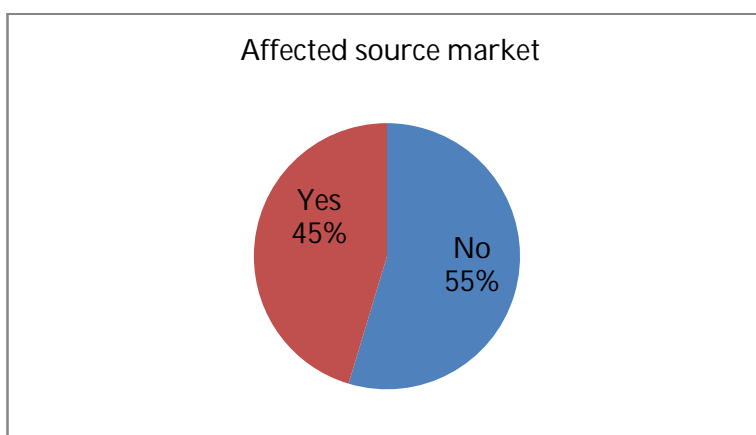
Figure 7.3: Whether the source market has been affected by disaster

Figure 7.3 shows that almost half of the source markets were affected by the disaster in different ways. The analysis shows that about 45% of the traders major source markets were affected by the climate change related disasters. This finding shows that supply for staple grains to the destination market has been affected negatively by almost half. This result, therefore, will affect implementation of CBT and thus in areas that are largely

dependent on the affected source markets can be recommended to in-kind food assistance.

Further analyses as shown in Figure 7.4 below relate the occurrence of weather and climate related disasters to affected market dynamics of the staple grain supply and demand. The effects of these disasters caused changes in demand and supply of grains between the source and destination markets.
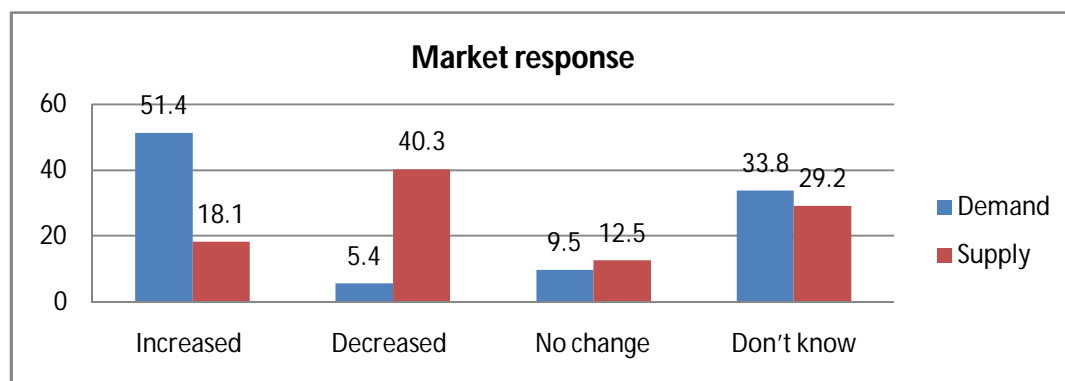
Figure 7.4: Market response to occurrence of a disaster

The quest to establish the climate change impacts on demand in source markets resulted in study results as shown in Figure 7.4 above. This involves analyses of impacts on the demand levels in the disaster affected areas which act as source markets. Figure 7.2 shows that there has been a 51% increase in the demand in the source market due to the occurrence of the disaster. In terms of impacts on supply of food commodities, the results show that commodity supply levels decreased by about 40%. The demand and supply analysis results, therefore, show that disasters have had impacts in terms of both demand and supply of staple grains between source and destination markets.

7.3 Commodity Transportation

Apart from showing how the disasters have affected demand and supply between source and destination markets, the study also sought to show distances that private staple grain traders cover to source grains for their customers.

7.3.1 Distance to Source Market

Table 7.3 below shows analysis of the average distances covered by private grain traders to buy from the suppliers. Determining distances that traders covered to source the staple food is important in gauging the transactions costs for each commodity and thus its impact on the price that consumers will have to pay at the destination market. Details are in Table 7.4 below.

Table 7.4: Distance from the source market

Commodity	Statistics				
	N	Minimum[8]	Maximum	Mean	Std. Deviation
Maize	38	0	800	33.26	129.573
Pigeon peas	23	0	800	56.09	167.324
General beans	11	0	120	21.97	35.965
Cowpeas	11	0	120	22.61	35.583

Table 7.4 shows that traders dealing in pigeon peas and maize traders were covering the longest distances to their commodity source markets. The analysis show that maize traders cover on average 33 km and pigeon peas traders covered 56 km to source markets. The maximum distance covered for both maize and pigeon peas traders was 800 Kilometers. For the other pulses (general beans and cowpeas) the average distances were 22 and 23 km respectively. The fact that maize traders cover longer distances to source the grains means that maize traders are more dynamic and can maintain supply to their markets.

7.3.2 Type of Transport Used & Costs of Transportation

The study also sought to determine means of transport that are used by private grain traders in ferrying commodities from the source markets to the markets for sale. Figure 7.5 below show the analysis if the means of transport used.
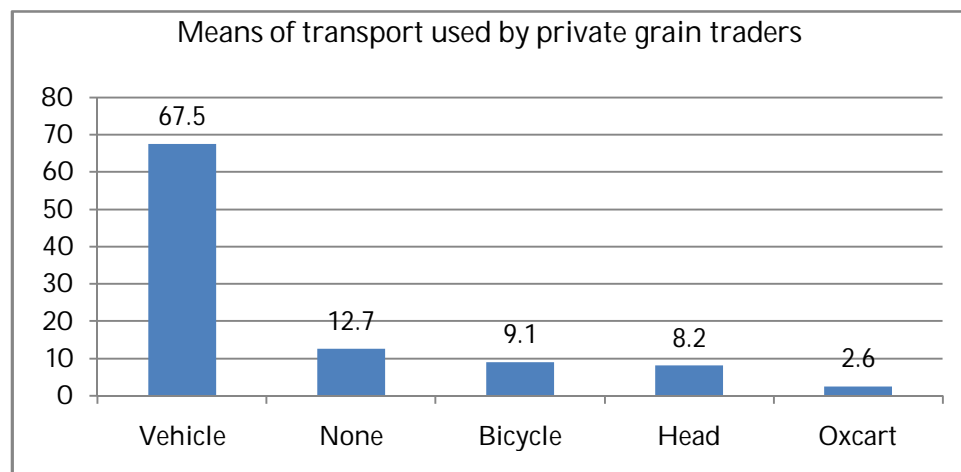
Figure 7.5: Means of transport used by traders

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[8] The zero minimum distance values refer to those situations where the trader sources the commodity from within the localities where he/she is based. In some cases, the farmers are the ones bringing the commodities to the trader's business place.

Figure 7.5 shows that about 68% of the staple grain traders use vehicles to transport grains from source markets. Results also show that about 13% do not have specific means of transport while other private traders depend on bicycles (9 %) carry on the head (8%) and the least proportion of (2.6%) use oxcarts. Based on the analysis, traders can respond easily and quickly if demand can increase due to CBT.

In addition to the inquiry on the modes of transport, the study also analyzed the associated cost that private traders incur. Table 7.5 presents average cost that traders pay to transport the staple grains from the source markets.

Table 7.5: Total cost per trip staple grain traders incur

Commodity	N	Minimum	Maximum	Mean	Std. Deviation
Maize	34	0	100000	9727.38	19613.967
Pigeon peas	19	0	20000	4728.95	6750.994
General beans	9	0	20000	2894.44	6477.000
Cowpeas	10	0	20000	4265.00	6943.504

Results in Table 7.5 suggest that it is expensive to transport maize compared to the pulses. For instance, transporting maize costs MK 9,700while for pigeon peas, cowpeas and general beans it cost about MK4700, 4300 and 2900, respectively. These findings show that private traders are willing to pay more for transporting maize because of relative importance of the staple grains in their business. The results, therefore suggest that more traders are able to invest their resources to supply maize as long as there is demand for maize. This has positive ramifications on the CBT especially in areas that are connected with good road network.

Apart from transportation costs, the study also inquired on the determinant of the transport cost. Table 7.6 present summaries on determinants of the price for transporting staple grains from the source markets.

Table 7.6 : Transportation price setting

Commodity	Price setter	Frequency	Percent
Maize	Transporter	23	82.1
	Me as buyer	5	17.9
	Total	28	100.0
Pigeon peas	Transporter	8	61.5
	Me as buyer	5	38.5
	Total	13	100.0
General beans	Transporter	5	71.4
	Me as buyer	2	28.6
	Total	7	100.0
Cowpeas	Transporter	6	75.0
	Me as buyer	2	25.0
	Total	8	100.0

Analysis in Table 7.6 show that transportation cost is largely determined by transporters and not the commodity traders. Transport costs have implications for the final commodity prices especially for maize where about 82% cases price is determined by transporters. Among the pulses that were considered in this study, about 38 % of the pigeon pea private traders determine transportation cost. In general, pulse traders have relative influence on the transportation cost unlike maize traders. This shows that maize traders are less likely control transportation cost and thus more likely to expose consumers to inflationary factors like fuel price variations. Implementation of humanitarian responses such as CBT should take into account such market dynamics.

7.4 Physical Accessibility of Supply and Demand Markets

The study also interrogated the physical accessibility of demand and supply markets. The analysis sought to establish conditions of roads and establish whether the roads are passable during rain and dry season.

7.4.1 Physical Accessibility Condition of the Roads to Source Markets

The study also investigated the accessibility of source markets during both harvesting and lean periods. Figure 7.6 below shows the results of an analysis of the conditions of the roads as established during the study. The investigations into road conditions was undertaken to establish if transporting staples grains from source market is constrained by challenges related to physical condition of the roads either during harvesting or lean period.
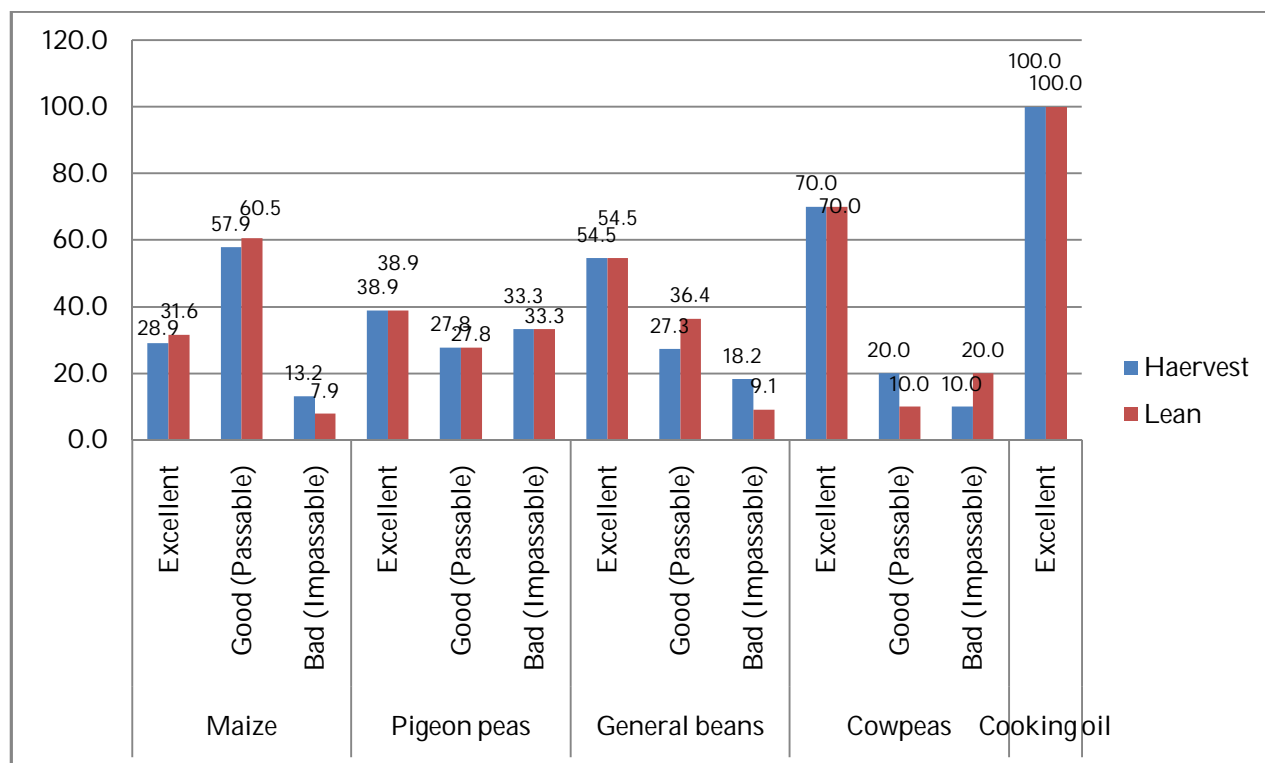
Figure 7.6: Physical accessibility of supply markets

Figure 7.6 above show that 29% and 32% of the road to source markets are in excellent condition during harvesting period as well as during lean period. The analysis also shows that about 58% and about 61% of the roads are passable during both harvesting and lean period. Results further show that 55% of the roads to source markets for the beans are either excellent or in passable condition during harvest and lean period. Source markets for the pigeon peas are also accessible. Since cooking oils are usually sourced from urban centres, it was not surprising to note that 100% of the traders cited excellent road conditions to such source markets.

7.4.2 Physical Accessibility Condition to Demand Markets

The analysis also sought to determine physical accessibility to demand markets. Given that private grain traders move the grains to wherever there is demand, it was vital to determine if traders can reach their customers when need arises. Results in Figure 7.7 below show conditions of the road to grain markets.
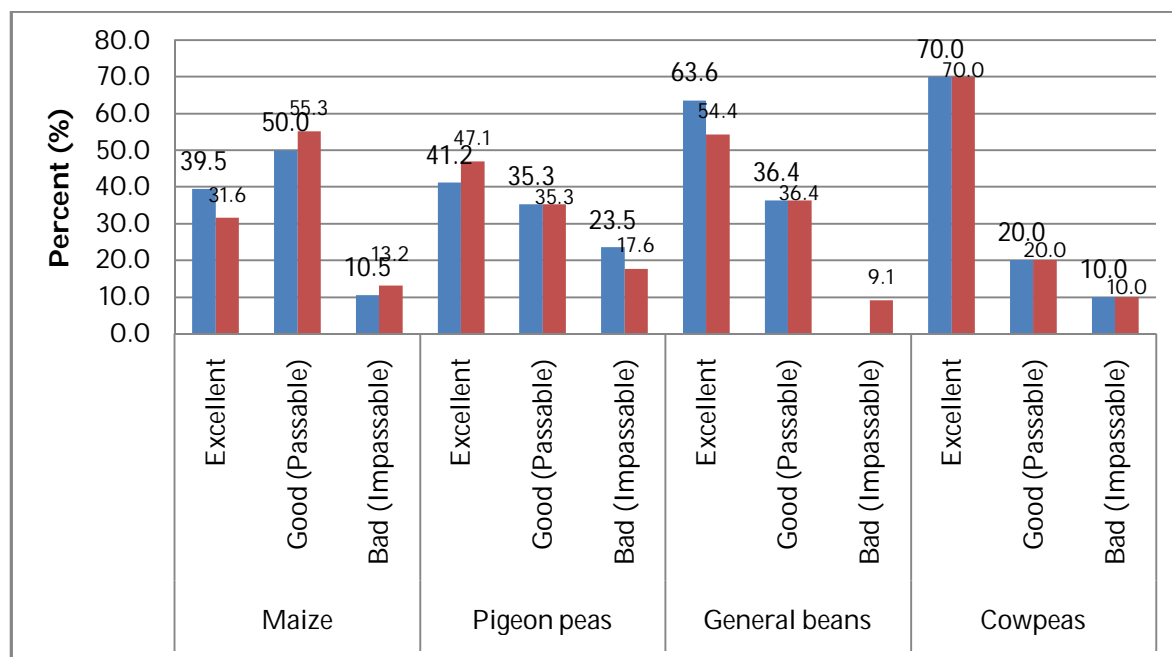
Figure 7.7: Physical accessibility to demand markets.

Figure 7.7 above show that only 11% and 13% of the road to destination markets are impassable during harvesting period as well as during lean period. The analysis also shows that only about 9 % of the roads to beans destination markets are impassable during lean period. Likewise 24% and 18% of the roads to pigeon pea markets are impassable during harvest period and lean period respectively. The analysis also shows that about 10% of the roads to markets of cowpea during both harvest and lean period. The analysis therefore shows that majority of the roads to staple grain markets are in fairly good condition during both harvest and lean period. This, therefore, shows that traders can reach most of their destination markets with relative ease and sale the grains wherever demand for the grains is high. This state of affairs, therefore, shows that traders can respond to CBT with relative ease as they can transport the gains to the markets where CBT has been implemented and suffice the additional demand that might have been generated.

7.4.3 Distance to Demand Market travelled by major buyers

Information on distance travelled by traders was collected on the key source markets where traders source their commodities for both the 2014/15 season and the current season. This reflects market accessibility by the major traders. Details are in Table 7.7 below.

Table 7.7: Distance covered by buyers to source markets.

Region	Commodity	Distances	N	Minimum	Maximum	Mean	Std. Deviation
North	Maize	Current distance	77	0.0	250.0	24.221	47.1073
		2014/2015 distance	72	0.0	600.0	27.044	78.4708
	Pulses	Current distance	16	0.6	150.0	38.225	51.5693
		2014/2015 distance	16	0.0	100.0	28.169	43.0928
	Cooking oil	Current distance	18	0.3	12.0	2.933	3.1009
		2014/2015 distance	16	0.4	10.0	2.306	2.2702
Central	Maize	Current distance	113	0.0	300.0	44.348	80.7919
		2014/2015 distance	117	0.0	350.0	52.369	92.2736
	Pulses	Current distance	71	0.0	500.0	54.873	96.1197
		2014/2015 distance	71	0.0	500.0	61.613	104.8553
	Cooking oil	Current distance	64	0.0	40.0	8.708	10.3476
		2014/2015 distance	63	0.0	40.0	8.735	10.4438
South	Maize	Current distance	105	0.0	100.0	14.692	22.6371
		2014/2015 distance	104	0.0	100.0	15.842	23.5135
	Pulses	Current distance	52	0.0	100.0	11.079	19.0070
		2014/2015 distance	55	0.0	101.0	14.418	25.0377
	Cooking oil	Current distance	31	0.0	80.0	10.403	18.5195
		2014/2015 distance	29	0.5	80.0	11.638	19.9172
National	**Maize**	**Current distance**	**295**	**0.0**	**300.0**	**28.539**	**58.4032**
		2014/2015 distance	**293**	**0.0**	**600.0**	**33.181**	**73.0657**
	Pulses	**Current distance**	**139**	**0.0**	**500.0**	**36.573**	**74.3408**
		2014/2015 distance	**142**	**0.0**	**500.0**	**39.565**	**80.0134**
	Cooking oil	**Current distance**	**113**	**0.0**	**80.0**	**8.253**	**12.6294**
		2014/2015 distance	**108**	**0.0**	**80.0**	**8.562**	**13.2727**

Table 7.7 above presents average distances that major buyer covered to access commodities at the markets. On average, major buyers travelled longer distances last consumption period compared to this period. The results in Table 7.7 show that major buyers travel an average of 33 km compared to 29 km for this consumption period. The analysis show that pulse major buyers travel shorter distances to access source markets compared to last year when they were covering an average of 40 km. Cooking oil buyers cover a comparable distance from the one they covered last year. On average major buyers cover 8 km this consumption period against 9 km last consumption periods.

7.5 Summary of Findings from Market integration Analysis

Strong evidence of market integration is observed from secondary data analysis of commodity flow maps and time series price trends. There is strong co-movement of market prices which is evidenced by strong pairwise correlation co-efficients ranging from 0.60 to 0.94 for most key markets across the country.

Analyses of trader responses on market integration shows that private grain traders have on average about 5 source markets from where they can buy maize while on average pulses could be sourced from markets in the range of 4.8 for pigeon peas to 2.8 for cowpeas. There was a small price variation (of about 13%) from source and destination markets for maize while for pulses variations were more especially for pigeon peas and general beans. The fact that private staple grain traders have more than three reliable source markets implies that they can supply their market from various source markets, implying capacity to meet market demand particularly when effective demand increases.

On average, staple grain traders travelled 33 km and a maximum of 800 km to the commodity source markets. Maize traders are likely to incur more costs to transfer the commodity that pulse traders and the transportation cost is often determined by transporters. Analysis results show that road conditions for most of the demand and supply markets were in excellent of passable condition both during harvesting and lean period. The results also show that major maize buyers travel less distance to access the maize unlike for pulses. This has an advantageous implications for implementation of CBT option.

8.0 FOOD COMMODITY STORAGE CONDITIONS

Cognizant of the fact that food commodities found in different market centres are sourced from different places, the study inquired on the food storage conditions under the trader's agri-businesses. The inquiries focused on issues such as restocking efforts and also volumes of the stored commodities. This was motivated by the realization that commodity storage conditions are vital for the determination of the sustainability of the commodity trade and ultimately the possible humanitarian response options that can be implemented in a particular geographical area.

8.1 Private Trader Commodity Stocking Efforts

Availability of stocks in a given area have implications for the market dynamics such as market prices. Therefore, the study sought to understand the extent of commitment of the sampled traders in the restocking of the products.

8.1.1 Frequency & Efficiency of Commodity Re-stocking

The sampled traders were asked how often they restock their commodities when stocks run out and the number of days it takes to refill or replenish the stocks. This was meant to help determine commitment of traders to the business and also to understand the scarcity of maize in the different parts of the country. Table 8.1 below has details of private traders' responses.

Table 8.1: Traders' Restocking Frequency

Traders Frequency of Restocking	Responses			Total (%)
	North	Central	South	
Daily	101(48.6%)	194(48.4%)	164(54.7%)	**459(50.5%)**
Once a week	32(15.4%)	73(18.2%)	41(13.7%)	**146(16.1%)**
Twice a week	36(17.3%)	45(11.2%)	49(16.3%)	**130(14.3%)**
Once a month	27(13%)	80(20%)	42(14%)	**149(16.4%)**
Twice a month	0(0%)	9(2.2%)	3(1%)	**12(1.3%)**
Six times a Month	12(5.8%)	0(0%)	1(0.3%)	**13(1.4)**
Total	**208(100%)**	**401(100%)**	**300(100%)**	**909(100%)**

From Table 8.1, analysis results indicate that the highest proportion of the traders is daily stockers (50.5%). Only 16.4%, 16.1% and 14.3% of the sampled traders are able to restock their staple food commodities once a month, once a week and twice a week respectively. This simply means stocks run out frequently in the different markets. As a result there is need for frequent restocking. On the same note, most traders are small hence the need to have commodities restocked daily or a number of times in a week. To

further understand the restocking behaviors of traders, the study also sought how long in days it takes to refill or replenish stocks. Details are in Table 8.2 below.

Table 8.2: Number of Days to refill/replenish stocks

Commodity being Restocked	Average Days to refill/replenish stocks (Days)			Total (Days)
	North	Central	South	
Maize	5	3	5	**4.3**
Beans	6	3	6	**5**
Cowpeas	4	4	6	**4.7**
Pigeon peas		1		**1**
Cooking oil	4	2	3	**3**

According to Table 8.2, on average, traders take 4 days, 5 days, 5 days, a day and 3 days to restock maize, beans, cowpeas, pigeon peas and cooking oil respectively. As explained above, at the time of the study, most of the staple food commodity trading activities were taking place in the Central Region, with the northern region having just starting to harvest and the Southern region has very little harvest due to the dry spells. Therefore, the central region traders did not have to spend so many days in restocking their commodities as compared to the southern and Northern region for all commodities. Both Southern and Northern region traders are mostly traveling to the central region to restock their commodities no wonder the high number of days to refill or replenish their stocks. This shows that most traders are committed to travel long distances in searching for the trade commodities.

8.1.2 Volumes of re-stocking

Actual volumes of staple food commodities restocked is of interest in determining food security conditions within a given area and season. In this regard, the study interrogated the traders in the different regions on how much of the commodities they do restock per trip. The responses are summarized in Table 8.3 below.

Table 8.3: Average stocks per trip

Commodity being Restocked	Average stocks per trip			Average Total (kgs)
	North	Central	South	
Maize(kgs)	22, 592	23, 028	424, 214	**156, 611.3**
Beans(kgs)	3, 358	5, 315	1, 543	**3, 403.3**
Cowpeas(kgs)	225	384	232	**280.3**
Pigeon peas (kgs)	0	900	0	**300**
Cooking oil(liters)	6, 795	450.9	643.9	**2, 629.3**

Based on the location and the commodities that are likely found in that region, different regions have different stock quantities per restocking trip that differ based on the commodity. This is evident from Table 8.3 above. Maize is restocked in highest quantities per restocking trip (156, 600kg) whilst pigeon peas is restocked with the lowest quantities (300kgs) which can be justified by the fact that pigeon peas are not on the market now. Traders from the Southern region restocked the highest quantities (424, 214kgs) of maize per trip than the other regions[9]. This confirms the fact that the Southern region is facing more serious food deficit due to low maize production hence to reduce transportation costs, traders have to buy large quantity stocks from the other regions.

8.2 Ownership of Storage Facilities by Private Traders

The ability to store the bought staple commodities is of vital importance in sustainable trading. This is evidenced in the changes in seasonal demands and correspondingly in market prices. Such seasonal demand and price variations demand for traders with abilities to store adequate commodities if serious seasonal price variations are to be contained for sustainable household and national food security. In this recognition, the study interrogated the traders' ownership of storage facilities and whether they have been leasing it out as a source of income. The responses are summarized in the Figure 8.1 below.
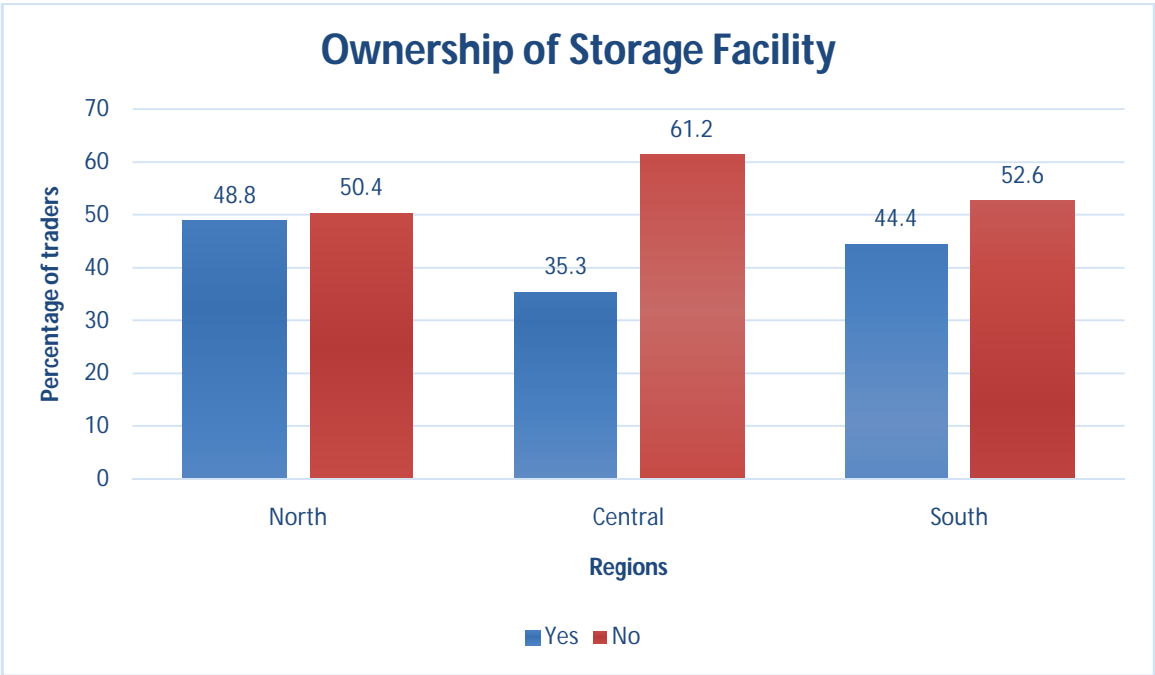
Figure 8.1: Whether trader owns a storage facility or Not

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[9] Such huge quantities may not necessarily be transported at once, but bought and stored during one trip to Central Region from the Southern Region.

Figure 8.1 indicates that most of the traders in all the regions do not own a storage facility as evidenced from 50%, 61% and 53% of the responses obtained from traders in the Northern, Central and Southern regions, respectively. This confirms that most traders do not have capacity to own a recognizable storage facility. The inability to own reliable storage facilities by staple food commodity traders explains the inter-seasonal price variations that the country faces.

8.3 Commodity Storage Practices by Private Traders

To further obtain insights on the storage practices of the traders in the different parts of the country, the study inquired on the type of storage facilities used by the traders. Table 8.6 below gives details.

Table 8.6: Storage facility used by traders

Type of storage Facility used by trader	Regional Responses (%)			Total (%)
	North	**Central**	**South**	
Rented storage facility	54(44.6%)	76(32.8%)	42(24.6%)	**172(32.8%)**
Dwelling house	36(29.8%)	84(36.2%)	38(22.2%)	**158(30.2%)**
None	14(11.6%)	10(4.3%)	17(9.9%)	**41(7.8%)**
Others (Specify)	10(8.3%)	3(1.3%)	23(13.5%)	**36(6.9%)**
Missing	7(5.8%)	59(25.4%)	51(29.8%)	**117(22.3%)**
Total	**121(100%)**	**232(100%)**	**171(100%)**	**524(100%)**

Table 8.6 shows that more than 30% of the traders use rented facilities and dwelling house as a storage facility. A very smaller proportion (8%) was found to be not using any storage facility. Some traders in market centres such as Nchalo and Ngabu reported to be using a shed at the trading center as their storage facilities. On the other hand, the study found that some of the traders who reported to own storage facilities indeed do have huge facilities. For instance, at Luchenza market a trader was found with an upstairs commodity storage facility. See Figures 8.2 below:

Figure 8.2: Empty and partially filled safe maize warehouse facilities at Luchenza Trading Centre in Thyolo District

8.4 Seasonality Patterns in Commodity Storage

Seasonality can be defined as a predictable change or pattern in a time series that recurs or repeats over a one-year period. In terms of staple food commodity trade, this would refer to the lean period where supply is low and commodities are sold at relatively higher price compared to the harvest period characterized by high supply levels and the concomitant low market prices. The study, therefore sought to determine the seasonal patterns by inquiring on type of storage used, prices at storage and release period and seasonal buyers.

8.4.1 Stocks stored/Commodity Storage facilities

The nature of staple food commodity storage facilities plays a vital role in the staple food commodity trade and minimizing seasonal price food fluctuations. From the traders 'perspective, food storage does not only entail stable but also higher income earnings especially if the commodity is released at the time of scarcity. In fact, a study done by Kaminski (2014) on Impact of Seasonality and Price Fluctuation in Household Consumption Pattern in Malawi, Tanzania and Uganda confirmed that improved storage gives trading advantage to sell overtime. This study, therefore, sought to analyze the traders' choice of commodity storage facilities.   Figure 8.3 below has the details.
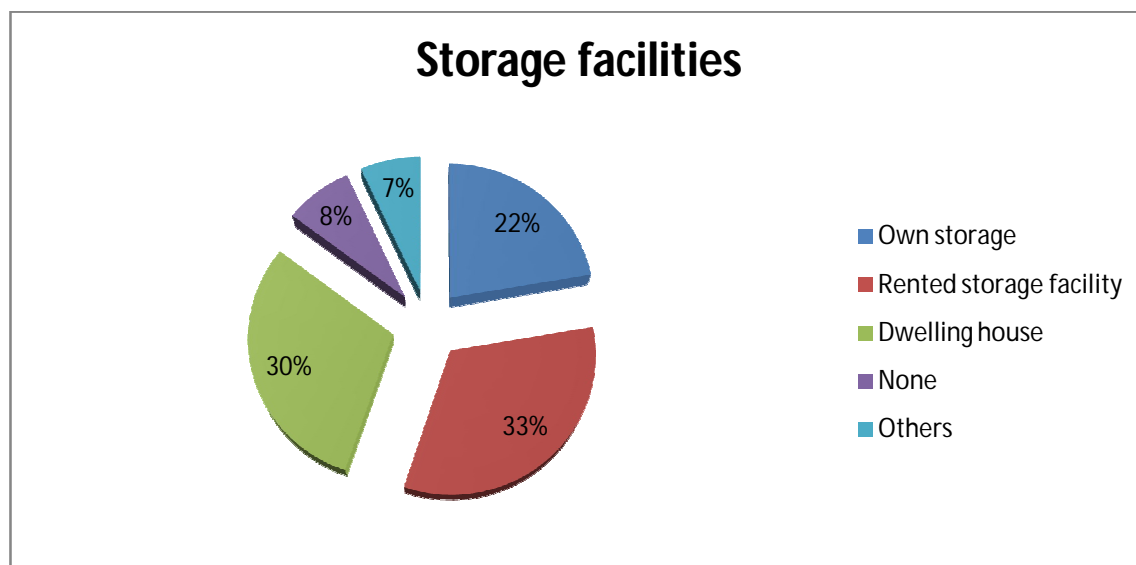
Figure 8.3: Traders' commodity storage facilities

Analysis results in Figure 8.3 show that the most preferred storage facility by staple food traders is rented storage facility, as evidenced by 33% of the responses. This is followed by a 30% response for dwelling house and 22% for those with their own storage. This reveals the need for traders to acquire storage facilities. As argued by Kaminski (2014) storage facilities need to be secure. This requires good physical storage conditions, to avoid losses to insects and rodents, and good security so that traders can be sure to access their own produce later when supply is low. While this study did not interrogate the conditions of the storage facilities used by the traders, anecdotal evidence shows from researchers observations showed variations in the quality of the storage facilities used.

8.4.2 Prices at Storage & Release Periods

Use of storage facilities helps contain commodity price seasonal fluctuations. Price seasonality itself is determined by the difference in price at point of storage and price at point of release. The study made an in investigation on the prices at storage and prices at point of release during the 2015/2016 consumption year. Table 8.7 below has the details.

Table 8.7: Prices at storage and Release periods

Maize	Number of Responses	Mean price per 50 kg (MK)	Mean price per kg (MK)	Std. Deviation
Price at stocking	105	4771.19	95.42	43872.890
Price at release	64	7705.00	154.1	56188.166
Difference		2933.81	58.68	

The study results in Table8.7 show that during the 2015/2016 consumption season, most traders stored their maize when the price were a mean price of MK95.42 per kg at the time of storage and was released at MK 154.1 per kg. This implies a price increase of 62% increase at time of release thus demonstrating the significant profit gains for those privileged to have reliable storage facilities. The change in price at point of release will depend of availability of supply. A research done on price seasonality in Africa by Gilbert, Christiansen and Kaminski (2016) revealed that African nations, Malawi in particular, have substantially higher seasonal price variability than what is observed internationally. An example was given for maize and rice that the seasonal price gap is 2½ to 3 times higher than on the international reference markets. Therefore, there is need for improved monitoring of price changes to determine the full extent of staple food price seasonality patterns in Malawi.

8.4.3 Seasonal Buyers

Further to stocks stored and the evaluation of prices at storage and at point of release, the study sought information on seasonal buyers. In this case, traders were asked major seasonal buyers at the time of stock release. Table8.8 below has the details.

Table 8.8: Major Seasonal Buyers at the time of Stock Release

Buyers	Responses	
	Number of responses	Percent
Local people	91	42.9%
Fellow traders/vendors	46	21.7%
Schools	9	4.2%
Restaurants	33	15.6%
Hospitals/clinics	12	5.7%
Others	21	9.9%
Total	212	100.0%

The majority of customers buying at time of release of stock by traders whole stored staple food commodities are mostly local people. This is evidenced by the fact that traders indicated that 43% of their customers at time of stock release were local people. This, therefore means that when there is seasonal maize price fluctuations, its the local consumers who bear the brunt of such market dynamics.

8.5 Summary of insights on Storage Facilities

The study confirms the vibrancy of the food commodity trade during the 2016/17 season as most traders were busy restocking their business in the event of stock depletion. Smaller traders with little or no storage facilities were usually found to be restocking on almost daily basis. For the traders from the Southern region, who have capacity to travel and procure food commodities in the Central Region, maize is usually traded and

restocked commodity such that some traders reported on procuring up to 420 MT per trip.

While most of the small traders do not have own storage facilities, there are some big traders who huge storage facilities. In any case, the limited storage facility challenge is heavily contributing to interseasonal price variations the country faces. For instance, the study established that last season, traders with reliable storage facilities were able to release their maize when the prices were 62% higher than purchase time.

9.0 TRADE VOLUME AND MARKET PRICE PROJECTIONS

Further to commodity stock storage, the study collected data on projections of commodity stock volumes and market prices expected for the 2016/17 consumption season. The reported projections comprise the traders own projections based on their market experience and statistical forecasting techniques using market price data.

9.1 Commodity Volume Projections

Traders were asked to state their perceptions regarding the projected market commodity volumes sales for the different periods within the 2016/17 consumption season, namely July- September being post harvest period 2016, October- December 2016 which is the onset of lean period, and January- March 2017 being the critical lean period. The details response results are in Annex Table 1.2 with the summary in Table 9.1 below.

Table 9.1: Traders Projections of Seasonal Maize Volume Sales Changes July 2016- March 2017

Traders Response on Expected Maize Volume change	Time Frame and Gender of Respondents								
	July- September, 2016 Total			October- December, 2016			January- March, 2017		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Will increase	54	226	280	51	227	278	49	196	245
	83.1%	84.3%	84.1%	78.5%	84.7%	83.5%	75.4%	73.1%	73.6%
Decrease	10	31	41	13	36	49	15	62	77
	15.4%	11.6%	12.3%	20.0%	13.4%	14.7%	23.1%	23.1%	23.1%
No change	1	11	12	1	5	6	1	10	11
	1.5%	4.1%	3.6%	1.5%	1.9%	1.8%	1.5%	3.7%	3.3%
Total	65	268	333	65	268	333	65	268	333
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

According to traders responses presented in Table 9.1 above, most traders were of the view that maize volumes sales would register significant increases in the post harvest period of July- September 2016 and that of October- December 2016 when compared to the harvest period (which was the time of the study). The reduction in responses for the period January- March 2017 is due to the anticipated low maize supply levels at that time, hence low marketed volumes.

The stated projected market volumes were based on the expectations of the maize stocks being bought, stocked at the time of the study in readiness for release into the market based on demand. This means that the traders' projections may not fully realized if market supply happens to be lower than expected. Further inquiries into how they would acquire the maize for re-sale during the lean periods, some indicated that they are able to source the maize even from remote rural areas where ADMARC is able to reach, while others made reference to the foreign markets, namely Zambia and Mozambique where they were sourcing the maize in the informal markets as well. In any case, the traders' projections, while providing assurance that maize would be available in the some key markets for consumers, such assurance must be taken with caution considering that they were providing these responses at a time when they were in the process of making purchases and stocking.

Further to maize, the study also inquired on projections for legumes such as beans. Analysis results for traders' responses on projections for beans sales are reported in Table 9.2 below, with detailed regional analysis results in Annex Table 1.3.

Table 9.2: Traders Projections of Beans Seasonal Volume Sales Changes July 2016- March 2017

Expected Beans Market Sales Volume change	Time Frame and Gender of Respondents								
	July- September, 2016 Total			October- December, 2016			January- March, 2017		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Will increase	22	52	74	20	55	75	20	47	67
	62.9%	71.2%	68.5%	57.1%	75.3%	69.4%	57.1%	64.4%	62.0%
Decrease	9	16	25	9	13	22	8	22	30
	25.7%	21.9%	23.1%	25.7%	17.8%	20.4%	22.9%	30.1%	27.8%
No change	4	5	9	6	5	11	7	4	11
	11.4%	6.8%	8.3%	17.1%	6.8%	10.2%	20.0%	5.5%	10.2%
Total	35	73	108	35	73	108	35	73	108
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.2 shows that marketed volumes of beans are also generally expected to increase over the 2016/17 consumption season as is the case with maize. However, slight reduction in marketed volumes are expected during the lean season, as evidenced by the reduction in responses from 69% during July-September period to 62% during the January- March 2017.In any case, the response pattern provide some assurance that beans would be available on the market for consumers. However, the same caveat for

maize as argued above, applies. Further inquires on market volume sales were made about the cooking oil. Analysis results are in Annex Table 1.4 and Table9.3 below:

Table 9.3: Traders' Projections of Cooking Oil Seasonal Sales Volume Changes July 2016- March 2017.

Expected Volume change of Cooking Oil	Time Frame and Gender of Respondents								
	July- September, 2016 Total			October- December, 2016			January- March, 2017		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Will increase	13	61	74	10	54	64	7	38	45
	41.9%	54.5%	51.7%	32.3%	48.2%	44.8%	22.6%	33.9%	31.5%
Decrease	2	10	12	6	16	22	11	32	43
	6.5%	8.9%	8.4%	19.4%	14.3%	15.4%	35.5%	28.6%	30.1%
No change	16	41	57	15	42	57	13	42	55
	51.6%	36.6%	39.9%	48.4%	37.5%	39.9%	41.9%	37.5%	38.5%
Total	**31**	**112**	**143**	**31**	**112**	**143**	**31**	**112**	**143**
	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Responses in Table 9.3 show that traders expect a steady decline in the volumes of cooking oil sold as we approach the lean season. The major reason given was that during the lean period, most consumers face budget constraints hence reduce consumption of cooking oil, thus translating into reduced marketed volumes sales. This explains why the responses on decreased expected volumes increased from 8% for July- September 2016 to 30% during January- March 2017.

9.2: Market Price Projections: A Traders Perspective

Further to market volume projections, the study also collected data on traders' projections of market prices for key commodities such as maize, legumes such as beans, and cooking oil. The Tables 9.4-9.6 below present information on price projections for key commodities namely, maize, beans and cooking oil.

Table 9.4: Traders Seasonal Maize Price Projections: July 2016 – March 2017

Region	July- Sept 2016 (MK/kg)			Oct- Dec 2016 (MK/kg)			Jan- March 2017 (MK/kg)		
	mean	Min	max	mean	min[10]	max	Mean	min[11]	Max
North	158.00	110.00	200.00	216.1	0	450.0	258	0	500
Central	163.00	120.00	200.00	218.3	0	400.0	256	0	400
South	185.00	130.00	220.00	252.5	140.0	400.0	276	150	400
Average	169.00	110.00	220.00	229.00	O	450.00	264.00	O	500

Table 9.4 shows increasing maize price trends over the 2016/17 consumption season from about MK169/kg during the post-harvest season to about MK264/kg during the critical lean period months of January-March 2017. However, regional variations are expected. The dramatic price situation is likely to be experienced during the last quarter of 2016, i.e. during October- December 2016 and also January- March 2017 when maize prices could reach MK450/kg and MK 500/kg, respectively. Traders in the Northern region are forecasting highest maize market prices for the period of October 2016-March 2017 because of increased demand from traders from Southern region as well as local demand since most parts of the region have had poor harvests. The increased maize price projections indicated in Table 9.4 alongside increased marketed volumes as reported in Table 9.1 above confirms the earlier argument that expected sales volumes in the markets may not actually be realized thus resulting into food insecurity challenges for the consumers who rely on the market for access to maize supplies.

As was the case with the market volume sales, the analysis inquired on the bean market price projections. Results on trader responses are in Table 9.5 below.

Table 9.5: Traders Seasonal Beans Price Projections: July 2016- March 2017

Region	July- Sept 2016 (MK/kg)			Oct- Dec 2016 (MK/kg)			Jan- March 2017 (MK/kg)		
	mean	Min	max	mean	min	Max	mean	min	Max
North	574	0	1000	643	0	1200	726	0	1500
Central	726	400	1111	809	111	1500	831	0	1500
South	842	250	1200	907	300	1500	914	300	1500
Average	725.1	O	1200	799	O	1500	831.5	O	1500

Table 9.5 shows regional and seasonal variations in market bean prices. The national picture shows a steady price growth in bean prices from MK725/kg to MK832/kg.

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[10]The minimum projected commodity price of MK0.00 refers to situations where the interviewed trader failed to project the commodity price for that particular season.

[11] Zero minimum refer to those traders who did not have an idea of the possible price projections

However, unlike the case of maize, bean traders in the Northern region expect to have the least bean prices across the seasons compared to their counterparts in the Central and Southern Regions save for the expected maximum prices for January- March 2017 which is equal hence MK1,500.00/kg across all the three regions.

Table 9.6: Traders Seasonal Cooking Oil Price Projections: July 2016-March 2017

Region	July- 2016(MK/litre)		Sept	Oct- (MK/litre)	Dec	2016	Jan- (MK/litre)	March	2017
	mean	min	max	mean	min	max	Mean	min	Max
North	979	0	1350	978.6	.0	1500.0	1013.6	.0	1650.0
Central	969	0	1200	1118.4	.0	9000.0	1018.3	.0	1300.0
South	1050	600	4800	1059.0	650.0	4800.0	1035.0	600.0	4000.0
Average	**975.6**	**0**	**1350**	**1018.8**	**0**	**1500**	**1023.7**	**1000**	**1650**

Table 9.6 shows that market prices for cooking oil are generally expected to increase at a national level from an average of MK975.6 in the post-harvest period to MK1023.7 per liter. Regional analysis indicates that market prices for cooking oil would be expected to be lower in Northern regions than in Central and Southern regions, reflecting demand patterns. In addition, projections show a general increasing price trend during the 2016/17 consumption season despite the fact that above analyses on sales volume could register a decreasing trend.

9.3 Secondary data Commodity Price Projections

Commodity price projections by traders were complimented by secondary data projections obtained from a Holt winters seasonal forecasting method. The Holt Winters forecasting approach is applied to the univariate time series data has a seasonal component. Forecasts can be done using either the *multiplicative approach* if the seasonal component varies or grows with the series, or using the *additive approach* which assumes that the seasonal component is additive to the series. The study applies the additive Holt Winters forecasting approach. The additive approach is given by a given formulae as:

$$x_{t+j=} (u_t+\beta_j)+S_{t+j}+\varepsilon_{t+j}$$

where x_t is the time series, u_t is a time varying mean at time t constant, β is a parameter, and S_t is a seasonal component at time t, and ε is error.

This was done using market price data from Agriculture Market Information System (AMIS) monthly time series data obtained from the Ministry of Agriculture, Irrigation and Water Development for the period January 2013 to May 2016. This forecasting is for the period of 10 months from June 2016 (time of study) to March 2017 (possibly end of lean period). The projection is focuses on maize price commodity since it's the main

staple food crop. Figure 9.1 below has results for the national maize price forecast picture, regional picture is presented in Figure 9.2 represented by specific key regional markets, namely Karonga, Lilongwe, Lunzu and Nsanje
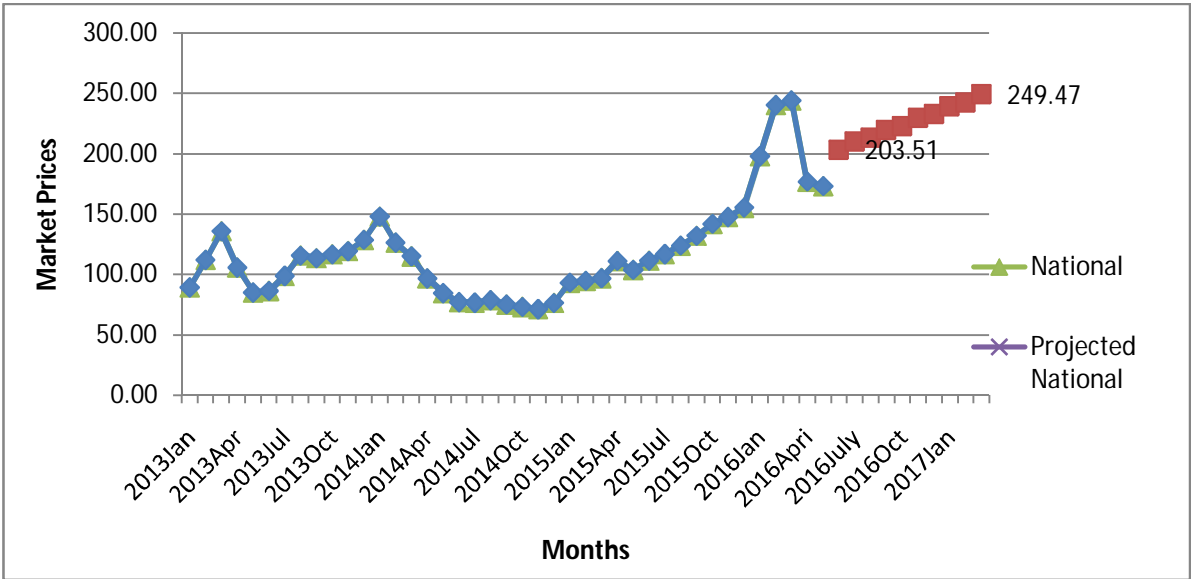
Figure 9.1: Projected National Maize Prices

According to Figure 9.1 above, maize prices are expected to continuously rise over the 2016/17 consumption season even in March 2017 to about MK250/kg. This agrees with the price forecasts of the private traders who anticipate the January- March 2017 maize prices to be around MK264/kg though there are differences in terms of the actual price levels. The difference is largely due to the fact that the secondary data projections are made based on monthly average price data set, whereas the traders' projections include anecdotal predictions based on their reading of the market conditions. This, notwithstanding, the price situation may stabilize if the Government through the operations of ADMARC and NFRA intensify the market interventions.

Further to the national forecast, the analysis interrogates the possible regional price dynamics during the 2016/17 consumption season. The analysis involves maize price projections for Karonga market representing the Northern region, Lilongwe market for the Centre, Lunzu and Nsanje markets for the Southern region. Detailed regional maize price projections are in Figure 9.2 below while for other markets in the Southern Region are in Annex Figure2.2.
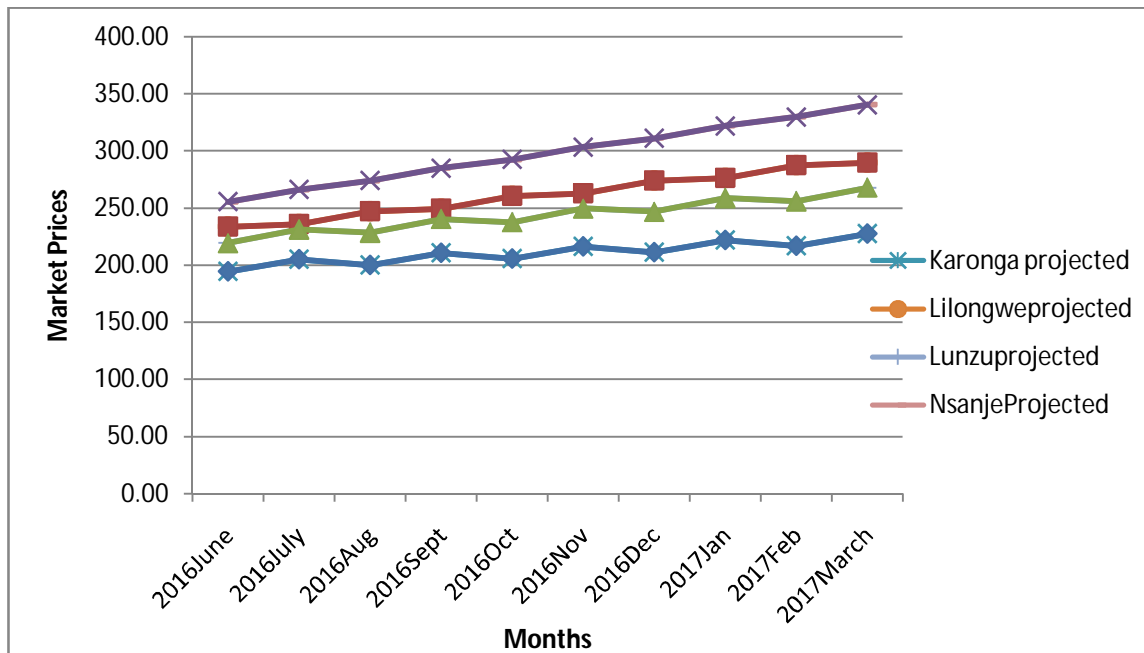
Figure 9.2: Maize Price Projections: June 2016- March 2017.

Figure 9.2 confirms the earlier finding that maize prices are likely to take a steady continuously upward trend between June 2016 and March 2017. The regional projections show that the Lower Shire Valley, particularly Nsanje district could face highest maize prices during the 2016/17 consumption season, reaching as high asMK340 per kg if stabilization interventions are not undertaken. Interestingly, Lilongwe is likely to come second to Lower Shire, and this could be a reflection of the high demand from within Lilongwe City as well as from traders from the Southern region. Karonga is having the least price trends but the continuation of such trends will depend upon the supply levels in Chitipa district, being the major source market for Karonga and even foreign supplies particularly from Tanzanian traders.

9.4 Summary of the Market Volume and Price Projections Analysis

Traders' expectations of increased market sales during the 2016/17 consumption season are largely premised on anticipation that they will be able to procure and stock adequate stocks for the season. They were very certain of the increased market demand during the season owing to the low national production and ready to make profits from food commodity sales, particularly maize. However, the traders' projections of their ability to increase sales volume in to meet consumers food security needs in response to market demand, must be viewed with cautions as it is dependent upon secured volumes.

In terms of market prices, prices for all the food commodities are expected to take an upward trend over the 2016/17 consumption season. For instance, in the case of maize,

traders project the maize prices to take an upward trend from an average of MK169/kg during the post-harvest season to about MK264/kg during the critical lean period months of January-March 2017. This is corroborated by statistical price forecasting techniques which show that average national maize prices could be as high as MK250/kg by January- March 2017, and that the average monthly maize market prices in some market centres could be above MK340/kg. In addition, traders' maximum anecdotal prices projections indicate that maize prices could increase from MK220/kg in July-September 2016 period to about MK500/kg in January- March 2017. If the Government planned market interventions are not implemented in the manner that market prices can be stabilized, the projected maximum prices may actually turn out to become the average market prices in most market centres.

10. THE 2016/17 MVAC RESPONSE OPTIONS

The 2016/17 MVAC response involves the 6,491, 847 households from 24 districts who need humanitarian assistance in form of either in-kind food assistance or cash based transfer.

10.1 Criteria for In-kind food assistance or Cash based Transfer Recommendations

The recommendation of a TA to be under in-kind food assistance is informed by the following: (a) an area with difficult passability conditions especially during rainy season; (b) area with big caseloads, that is above 50,000; areas with limited private traders capacity to supply staple food commodities throughout the 2016/17 season, gauged in terms of numbers of traders, their storage capacity and sources of the commodities- all this based on the past experience and what was stated during the interviews.

On the other hand, a recommendation for a TA to be under a cash based transfer option is based on: (a) the TA having market centres with active staple food private traders that have diverse and reliable market sources and are able to supply the market throughout the consumption season, (b) market centres with private traders that have sizeable warehouses or storage facilities (c) having caseloads of less than 50,000, and (d) market centres are reachable with accessible road conditions throughout the consumption season.

10.2: Summary Recommendations of 2016/17 MVAC Response Options

Based on the foregoing criteria, recommendations for the MVAC transfer options have been made and the summary is provided in Table 10.1 below, Annex 5 and the detailed Excel file of Matrix of Recommendations accompanying this report.

Table10.1: Details of the 2016/17 MVAC Response Options Recommended

Region/ Transfer Option	Cash Based Transfer		In- kind Food Assistance		Total population
	Caseload	% (Row total)	Caseload	% (Row total)	
North	10,844	7.4	134,968	92.6	145,812
Centre	963,260	48.2	1,036,015	51.8	1,999,275
South	754,459	17.4	3,592,301	82.6	4,346,760
National Total	**1,728,563**	**26.6**	**4,763,284**	**73.4**	**6,491,847**
Prepositioning strategy for in-kind assistance caseload					
In-kind assistance caseload that need prepositioning					620,149
Pre-positioning caseload as a proportion of total in-kind assistance caseload (4,763,284)					13.02%

Pre-positioning caseload as a proportion of total national in-kind assistance caseload (6,491,847)	9.55%
Possibility of CBT caseload shifting to in-kind assistance during the season	
Cash based transfer (CBT) caseload that could shift to in-kind food assistance	394,368
CBT caseload with possibility of shifting to in-kind assistance as a proportion of total CBT caseload (1,728,563)	22.81%
CBT caseload with possibility of shifting to in-kind assistance as a proportion of total national CBT caseload (6,491,827)	6.07%

According to Table 10.1 above, the study recommends that 73.4% (4,763,284) of the total national caseload be provided with in-kind food assistance with the remaining 26.6% (1,728,563) be on cash based transfer options.

For the in-kind assistance caseload, the study finds for the TAs with most noticeable passability challenges, preparatory processes for delivery of humanitarian assistance should include prepositioning of the food commodities. Such strategic actions ensure smooth delivery of food assistance to the identified households during the difficult rainy season times. In this respect, Table 10.1 shows that prepositioning is recommended for a total caseload of 620,149 translating into 13% of the total caseload recommended for in-kind food assistance or 9.6% of the national caseload.

Cognizant of the fact that there have been instances when markets have failed to sustainably deliver food to CBT beneficiaries throughout the annual intervention period, some of the TAs identified for CBT option have been recommended for a switch to in-kind food assistance. These are largely TAs where much as the private traders are vibrant, they a times face shaky food source markets to sustainably meet the caseload demand throughout the intervention period, coupled with passability conditions of the TA. As such, as shown in Table 10.1, a total caseload of 394,368 (or 22.8%) of the total CBT caseload could switch to in-kind food assistance during the course of the consumption season. Through an effective local food security monitoring and evaluation system, the humanitarian assistance organization with the guidance of district stakeholders to decide when to undertake a switch, if all necessary. However, implementation of such a recommendation depends upon the feasibility of logistical challenges of effecting such switches. The scope of the study did not cover investigations into such issues.

It is worth noting that while a voucher system could be implemented during the 2016/17 season, the study could not identify TAs (and hence caseload) for voucher systems because of limited private sector numbers with practical knowledge of the voucher systems. Most of them will need specialized civic education to participate in such arrangement.

10.3: The 2016/17 MVAC Responses Recommendations by TA

Further to the general regional picture for the 2016/17 MVAC transfer options, the study presents the recommendations per TA. Summary details are in Table 10.2 and Figure 10.1 below.

Table 10.2: The 2016/17 MVAC Response Options Recommended by TA

Region	Cash Based Transfer		In-kind Food Assistance		Total
	No of TAs	Row %age	No of TAs	Row %age	
North	1	11.1	8	88.9	9 (5.2%)
Centre	30	52.6	27	47.4	57 (33.1%)
South	20	18.9	86	81.1	106 (61.6%)
TOTAL	**51**	**29.7**	**121**	**70.3**	**172**

Table 10.2 shows that the total number of TAs from the 24 districts earmarked for the 2016/17 MVAC response are 172. Of these, 62% (106) of the TAs are in the Southern region while the Central Region has 33% (57). Only 5.2% (9) are in the Northern region. In terms of MVAC responses, 70% (121) of the TA population is recommended for in-kind food assistance with 30% (51) for cash based transfer. Most of the TAs recommended for cash based transfer option are in Central region owing to the relatively stable food security conditions and vibrant private trader operations observed at the time of the study.

Additional details of the TAs recommended for each of the transfer options are in map as presented in Figure 10.1 below. The map confirms the earlier observations that most of the in-kind food assistance TAs are in the Southern region with the Central region leading on the cash based transfer TAs.
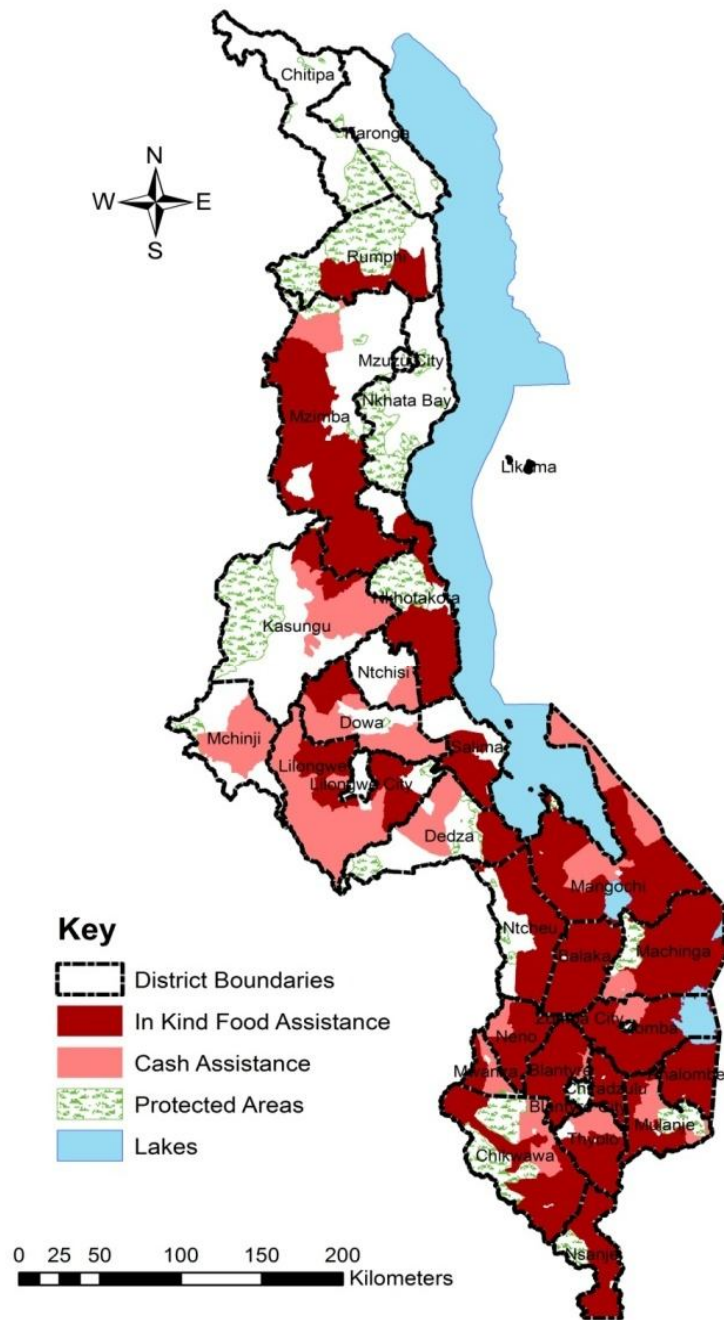
Figure 10.1: Map of 2016/17 MVAC Response Modality by TA

Summary of the MVAC response analyses

Of the total caseload of 6,491,847 the study recommends that 73.4% (4,763,284) of the total national caseload be provided with in-kind food assistance with the remaining 26.6% (1,728,563) be on cash based transfer option. Prepositioning is recommended for a total caseload of 620,149 being 13% of the total caseload recommended for in-kind food assistance or 9.6% of the national caseload. In addition, a total caseload of 394,368 (or 22.8%) of the total CBT caseload is recommended for a switch to in-kind food assistance during the course of the consumption season. Implementation of a switch recommendation could be explored in light of the accompanying the logistical challenges of effecting such decisions.

11: CONCLUSIONS

The 2016/17 market assessment study brings to light a number of critical insights relating to national food security conditions and planned interventions, and from the primary data analysis, it brings out critical insights relating to trader characteristics, trader business activities and capacity to respond to market dynamics, state of agri-business financing conditions, the extent of market integration between source and demand markets,   storage conditions, commodity volume and price projections, amongst others.

In terms of national food security conditions, it is apparent that the Government has commendable intentions of purchasing about 500,000 MT of maize through ADMARC and NFRA to meet the food shortfalls. However, such policy intentions could face serious challenges since from the 2.4 million production, only about 240,000-312,000 mt of maize could be available on the market for which the private sector has also expressed intentions to purchase about 500,000 MT.

With respect to trader characteristics, the study results show that confirm low women and youth participation in staple food commodity trade. In terms of education, the findings show that citizens with higher levels of education possibly graduates from tertiary education institutions, are also participating in the staple food commodity trade. This has positive implications for transfer humanitarian transfer options such as use of vouchers. Besides formal education, inquiries into business experience finds that some traders have over three decades of staple food trading.

In terms of distance from district of origin to the current place of business, the study results generally show that most traders had travelled long distances of even up to 850 km to their current business operating place. This means that traders willing to move from place of origin to settle elsewhere for the sole purpose of conducting business activities as long as there is effective demand.

Investigations into trader business characteristics show a concentration of traders in Southern and Central regions with few in the North. This is a reflection of food supply

and demand conditions to which traders respond. Central Region is largely a source market for most food commodities whereas Southern region is the demand markets.

Interesting relations exists amongst traders who, while reporting to be collaborating in price setting, they also do compete amongst themselves. In terms of interactions with public institutions such as ADMARC and NFRA, the analysis confirms what has been found in previous similar studies that there are minimal such interactions.

Much as generally staple food commodity traders have limited capital base, the study finds the traders are able to explore diverse source to obtain business capital. Profits from other businesses were the major reported. In any case, this means that granted the opportunity for increased and sustained effective demand such as CBT some traders could ably mobilize the required finances for the staple food commodity businesses.

At the time of the study, that is May 2016, the country had very limited stocks of maize. For instance, NFRA reported to have just about 7,000 MT, the private traders covered under this study were estimated to have about 15,000 MT. While promises of significant maize purchases have been made, implementation of such plans is a different issue altogether as it is dependent on a number of factors including commodity availability on the market.

Most traders have are not keen to supply their commodities on credit citing business capacity implications. This notwithstanding, some few traders are able to supply goods worth MK60.0 million on credit.

Investigations into traders' willingness to participate in a Voucher system shows that about 30% of the traders are willing to participate in such a facility, with expressed equal willingness by both male and female traders. It was apparent that those who objected to or expressed reservations with the Voucher systems did so out of limited information.

Market integration analyses show that private grain traders have diverse market sources with some of them reaching 5 source markets, implying that they can supply their market from various source markets when effective demand is available and reachable source markets are known.

In terms of distance travelled to source markets, analysis results show that on average, staple grain traders travel 33 km and a maximum of 800 km to the commodity source markets.

Most of the small traders do not have own storage facilities. However, there are some big traders who huge storage facilities and hence are able to store grain across the marketing seasons. In so doing, such traders are able to release maize into the markets prices are 62% higher than the purchase prices. When compared with the 14% margin realized from immediate purchase and sell of maize, traders with large storage facilities are able to realize significant profit margins from their business undertakings.

At the time of the study, most traders were busy buying and stocking staple food commodities. Some traders from Southern region reported to have capacity to procure

and stock even 420 MTof maize during a trip to the Central Region. This simply reflects the seriousness of maize business for some big traders.

The vibrancy of the food private sector against the myriad of challenges as revealed in this study shows that the private sector could be a more effective partner in the national food security agenda if supported. The ministries responsible for Agriculture and Industry and Trade are well placed to do this under the Agriculture Sector Wide Approach framework which has a component of promoting market based food security

Both traders' perceptions and statistical projections agree on the fact that the 2016/17 consumption season will have significant price increases. On average traders project the market prices for maize to reach MK 264/kg with a possible maximum of MK500/kg during the critical lean period of January- March 2017. Statistical projections using secondary monthly data, on the other hand, put the average price increases to reach MK250/ kg with a maximum of MK 340/kg for some volatile markets. In any case, it is apparent that if the Government planned market interventions are not well implemented to stabilize the markets, the projected maximum prices may actually turn out to become the average market prices in most market centres.

12: STUDY RECOMMENDATIONS

The identified 6.5 million food insecure population need to be provided with both in-kind food assistance and cash based transfer option. In-kind food assistance is to be provided to 73% (or 4.76 million) while cash based transfer is for the remaining 27% (or 1.73 million).

Serious consideration of prepositioning of food assistance is recommended for the 4.76 million food insecure population to be targeted with in-kind food assistance. Prepositioning to be effected for at least 13% of such population located in TAs with difficult road conditions that become impassable during the rainy season. Such a need is also necessitated by the huge caseloads identified for the humanitarian assistance during the 2016/17 season.

For the 1.73 million population to be under cash based transfer option, about 23% of them could be considered for a switch to in-kind food assistance option during the course of 2016/17 consumption season. The switch option is recommended for the cash based transfer population is from TAs where much as the private traders are vibrant, they face shaky food source markets which may affect their capabilities to sustainably meet the population food demand throughout the 2016/17 consumption season.

Since climate change is with us for foreseeable future, there is need for a regional approach to clarify issues in terms of food trade in the Southern African region. Of particular importance here is the question of whether the region's member states needs to continue with food trade bans.

There is need for institutionalized national system to collect, analyze and disseminate national stocks being kept by business players in different parts of the country. This is based on the realization that currently no one has definite idea of how much maize or other food grain are in the country. Such an institutional arrangement could be housed in MVAC Secretariat, FEWSNET or GTPA or even NFRA or any other institutional home where it can effectively discharge its duties of collecting, analyzing and disseminating data on market dynamics on stocks on grain, number of players involved, capital requirements, challenges being encountered, stocking and release prices, amongst others. Currently most of such issues are being covered under the current annual market assessment undertakings.

If the idea for such the proposed institutional arrangement is welcome, the starting point could be a benefit- costs analysis of having such an institutional home vs the *status quo* of annual market assessments. This could be followed by a documentation of traders operating in different parts of the country, so that they are made use of in their localities when need arises.

Deliberate capacity building efforts for private traders should be considered. This should target the potential female and youth traders whom the study results show to be lagging behind in the staple food commodity trading businesses. Such efforts such build on the vast wealth of experiences from some traders who have in such businesses for a long time such as two to three decades. In addition, the fact that some citizens with tertiary education levels are participating in food trade means the country is now having an educated caliber of traders who could also be target of such capacity building efforts.

There is need to for timely and well coordinated diverse food security interventions including timely importation, storage and selling of maize to the affected populations to avoid further food inflationary pressures that are currently building up in the markets.

In view of huge caseloads identified for the humanitarian assistance during the 2016/17 season, there is need for serious consideration of propositioning of food assistance in certain geographical areas with difficult passability conditions during the rainy season.

Humanitarian assistance stakeholders intending to undertake food security interventions for the affected populations could consider the use of the Voucher system. However, it must be preceded by strong sensitization efforts to bring the traders to the required levels of understanding.

Government is urged to continue with long term investments in food storage facilities, namely silos in line with the growing population and its attendant food security needs. In relation to that, the national silos need to be well stocked at any time to minimize or reduce cases of huge food imports as is likely to be case during the 2016/17 consumption season.

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Annexes

Annex 1: Additional Statistical Tables

Annex Table1.1: Distance from original place and distance from homestead

Region	Description	N	Minimum	Maximum	Mean	Std. Deviation
North	Distance from district of origin	121	0.00	850.00	78.62	152.38
	Distance from home	121	0.00	20.00	2.07	3.24
Central	Distance from district of origin	232	0.00	500.00	40.28	78.38
	Distance from home	232	0.00	20.00	1.19	2.02
South	Distance from district of origin	171	0.00	504.00	34.67	70.57
	Distance from home	171	0.00	46.00	2.40	4.87
National	**Distance from district of origin**	**524**	**0.00**	**850.00**	**47.30**	**99.80**
	Distance from home	**524**	**0.00**	**46.00**	**1.79**	**3.50**

Annex Table 1.2: Detailed Traders Projections of Seasonal Maize Volume Sales Changes July 2016- March 2017

Region	Expected Volume change	Time Frame and Gender of Respondents								
		July- September, 2016 Total			October- December, 2016			January- March, 2017		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
North	Will increase	24	49	73	23	47	70	18	39	57
		85.7%	94.2%	91.2%	82.1%	90.4%	87.5%	64.3%	75.0%	71.2%
	Decrease	3	3	6	4	5	9	9	13	22
		10.7%	5.8%	7.5%	14.3%	9.6%	11.2%	32.1%	25.0%	27.5%
	No change	1	0	1	1	0	1	1	0	1
		3.6%	0.0%	1.2%	3.6%	0.0%	1.2%	3.6%	0.0%	1.2%
	Total	**28**	**52**	**80**	**28**	**52**	**80**	**28**	**52**	**80**
				100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Central	Will increase	8	119	127	8	119	127	8	101	109
		100.0%	89.5%	90.1%	100.0%	89.5%	90.1%	100.0%	75.9%	77.3%
	Decrease	0	11	11	0	14	14	0	31	31
		0.0%	8.3%	7.8%	0.0%	10.5%	9.9%	0.0%	23.3%	22.0%
	No change	0	3	3				0	1	1
		0.0%	2.3%	2.1%				0.0%	0.8%	0.7%
	Total	**8**	**133**	**141**	**8**	**133**	**141**	**8**	**133**	**141**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
South	Will increase	22	58	80	20	61	81	23	56	79
		75.9%	69.9%	71.4%	69.0%	73.5%	72.3%	79.3%	67.5%	70.5%
	Decrease	7	17	24	9	17	26	6	18	24

		24.1%	20.5%	21.4%	31.0%	20.5%	23.2%	20.7%	21.7%	21.4%
	No change	0	8	8	0	5	5	0	9	9
		0.0%	9.6%	7.1%	0.0%	6.0%	4.5%	0.0%	10.8%	8.0%
	Total	**29**	**83**	**112**	**29**	**83**	**112**	**29**	**83**	**112**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total	Will increase	54	226	280	51	227	278	49	196	245
		83.1%	84.3%	84.1%	78.5%	84.7%	83.5%	75.4%	73.1%	73.6%
	Decrease	10	31	41	13	36	49	15	62	77
		15.4%	11.6%	12.3%	20.0%	13.4%	14.7%	23.1%	23.1%	23.1%
	No change	1	11	12	1	5	6	1	10	11
		1.5%	4.1%	3.6%	1.5%	1.9%	1.8%	1.5%	3.7%	3.3%
	Total	**65**	**268**	**333**	**65**	**268**	**333**	**65**	**268**	**333**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Annex Table 1.3: Detailed Traders Projections of Beans Seasonal Volume Sales Changes July 2016- March 2017

Region	Expected Volume change	Time Frame and Gender of Respondents								
		July- September, 2016 Total			October- December, 2016			January- March, 2017		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
North	Will increase	9	13	22	9	13	22	9	13	22
	Total	**9**	**13**	**22**	**9**	**13**	**22**	**9**	**13**	**22**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Central	Will increase	7	28	35	7	29	36	5	22	27
		77.8%	80.0%	79.5%	77.8%	82.9%	81.8%	55.6%	62.9%	61.4%
	Decrease	2	5	7	1	5	6	3	12	15
		22.2%	14.3%	15.9%	11.1%	14.3%	13.6%	33.3%	34.3%	34.1%
	No change	0	2	2	1	1	2	1	1	2
		0.0%	5.7%	4.5%	11.1%	2.9%	4.5%	11.1%	2.9%	4.5%
	Total	**9**	**35**	**44**	**9**	**35**	**44**	**9**	**35**	**44**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
South	Will increase	6	11	17	4	13	17	6	12	18
		35.3%	44.0%	40.5%	23.5%	52.0%	40.5%	35.3%	48.0%	42.9%
	Decrease	7	11	18	8	8	16	5	10	15
		41.2%	44.0%	42.9%	47.1%	32.0%	38.1%	29.4%	40.0%	35.7%
	No change	4	3	7	5	4	9	6	3	9
		23.5%	12.0%	16.7%	29.4%	16.0%	21.4%	35.3%	12.0%	21.4%
	Total	**17**	**25**	**42**	**17**	**25**	**42**	**17**	**25**	**42**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total	Will increase	22	52	74	20	55	75	20	47	67
		62.9%	71.2%	68.5%	57.1%	75.3%	69.4%	57.1%	64.4%	62.0%
	Decrease	9	16	25	9	13	22	8	22	30
		25.7%	21.9%	23.1%	25.7%	17.8%	20.4%	22.9%	30.1%	27.8%
	No change	4	5	9	6	5	11	7	4	11
		11.4%	6.8%	8.3%	17.1%	6.8%	10.2%	20.0%	5.5%	10.2%
	Total	**35**	**73**	**108**	**35**	**73**	**108**	**35**	**73**	**108**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

**Annex Table 1.4: Detailed Traders Projections of Cooking Oil Seasonal Sales Volume Changes July 2016- March 2017.**

Region	Expected Volume change	Time Frame and Gender of Respondents								
		July- September, 2016 Total			October- December, 2016			January- March, 2017		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
North	Will increase	3	12	15	3	11	14	3	10	13
		42.9%	54.5%	51.7%	42.9%	50.0%	48.3%	42.9%	45.5%	44.8%
	Decrease				0	1	1	0	1	1
					0.0%	4.5%	3.4%	0.0%	4.5%	3.4%
	No change	4	10	14	4	10	14	4	11	15
		57.1%	45.5%	48.3%	57.1%	45.5%	48.3%	57.1%	50.0%	51.7%
	Total	**7**	**22**	**29**	**7**	**22**	**29**	**7**	**22**	**29**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Central	Will increase	9	36	45	7	31	38	4	19	23
		60.0%	62.1%	61.6%	46.7%	53.4%	52.1%	26.7%	32.8%	31.5%
	Decrease	0	2	2	3	8	11	8	23	31
		0.0%	3.4%	2.7%	20.0%	13.8%	15.1%	53.3%	39.7%	42.5%
	No change	6	20	26	5	19	24	3	16	19
		40.0%	34.5%	35.6%	33.3%	32.8%	32.9%	20.0%	27.6%	26.0%
	Total	**15**	**58**	**73**	**15**	**58**	**73**	**15**	**58**	**73**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
South	Will increase	1	13	14	1	13	14	1	13	14
		11.1%	40.6%	34.1%	11.1%	40.6%	34.1%	11.1%	40.6%	34.1%
	Decrease	2	8	10	2	8	10	2	8	10
		22.2%	25.0%	24.4%	22.2%	25.0%	24.4%	22.2%	25.0%	24.4%
	No change	6	11	17	6	11	17	6	11	17
		66.7%	34.4%	41.5%	66.7%	34.4%	41.5%	66.7%	34.4%	41.5%
	Total	**9**	**32**	**41**	**9**	**32**	**41**	**9**	**32**	**41**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Total	Will increase	13	61	74	10	54	64	7	38	45
		41.9%	54.5%	51.7%	32.3%	48.2%	44.8%	22.6%	33.9%	31.5%
	Decrease	2	10	12	6	16	22	11	32	43
		6.5%	8.9%	8.4%	19.4%	14.3%	15.4%	35.5%	28.6%	30.1%
	No change	16	41	57	15	42	57	13	42	55
		51.6%	36.6%	39.9%	48.4%	37.5%	39.9%	41.9%	37.5%	38.5%
	Total	**31**	**112**	**143**	**31**	**112**	**143**	**31**	**112**	**143**
		100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Annex 2: Additional Annex Figures

Annex Figure 2.1: Main food commodities being traded
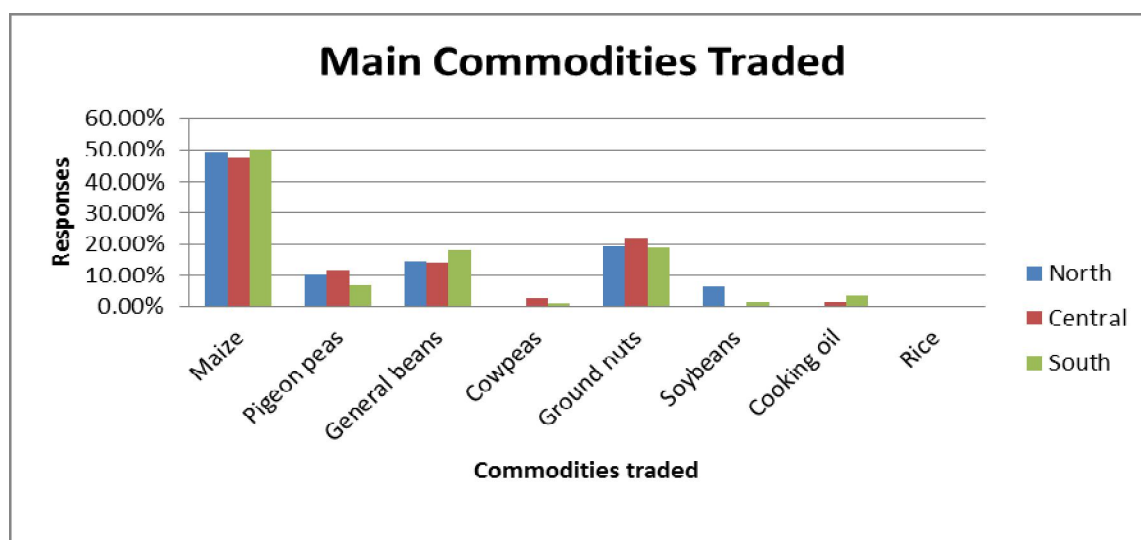
Annex Figure 2.2: Maize Projections for Additional Selected Markets for Southern Region such as Mangochi, Balaka, Chiradzulu and Luchenza
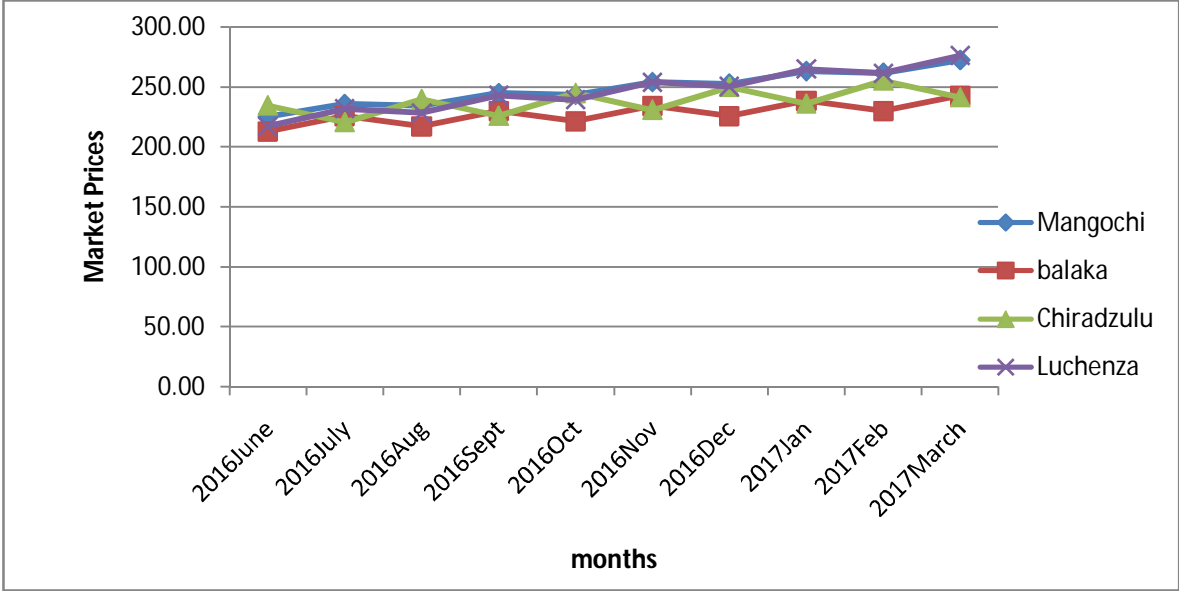
Annex 3:Data Collection Tool

Market Situation Analysis to Inform Food Security Response Options as part of the 2016/17 MVAC Response Programme

<mark>QUESTIONNAIRE FOR PRIVATE TRADERS</mark>

<mark>*My name is ----------------------------.I am here on behalf of*</mark> *the Malawi Government through the Malawi Vulnerability Assessment Committee (MVAC)<mark>which</mark> intends to conduct a nationwide food market situation assessment to examine the functionality food commodity markets in the country. The purpose of this market assessment is to understand how staple food markets will function in different districts during the 2016/17 consumption season, and identify Traditional Authorities (TAs) that are suitable for implementation of in-kind* **food assistance** *and those suitable for implementation of* **cash based transfers***. Your business enterprise is one of the many enterprises sampled to provide the needed information for the study at this market. For us to effectively collect the required information, we have a few questions which we shall ask you. All the information collected during the interview will be kept confidential, for the sole purpose of our client and your identity will not be disclosed to anyone. We hope you'll feel free to speak openly and honestly. Are you willing to participate in this study? Yes |___|, No. |___|, If No, do not proceed with interviews.*

A. PROFILE AND IDENTIFICATION

A1	ADD		A10	Date checked by Consultant	
A2	District		A11	Starting Time	
A3	Traditional Authority		A12	Ending Time	
A4	EPA		A13	Market Name	
A5	Section		A14	Do you have market days?	1= Yes; 0= No
A6	Research Assistant		A15	If yes, when are the market days	Monday |___|, Friday |___| Tuesday |___|, Saturday |___| Wednesday |___|, Sunday

				A16		
						|___| Thursday |___|
A7	Date of interview				Y-coordinate (latitude)	S: |___|___|, |___|___|___|___|___|
A8	Supervisor				X-coordinate (longitude)	E: |___|___|, |___|___|___|___|___|
A9	Date checked by Supervisor					

B. TRADER CHARACTERISTICS

Before, we start discussions on details of your business, I would want to find out the following information about you:

B1. Name of business owner_____

B2. Name of respondent _____

B3. Contact details of Business Owner (if possible)_____

B4. District of origin of owner _____

B5. Nationality of business owner_____

B6. When did you start the food commodity trade (year)? _____

B7. Distance from the original place, to the current business place (km):_____

B8. Distance from the homestead to the staple food business premise(s) in the past two years

Years	Name of the major staple food business place (where located)	Distance from homestead to the major staple food business place (km)
2016/17 (current)		
2015/16		

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C. DEMOGRAPHIC CHARACTERISTICS OF THE TRADER

C1	C2	C3	C4	C5
Gender 1=Male; 2=Female	Age (years)	Marital status	Years of education completed	Household size

Codes for C3: 1=never married, 2=married, 3=divorced, 4=widowed, 5=separated, 6=Other (specify)_____

D. GENERAL INFORMATION ON TRADER'S AGRI-BUSINESS& BUSINESS CONDITIONS

Years	D1 Type of business 1=Wholesaler 2= Retailer 3=Wholesaler and retailer	D2 Number of simultaneous outlets	D3 Main commodities traded in for the level (type) of business (*main commodities are those that constitute at least 20% of the business incomes*)		D4 Major Source of the staple food commodity business capitalization and amounts	
			Total No. of commodities being traded	Names of commodities **(See codes below[12])[multiple response]**	Major source of business capital **(See codes below)**	Amount (MK)
2016/17 (current)						
2015/16						

Codes for D3:1=Maize, 2= pigeon peas, 3= general beans, 4=cow peas, 5= Groundnuts, 6= Soybean, 7=cooking oil, 8=CSB (Corn Soya Blend); 9 = rice; 10= fish; 11= vegetables; 12= poultry (eg chicken); 13= small ruminants (eg goats, sheep); 14= Cattle /cattle meat

Codes for D4: 1=Profit from other business, 2=Farming (crop sales), 3=savings from salary/wage, 4=loan, 5=remittances, 6=Fishing, 7=sales of assets/goods, 8=sale of livestock, 9=Other (specify) _____

D5. Do you have a bank account for your business?   Yes|___| No|___|

---

[12] For the commodities that are not mentioned in D3, we do not expect to see them mentioned in responses to the subsequent questions below.

D6. If no bank account for business, why? 1= Not enough business money to keep in account; 2=I see no need; 3= Banks are very far; 4= Don't have an ID; 5= The account was closed; 6=other(specify).

D 7. Do you have a license/business permit to conduct trade?   Yes|___| No|___|

D.8 If No, why not?
1= It not necessary since not required; 2= Not aware of need to for the license; 3= Pays market fees which is enough; 4= I do not know where to obtain the license; 5= the office where to get licenses is far away from here, hence its costly; 6=other (specify)

D.9 What mobile phone provider is available here [tick only one of the below options]? 1= Airtel only; 2= TNM only, 3= Both; 4= None

D.10 What factors do you consider when opening up a business in a new place? **[multiple response- but please do not read responses to the respondent!!!]**

1=Demand and supply of the commodity, 2=Road infrastructure, 3=Security of the place, 4=Availability of competitors, 5=Amount of capital, 6=Storage facilities, 7=Local prices, 8=Others (specify)

E. PATTERN OF VOLUMES OF TRADED COMMODITIES IN KEY SELECTED MARKETS

Commodity	Numbers of traders in this market operating at the same activity level (amount and type of trading) as you do?	Volumes traded in per month (kg)/(litres)		In your opinion, based on the market trends, how are the volumes sold expected to change from July-September* 1=Will increase; 2=Decrease 3=No change	In your opinion, based on the market trends, how are the volumes sold expected to change from October-December 1=Will increase; 2=Decrease 3=No change	In your opinion, based on the market trends, how are the volumes sold expected to change from January-March 1=Will increase; 2=Decrease 3=No change
		Bought	Sold			
(a) 2016/17 (current)	Ea1	Ea2.1	Ea2.2	Ea3	Ea4	Ea5
Maize						
Pulses (Beans)						
Pulses (Cowpeas-*khobwe*)						
Pulses (Pigeon peas-*nandolo)*						
Vegetable oil						

2015/16	Eb1	Eb2		Eb3	Eb4	Eb5
Maize						
Pulses (Beans)						
Pulses (Cowpeas-*khobwe*)						
Pulses (Pigeon peas-*nandolo)*						
Vegetable oil						

*The responses for Ea3 to Ea5 should be based on a traders' perspective for a 3- months volumes averages

F. MARKET DYNAMICS IN FOOD COMMODITY MARKETING IN THE LOCAL MARKET PLACE IN THE CURRENT YEAR AND PAST YEAR

(a) Plans for the 2016/17 Agricultural Marketing Season

	Fa1	Fa2	Fa3	Fa4	Fa5	Fa6
Commodity	Current Stocks available (kg/litres)	Current selling Price (MK/kg)/(MK/liters)	Planned stocks to be sold in the 2016/17 year (kg)/(litres)	Expected average market selling price July – September, MK/kg)/(MK/litre)	Expected average market selling price Oct – Dec, (MK/kg)/(MK/litre)	Expected average market selling price Jan - March, (MK/kg)/(MK/litre)
Maize						
Pulses (Beans)						
Pulses (Cowpeas-*khobwe*)						
Pulses (Pigeon peas-*nandolo*)						
Vegetable oil						

(b1) Past Market Performance in different commodities

	Fb1	
	2015/16 (May 2015 - April 2016)	
Commodity	Total stock/ amount already sold in the year (kg)/ (litres)	Average selling price (MK/kg) (MK/litres)
Maize		

	Fb1
	2015/16 (May 2015 - April 2016)
Pulses (Beans)		
Pulses (Cowpeas-khobwe)		
Pulses (Pigeon peas-nandolo		
Vegetable oil		

b2. What factors do you consider when setting a commodity price? [Multiple response options- please do not read responses to the respondent!!!]

Codes for FC1: 1=Price in source markets, 2=Transportation costs, 3=Demand and supply of the commodity, 4=Storage costs, 5=Labour costs, 6=Competitor price, 7=ADMARC prices, 8=Govt set price, 9=Joint price setting, 10=Quantity of the commodity, 11=Others (Specify) _____

(c) Local Market and Institutional Environment for Food Commodities Trade

Food Commodity	Year	Fc1 Is there competition from other traders in the market?					Fc2 How do you support each other as traders? *(mumathandizanabwanji pa malondaanu)* (See codes below)
		1= Yes 2=No	No. of competitors				
			Wholesalers	Retailers	Both	Total	
Maize	2016/17						
	2015/16						
Pulses (Beans)	2016/17						
	2015/16						
Pulses (Cowpeas-*khobwe*)	2016/17						

Food Commodity	Year	Fc1						Fc2
		Is there competition from other traders in the market?						**How do you support each other as traders?** *(mumathandizanabwanji pa malondaanu)* **(See codes below)**
		1= Yes 2=No	No. of competitors					
			Wholesalers	Retailers	Both	Total		
	2015/16							
Pulses (Pigeon peas-*nandolo*)	2016/17							
	2015/16							
Vegetable oil	2016/17							
	2015/16							

Codes for Fc2(major support from other traders): *1= joint setting of selling prices; 2= assisting each other in transportation of produce; 3= storage security of the produce in the market place; 4=sharing customers, 5=borrowing money from each other, 6=Selling on each other's 'behalf, 7=None, 8=other (specify)_____*

(d) Private sector Interactions with Public Institutions

Food Commodity	Year	Fd1		Fd2			Fd3		
		Any support from Government?		**Ever bought commodity from ADMARC for resell?**			**Ever bought commodity from NFRA for resell?**		
		1=Yes 2=No	If yes, type of support **Codes for type of support:** 1=Market information, 2=Training, 3=Sanitation facilities, 4=Security, 5=Others (specify) [multiple response]	1=Yes;2 =No	Amount bought (kg)	Av.Price (MK/kg)	1=Yes; 2=No	Amount bought (kg)	Av.Price (MK/kg)

Food Commodity	Year	Fd1		Fd2			Fd3		
		Any support from Government?		Ever bought commodity from ADMARC for resell?			Ever bought commodity from NFRA for resell?		
		1=Yes 2=No	If yes, type of support **Codes for type of support:** 1=Market information, 2=Training, 3=Sanitation facilities, 4=Security, 5=Others (specify) [multiple response]	1=Yes;2 =No	Amount bought (kg)	Av.Price (MK/kg)	1=Yes; 2=No	Amount bought (kg)	Av.Price (MK/kg)
Maize	2016/17								
	2015/16								
Pulses (Beans)	2016/17								
	2015/16								
Pulses (Cowpeas-*khobwe*)	2016/17								
	2015/16								
Pulses (Pigeon peas-*nandolo*)	2016/17								
	2015/16								
Vegetable oil	2016/17								
	2015/16								

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(e) Private sector food commodity supplies to ADMARC and NFRA in the current market season (2016/17)

Commodity	Fe1					Fe2		
	Ever sold to ADMARC (current season)					Ever sold to NFRA (current season and in the past 2 years)?		
	1= Yes 2=No	If Yes, why	If No, why	If Yes, Amount sold (kg)	Av. selling price (MK/kg)	1= Yes 2=No	Amount sold (kg)	Av. selling price (MK/kg)
Maize								
Pulses (Beans)								
Pulses (Cowpeas-*khobwe*)								
Pulses (Pigeon peas-*nandolo*)								

Codes for Sales to ADMARC 1= ADMARC offers competitive buying prices: 2= its near; 3=nowhere to sell my commodity; 4= other specify.
Codes for No sales to ADMARC: 1= Not available here; 2= Not able to meet standards;; 3= corruption at ADMARC; 4= Its buying directly from farmers; 5 other specify

(Ff)Response Capacity and Constraints

Commodity	Ffa1	Ffa2	Ffa3	Ffa4	C
	In your opinion, would the sale price of the following commodities increase, decrease or remain the same if demand in this market increases? **See Codes Ffa1**	If demand would increase, will you be able to absorb the increased demand? **See Codes Ffa2**	How much could you increase the volume of your current trade (%)?	In case your demand increases by 50%, within what time frame would you deliver? **See CodesFfa4**	What do you see this year as the 3 biggest constraints to increase supply should demand increase?**See CodesFfa4**
Maize					
Pulses (Beans)					
Pulses (cowpeas-*khobwe*)					
Pulses (pigeon peas-*nandolo*)					
Vegetable oil					

Codes Ffa1: 1=Increase, 2=Decrease, 3=No change

CodesFfa2: 1=Yes, 2=No

Codes Ffa4: 1=within one week, 2=within two weeks, 3-within one month, 4=Longer than one month, 5=I can't promise, 6=don't know, 999=Not applicable

Codes Ffa4: 1=Lack of own capital, 2=Lack of credit, 3= High collateral, 4=High interest rate on credit, 5= High transport costs, 6=Lack of means of transport, 7=Poor road infrastructure, 8=High tax payment, 9=Too much food assistance, 10=Low demand, 11=Low supply, 12 Few people control the market, 13=Shortage of storage, 14=Others (specify)_____

(Fg) If there is an increase in demand from the affected population, how can you be supported to sustainably increase supply in the disaster affected areas?

1=more capital, 2=loan, 3=transportation means, 4=improved road infrastructure, 5=Remove/reduce tax, 6=storage facilities, 7=None, 8=Others (specify)_____

Fh: Business Loan/ Capital Constraints [*the previous rows for different commodities deleted- only remaining with one*]

Fh1	Fh2	Fh3	Fh4	Fh5	Fh6	Fh7
What is the total required Capital to operate an effective commodity business in the current marketing season (MK)?	Ever attempted to get a loan from the bank/ microfinance institution/ VSL/ friend in the past & current year for the commodity trading? 1= Yes, 2=No (**go to Fh7**)	From which source did you attempt to acquire the business loan? 1= bank, 2= micro finance, 3= VSL= 4= friends/ relatives, 5= other (specify)	If, Yes, amount of loan obtained?	If Yes, what was/ is the interest rate?	If yes, how long was/ is the payment period? (months)	If not able to get a loan for the business from the stated sources, what are the reasons? **See codes for Ffb7 below**

Codes for **Fh7**: 1= not able to meet collateral requirements; 2= requirement to be a cooperative/group; 3= have previous loans which are unpaid; 4= I fear loans; 5= high interests, 6=I do not need loans; 7 = other (specify)

(G)   FLOW OF COMMODITIES

Commodity	Year	**Gi1** How often do/did you have to restock commodities (when stocks run out)? **(Codes Gi1)**	**Gi2** How long does it take to refill/replenish the stock (days)	**Gi3** Volume of purchase in restocking trip (kg)
Maize	2016/17			
	2015/16			
Pulses (Beans)	2016/17			
	2015/16			
Pulses (Cowpeas-*khobwe*)	2016/17			
Pulses (Pigeon peas-*nandolo*)	2016/17			
	2015/16			
Vegetable oil	2016/17			
	2015/16			

Codes for Gi1: 1=daily, 2=once a week, 3=twice a week, 4=twice a month, 5=once a month, 6=other (specify)_____

(H) MARKET INTEGRATION

Commodity	From how many markets do you usually source the commodity for sale in this market?	Of these, what is the major source market (name of place/market)?	Price in the source market at the time of the study? (MK/kg) (MK/litre)	Price in markets (MK/kg) (MK/litre)	Has the source market been affected by any of the disasters? *(floods drought/dry spell, early cessation of rains)* **Codes for Hja4**	How has the demand of the source market been impacted by the disaster 1=Increased demand 2=Decreased demand 3=No change in demand 4=Don't know 999=Not applicable	Impacts on the levels of supply in the disaster affected areas: 1=Increased 2=Decreased 3=No change 4=Don't know 999=Not applicable
(a) current 2016/17		Hja1	Hja2	Hja3	Hja4	Hja5	Hja6
Maize							
Pulses (Beans)							
Pulses (Cowpeas-*khobwe*)							
Pulses (Pigeon peas-*nandolo*)							
Vegetable oil							
(b) 2015/16		Hjb1	Hjb2	Hjb3	Hjb4	Hjb5	Hjb6
Maize							
Pulses (Beans)							
Pulses (Cowpeas-*khobwe*)							
Pulses (Pigeon peas-*nandolo*)							
Vegetable oil							

Codes for Hja-c4: 1=Yes, 2=No

(I)   COMMODITY TRANSPORTATION

(a) For each of the commodities you are trading in, tell me more on transportation of the commodity for sale in the current season <mark>and past season</mark>:

Commodity	Location of the source market (as in Hja1& Hjb1) 1= within the market 2= within the district 3=outside the district (name)	Distance from the source to this market (km)	Type of transport used 1=vehicles 2 oxcart 3=bicycle 4=head 5=None **(Multiple response)**	Unit being transported *(e.g. 50 kg bag, dengu, 90 kg bag, litresetc)*	Transport Cost per unit being transported (**For the main transport means**) **(For the trader)**	Quantity transported per trip	Total costs per trip (MK)	Who sets the transport prices? 1=Transporter 2= me as buyer
(a) 2016-17current	**Ia2**	**Ia3**	**Ia8**	**Ia4**	**Ia5**	**Ia6**	**Ia7**	**Ia9**
Maize								
Pulses (Beans)								
Pulses (cowpeas-*khobwe)*								
Puses(Pigeon peas-*nandolo)*								
Vegetable oil								
For 2015-16	**FI2**	**Ib3**	**Ib8**	**Ib4**	**Ib5**	**Ib6**	**Ib7**	**Ib9**
Maize								
Pulses (Beans)								
Pulses (cowpeas-*khobwe)*								

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Commodity	Location of the source market (as in Hja1& Hjb1) 1= within the market 2= within the district 3=outside the district (name)	Distance from the source to this market (km)	Type of transport used 1=vehicles 2 oxcart 3=bicycle 4=head 5=None **(Multiple response)**	Unit being transported *(e.g. 50 kg bag, dengu, 90 kg bag, litresetc)*	Transport Cost per unit being transported (**For the main transport means**) (**For the trader**)	Quantity transported per trip	Total costs per trip (MK)	Who sets the transport prices? 1=Transporter 2= me as buyer
Puses(Pigeon peas-*nandolo)*								

(J) PHYSICAL ACCESSIBILITY TO SUPPLY/SOURCE AND DEMAND/DESTINATION MARKETS

Commodity/ Year	SUPPLY MARKET				DEMAND MARKET			
	Names of source markets [As stated above (Ia)]	Physical Accessibility (Condition of road) for the major source market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)		If the road is/will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop	Names of destination/ demand markets	Physical Accessibility (Condition of road) to the major demand market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)		If the road is/ will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop.
		Harvest period	Lean period			Lean period	Harvest period	
(a) 2016-17current	Ja1	Ja2	Ja3	Ja4	Ja5	Ja6	Ja7	Ja8
Maize	1.		▓					
Pulses (Beans)	1.		▓					
Pulses	1.		▓					

Commodity/ Year	SUPPLY MARKET				DEMAND MARKET			
	Names of source markets **[As stated above (Ia)]**	Physical Accessibility (Condition of road) for the major source market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)		If the road is/will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop	Names of destination/ demand markets	Physical Accessibility (Condition of road) to the major demand market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)		If the road is/ will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop.
		Harvest period	Lean period			Lean period	Harvest period	
(cowpeas-*khobwe)*								
Puses(Pigeon peas-*nandolo)*	1.							
Vegetable oil	1.							
For 2015-16	**Jb1**		**Jb4**		**Jb5**	**Jb6**	**Jb7**	**Jb8**
Maize	1.							
Pulses (Beans)	1.							
Pulses (cowpeas-*khobwe)*	1.							
Puses(Pigeon peas-*nandolo)*	1.							
Vegetable oil	1.							

Codes for Ja4 & Jb8: 1= nothing &business stops; 2 = sources from farmers within locality; 3= buys from friends; 4= have to look for alternative sources; 4= other specify . Codes for Jb8: 1=Nothing & not able to supply demand market; 2= sells only locally; 3= looks for alternative markets to sell; 4= other (specify)

K MODEL OF SELLING WHETHER BY CREDIT OR VOUCHER

K1. Do you sale on credit to some of your customers? 1=Yes, 2=No

K2. If yes, how much of total sales for last month was on credit (MK) _____

K3. If yes, in which period of the year is your total sales on credit the highest (mention months)? _____

1= January; 2= February, 3= March; 4= April; 5= May; 6= June; 7= July; 8= August; 9= September; 10= October, 11= November; 12= December

K4. Have you ever sold your commodities using cash vouchers? 1=Yes, 2=No

K5. If yes, which Year,? ………………………; and K6. How much of total sales was on cash vouchers? (MK) _____

K7. If no, would you accept to sell your commodities using cash vouchers? 1=Yes, 2=No

K8. If no, why?_____

L DEMAND OF AGRICULTURAL COMMODITIES ON THE MARKET: CHARACTERISTICS OF BUYERS

Commodity	Your major buyers/ customers (types of buyers) **(Codes La1)**	Where do they come from?	
		Location	Distance from here(km)
(a) For 2016-17(current situation)	**La1**	**La2**	
Maize	1.		
	2.		
	3.		
Legumes	1.		
	2.		
	3.		
Vegetable oil	1.		
	2.		
	3.		
(b) For 2015-16	**Lb1**	**Lb2**	
	Your major buyers/ customers (types of buyers)	Where do they come from?	
		Location	Distance from here (km)
Maize	1.		
	2.		
	3.		
Legumes	1.		
	2.		

Commodity	Your major buyers/ customers (types of buyers) (Codes La1)	Where do they come from?	
		Location	Distance from here(km)
	3.		
Vegetable oil	1.		
	2.		
	3.		

Codes for La1:1=Local people, 2=fellow traders/vendors, 3=Schools, 4=Restaurants, 5=Hospitals/clinics, 6=Others_____

M **TRADER'S COMMODITY STORAGE FACILITIES**

M1. Do you own a storage facility for the staple food commodities you trade in?
    1=Yes; 2=No
M2. If no, where do you keep/store your commodity?
    1=Rented storage facility, 2=dwelling house, 3=None**(Go to section N),** 4=others (specify)_____

M3. If Yes in M1, then, what commodities do you usually keep in thestorage facility?

	Na1	**Na2**	**Na3**		
Year	Main commodities stored in the facility owned by the trader	Total storage capacity (kg)	Have you been leasing/renting out your storage facility? If Yes, amount realized?		
			1=Yes 2=No	Amount realized (MK) in a year	Major client (s)
2016/17 (current)	1.				
	2.				
	3.				

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		4.				

(N) SEASONALITY OF STORAGE ACTIVITIES IN THE CURRENT SEASON AND OVER THE PAST YEAR:

	Ni1	**Ni2**		**Ni3**	**Ni4**
Season of the Year (e.g. harvest or lean season)	Amount of stock stored in the season (kg)	Average commodity prices at time of:		Major seasonal buyers at the time of stock release **(Codes Ni3)**	For these seasonal buyers, distance to the major destination of released stock (km)
		Stocking (MK/kg)	Release (MK/kg)		
(i) **Maize**					
2016-17 (current available stock)					
2015-16 harvest (April-July)					
2015-16 lean (October-February)					
(ii) Pulses (beans)	**Nbil1**	**Nbil2**		**Nil3**	**Nil4**
		Stocking (MK/kg)	Release (MK/kg)		
2016-17 (current available stock)					
2015-16 harvest (April-July)					
2015-16 lean (October-February)					
(iii) Vegetable oil	**Niii1**	**Niii2**		**Niii3**	**Niii4**
		Stocking (MK/litre	Release (MK/litre)		
2016-17 (current available stock)					

2015-16 harvest (April-July)					
2015-16 lean (October-February)					

Codes for Ni-iii3:1=Local people, 2=fellow traders/vendors, 3=Schools, 4=Restaurants, 5=Hospitals/clinics, 6=Others_____

M. Any other information you may wish to provide/ or comments to make on agricultural market issues?

_____
_____
_____
_____

Thank you very much for participating in the study by providing useful market information!!!

Annex 4: Terms of Reference for the Study

TORs for Market Situation Analysis to Inform Food Security Response Options as part of the 2016 MVAC Response Programme

DRAFT

April 2016

1. Background

Malawi continues to face numerous challenges that are negatively affecting the general food and livelihood security status amongst the poor and vulnerable households in the country. Extreme weather patterns, from floods to prolonged dry spells have been affecting crop harvests for the past decade or so. Currently El Niño weather condition have resulted in prolonged dry spells in most parts of the south and centre and some flooding in the north.

The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) results of the first round Agriculture Production Estimate Survey (APES) released in February 2016 show that the national maize production is projected at 2,719,425 metric tons, which is 2% lower than the 2014/15 final round estimate which had 7% deficit compared to the 3 million metric tons national requirement.

Furthermore, the prevailing economic conditions characterized by high food inflation and high fuel and transportation costs have resulted in surges in food and general commodity prices. This has resulted in increased livelihood vulnerability and food insecurity amongst the general population.

The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) second round Agricultural Production Estimates Survey (APES) results show that the country will produce a total2,431,313 metric tons (MT), representing 12.4 percent decline in production as compared to the 2014/2015 final round estimate of 2,776,277 MT. The country's maize requirement for human consumption, seed, stock feed, and industrial use is currently estimated at 3,205,135 MT as such it is projected that the country will face a maize deficit of about 1,072,461MT.

The Malawi Vulnerability Assessment Committee (MVAC) in early March 2016 conducted the Seasonal Crop Outlook Assessment from which preliminary findings highlighted the late onset of planting rains by 3-4 weeks for the southern region; 2-3 weeks for central region and on time for northern region, with

very low amount of rainfall received in the southern region from the start of the season up to February, on average equal to one third of the last year's rains for the same period. The country has received at least three episodes of prolonged dry spells each lasting 4-7 weeks for southern region districts, 3-4 weeks for central region and about 2 weeks for the northern region districts. The District Agriculture Development Offices (DADOs) reported severe crop failure in some Sections of the EPAs across all districts in the southern region, moderate to severe crop failures in some central region areas and low prospects of irrigation in the southern and central region districts due to low residual moisture in Dambos and almost dry rivers. For instance, some rice irrigation schemes in the southern region had been abandoned due to lack of water e.g. in Zomba, 4 out of 5 had not planted rice and seedlings had overgrown at the nursery. The DADO offices indicated maize production reduction ranging from 40% - 80% for the southern region districts, up to 30% reduction for central region districts and on average similar or slight increases for northern region districts compared to the previous year. Similarly, crop failures were observed for other food and cash crops in the southern region a situation which is likely to increase the number of food insecure people requiring assistance in the coming consumption season (April 2016 to March 2017).

MVAC plans to conduct its annual food security assessment in the country starting from the last week of April 2016 to determine the affected areas and required needs. The assessment will come up with actual numbers of affected people, their locations and time when assistance is required. However, there is need to determine modalities of transfer regarding in-kind food assistance or market based intervention.

The MVAC, thus, seeks to undertake a market assessment, which is expected to bring out an understanding on how markets will behave during the recommended assistance period in the affected areas. This market assessment will assist in identifying areas that will be most suitable for the adoption of a market based response[13]or in-kind food based during the intervention period. Considering the tight schedule of MVAC activities to carry out HEA food security assessment and to also validate baselines for livelihood zones, MVAC seeks to engage services of a consultant as an individual or a firm to carry out the market assessment. The consultant will report to and be supervised by MVAC Secretariat.

2. Objectives and Key questions of the Market Assessment

The objective of this market assessment is to bring out an understanding of how markets will function in 27 districts in the country during the 2016/17 consumption season. The assessment will identify Traditional Authorities (TAs) that are suitable to Cash Based Transfers and those that are suitable to in-kind transfers. This is expected to help inform appropriate decisions of the Humanitarian Response Committee, Humanitarian Agencies and donors on whether (and where) to implement market based interventions or food assistance based interventions to help the people who are at risk of missing food entitlements due the effects of the long dry spells, early cessation of rains and floods.

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[13]Market based responses include an array of response mechanisms which can include direct cash transfers, vouchers (cash or commodity vouchers), support to market players such as traders for them to supply key products to remote areas, cash for work etc.

The assessment will focus on large, medium and small capacity traders (wholesalers and retailers) of maize grain, pulses and cooking oil, herein referred to as 'food commodities'. The assessment will also discuss with market actors at national level. Specific objectives include the following:

- To determine the physical accessibility to markets affected floods;
- To determine the stocks of the staple cereals, pulses and cooking oil available at markets and current market prices in the major markets serving each affected TA;
- To understand challenges faced by traders and other market players to supply key food commodities to markets in the affected areas;
- To assess how the traders will ensure the supply generated by CBT interventionsin the affected districts.
- To determine the preferred mode of assistance, whether CBT or in-kind food assistance amongst the affected populations;
- To determine any potential inflationary risks associated with increased local demand arising from the use of market based interventions as well as understanding the reasons and drivers for inflationary pressures.
- To assess the appropriateness of market based and in-kind food assistance in the affected areas and recommend the appropriate response option for each affected TA (Market based or food);
- To determine the level of competition and price setting behaviours of market participants
- To determine the physical and economic factors that may affect the smooth movement of food commodities along the supply chain for the reference period. These could include currency exchange regime, inflation, transport costs, road/rail conditions etc.

3. Methodology for the Market Assessment

- The MVAC Secretariat will coordinate the market assessment with support from a task force through the engagement services of a consultant.

- Desk review of key information regarding market profiles, market functionality, food assistance and market based interventions by the consultant.

- Review of previous market based and food interventions implemented by different stakeholders in the country will be undertaken and lessons learnt considered.

- Appropriate check lists will be developed to interview different key actors that contribute to market functionality. Interviews with key informants such as traders of food commodities (wholesalers, retailers and growers selling their own produce) buyers of the food commodities from the affected areas, Grain Trader Association; District Agriculture Development Officers, transport operators ferrying food commodities among others at the markets in the affected areas. Interviews will also be conducted in selected key source markets. In addition, geographic positioning of markets will be captured using GPS units.

- The assessment will be conducted in 27 mainland districts in the country. In each district, key markets serving populations expected Traditional Authorities (TA) will selected. The unit of analysis will be the Traditional Authority (TA). Thus the sampling methodology falls in the broad category of non-probability sampling. The study team will be instructed to check with local sources which markets are most used by the affected population of each affected district, recognising that the most important market for the population may not be the local market but a market farther away. One key market per TA will be sampled however if there are numerous key markets that operative in a given TA, at most two key markets will be sampled.

4. **Roles and responsibilities of different players in the assessment**

   a) **MVAC Secretariat**
      - Providing overall coordination of the assessment.
      - Facilitating dissemination of the assessment report to the Humanitarian Response Committee and Other stakeholders.

   b) **Consultant**
      The consultant will be responsible for the development of the tools, data collection, and analysis and reporting. Specifically the consultant will perform the following tasks:
      - Conducting a desk review
      - Preparing market assessment tools;
      - Presenting the tools to the task force members;
      - Field data collection;
      - Data analysis and presentation of key findings in tabular form and recommendations.
      - Report writing to recommend the TAs that should implement food assistance or market based interventions;
      - Disseminate results of the assessment to the MVAC and the Humanitarian Response Committee.

   c) **Task Force**
      The main role of the Task Force is to provide technical support to the consultant in the delivery of market assessment. The key task force members will include DoDMA, Min of Finance (EPD), Min of Agriculture, WFP, OXFAM and Christian Aid. Specifically, they will perform the following tasks:
      - Briefing the consultant on the methodology and tools
      - Reviewing the assessment tool developed by the consultant
      - Reviewing the preliminary findings and recommendations
      - Providing guidance on some key issues to be included in the assessment

5. **Areas of focus**
   1. *The data collection in the market surveys will be focussed on the following category areas of data:*
   - Supplies of key food commodities available in the market with the focus on commodities that are in the food ration for humanitarian assistance such as maize grain, pulses, vegetable oil and corn soya blend
   - Number of different types of traders in the local market

- Volumes of the specific food commodities traded in the market
- Price and quality of goods available; as well as price projections;
- Sources of the food whether within the area/district or from other neighbouring or distant districts;
- How well integrated the local markets are to main supply markets and the potential capacity of the source markets to adequately supply the increased demand in the local markets
- Ability and willingness of traders to respond to increased demand;
- Capacity of traders to expand supply to meet the increase in demand created by large scale CTPs.
- Potential impact of local purchases of food on the market
- Potential barriers for transporting commodities to the affected areas
- Potential impact of direct food aid from potential food aid projects on the local markets / local traders

2. Secondary information requirements
- Regional staple cereal supply outlook
- Maize and pulse price data from Ministry of Agriculture for the past five to ten years
- Market flow map for normal year
- MVAC HEA, Nutrition reports for the past 3 years
- CPI, GDP, Exchange rate data for the past 5 years
- ADMARC purchase and Selling prices for the current year and past five years
- ADMARC plans for the remainder of the consumption year
- Informal and import data from FEWSNET/ACTESA since 2009
- Government import and export restrictions on food commodities-taxes, bans, quotas and licensing requirements. (including regional export and import restrictions)

6. Expected Outputs
a) Presentation of an inception report
b) Data collection tools developed
c) Data collected and processed;
d) Presentation of the preliminary findings and recommendations to MVAC task force
e) Presentation of the findings and recommendations to MVAC members
f) Presentation of the assessment findings to the Humanitarian Response Committee;
g) Final report produced and shared with all relevant stakeholders and handing over the raw data to MVAC secretariat.

7. Time Schedules
Table 1: Time frame for activities
- Tools development: 3rd- 6th May
- Training: 9th-11th May
- Data collection: 12th- 31th May
- Data Entry, Analysis and internal dissemination: 1st June to 7th June
- Report writing: 1st – 8th June
- External dissemination: 10th June
- Final Report: 15th June

Annex 5: The 2016/17 MVAC Response Summary Recommendations

District	TA	Affected population	Recommended intervention	Need for prepositioning?	Possibility of switch from cash to in-kind during the year?	
NORTHEN REGION						
Rumphi	Mwahenga	4,176	In-kind food assistance	Yes		
	Chikulamayembe	21,056	In-kind food assistance	Yes		
	Mwankhunikira	6,986	In-kind food assistance			
Mzimba	Chindi	32,286	In-kind food assistance			
	Mpherembe	10,844	Cash based transfer		Yes	
	M'mbelwa	28,880	In-kind food assistance			
	Mzikubola	16,790	In-kind food assistance			
	Khosolo	9,210	In-kind food assistance	Yes		
	Mwabulabo	15,584	In-kind food assistance			
Total in-kind Food (North)		**134,968**	**% age North in-kind food assistance**			**92.6%**
Total Cash (North)		**10,844**	**% age North Cash based transfer**			**7.4%**
Total North Population		**145,812**				
CENTRAL REGION						
Kasungu	Kaomba	39,771	Cash based transfer		Yes	
	Simulemba	28,840	In-kind food assistance			
	Mnyanja	30,232	Cash based transfer			
	Mdunga (Kaperula)	22,652	Cash based transfer			
	Chinyama	17,500	Cash based transfer			
	Chitanthamapira	28,393	Cash based transfer			
	Kaluluma	20,090	In-kind food assistance			
	Chisemphere	10,100	Cash based transfer			
	Wimbe	35,000	Cash based transfer			
Dowa	Chakhaza	47,742	In-kind food			

			assistance			
	Kayembe	41,168	Cash based transfer			
	Dzoole	50,603	Cash based transfer			
	Mkukula	16,010	Cash based transfer			
	Chiwere	73,187	Cash based transfer			
Ntchisi	Nthondo	16,536	Cash based transfer			
	Malenga	4,134	Cash based transfer			
	Vuso jere	16,536	Cash based transfer			
	Kasakula	8,268	Cash based transfer			
	Chikho	37,206	Cash based transfer			
Lilongwe	Kalolo	29,934	Cash based transfer			
	Mazengera	23,524	In-kind food assistance			
	Tsabango	14,967	In-kind food assistance			
	Chimutu	20,526	In-kind food assistance	Yes		
	Mbang'ombe	12,829	In-kind food assistance			
	Chitukula	14,967	In-kind food assistance			
	Kabudula	36,348	In-kind food assistance	Yes		
	Malili	34,210	In-kind food assistance			
	Kalumbu	34,210	In-kind food assistance			
	Mtema	20,094	In-kind food assistance	Yes		
	Njewa	47,039	Cash based transfer			
	Masula	25,658	Cash based transfer			
	Chiseka	59,868	Cash based transfer			
	Khongoni	29,934	Cash based transfer			
	Chadza	23,519	Cash based transfer			
Mchinji	Nyoka	20,465	Cash based transfer			
	Mduwa	28,992	Cash based transfer		Yes	
	Kapondo	30,697	Cash based transfer		Yes	
	Dambe	59,689	Cash based transfer		Yes	
	Simphasi	21,554	Cash based transfer		Yes	
	Zulu	9,143	Cash based transfer			
Nkhotakota	Malengachanzi	15,347	In-kind food assistance			
	Mwansambo	12,558	In-kind food assistance			
	Kanyenda	17,440	In-kind food			

			assistance			
	Mwadzama	12,789	In-kind food assistance	Yes		
Salima	Kalonga	51,947	In-kind food assistance			
	Kambwili	38,961	In-kind food assistance			
	Pemba	57,142	In-kind food assistance			
	Ndindi	64,934	In-kind food assistance			
	Kambalame	46,753	In-kind food assistance			
Dedza	Kachindamoto	94,208	In-kind food assistance			
	Tambala	63,552	Cash based transfer			
	Kaphuka	65,920	Cash based transfer			
Ntcheu	Mphambala	72,828	In-kind food assistance			
	Makwangwala	84,168	In-kind food assistance			
	Tsikulamowa	47,339	In-kind food assistance			
	Ganya	69,176	In-kind food assistance			
	Masasa	42,078	In-kind food assistance			
Total in-kind Food (Central)		**1,036,015**	**% age Central in kind Food assistance**			51.8%
Total Cash (Central)		**963,260**	**% Central Cash based transfer**			48.2%
Total Central Population		**1,999,275**				
SOUTHERN REGION						
Blantyre	Kuntaja	68,422	In-kind food assistance			
	Kunthembwe	32,346	In-kind food assistance			
	Lundu	24,593	In-kind food assistance			
	Chigaru	38,156	In-kind food assistance			
	Machinjiri	30,357	Cash based transfer			
	Kapeni	80,190	In-kind food assistance			
	Nsomba	36,979	In-kind food assistance			

	Makata	15,317	Cash based transfer			
Chikwawa	Maseya	26,945	Cash based transfer		Yes	
	Mlilima	18,962	In-kind food assistance			
	Kasisi	35,428	Cash based transfer			
	Katunga	24,951	In-kind food assistance			
	Makhuwira	77,343	In-kind food assistance			
	Mgabu	130,235	In-kind food assistance			
	Chapananga	89,816	In-kind food assistance	Yes		
	STA Ndakwela	12,475	Cash based transfer		Yes	
	STA Masache	13,972	In-kind food assistance			
	STA Ngowe	15,469	In-kind food assistance			
	Lundu	53,392	Cash based transfer			
Mulanje	Njema	6,531	Cash based transfer			
	Mabuka	87,016	In-kind food assistance			
	Chikumbu	71,744	In-kind food assistance			
	Nthilamanja	36,355	In-kind food assistance			
	Nkanda	71,759	Cash based transfer			
	Juma	80,899	In-kind food assistance			
Mwanza	Kanduku	18,120	Cash based transfer		Yes	
	Nthache	14,643	In-kind food assistance	Yes		
	STA Govat	6,893	In-kind food assistance			
Neno	Chekucheku	4,552	In-kind food assistance			
	Mulauri	27,315	In-kind food assistance			
	Dambe	6,350	Cash based transfer			
	Saimon	42,092	In-kind food assistance			
Nsanje	Mlolo	55,263	In-kind food assistance	Yes		
	Chimombo	10,155	In-kind food assistance			
	Ndamera	25,344	In-kind food	Yes		

			assistance		
	Tengani	37,817	In-kind food assistance		
	Mbenje	41,787	In-kind food assistance		
	Malemia	42,135	In-kind food assistance		
	Nyachikadza	3,667	In-kind food assistance		
	Makoko	7,190	In-kind food assistance		
	Mgabu	12,670	Cash based transfer		
Thyolo	Nanseta	13,170	Cash based transfer		
	Chimaliro	34,103	Cash based transfer		
	Ngolongoliwa	11,794	In-kind food assistance		
	Bvumbwe	64,517	Cash based transfer		
	Mphuka	40,688	In-kind food assistance		
	Changata	27,927	In-kind food assistance	Yes	
	Thukuta	15,311	In-kind food assistance	Yes	
	Nsabwe	35,337	In-kind food assistance	Yes	
	Khwethemure	38,007	In-kind food assistance		
	Mbawera	38,274	In-kind food assistance		
	Boidi	4,185	In-kind food assistance		
	Mchiramwera	32,879	In-kind food assistance		
	Kapichi	48,162	In-kind food assistance		
Balaka	Nsamala	199,003	In kind food assistance		
	Kalembo	134,940	In kind food assistance	Yes	
Phalombe	Nkhulambe	16,871	In kind food assistance		
	Chiwalo	33,430	In kind food assistance	Yes	
	Jenala	63,939	In kind food assistance	Yes	
	Mnkhumba	70,882	In kind food assistance		
	Kaduya	38,859	In kind food		

			assistance			
	Nazombe	20,316	In kind food assistance			
Chiradzulu	Nchema	23,158	In kind food assistance			
	Likoswe	32,384	In kind food assistance			
	Nkalo	22,356	In kind food assistance			
	Sandalaki	21,546	In kind food assistance			
	Onga	24,178	In kind food assistance			
	Mpunga	24,177	In kind food assistance			
	Kadewere	34,047	In kind food assistance			
	Maoni	19,856	In kind food assistance			
	Chitera	15,334	In kind food assistance			
	Mpama	24,178	In kind food assistance			
Machinga	Nsanama	40,019	In kind food assistance			
	SC Mlomba	62,672	In kind food assistance			
	Kawinga	40,348	In kind food assistance			
	SC Chiwalo	1,456	In kind food assistance			
	Nyambi	5,098	In kind food assistance			
	Ngokwe	18,908	In kind food assistance			
	Liwonde	47,955	In kind food assistance			
	Mchinguza	12,732	In kind food assistance			
	Nkoola	47,617	In kind food assistance			
	Mposa	43,621	In kind food assistance			
	Chamba	25,536	In kind food assistance			
	SC Chikweo	60,773	In kind food assistance			
	Nkula	23,421	Cash based transfer			

	Sitola	26,069	Cash based transfer			
Zomba	Malemia	38,221	Cash based transfer			
	Mlumbe	86,526	In-kind food assistance			
	Kuntumanji	34,351	In-kind food assistance			
	Chikowi	56,339	In-kind food assistance			
	Mwambo	30,755	In-kind food assistance			
	SC Mbiza	56,668	In-kind food assistance			
	Ntholowa	31,530	In-kind food assistance			
	Nkapita	51,579	In-kind food assistance			
	Ngwelero	44,198	In-kind food assistance			
	SC Mkumbira	8,923	In-kind food assistance			
	Nkagula	34,407	In-kind food assistance			
Mangochi	Katuli	60,804	Cash based transfer		Yes	
	Chowe	118,383	In-kind food assistance			
	Chimwala	23,337	In-kind food assistance			
	Mponda	120,333	Cash based transfer			
	Makanjira	84,477	Cash based transfer		Yes	
	Namabvi	30,923	In kind food assistance			
	Jalasi	45,388	In kind food assistance			
	Bwana Nyambi	48,322	In kind food assistance			
	Nankumba	125,618	In kind food assistance			
Total in-kind Food South		**3,592,301**	**% age South in-kind food assistance**			**82.6%**
Total cash South)		**754,459**	**% age South Cash based transfer**			**17.4%**
Total South Population		**4,346,760**				

National Summary Statistics

Region	Cash based Transfer		In- kind Food assistance		Total population
	Population	% (Row total)	Population	% Row total)	
North	10,844	7.4	134,968	92.6	145,812
Centre	963,260	48.2	1,036,015	51.8	1,999,275
South	754,459	17.4	3,592,301	82.6	4,346,760
Total	**1,728,563**	**26.6**	**4,763,284**	**73.4**	**6,491,847**
In-kind assistance caseload that need prepositioning	**Caseload**	**as a %age of in-kind caseload**	**as a %age of Total National caseload**		
	620,149	**13.02**	**9.55**		
CBT caseload that could shift to in-kind food assistance		**as a % age of CBT caseload**	**as a% age of Total National caseload**		
	394,368	**22.81**	**6.07**		

National Summary Statistics by TA

Region	Cash Based Transfer		In-kind Food Assistance		Total
	No of TAs	Row %age	No of TAs	Row %age	
North	1	11.1	8	88.9	9
Centre	30	52.6	27	47.4	57
South	20	18.9	86	81.1	106
TOTAL	**51**	**29.7**	**121**	**70.3**	**172**