ASSESMENT OF WAREHOUSE RECEIPT SYSTEM ROLES IN IMPROVING SMALL HOLDER FARMERS INCOME: A CASE STUDY OF CASHEW NUT FARMERS IN MTWARA REGION

EDITH OCTAVIAN NGONDO

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF THE OPEN UNIVERSITY OF TANZANIA

2014

CERTIFICATION

I, the undersigned certify that I have read and hereby recommends for acceptance by the Open University of Tanzania this dissertation titled: ***"Assessment of Warehouse Receipt System Role in Improving Small Holder Farmers Income***; ***A Case of Cashew Nuts Farmers in Mtwara Region",*** in partial fulfilment of the requirements for the degree of Master of Business Administration of the Open University of Tanzania.

.....

Dr. Haule C.B.M

(Supervisor)

…….

Date

COPYRIGHT

DECLARATION

I, Edith Octavian Ngondo, do hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

…….

Signature

……

Date

DEDICATION

This work is dedicated to my beloved mother Rose John who laid the foundation of my education, my lovely husband Mr Emmanuel Mbapila who supported my idea of studying a masters degree, my daughter and son Evelyn and Gerald, respectively for their tolerance during my absence, my brothers Crisantus and Moses for their material and moral support and above all to my Lord.

ACKNOWLEDGEMENTS

A number of individuals and institutions provided me with invaluable support, encouragement and constructive criticisms during the period of preparing this dissertation. First, I thank my family who gave me all the support I needed. Second, I sincerely thank Dr. Cosmas Haule for his constructive advice and support which made this work a reality. Without his guidance this dissertation could not have taken the present form.

Third, I thank staff members of the Faculty of Business Management of the Open University of Tanzania who taught me during the MBA programme. Special thanks should go to Dr. Protus Ngatuni and Dr. Chacha Matoka for their guidance in writing this dissertation. I also wish to thank my MBA colleagues, particularly Mrs. Magreth Mndolwa, Mr. Hendry Shimo for their company and cooperation I enjoyed in the course of my studies and particularly during writing of this dissertation.

I would also wish particularly to express my special thanks to Dr. Jerome Chilumba, OUT, Director of Mtwara regional centre for his moral and material support.

ABSTRACT

Although agriculture is the main source of income for the majority of Tanzanian's the sector is not well developed, especially on agricultural marketing. The major objective of this study was to assess the Role of Warehouse Receipt System (WRS) in improving the small holder farmer's income (case study cashew nuts farmers in Mtwara Region) More specifically, the study intended to analyze the relationship between production, price, storage and cashew nuts farmers income increase at Mtwara region to analyze the relationship between policy made for Warehouse Receipt System at Mtwara region. The survey covered the cashew nuts farmers in MAMCU (Mtwara and Masasi Cooperative Union) and TANECU (Tandahimba and Newala Cooperative Union) various primary societies Mtwara District, Mtwara Rural, Nanyumbu, Masasi, Newala and Tandahimba. (Michiga, Chiungutwa, Lengo, Naliendele, Mtawanya and Nanguruwe) who make production of cashew nuts at Mtwara region were used, coaster and mini buses. The major finding from the study is that the price increase or set by in Warehouse Receipt System is the cause of the improving of smallholder farmers income thus is beneficial to farmers to adopt a better life. Among other factors, perceived general WRS operation is the influential factor in determining customer's satisfaction in WRS. The study findings indicated that there was a positive and significant relationship between perceived WRS service provided and customer's satisfaction in Warehouse Receipt System operation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

ADMARC Agricultural Development and Marketing Corporation

ATM	Automated Teillaring Machine
CFC	Common Fund Commodities
CP	Certificate of pledge
CRDB	Cooperative for Rural Development Bank
CT	Certificate of Title
EAGC	East African Grain Council
EAGC:	East African Grain Collaboration
ESA:	East Southern African
eWRS	electronic Warehouse Receipt System
FAO	Food &Agricultural Organization
MIS:	Market Information System
MKUKUTA	Mpangowa Kukuzana Kuinua Uchumi Tanzania
NGO	Non-Government Organization
P4P	Purchase for Progress Programme
SACCOS	Saving and Credit Cooperation
SPSS	Software Package for Statistical Science
TSHS	Tanzania Shillings
WFP	World Fund Program
WRS	Warehouse Receipt System

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

The lack of markets and access to credit is a severe constraint for many farmers in many developing countries. Warehouse receipts system is an important and effective tool for creating liquidity and easing access to credit as well as the market answer to the farmers. Such schemes also offer additional benefits such as smoothing the supply and prices in the market, improving grower incomes, and reducing food losses. This research describes the role of warehouse receipt system in improving smallholder farmers' income which sets out the essential questions, and challenges to be asked regarding the critical conditions for its success and illustrates the ways of running such a system.

In many developing countries, past government interventions in commodity markets have reduced the economic returns to private storage or removed the need for private credit. But with the opening of markets and the liberalization of trade, such instruments as warehouse receipts are becoming important in the transition to markets, serving to reduce uncertainty and enhance efficiency. For warehouse receipt systems to work well, government and industry must build a legal and institutional framework to guarantee performance and minimize transaction costs.

WRS in Africa was developed and emerged as an important means of improving the performance of agricultural marketing system in Africa following trade liberation in the 1980s. The counties which joined with this system are Kenya, Uganda, Ghana,

Bukina Faso, Zambia, Malawi, South Africa and Rwanda. These countries have strengthened its delivery system and boost trade on the exchange floor.

Financial fragility in rural Africa can in part be attributed to production and marketing problems in agriculture. The development of warehouse receipt systems (WRS) emerged as an important means of improving the performance of agricultural marketing systems in Africa following liberalization in the 1980s (Gideon, 2010). Progress in promoting WRS and related market institutions in Africa has generally been slow or limited but interest remains high in Eastern and Southern Africa as well as elsewhere in Africa. For example, Uganda is expanding its WRS, especially for grains, to ensure increased trading activities by its commodity exchange.

The Government of Kenya has in its 2010/11 budget statement committed itself to supporting the development of WRS and other related exchange infrastructure, building on a pilot initiated by the Eastern Africa Grain Council (EAGC) (Onumah, 2010) The objective is to develop institutional infrastructure that will improve management of household food security as well as ease access to regional markets for Kenyan stakeholders. The Government of Rwanda is similarly collaborating with the EAGC to promote WRS as a means of ensuring more efficient trade in staple grains. Elsewhere in West Africa, the Abuja Securities and Commodity Exchange is seeking Federal Government support to develop a WRS which will strengthen its delivery system and boost trade on the exchange floor (Onumah, 2010). Similar initiatives are being pursued in Ghana and Burkina Faso. In Zambia, stakeholders are advocating warehouse legislation in order to build confidence in the receipt system,

while investing in rural aggregation infrastructure to expand scope for smallholder access to the receipt system.

Since Independence, Tanzania Cashew nuts Sector has experienced distinct periods with varying production performance in other developing countries in and outside Africa. Since 1960s cashew nut production has been fluctuating (Towo and Kimaro, 2013) Total production declined significantly from smallholder's farmers in some of the poor regions producing cashew in Tanzania. The cashew nuts sector in Tanzania has a history of production swinging rapid growth in 1970 and rapidly declined in 1990 and became stagnant in 2000's. This caused the decline of per capital in cashew nut sector for 70% in 1960**.** This decline cause Tanzania production loss in Global competitiveness as new countries entered the market.

It is concerned that production of cashew nuts in Tanzania mostly done by small holder farmers in the regions such as Mtwara, Lindi, Ruvuma and Costal Region. Since then, smallholder farmers have been working closely with cashew nut stakeholders such as Cashew nut board, primary societies, government, financial institutions and warehouse operators (Lyimo, 2009). They have been benefited in getting subsidies, small loans, agricultural training and many others. Apart from that small holder farmer's income has increased due to the increase in price which is attributed by the increase in production. The main stakeholders who are close to farmers are warehouse operators. They buy cashew nut directly from farmers and issue them certificates. Warehouse operators have achieved to play their roles and their contributions to improve the welfare of farmers have been noted.

According to MKUKUTA and National Development Vision of 2025 (URT, 2008 Tanzania intends to strengthen its warehouse regulatory regime in order to ensure that receipting can be mainstreamed for staple grains as has been achieved for export crops such as coffee, cotton and cashew. This is seen as essential in ensuring the viability of a commodity exchange which public and private sector players intend to establish.

1.2 Statement of the Problem

Despite the realized significances of warehouse receipt system in improving farmer's welfare, the system has been facing challenges in its operations of selling cashew nut abroad (exporting) and buying from small holder farmers. Warehouse receipt system hasn't achieved its objectives as expected during its establishment. This has also affected the development of farmers' income. No study has so far done to exactly assess the warehouse receipt system roles in improving smallholder farmers income and explore the challenges it faces in implementing its activities. Thus, the study wishes to assess WRS role in improving farmer's income and examine the challenges facing the implementation of WRS in Tanzania.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study was to assess WRS role in improving smallholder farmer's income in Tanzania.

1.3.2 Specific Research Objectives

The study was specifically intended to:

(i) Determine the benefits of warehouse receipt system (WRS) in improving small holder farmer's income in Tanzania

(ii) Examine the main challenges facing WRS in improving small holder farmers income in Tanzania

(iii) Find out the measures that should be taken to improve the operations of WRS in Tanzania

1.4 Research Questions

(i) What are the roles of warehouse receipt system (WRS) in improving small holder farmer's income in Tanzania?

(ii) What are the main challenges facing warehouse receipt system (WRS) in improving small holder farmer's in Tanzania?

(iii) What are the measures that should be taken to improve the operations of WRS in Tanzania?

1.5 Statement of Hypothesis

H1: There is the relationship between small holder farmers per capital income and warehouse receipt system (WRS) in Tanzania.

1.6 Significance of the Study

Now days to win the markets and get more earnings for both the Governments and the farmers need to mobilize all internal energies of their firms in order to cope with the increasing competition and changing of business environment (Kotler, 2001). This study will help Warehouses receipt system to develop new insights in their operations and marketing strategies to offer good operating service to their customers

so as to retain and maintain them. They will be challenged to understand farmers' expectations and their level of satisfaction on warehouse receipt system service or operation. This will be a wake-up call in improving and maintaining quality operation of the system.

The study will also help the Government and policy makers to have an opportunity of formulating policies and standards of regulating the operations of Warehouse receipt system to various levels of the farmers in our country. Moreover, the Nation will use the recommendations of the study to make improvements and maintenance of provision of more registered warehouses for the purpose of increasing efficiency and effectiveness of the system.

The study also provides transparency about Warehouse Receipt System Operations hence widening up the horizon of all interested people or stakeholders like producers (farmers) warehouse depositors and operators, financial institution and the Government Authorities to satisfy their interests and assurance of their prosperity. Moreover the study will Improve and increase the potential benefits to cashew nuts and other crops production, export earnings, and marketing in the country and other countries in the liberalized global market.

1.7 Scope and Delimitations of the Study

According to Co build English Dictionary (2000), delimitation is a term derived from the word delimits, which means to establish the limit to something. The study is delimited to Mtwara rural in Tanzania as the case study. The study will mainly focus on three issues as such as; warehouse receipt system, cashew nut farmers per capital

income and will suggest ways for improvement of implementation of WRS in Tanzania so as to achieve the intended objectives of establishment.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview

This chapter has reviewed and discussed the literatures presented by various scholars or authors that relate to the research study. The conceptual definitions were presented and the review of various related theories were done. Empirical study was done where scholarly studies from all over the world, Africa and Tanzania were presented and discussed and the research gap was identified and thoroughly discussed. The chapter finally presented a conceptual model that the study will use to test the hypothesis.

2.2 Definitions

2.2.1 Warehouse

A warehouse is a key part of the supply chain and primarily aims to control the movement and storage of materials within a warehouse and process the associated transactions, including shipping, receiving, put away and picking. The systems also direct and optimize stock put away based on real-time information about the status of bin utilization. The basic function of a warehouse is to store goods. This means that they receive deliveries from upstream suppliers, do any necessary checking and sorting and store the materials (Waters, 2003).

According to Waters (2003) traditionally warehouses were seen as places for the long-term storage of goods. Now organizations try to move materials quickly through the supply chain, so their role has changed. We can add some details and get

the following list of activities that are generally included in ‘warehousing’ as listed below:

(i) Receiving goods from upstream suppliers

(ii) Identifying the goods, matching them to orders and finding their intended use

(iii) Unloading materials from delivery vehicles

(iv) Doing any necessary checks on quantity, quality and condition

(v) Labeling materials (usually with bar codes) so they can be identified

(vi) Sporting goods as needed

(vii) Moving goods to bulk storage area

(viii) Holding them in stock until needed

(ix) When necessary, moving materials from bulk storage to a smaller picking store

(x) Picking materials from this store to meet orders

(xi) Moving the materials to a marshalling area

(xii) Assembling materials into orders

(xiii) Packing and packaging as necessary

(xiv) Loading delivery vehicles and dispatching the order

(xv) Controlling all communications and related systems, such as inventory control and finance.

2.2.2 Warehouse Receipt System (WRS)

According to Coulter and Onumah (2002) Warehouse receipts (WR) are documents issued by warehouse operators as evidence that specified commodities of stated quantity and quality have been deposited at particular locations by named depositors. The depositor may be a producer, farmer group, trader, exporter, processor or indeed

any individual or body corporate. The warehouse operator holds the stored commodity by way of safe custody; implying he is legally liable to make good any value lost through theft or damage by fire and other catastrophes but has no legal or beneficial interest in it. The receipts may be transferable, allowing transfer to a new holder a lender (where the stored commodity is pledged as security for a loan) or a trade counter-party which entitles the holder to take delivery of the commodity upon presentation of the WR at the warehouse.

2.3 Critical Review of Supporting Theories

According to Coulter and Shepherd, 1995; The North American Warehouse Receipt System. (WRS) model may not be suitable to Africa for a number of reasons. First, there is the problem of assuring the integrity of the system in countries where public regulatory functions are perceived as weak, and where there is no effective and articulate farmer lobby to rein in a non-performing authority. Second, there is the difficulty of overcoming the skepticism of bankers and others who fear that any new scheme will be undermined by pilferage, embezzlement or political intervention. The third challenge lies in ensuring the financial sustainability of a regulatory regime depending on user-fees in countries with relatively low volumes of output of grains and oilseeds; and to ensuring that smallholder farmers producing small marketable surpluses benefit from the system without having to sacrifice its sustainability.

With assistance from the Common Fund for Commodities (CFC) and other donors (Dudd, 2001) assisted a range of Zambian parties (including farmers, bankers, traders, millers and policy matters) 15 to develop a national warehouse receipts system, using an approach which might prove more widely applicable and to other

countries of Sub-Saharan Africa. The approach involves fostering the development of a national network of privately managed warehouses, issuing transferable warehouse receipts, and where trust is developed through a robust non-Governmental certification and inspection system. The warehouses are required to apply strict commodity grading and weight standards, and electronic documents (electronic warehouse receipts (EWRs)) are used with a view to reducing transaction costs and enhancing security. The prime source of income of the certification agency is user-fees, though it may be subsidized in its early years.

2.4 Empirical Analysis of Relevant Studies

According to Coulter and Onumah (2002), WRS has catalyzed the development of commercial farming in North America, and permitted an effective transition from State control to liberalization in South Africa. It will be more challenging to establish it in other African countries where smallholders are responsible for producing the bulk of agricultural surpluses. However, if successful the developmental impact may be greater, given the dearth of alternative collateral, such as mortgage able real estate.

The North American regulated system has much to commend it, particularly its agricultural and commodity-specific focus, and licensing of companies trading the commodity concerned. It compares very favorably to the Civil Law system adopted in Latin America, making the warehousing service available to a wider public, reducing storage costs and assisting in the professionalization of the commodity chain players. Notwithstanding this, Latin America has re-engaged with its WRS over recent decades and is now a source of interesting innovations.

The Brazilian experience up to the 1990s shows how populist politics can distort a warehousing system, resulting in ill-designed and miss-located warehouses, the abandonment of grading systems and unreliable storage services, the very antithesis of policy-makers' original purpose with market institutions of this kind. It also shows that it is only worth introducing regulatory regimes where they can be strict, efficient and insulated from political pressures; if these preconditions cannot be met, it is better not to try (Fafchamps *et al.*, 2006)

The establishment of a special discount window for loans backed by warehouse receipts can be an effective means of promoting WRs, though it is unclear how much difference it would make at present in African countries, given situations of surplus liquidity in the banking sector and constraints on the use of WRS discussed in this report.

The introduction of the warehouse receipt system has for the most part gone hand in hand with the development of commodity exchanges, though there are some exceptions where exchanges have not been in place, e.g. Bulgaria and Kazakhstan. There is a high level of interdependence between these two innovations, with the warehouse receipts providing a mechanism for delivery against exchange contracts, and the exchange providing additional liquidity, plus a means of valuing the warehouse receipt and liquidating the underlying commodity (Onumah, 2009)

Electronic warehouse receipt systems (WRS) are a key innovation with scope to radically reduce cost, increasing security, facilitate transactions and provide useful information to players – and the system is available 'off the shelf (Kwadjo, 2000)

Lastly, successful warehouse receipt systems are technical devices that farmers and others can use to take greater advantage of agricultural markets. They are not panaceas for the ills of those markets, or solutions to problems of rural poverty as such.

2.5 Benefits of the Warehouse Receipt System (WRS)

The benefits of this system include facilitating trade, enhancing market efficiency, easing access to rural finance, mitigating price risks, and enabling cost effective management of public food reserves. These are discussed subsequently.

2.5.1 Facilitating Trade

By enabling commodities of known description to be assembled at stated locations, a WRS facilitates impersonal trade by reducing information asymmetry between counter-parties. The warehouse operator is able to provide information on inventories available and on demand from major buyers at little or no cost. He also guarantees delivery commodities matching stated and against date contracts. This is likely to benefit smallholders who can bulk up their crops and sell further down the marketing chain to large traders, processors and to regional markets for a better price. They are able to participate in a modern and efficient commodity market because the system encourages them to comply with commodity standards, which will also curtail cheating on weights and quality (Coulter *et al.,* 2007).

5.2.2 Enhancing Marketing Efficiency in Agricultural Markets

The use of warehouses as delivery locations will allow transparent trade in agricultural commodities to develop—between producers and large traders or

processors, thereby reducing the length of the marketing chain and narrowing distribution margins. Producers are also able to defer the sale of produce by making use of inventory credit to satisfy immediate consumption needs. Increased storage by participants in the commodity system will moderate seasonal price variability and reduce trade margins for the benefit of both producers and consumers. Storage will also occur in well-run warehouses or silos, thereby reducing post-harvest losses, which are quite substantial in SSA and often mean significant loss of income to farm households (Slater and Diana, 2006).

According to DFID (2009) Subsistence producers may not be in a position to take advantage of the system, because they have little by way of surplus to store. However, their capacity to cope with household food insecurity will be improved because with decline in seasonal price variability, the marginal sales they make during the harvest season will command higher prices, and the food the household must 'buy back' in the lean season will cost less.

5.2.3 Easing Access to Rural Finance

A Ware Receipt System will facilitate development of efficient and accessible rural financial systems. By attracting deposits from small farmers and traders, the system will help formalities their trade transactions, enabling a database on their activities to be generated, which will assist banks in evaluating loan requests. Lenders can mitigate credit risks using collateral (the stored produce), which is more readily available to the producer and of better quality than the traditional security that banks in Africa accept (e.g. real estate) (IFAD, 2011).

Availability risk, associated with movable collateral, is reduced by the warehouse operator's guarantee of delivery from a stated location, and foreclosure can be simple and low cost, without any resort to the courts, depending on the legal regime seventeen. Lenders can minimize the risk of loss of value of the collateral by monitoring movements in its market value and using margining and price risk management instruments (discussed in mitigating price risks section).

Lenders no longer need to monitor a large number of small borrowers, but few warehouse operators to assure loan performance. This will reduce monitoring costs and encourage commercial lending to the rural sector, helping to capitalize the rural trade; and in turn, facilitating the development of a competitive national network of service providers in rural areas.

5.2.4 Mitigating Price Risks

Producers in most developing countries lack the means to mitigate price risk, and this affects their income and ability to repay loans. A will facilitate development of simple mechanisms by which producers, lenders and traders can secure a floor price by locking in a fixed future price. Forward contracts and over the-counter put options can be used for this purpose, but the former entails substantial performance risks producers have strong incentives to revoke on forward contracts if prices rise significantly above the fixed future price or they may simply fail to deliver according to specification. Warehouse operators can mitigate such risks by guaranteeing delivery against forward contracts (Rashid *et al.,* 2008). The development of commodity exchanges makes it possible for producers and lenders to gain access to

exchange-traded forward contracts, or more sophisticated price insurance instruments like futures and options.

Varangis and Larson (1996) found that this prospect had stirred up interest in establishing commodity exchanges in a number of developing countries. However, the exchanges are often promoted without ensuring that the pre-conditions for success are in place, so that most end up merely as intermediaries with little or no active trading. The probability of success of such exchanges would be greater if linked to licensed warehouses as delivery locations.

5.2.5 Cost-effective Management of Public Food Reserves

Food security concerns have been an important factor behind what Jayne et al. (1999) term 'second generation' government controls that undermine the development of efficient agricultural markets. Food insecurity has often been attributed to inadequate food production and high food prices, but is increasingly being acknowledged as being a problem of low and unstable household income (Gladwin *et al.*, 2001). Therefore, Zeller and Sharma (2000) advocate a combined range of policy instruments that increase household income, stabilize food prices and improve household access to finance for consumption smoothing.

A Warehouse Receipt System will contribute to the attainment of these goals, for instance by enabling farmers obtain better prices through deferring sale or selling further down the marketing chain. It makes smooth consumption possible by easing access to finance and households will benefit from more stable food prices, resulting from improved storage and better managed supply. Management of reserve stocks

will be more cost-effective as the WRS will allow government access to more reliable data on private stockholding, enabling it to forecast shortages more realistically.

It will also create a more transparent system for procuring and selling Government stocks, using WRs. Large organizations will no longer be needed to manage strategic food reserves, thus reducing the scope for corrupt practices. Other benefits includes: Such a warehouse receipts system has the benefits of:

(i) Mobilizing credit to agriculture by creating secure collateral for the farmer, processor, and trader helping to upgrade the standards and transparency of the storage industry since it requires better regulation and inspect.

(ii) Lowering transaction cost by guaranteeing quality and quantity which helps to the increase of quality awareness.(assuring the quality deposited is the same as the quality withdrawn).

(iii) Smoothing market prices by facilitating sales throughout the year rather than just after harvests thus increasing market power of small-holders by enabling them to choose at what point in the price cycle to sell their crops.

(iv) Increasing market power of small-holders by enabling them to choose at what point in the price cycle to sell their crops thus helping to create commodity markets which enhance competition, market information and international trade.

(v) Helping to upgrade the standards and transparency of the storage industry since it requires better regulation and inspection.

(vi) Mobilizing credit to agriculture by creating secure collateral for the farmer, processor, and trader.

2.6 Theoretical Framework

2.6.1 Operation of WRS

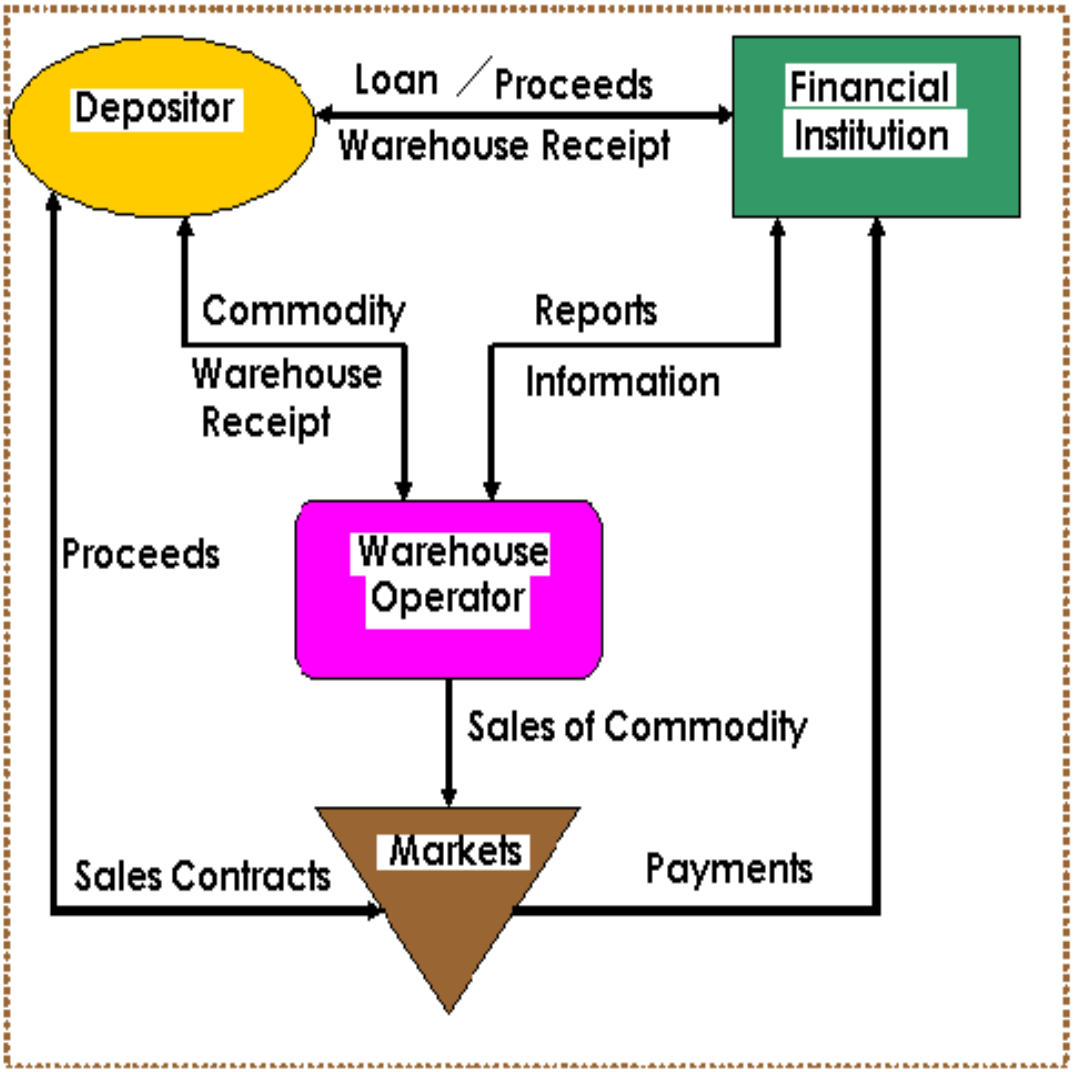

Figure 2.1: Operation of Warehouse Receipt System

Source: Kuserwa, (2009) The Warehouse Receipt System in Tanzania

According to Kuserwa. N, 2009 the summary of how WRS operates is summarized below:

(i) Deposit of commodity in a licensed warehouse

(ii) Depositor borrows against commodity upon surrendering the Warehouse receipt to the bank

(iii) Depositor with loan sells the commodity depositor without loan sells the commodity

(iv) Depositor is given Certificate of Title (CT)

(v) Buyer redeems CP from the financier

(vi) Buyer gets the commodity from the warehouse

(vii) Balance after payment of loan & interest is left in the depositors account

2.6.2 Challenges of Warehouse Receipt System

The challenges which have led to the slow or limited progress in establishing WRS in Africa appear to be quite common. They include lack of suitable storage infrastructure, legal and regulatory issues, lack of requisite skills, missing or weak complementary market institutions, difficulty in attracting key stakeholders especially bankers, problems encountered in ensuring smallholder participation and disabling elements in the policy environment. We discuss these issues and practical steps which can be taken to tackle them in this section.

2.6.2.1 Lack of Suitable Storage Infrastructure

A network of secure, well-run warehouses which are accessible to various depositors is essential prerequisite for a successful WRS. Most ESA countries have physically adequate grain storage capacity in excess of 1 million tons (Forestier, & Bryde,

2003**).** The exceptions are Mozambique, Rwanda and Uganda which need additional investment in expanding grain storage capacity based on data in the study by the World Bank/NRI/FAO (2010). However, the available grain storage facilities in the grain-surplus producing areas in most ESA countries are owned by grain marketing parastatals. With declining government investment and financial support, their role in the grain market has been diminishing in the post-liberalization era, often leading to operational and financial difficulties which undermine investors‟ confidence in them as credible counterparties. Private storage infrastructure tends to be concentrated in the urban markets.

Hence, while there may be excess storage capacity in grain-surplus producing areas in some ESA countries, credible private warehouse operators may not have access to the facilities, thereby limiting uptake of WRS by smallholder farmers‟ groups and medium-scale rural grain traders – most large-scale farmers have suitable on-farm storage. Lack of political will appears to hamper outright sale of state-owned storage facilities to private warehouse operators as a means of attracting private investment in improving the physical conditions of under-utilized facilities in rural grain producing areas.

The option of setting up autonomous warehousing companies to take over state-owned storage facilities in strategic locations and offer third-party warehousing services which offers a means to mitigate the credibility problems faced by the parastatals have not been adopted by governments in the region. Forestier, P. & Bryde (2003**)** reported that, the government of Malawi considered this option while restructuring ADMARC in 2006.while Coulter & Onumah (2001) pointed that, the

Government of Zambia took the lead in leasing warehouses owned by the Food Reserve Agency to private warehouse. The Government of Mozambique is reported to have followed this model in recent times. On the other side the lease tenure tends to be rather short-term and therefore does not encourage significant investment in improving the physical infrastructure (Onumah, 2010).

2.6.2.2 Legal and Regulatory Issues

Specific warehouse legislation and formal regulatory structures followed, rather than, led the development of the successful receipt systems in the region. For instance, South Africa's silo receipt system is not backed by specific warehouse legislation. Neither was the successful WRS for grains in Zambia backed by Malawawi (Coulter and Onumah, 2002). Even where specific legislation has been enacted to back WRS, as is the case in Tanzania and Uganda, the law came in after the systems had evolved. However, this does not detract from the need to resolve legal issues which can potentially diminish the holder's title to the underlying goods and/or security interest in them. It tends to be particularly important to bankers who are usually keen to avoid lengthy litigation and/or costly searches to establish the absence of previous charges on underlying commodities they intend to finance.

Other issues which can be resolved by legislation is recognition of warehouse receipts as documents of title which may be transferable and negotiable instruments – in South Africa transferability of the receipts emerged as a result of *custom and practice* but statutory intervention can short circuit the process and encourage acceptance by the banking community and third party buyers (Onumah, 2003). In

the case of grains it is also important that legislation ensures that the security interests of holders of warehouse receipts can be assured in commingled goods.

One of the issues specific warehouse legislation can resolve is regulatory framework which is instituted to maintain the integrity of the WRS. It should be stressed that – as has been demonstrated in the case of South Africa – a strong market institution such as a commodity exchange can self-regulate its supporting receipt system on the basis of existing contract law (Budd, 2001). This may be feasible where the existing exchange promotes the WRS. However, where this is not the case, legislation may vest regulatory powers in a public, private or arms-length public-private institution for the licensing and overseeing the operations of participating warehouse operators. The law then has to be clear on licensing requirements and sanctions for breach of those requirements as well as other relevant regulations.

Since the region is pursuing a policy of open borders for the grain trade, it is important that national legislations are harmonized across the region. It is particularly important to insulate the regulatory authority from political control as well as the potential to compromise in enforcing the laws and regulations as a result of control by any dominant interests. This is important in assuring the integrity of the WRS. (URT, 2008).

2.6.2.3 Lack of Requisite Skills

The quality of warehouse and storage management skills tends to be highly variable in most ESA countries. Improving professional skills in the warehousing industry is necessary if storage losses are to be kept at a minimum. Similar training and capacity

building is required to enable traders and processing companies to utilize the WRS in cost-effectively managing their inventories. Smallholder groups, which have to bulk and market collectively in order to meet quantity and quality requirements under the WRS, will experience considerable difficulty unless adequately trained. Bankers as well need training to enable them shift from the “traditional” balance sheet-based financing to inventory-backed structured financing (Onumah, 2003).

Most WRS projects have training and capacity building components but it is important to develop institutional capacity to deliver the required training on a sustained basis at national and regional levels. The EAGC has initiated a process to establish a regional institute which will offer requisite training for various players in the grain value chain (Fafchamps *et al.,* 2006). It is expected that the institute will collaborate with relevant national training institutions to deliver the training programmes. This initiative definitely responds to an identified need and is worth supporting.

2.6.3 Missing or Weak Complementary Market Institutions and Other Infrastructure

As illustrated in Figure 1, a viable WRS is underpinned by important pillars, including a reliable market information system (MIS). Considerable progress has been made in delivering price information through regional MIS such as RATIN and via several national platforms (KENFAP, 2011). The 5development of mobile telephony has created a cost-effective means for disseminating price information, with Uganda being at the forefront. However, there is need to improve the quality of data on supply and demand, including crop forecasts as market participants are not

only interested in historical prices but need to take informed positions on future price trends in determining their marketing strategy.

There is evidence from the ESA to suggest that prospects for successful development of WRS can be significantly improved if formal markets for the stored commodities exist or are created. JSE/SAFEX offers the most visible example as the silo receipts issued in South Africa back trading contracts on the exchange. In Tanzania, the WRS for coffee advanced pretty quickly, far outpacing the pilot for cotton. One reason for this is the existence of the Moshi Coffee Auction which provides a single marketing channel through which the collateralized coffee is trade, making it relatively easy to ensure payment through financing banks, thereby lowering loan default risks (Towo and Kimaro, 2013).

Extension of WRS to the cashew sub-sector in Tanzania appears to have been boosted by the development of an informal auction system. Though this evidence needs to be more robustly tested, it is apparent that while a viable WRS contributes to the success of a commodity exchange (as pointed out in Section 2.6), the converse relationship also holds. This is because commodity exchanges offer a transparent means for price discovery and therefore more objective valuation of collateralized stocks. They also provide a reliable means by which lenders can liquidate collateralized commodities and so make inventory-backed financing more attractive. Furthermore, as an exchange matures from a spot market into offering various risk management instruments, including futures and options contracts, lenders are able to use such instruments to hedge price risks. By so doing, they reduce credit risks, leading to lower cost of borrowing. Therefore, the synergy between WRS and

commodity exchanges needs to be acknowledged and reflected in programmes to develop these market institutions in the region.

Availability of adequate insurance cover and performance bonds for licensed/ certified warehouse operators assures third parties, especially depositors and lenders that their interests will be sufficiently protected in the event of a loss (World Bank, 2010). While the insurance industry is often able to insure warehouses and stocks against relevant losses, there are difficulties when it comes to obtaining the right performance bonds. Insurance companies tend to issue conditional bonds, which may not be appropriate as it creates uncertainty regarding compensation in the event of non-performance by the warehouse operator. Banks are sometimes able to provide unconditional bonds which are preferred but the cost tends to be quite high. This is a challenge that needs to be addressed in order not to exclude potential warehouse operators.

Electronic warehouse receipts are growing in popularity in African countries which are promoting WRS. They are preferred by banks because of the greater security they offer against forgery. They also tend to be less costly to issue, transfer and store than paper receipts. the technology is currently available and has been successfully adopted in Uganda by a provider based in South Africa(Onumah, 2010) However, the major challenge in adopting this system is the reliability of ITC infrastructure.

2.6.4 Challenges in Attracting Key Stakeholders

Attracting participation by bankers in WRS projects has proved very challenging in most African countries. Financial sector reforms undertaken in Africa in the 1990s

focused on liberalization of interest rates and tightening of prudential regulation (World Bank, 2010). The consequence was a deepening of risk aversion in the banking industry. At the same time yields on domestic government debt instruments rose significantly, making investment in such comparatively low-risk instruments very attractive. Therefore, banks had little or no incentives to innovate beyond traditional balance sheet lending, with the most common form of security for domestic enterprises being real estate. Increased competition in the banking industry in most African countries, especially in West Africa, appears to be encouraging banks to adopt innovative financing mechanisms which are also relatively low risk. Inventory-backed structured financing represents an option which will therefore be attractive to bankers.

However, an important lesson learn in Zambia in promoting uptake of receipt-based financing, is to avoid “hard selling” of the system but rather engage the bankers in a process where they contribute to identifying business and process risks associated with the WRS as well as in instituting appropriate mitigation mechanisms (Towo and Kimaro, 2013). Furthermore, the pilot in Tanzania showed that it pays to focus in the beginning on a few willing banks, usually local banks which enjoy greater scope in innovating. Other banks tend to respond by free riding on the positive experiences of the early up takers.

Other parties may not just be skeptical but may actually perceive the development of the WRS as inimical to their business interests. For instance in Zambia, the international inspection companies were reluctant to adapt their standard CMA 'product' and participate in the WRS because the new system could open up their

exclusive preserve in the collateral management business to locally-owned companies (Onumah, 2010).

Furthermore, they viewed the introduction of regulatory oversight with suspicion. However, one of these companies was certified as a warehouse operator in Zambia while in Tanzania and Uganda local inspection companies have been active participants, bringing valuable skills and reputation to the emerging WRS. There is potential for this trend to continue, especially as the CMA market has been shrinking in Africa because of losses which can partly be attributed to weaknesses in monitoring systems.

2.7 Ensuring Effective Participation by Smallholder Farmers

There are major political pressures to either exclusively target or fast-track direct smallholder participation in WRS projects. This emanates not only from governments but also from donors. With the smallholder sector dominant in agricultural production in most African countries, the underlying concerns over their welfare are legitimate. The cases we discussed in Section 2 demonstrate that smallholder farmers can benefit directly and indirectly from the WRS, the latter through its aggregate impact on price stability and the transparency of price formation (KENFAP, 2011).

However, in pursuing this objective care should be taken to avoid undermining the long-term viability of the WRS because there are major issues of scale economies, both in terms of managing warehouses and providing regulatory oversight. Lessons learnt from Tanzania in particular suggest that smallholder participation and system

viability can be achieved if the capacity of groups to aggregate and undertake collective marketing is strengthened. The direct financial benefits to members are highest when aggregation, depositing and marketing are undertaken by primary-level farmers‟ group rather than second or third-tier representative organizations such as cooperative unions. There are indications from the cases in Section 2 that can be significant pay-offs if governments, NGOs and donors support the development of strong primary-level farmers‟ organizations. What needs to be avoided is involvement by the regulatory authorities in promoting smallholder farmers‟ groups as this tends to blunt their regulatory “teeth” and can undermine confidence in the system.

2.8 Policy-Related Constraints

Ad hoc interventions in agricultural markets have constituted one of the most intractable bottlenecks in the development of WRS in Africa. It is worth noting that in South Africa, which has the most advanced receipt system and commodity exchange on the continent, the government has consistently maintained a policy of non-intervention since 1996 when liberal market reforms in the agricultural sector were initiated (URT, 2008). Uganda is also one of the few countries in the ESA where government intervention in the grain market is rather marginal. This is largely because it is a significant surplus producer of maize and its most important staple is banana.

In Zambia, on the other hand, government intervenes whenever there is a short crop, usually on the grounds of avoiding food security crisis. For instance in the 2000/01 season and the next the government intervened in the maize market by imposing a

ban of export of maize grains, ad hoc waiver of duties on imported *mealie meal* and delivery of subsidized grains to millers. Similar interventions occurred in 2005/06 season. In all these instances the interventions were costly but the impact on retail prices of *mealie meal* comparatively marginal. Millers often argued that the subsidized grains allocated to them was insufficient and they had to buy maize grains from the open market at exorbitant prices and could, therefore, not significantly lower ex-factory prices for the *mealie meal.* The uncertainty created as a result of these interventions discouraged producers, traders and processors from holding significant stocks while making inventory financing became even more risky. It is therefore not surprising that it was only in the years of good harvest, including the 2004/05 season.

In Tanzania, Government also intervened in the grains market in the 2009/10 season, imposing a ban on export of maize and rice to the regional markets, especially Rwanda and Kenya (KENFAP, 2011). The interventions coincided with pilots of WRS for grains, in an attempt to expand coverage of the successful WRS for export commodities to the grains.

However, as a result of the export ban, farm gate prices in the surplus producing areas collapsed as it proved more costly to deliver into the domestic urban markets than into the regional markets. Producer groups which collateralized their grain stocks in order to benefit from seasonal price rise incurred losses and repayment of inventory credit was put at risk. During recent discussions with officials of the Tanzania Warehouse License Board and MVIWATA (a farmers' organization), it was reported that the only reason why grain producers in Tanzania had decided not

abandon the WRS was that they acknowledged that their losses originated from an unfavorable policy environment rather than failure of the system (IFAD, 2011) It is unlikely, however, they will continue to utilize the system if this problem is not addressed.

Strategic grain reserves provide governments with a commonly-used means to intervene in markets to dampen rising food prices resulting from supply deficits. National food reserve agencies or parastatal grain marketing boards usually manage the strategic reserves, being responsible for procurement (either from the domestic market or direct imports) and storage of the grains. Financing is usually by governments, sometimes with donor support.

Among the common problems which bedevil management of strategic grain reserves is delays in intervening, especially in initiating grains procurement. This is usually the result of delays is estimating the size of the grain deficit and in mobilizing government funding for procurement. Anecdotes abound regarding farmers being paid months after supplying to food reserve agencies as a result of this situation. Procurement prices are usually not determined through a transparent market process but are rather fixed by an administrative process (Budd, 2011). Consequently, the fixed prices can exceed market prices with the procurement agency being over-supplied with grains. Subsidies are a common feature of the pricing mechanism as governments tend to sell below market prices, a situation which discourages private stockholding of grains. Though open tendering systems are sometimes used for procuring grains, especially if supplies are imported on behalf of government, it is common for less transparent procedures to be adopted, including using field staff to

buy directly from smallholder farmers. Storage losses tend to be quite high – ranging between 8 and 20 percent in the region. In the short-run these problems tend to increase the cost incurred by government in maintaining the reserves. However, the longer-term and even more damaging effects include distorting private incentives to produce and hold grains stocks just as happens in the case of the trade controls discussed above.

We argue that governments and the farm economies in ESA can benefit from the use WRS and related exchange infrastructure in managing strategic grain reserves. For instance, the Government of Malawi has demonstrated that governments and relief agencies can use price risk management instruments offered by exchanges to hedge their positions on grain markets, and thereby bring greater stability to the net prices at which they are traded in the market Again, as advocated by Coulter *et al* (2007), governments and relief agencies such as the World Food Programme (WFP) can also use the WRS and exchanges to cost-effectively procure and store food from domestic and regional markets. Under its Purchase for Progress (P4P) programme, WFP is already piloting this in Zambia and Uganda and the initial results are quite encouraging. It is expected that such a process will lead to reduction in storage losses, leading to financial savings as well as increase in the volume of available grains. Internationally-acceptable level of storage losses, which licensed warehouse operators (either private or autonomous commercial warehousing companies) have to comply with, is between 1 and 2 percent.

The use of the WRS and/or exchanges for procuring and storing strategic grain reserves will give a major boost to the development of these market institutions,

reduce market distortions and thereby enhance incentives for increased production. It will also reduce pressure on governments‟ budgets required to maintain the reserves. For instance, governments can obtain inventory-backed credit to procure grains for storage, allowing it to build up adequate stocks without tying up critically-needed resources. It may also issue over-the-counter put options to depositors, who can then obtain inventory finance more readily governments will only be required to finance the associated continent liabilities if grain prices fall below a pre-determined threshold (IFAD, 2011).

If governments opt for the development and use of the WRS and related exchange infrastructure, then it is important that they pursue measures that engender confidence among market players regarding the stability and predictability of agricultural trade policies. This may include establishing strong consultative platforms for regular dialogue with stakeholders on when and how it can intervene. Furthermore, governments need to invest in improving the quality and timeliness of crop forecasts in order to ensure that any interventions are based on sound data and information.

(i) Lack or minimal stakeholders education, courses and training on WRS, production, storage, TBS activities and inspection on Warehouse

(ii) Lack of good system in statistics on WRS information

(iii) Lack of home cashew nuts industries or dormant industries for cashew nuts processing which cause all cashew nuts to be exported to other countries. This make our people not getting employment, we lack by-products after cahew nuts processed (CNL). Also this undervalue our cashew nuts value.

(iv) Many Warehouses are not yet registered which cause to have minimal number of Warehouse compared to the number of farmers or Primary Societies. The registration Warehouse need to follow regulation and policy of 2005 No. 10 of WRS.

(v) The system is limited and not used by small media farmers (SMS)

(vi) Lack of common exchange market for this system

2.9 Research Gap Identified

After reading different authors definitions, models and empirical literatures written by different researchers about WRS, the researcher found that most of authors emphasize on various issues pertaining WRS operations such as efficiency and effectiveness of WRS operations. Therefore, a researcher found out that there is a need to study the roles played by WRS in improving cashew nuts small holder farmer's welfare. Moreover, no any study has been done in Tanzania on the benefits that small holder farmers get in production and selling of cashew nuts.

CHAPTER THREE

3.0 RESEARCH METHODOLOY

3.1 Research Paradigm

This research study aimed at examining research interpretation for potentials and challenges of WRS in improving cashew nuts farmer's development in Tanzania. It was a quantitative research type. Tables, charts and figures were clearly drawn and interpreted.

A contrast can thus be drawn between the 'thin' abstraction or description that results from quantitative data collection and the 'thick' or 'thorough' abstraction or description associated with qualitative data (Dey, 1993; Robson, 2002).

3.2 Research Design

A research design is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance of the research purpose with economy in procedures (Kothari, 1990). Case studies on the other hand, are designed to bring out the details from the viewpoint of the participants by using multiple sources of data. However, selecting cases will be done so as to maximize what can be learned in the period of time available for the study. Case study design tends to be selective, focusing on one or two issues that are fundamental to understanding the system being examined (Winston Tellis, 1997).

3.2.1 Area of the Research

Cohen et al. (2000) comment that it is very important for a researcher at the planning stage to clearly specify and define the area to be researched. The research study was

done in Mtwara region. Mtwara region has been selected because it was believed that enough data would be obtained. This is because Mtwara region has many and wide-ranging farmers cultivating cashew nuts and Warehouse Receipt System has been in practice for a number of years now.

3.2.2 Study Population

Population refers to the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran, 2006).) The study included cashew nut farmers, warehouse operators, Mtwara rural and urban business development officers and cashew nut board officers.

Table 3.1: The Total Population of Respondents

No.	Respondents	Population
1.	Cashew nut farmers of Mtwara	342
2	Warehouse operators/primary societies	3
3	Cashew nut Board officers	3
4	Mtwara rural Business development officers	2
Total		**350**

Source: Research survey (2013**)**

The study population was expected to be 350 in total. 17 farmers from each of 6 districts of Mtwara region were selected. The districts were Mtwara (M), Mtwara (V), Nanyumbu, Masasi, Newala and Tandahimba. (Michiga, Chiungutwa, Lengo, Naliendele, Mtawanya and Nanguruwe).

3.2.3 Sample and Sampling Techniques

3.2.3.1 Sample Size

A sample of 100 farmers was randomly selected from a population also, a sample of 3 Warehouse operators, 3 Cashew nut board officers and 1 Mtwara rural Business development officers will be purposely selected.

Table 3.2: The Sample Size Selected from the Total Population

No.	Respondents	Total Population	Sample Size	% of Sample Size
1.	Cashew nut farmers	342	100	29.24%
2.	Warehouse operators	3	3	100%
3.	Cashew nut Board officers	3	3	100%
4.	Mtwara Business development officers	2	1	50%
	Total	**350**	**107**	**30.57%**

Source: Researcher's survey (2013)

3.2.3.2 Sampling Techniques

In this study, random and purposive sampling techniques were used:

(a) Random sampling

A sample of 100 cashew nut farmers from Mtwara region and its districts (Michiga, Chiungutwa, Lengo, Naliendele, Mtawanya and Nanguruwe.) were randomly selected to represent the total population of farmers.

(b) Purposive sampling

Kerlinger (1986) explained purposive sampling as another type of non-probability sampling, which is characterized by the use of judgment and a deliberate effort to obtain representative samples by including typical areas or groups in the sample.

This was employed to warehouse operators, cashew nut board officers and Mtwara rural business development officers only because the researcher had the chance to choose those who had experience in warehouse implementation and management, WRS policy implementers and warehouse regulators respectively. This sample was expected to provide enough and useful information.

3.3 Data Collection Methods

According to Denscombe (1998), using more than one specific method enables the researcher to cross-validate information and data collected from a variety of sources. Both quantitative and qualitative methods were used complimentarily for data collection, analysis, interpretation and presentation. This study used a great deal of quantitative approach with minimal qualitative elements. In this study, both open-ended and close-ended questions were administered to all respondents in the form of interviews and questionnaires.

Quantitative approach is a study that exhibits facts in numerical values. Kothari (2003) claims that, quantitative study involves the generation of data that can be subjected to rigorous analysis in a formal and rigid form. This approach can further be classified into inferential, experimental and simulation approaches. The role of inferential is to form a database from which to infer the characteristics or relationships of a population. This is usually termed as survey research in which a sample population is studied to determine its characteristics.

3.3.1 Types of Data Collected

Both primary and secondary data were collected by using questionnaires which contained closed and open ended questions, observation, interviews and the review

of related documents including newspapers, official government publications, farmers association documentaries and other researchers documents .to meet all objectives of the study.

3.4 Data analysis

To analyze the data collected, the researcher used quantitative methods. The data collected from the field and other sources were coded and analyzed using statistical package for social science (SPSS) from the descriptive statistics such as frequencies, percentage and means were used to draw conclusion and make interpretation of data.

3.5 Data validity

Validity is concerned with whether the findings are really about what they appear to be about (Saunders *et. al.,* 2003). Validity is defined as the extent to which data collection method or methods accurately measure what they were intended to measure (Saunders *et. al.,* 2003). Cooper & Schindler (2003) believe that validity refers to the extent to which a test measures what we actually wish to measure. There are two major forms: external and internal validity. The external validity of research findings refers to the data's ability to be generalized across persons, settings, and times. Internal validity is the ability of a research instrument to measure what is purposed to measure (Cooper & Schindler, 2003). Numbers of different steps were taken to ensure the validity of the study:

(i) Data were collected from the reliable sources, from farmers who were selling their produce in warehouse system.

(ii) Survey questions were made based on literature review and frame of reference to ensure the validity of the result

(iii) Questionnaires were pre-tested before starting the survey. Questionnaire were tested to thirty cashew nuts farmers

3.6 Reliability

According to Saunders *et al.* (2003) reliability refers to the degree to which data collection method or methods yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data. Cooper & Schindler (2003) have defined reliability as many things to many people, but in most contexts the notion of consistency emerges. A measure is reliable to the degree that it supplies consistent results. Reliability is a necessary contributor to validity but is not a sufficient condition for validity. In this study, numbers of different steps were taken to ensure the reliability of the study:

(i) Questionnaire was divided into five parts in order for respondents to concentrate more on each question.

(ii) The theories that have been selected for the study were clearly described and research questions were formulated based on the previous theory. Data were collected based on the frame of reference that was drawn from the discussed theories. The objective was to make sure that if another investigator follow the same procedures and use the same questionnaires objects, the same conclusions would be made.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Introduction

This chapter has discussed major results of both qualitative and quantitative data. Qualitative data were collected and converted into quantitative data and presented in tables and graphical forms. The presentation and analysis of data were focused to answer the objectives of the study. The findings were critically discussed where the observations of the study were presented.

4.2 Social and Economic Profiles of Respondents

Demographic profiles of respondents were collected and analyzed by using four criteria of sex, age, education level and farmer's capacity of production as clearly shown in the Tables 4.1, 4.2, 4.3 and 4.4.

4.2.1 Gender

The information on the distribution of respondent's sex was as follows.

Table 4.1: Distribution of Respondent by Gender (N=109)

No.	Gender	Number of Respondents	Percentage (%)
1.	Male	71	65.14
2.	Female	38	34.86
	Total	**109**	**100**

Source: Field data (2013)

The Table 4.1 shows that males were 71(65.14%) while females were 38 (34.86%. The study found that most of males were farmers who are the owners of the cashew nuts farmers and were the one who were very free and willing be interviewed while women were shy and unwilling to participate in the interview. Also the officials from WRS operators were all males. Poor responses from women were a challenge in investigation of the benefits but the study decided to use participative face-to-face interview to at least ease their attention.

4.2.2 Age

The research study was interested to know the age of the respondents.

Table 4.2: Distribution of Respondent by Age (109)

No.	Age range	Number of Respondents	Percentage (%)
1	18-24	21	19.27
2	25-34	21	19.27
3	35-44	21	19.27
4	45-54	38	34.86
5	55-65	08	7.33
	Total	**109**	**100.00**

Source: Field data (2014)

The Table 4.2 shows that the highest percentage of respondents was found at the age of 45-54 which was 34.86%. The lowest percentage of respondents was noted at the age of 55-65 (7.33%). It has been noted that the age range of 45-54 is the one which own and operate the cashew nut business. This is because this group comprises of

people who own families, take care of children affairs such as paying school fees and moreover this group represents people who have experience on this business and their production capacity was high too.

4.2.3 Capacity of Production

The study wished to know the capacity of production of cashew nuts per farmers and the distribution of results were as shown in Table 4.3.

Table 4.3: Distribution of Respondents Based on Capacity of Production (N=102)

No.	Kgs. Produced per year	Number of Farmers	Percentage (%)
1	1000-3000	10	9.80
2	3000-5000	54	52.94
3	5000-7000	20	19.61
4	7000-9000	18	17.65
Total		**102**	**100.00**

Source: Field Data (2014)

The Table 4.3 shows that the largest number of farmers producing 3000-5000 kilograms of cashew nuts per year of which 54 (52.94%). This group had pointed the reasons that challenged them to stay on that category; among others are lack of enough capital, increase in price of fertilizers, and many charges during selling and high tax.

4.2.4 Level of Education

The level of education of the respondents was also taken into consideration.

Table 4.4: Distribution of Respondent by Level of Education (109)

No.	Level of Education	Number of Respondents	Percentage (%)
1	Primary	21	19.27
2	Secondary	44	40.37
3	Diploma	12	11.01
4	Degree	26	23.85
5	Postgraduate	06	5.50
	Total	**109**	**100.00**

Source: Field Data (2014)

Table 4.4 shows that the highest percentage of smallholder farmers was having secondary school level of education.44 (44.37) respondents out of 109 had secondary education which helped them to follow the instructions of using of agrochemicals to increase their production. The lowest percentage was noted to be 6 (5.5%) who were not farmers but. These were among the cashew nut board officers, Mtwara business development officer and warehouse operators.

4.3 Benefits of WRS to Farmers

Table 4.5: Benefits of Using Ware House System in Selling Cashew Nuts (N=102)

No.	Variable	Frequency	Percentage (%)
1	Yes	95	93.14
2	No	07	06.86
3	**Total**	**102**	**100.00**

Source: Field data-2014

This question was asked to cashew nuts farmers showing their experience before the warehouse receipt system and after the warehouse receipt system who. The results revealed that 95 (93.14) reported that from the experience they had, the system had benefits to them especially the security of selling price all over the season. Only 7 (6.86) reported that they don't see the benefits of this system because the system does not allow them to sell their produce out of their cooperative union parties.

4.3.1 Financial Benefits

The study surveyed farmers with the intention to know the income of smallholder farmers who are selling their cashew nuts through warehouse receipt system. The study had noted that prices of cashew nuts has been increasing each season. The study noted the price increase from 2007/08 to 2011/12 as shown in Table 4.6.

Table 4.6: Increase of Price from 2007/08 to 2011/12 per kg

NO.	SEASON	MARKET PRICE (TSHS)
1.	2007/08	800
2.	2008/09	810
3.	2009/10	1000
4.	2010/11	1080
5.	2011/12	1200

Source: Field Data (2013)

The trends of cashew nuts price for five growing seasons is represented by the Figure 4.1.

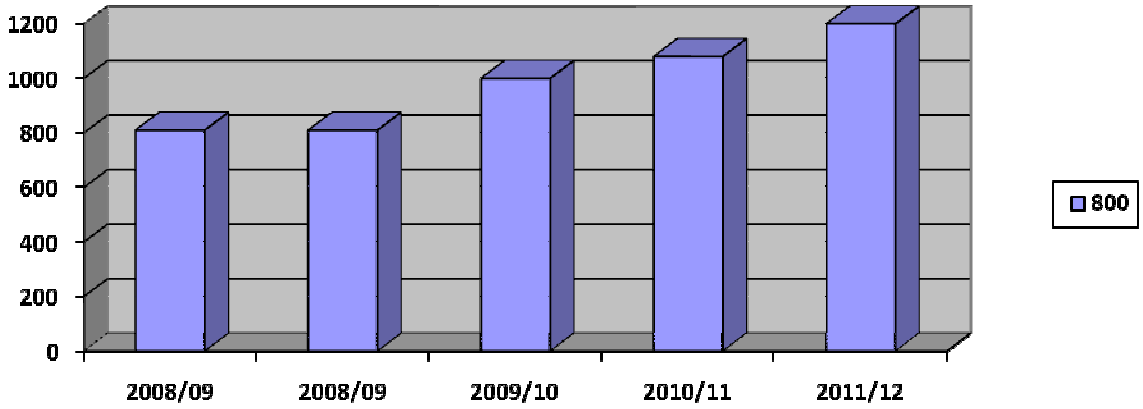

Figure 4.1: Changes of Price of Cashew Nut per kg from 2007/08 to 2011/12

Source: Field Data (2013)

The Table 4.6 shows the increase of price of cashew nuts per kilogram. The increase in price has the direct impact on farmers per capital income. The earnings of small holder farmers have been increasing and this has tremendously motivated farmers to increase production of cashew nuts. Some farmers had told that their life have changed a lot due to the increase of price. Out of 30 farmers interviewed, 26(86.7%) had pointed out that their per capital income has greatly grown up. The increase in production was another benefits that was greatly contributed after the introduction of WRS and this may be justified by the tonnes produced by all districts of Mtwara for five consecutive years from 2007/08 to 2011/12 as shown in the Table 4.7.

4.3.2 Trade facilitation

The study had revealed that out 109 respondents, 62(56.88%) responded that WRS facilitates trade on the sense that it is closer to farmers residences among them 41 (37.62%) reported that the system has improved security of their products 10 (9.17%) where by 11 (10.09%) of them said it is friendly as it provides a room for

business negotiation. Only 47 (43.12%) were noted to disagree as they pointed factors like late payment of fund.

Table 4.7: The Number of Respondents on Trade Facilitation

No.	Trade facilitation factors	Agreed	Disagreed
1	WRS is closer and cooperative	41	00
2	It provides security of products	10	0
3	It is friendly and allow negotiation	11	0
4	It pays on time	0	47
	Total	**62(56.88%)**	**47(43.12%)**

Source: Field Data (2014)

From the study, it was noted that the introduction of WRS has facilitated the business as compared before the establishment of WRS. Other complaints and claims from 47 (43.12%) small holder farmers regarding the whole issue of business on various factors they have no time to waste waiting to receive the agrochemical subsidize which always come late. Moreover late payments delay to meet expenses for weeding and other related farm expenses.

4.3.3 Allows Transparency in Trade

This was largely supported by the business development officers and all farmers showed their degree of concurring with this aspect. It was found that out of 102 farmers, 92(90.2%) agreed on this factor and only 10 (9.8%) appeared to strongly disagree. This indicates that WRS has proved to satisfy small holder farmers and other cashew nuts stakeholders as revealed by the study. It was further noted that the

previous experience before WRS establishment, a lot of complaints were aired out by smallholder farmers who thought that there was dubious or hidden business done when it happens the results do not match with their expectations as far as the weight per kg with the corresponding price.

4.4 Challenge Facing the WRS in Improving Income of Cashew Nuts Farmers

Findings from the study confirmed that lack of competent cooperative leaders was the major challenge facing the WRS where by 30 (29.41%) respondents out of 102 said that there were no competent cooperative leaders knowledgeable enough on WRS. Late and instalment payment was another challenge reported by respondents whereby 22 (21.57%) respondents out of 102 reconciled with this fact.

Table 4.8: Challenges Facing WRS on Improving Income of Farmers from Cashew Nuts (N=102)

No.	Variables	F(N)	%
1	Lack of reliable statistics on sales and expenditure	7	6.86
2	Fraud by cooperative leaders	18	17.65
3	Lack of competent cooperative leaders	30	29.41
4	Selling wet cashew nuts to increase weight (cheating)	4	3.92
5	Lack of freedom to farmers to choose subsidised agrochemicals	21	20.59
6	Late and instalment payments	22	21.57
	Total	**102**	**100.00**

Source: Field Data (2014)

Other challenges were as summarized in the table as stated by the respondents included lack of freedom to farmers to choose subsidised agrochemicals 21 (20.59), Fraud by cooperative leaders 18 (17%). Lack of reliable statistics on sales and

expenditure done within cooperative 7 (6.86%) and selling wet cashew nuts to increase weight 4 (3.92%) this was one of the cheating methods done by unfaithful farmers whereby in turn this causes lose huge amount of unexpected weight of sold cashew nuts.

Other Challenges Facing WRS in Improving Smallholder Farmers in Mtwara include lack of local industries for cashew nuts processing. Cashew nuts are sold while unprocessed. This inhibits people to get employment from the industries. Also, the by-products of cashew nuts were to be used to produce oils and fertilizers. Among others, the main challenges revealed by this research study from both farmers and other respondents (warehouse operators, cashew nut board members and business officer) who were asked this question Answers from farmers revealed that product fluctuation was among the challenges facing the system. The system didn't subsidize farmers depending on the size of their farms rather the system subsidized the farmers depending on the quantity of produce brought in the warehouse leading to low production in some of the seasons. The above explanations are supported in the Table 4.9.

Table 4.9: Number of Tonnes Produced each Season in Mtwara Region

No.	Season	Tonnes Produced
1.	2006/07	54,005.988
2.	2007/08	62,206.022
3.	2008/09	50,396.223
4.	2009/10	49,830.954
5.	2010/11	85,137.858

Source: Mtwara Regional Business Development Officer (2014)

According to National Board of Cashew Nuts, 2009, lack of enough education of WRS operators to key stakeholders has been noted as a great challenge. Many stakeholders lack enough knowledge on how to store products in warehouses, knowledge about the issued certificate, quality of products, regulations governing WRS operations, regulators of warehouses and many others.

Unreliable infrastructure was also revealed by the study as the challenge for WRS operations. This was aired out by the Cashew nut board officer who pointed out that it's difficult to transport products from farmers to warehouses due to rough roads attributed by heavy rain falls. Moreover there is a problem of communication between the WRS operators and farmers due to poor communication network.

The study noted the problem of quality of cashew nuts, warehouses operators claimed to face this challenge in the market as the customers require high quality cashew nuts. This is highly contributed by poor storage of cashew nuts; farmers do not use agrochemicals and pest sides.

4.5 Measures to be Taken to Improve WRS Operations

Table 4.10: Measures to be Taken to Improve WRS Operations (N=109)

No.	Variables	F(N)	%
1	Payments should be done once and at a time	52	47.71
2	Educating cooperative leaders and small holder farmers	26	23.85
3	Agrochemicals should be provided at right time	28	25.69
4	Farmers should be free to choose kinds of subsidized agro-inputs	03	2.75
	Total	**109**	**100.00**

Source: Field Data (2014)

This question was asked to all respondents who involved in the study. Findings from the field revealed that, in order to improve the WRS operations, payments should be done once and not for instalment to farmers. 52 (47.71%) respondents supported this idea. These respondents added that paying farmers at once will help them to budget and meet their needs because instalment payments made them fail to meet their objectives under schedule. Providing agrochemicals at the right time was another suggestion revealed from the study. 28 (25.69%) respondents reconciled with this notion. They further said that, receiving agrochemicals late made them to prepare their products improperly as a result having low harvests at the end of the season. Other suggested improvement were educating cooperative leaders and farmers whereby 26 (23.85%) respondents supported this aspect and farmers to be free from choosing kinds of subsidized agro-inputs as it was suggested by 3 (2.75%) of the respondents.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Based on the findings warehouse system has enormous advantages but mostly favours educated personnel who are capable of utilizing the knowledge provided by agricultural advisors making them to produce more when compared to less educated ones. The large numbers of farmers, who produce higher than others were the educated ones, who were also, were able to raise their capital and income after utilizing necessary principles of WRS.

Small holder farmers also enjoy with this system, since the system had improved the price stability and security of produce as well as subsides, because the price of cashew nuts has been increasing each season since the establishment of WRS in 2007 to date, and provision of agrochemicals as subsides assured farmers of the use of recommended agro inputs as per current studies done by various agricultural authority. Hence farmers are assured with their improved income from cashew nut production.

Trade facilitation was one of the benefits brought by WRS which facilitates trade on the sense that it is closer to farmers' residences as it has reduced the chain of trade, the system has improved security of farmers' products, and it is also friendly as it provides a room for business negotiation. Therefore introduction of WRS has facilitated the business as compared before the establishment of WRS.

Allowance of transparency in trade was another benefit brought by the system .The cashew nuts were sold every Friday in the open market involving all stakeholders openly making cashew nuts farmers know the collected and sold kgs of products This fact indicates that WRS has proved to satisfy small holder farmers and other cashew nuts stakeholders as revealed by the study. It was further noted that the previous experience before WRS establishment, a lot of complaints were aired out by smallholder farmers who thought that there was dubious or hidden business done when it happens the results do not match with their expectations as far as the weight per kg with the corresponding price.

Apart from these benefits it was also noted that the system had some challenges includes, lack of competent cooperative leaders knowledgeable enough on WRS, late and instalment payment which also cause ineffective preparation of their farm inputs, farmers lack freedom to choose subsidised agrochemicals, fraud to many cooperatives done by unethical cooperative leaders which some time leads to the lack of reliable statistics on sales and expenditure, and selling wet cashew nuts to increase weight which was one of the common cheating methods done by unfaithful farmers whereby in turn this caused lose of huge amount of unexpected weight of sold cashew nuts.

On the other hand, product fluctuation was reviled from the study, since the system did not subsidize farmers depending on the size of their farms rather depending on the quantity of produce sold as a result farmers receive irrelevant amount of subsidies in relation to the size of their farms which leads to low production in some of the seasons.

In order to improve the WRS operations, payments should be done once and not for instalment to farmers, since paying farmers at once will help them to budget and meet their needs because they will be able to meet their scheduled activities. Providing agrochemicals at the right time was another suggestion revealed from the study because receiving agrochemicals early made farmers to prepare their farms properly as a result having high harvests at the end of the season

Educating warehouse operators, cooperative leaders and farmers on WRS knowledge will help warehouse operators to effectively manage storage system, cooperative leaders to lead the cooperatives effectively and educated people are civilized to the extent that educated people will reduce unethical habits like cheating (selling wet cashew nuts). Many stake stakeholders do not understand some issues pertaining to WRS operation such as inspection, TBS, business regulations and standards, production and storage to mention few.

Lack of local industries for cashew nuts processing allows cashew nuts to be sold while unprocessed. This inhibits people to get employment from the industries as well as, the by-products of cashew nuts not to be used to produce other important commodities like oils and fertilizers.

5.2 Conclusion

In WRS the price is constant for all places that are in all Primary cooperative Societies as it is indicated by the government depending on the seasonal indicative price. This makes farmers to be sure of their income as indicative and approved price change by rising for each cashew nuts season. Price increase helped farmers to

increase their incomes which are reflected by changes in their daily life as they have enough money to cover life costs. They can easily get medical care and treatment for improving their health, get enough and reasonable education as they are capable of paying school fees, and most of them have purchased various means of transport such as motor cycles/Bajaji or motor vehicles.

Bonus payment in WRS enables farmers to be paid after profit have been obtained, which makes them to have an extra income to increase purchasing power throughout the year. The role of WRS in storage of farmer's products and provision of agro inputs ensures farmers on security of their products from theft or bad weather which may cause cashew nuts shrinkage as well as access to inputs every season.

Moreover, the storage documents given to Primary Societies and farmers (Certificate of charge and Certificate of pledge) enables them to secure loans from various banks, SACCOS and other Financial Institutes as they are used as collateral. Beside Warehouse Receipt System (WRS) is a transparent procedure to all stakeholders who are farmers, primary societies, cooperative unions, warehouse operators, warehouse keepers, banks and other financial institutes, Cashew nut Board and Government. The receipts, certificates and other documents are issued to farmers, Primary societies, Banks and other stakeholders concerned for storage and further purchase and payment procedures.

5.3 Recommendations

Based on findings from the study, the following recommendations are made.

(i) The government should formulate a clear policy governing the whole operations of WRS Tanzania and the policy should be specific to each

commercial products. The government has to rightly formulate cashew nut policy that will rule the business and all stakeholders have to abide and do the business as per established standards.

(ii) The government should work closely with stakeholders of cashew nuts to ensure the operations of WRS are effectively monitored. Government has to openly share its policies, regulations and standards that it has set so that the implementers should be aware of and smoothly cooperate with it for the mutual benefits of all stakeholders in the industry.

(iii) Farmers plus other stakeholders should be educated on the significances of WRS so as to encourage them to use WRS. This will add revenue to the government as it will be easier to collect taxes after sell.

(iv) The Government should provide agricultural utilities such as agrochemicals, (like Sulphur, insect sides) and seedlings to the Primary Cooperative Societies. These will be in a position to supply to farmers according to their capacity of production of cashew nuts as well as available land for establishment of new cashew nut farms.

(v) The Government should make sure that the number of registered Warehouses is increased so as to make the accessibility of it to all types and levels of Farmers.

(vi) The Government should make sure that home cashew nuts industries are established/set for cashew nuts processing which will be beneficial to all people such as increase the cashew nuts value, provision of employment; by-

products after cashew nuts processed (CNL) will increase the Nation and farmers income after selling.

(vii) The Government should make sure that all infrastructures are well kept for rural and urban so as to ease the operation of the warehouse receipt system.

(viii) The cooperatives should pay farmers as early as possible to enable them make preparation of their Farms as scheduled and

(ix) Farmers should be given options to choose subsidized agro inputs rather than keeping them in truck of the brought agro in inputs.

REFERENCES

Badiane O, F. Goletti, M. Kherallah, P. Berry, K. Govindan, P. Gruhn and M. Mendoza (1997). "Agricultural input and output marketing reforms in African countries: Final report", IFPRI, Washington DC.

Besley, T., (1994). *How do Market Failures Justify Interventions in Rural Financial Markets*. WorBank Research Observer 9, 27–47.

Budd, N., (2001). *The legal and regulatory framework for warehouse receipts in commodity distribution, credit and hedging*. Paper Presented at Workshop on Warehouse Receipt Financing: Making the Difficult Deals Easier and More Profitable, Amsterdam, July 9–11.by Smallholder Farmers in Kenya KENFAP.

Cohen, L. &. (2006). *Research Methods in Education (5th Ed).* London: Routledge Falmer.conference on best practices" Washington, June 2-4, 2003.

Coulter J. & Onumah G. (2001). "The Impact of Government Policy and Regulation on the Effectiveness of Warehouse Receipt Systems: The Case of Africa", Paper presented at Workshop on Warehouse Receipt Financing

Coulter, J., Onumah, G.E., (2001). *The Impact of Government Policy and Regulation on the Effectiveness of Warehouse Receipt Systems:* the case of Africa. Paper Presented at Workshop on Warehouse Receipt Financing: Making the Difficult Deals Easier and More Profitable, Amsterdam, July 9–11.

Coulter, J., Sondhi, J., Boxall, R., (2000). The economics of warehousing in Sub-Saharan Africa. African Review of Money, Finance and Banking, 97–114.

Coulter, J., Sondhi, J., Boxall, R., (2000). *The Economics of Warehousing in Sub-Saharan Africa*. African Review of Money, Finance and Banking, 97–114.

Coulter, J.P. and Onumah, G.E. (2002). The role of warehouse receipt systems in enhanced commodity marketing and rural livelihoods in Africa. *Food Policy*, Vol. 27, No. 4.

Coulter, J.P., Walker, D.J. and Hodges, R.G. (2007). Local and regional procurement of food aid in Africa: impact and policy issues. *Journal of Humanitarian Assistance*. www://jha.ac/

DFID (2009). "Road to Market", Field record of interviews of beneficiaries of market development projects in Africa produced for the Crop Post-Harvest Research Project, January 2005.

Fafchamps, M. and Eleni G.M., (2006). "Agricultural Markets in Benin and Malawi". *The African Journal of Agricultural and Resource Economics*, Vol 1, No 1, December 2006.

Forestier, P. & Bryde, P. (2003). Improving Access to Rural Finance through Regulated Warehouse Receipt

IFAD , (2009). Agriculture Marketing Systems Development Programme. Interim Evaluation

IFAD, Independent Office of Evaluation (2011). Rural Financial Services Programme

Jones, S., (1996). *Food Markets in Developing Countries: What do we Know?* Oxford Food Studies Group, UK (Working Paper No. 8).

KENFAP (2011). The role of Warehouse Receipt System and Financial Services in Improving Produce Marketing *Methods: Methods and Techniques.* 2nd revised edition. New Delhi: New Age International (P) Limited.

Kothari, C.R. (2010). *Research methods: methods and techniques.* 2nd revised edition. New Delhi: New Age International (P) Limited.

Kwadjo G.T-M (2000). “Inventory credit: a financial product in Ghana”, Paper presented at Conference on “Advancing microfinance in rural West Africa”, Bamako, February 22-25, 2000.

Kwadjo, G.T.-M., (2000). *Inventory Credit: a Financial Product, in Ghana*. Paper Presented at Conference on Advancing Micro-Finance in Rural West Africa, Bamako, February, 22–25, 2000.

Lyimo A. (2009). Warehouse Receipt System, RUDI Experience, Presented on ESSANET Nairobi Meeting Maymaking the diffi cult deals easier and more profi table, Amsterdam, July 9-11, 2001.North, D.C., 1990.

Onumah G. E. (2003). “Improving access to rural finance through regulated warehouse receipt systems”. Paper presented at international conference on “Paving the way forward for rural finance”, Washington 2-4 June 2003.

Onumah G. E. and Aning A. (2009). “Feasibility study towards establishment of commodity exchange in Ghana”, Official Report produced for the Securities and Exchange Commission, Accra, Ghana, August 2009.

Rashid S., Winter-Nelson A and Garcia P. (2008) Purpose and potential of commodity exchanges in African economies, IFPRI, Washington DC.

Saunders, M.N.K., Lewis, P. & Thornhill, A. (2009). *Research methods for business students*. 5th edition. Harlow: FT Prentice Hall.

Slater R and Dana J (2006). Tackling vulnerability to hunger in Malawi through market-based options contracts: implications for humanitarian agencies. Humanitarian Exchange, no 33, pp 13-17, March 2006

Stiglitz, J.E., (1993). *The Role of the State in Financial Markets. Proceedings of the World Bank* Annual Conference on Development Economics. World Bank, Washington.

Systems in Africa. Paper presented at conference on “paving the way forward for rural fi nance: an international

Teravaninthorn S. and G. Raballand *Transport Prices and Costs in Africa: A Review of the International Corridors*, The World Bank, Washington DC.

URT (2008). Agricultural Marketing Policy, Government Printers, Dar es Salaam

World Bank, NRI, FAO (2010) “Missing food: the case of postharvest grain losses in Sub-Saharan Africa, *World Bank, Washington*

APPENDICES

Appendix 1: Questionnaire for Small Holder Farmers

Dear Sir/Madam;

This questionnaire is a guide on research on "The role of Warehouse Receipt System in improving small holders farmers income in Mtwara region in Tanzania". You are humbly asked to spend few minutes of your valuable time to respond to questions provided in this questionnaire. You are hereby informed that the answers will be treated as confidential and will be only used for academic purpose only. Please do not write your name.

Instructions I: please answer the following questions by filling the blanks or putting a mark (V) in the appropriate box.

PART 1: DEMOGRAPHIC PROFILE

1. Gender: Male ☐ Female ☐

2. Which group do you belong?

   Age 18-35 ☐ 36-55 ☐ 56-65 ☐

3. Level of education

   i) Primary school ☐ ii) Secondary school ☐

   ii) College ☐ iv) University ☐

4. What is your experience about warehouse receipt system?

   .....

   .....

   .....

5. Do you see any benefit of using WRS in selling cashew nuts?

   YES ☐ NO ☐ If No give the reasons

   .....

   .....

6. What are the differences between the previous system and the new system of selling your dried raw cashew nuts?

   .....

   .....

   .....

7. What do you consider to be the major challenge facing the WRS to improve income from cashew nuts production?

   (i) Lack of reliable statistics on sales and expenditure ☐

   (ii) Fraud by cooperative leaders ☐

   (iii) Lack of competent cooperative leaders ☐

   (iv) Cheating of farmers to sell wet cashew nuts to increase weight ☐

   (v) Lack of freedom to farmers to choose subsidised agrochemicals ☐

   (vi) Late and Instalment payments ☐

8. Mention other challenges apart from the above challenges

   .....

   .....

   .....

9. How was your income in the old system of selling? .....

10. Are you paid on time?

    YES ☐ NO ☐

11. What are your suggestions to the government about WRS improvement?

(i).....(ii).....

(iii).....(iv).....

Appendix 2: Questionnaire to WRS Operators and Business Development Officer

INTRODUCTION

Dear Sir/Madam;

This questionnaire is a guide on research on "The role of Warehouse Receipt System in improving small holders farmers income in Mtwara region in Tanzania". You are humbly asked to spend few minutes of your valuable time to respond to questions provided in this questionnaire. You are hereby informed that the answers will be treated as confidential and will be only used for academic purpose only. Please do not write your name.

Instructions I: please answer the following questions by filling the blanks or putting a mark (V) in the appropriate box.

PART 1: DEMOGRAPHIC PROFILE

1. Sex Male ☐ Female ☐
2. Which group do you belong?

   Age 18-35 ☐ 36-55 ☐ 56-65 ☐
3. Level of education

   (i) Primary school ☐ (ii) Secondary school ☐

   (iii) College ☐ (iv) University ☐
4. How many Primary Societies are in your area? .....
5. How long do you take to pay farmers after depositing cashew in the warehouse?

6. Is the volume/supply of cashew nuts from farmers enough to suit with the market demand?

7. Are you satisfied with the quality of cashew nuts from Mtwara farmers?

   YES ☐ NO ☐

   If NO why .....

   .....

   .....

8. What are tha challenges which face WRS on improving the income of small holder farmers?

   .....

   .....

   .....

9. What are your suggestions to the government about WRS improvement

   (i).....(ii).....

   (iii).....(iv).....