ASSESSMENT OF THE EFFECTIVENESS OF WAREHOUSE RECEIPT SYSTEM IN CASHEWNUT MARKETING IN TANDAHIMBA DISTRICT

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT FOR THE REQUIREMENT FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN THE OPEN UNIVERSITY OF TANZANIA

2013

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled *Assessment of Effectiveness of Warehouse Receipt System in Cashewnut Marketing in Tandahimba District* in partial fulfillment of the requirements for the degree of Master in Business Administration at Open University of Tanzania.

…….

Dr. Salum Mohamed

(Supervisor)

…….

Date

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DECLARATION

I, Ayub Masali Mumi 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.

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Date

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DEDICATION

This work is dedicated to my family who gave me strength to face every day's life challenges.

ABSTRACT

The intention of the study was to assess the effectiveness of warehouse receipt system (WRS) in cashewnut marketing in Tandahimba district. Field data were collected from May to July 2013. The study used both primary and secondary data and they were analyzed using SPSS computer program.

The study found that WRS had brought some small improvement in farmers' income. It was shown that what farmers were getting after introduction of WRS in cashewnut marketing was slightly higher than before. This was achieved by enabling farmers to get better prices for their produce and gain access to credit from commercial banks. It was also found that farmers were paid in installment basis although majority of them did not like the mode since it associated with loss of money and time on frequently chasing for their payments. It was also agreed that WRS was protecting farmers against price fluctuation. When prices fell warehouse(s) used to stock RCN till the time when prices go high and sell at better prices for the farmers to set high income. Lastly the study found that market constraint experienced by farmers due to introduction of WRS were minimum price setting, lack of transparency in the system, improper measurements of the RCN, and lack of sufficient storage facilities in warehouse.

The study recommends that farmers should continue using WRS since the system is effective at improving their household incomes in the near future. They should be patient and pay more attention to the quality of their produce.

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LIST OF ABBREVIATIONS

ACPC	African Cashewnut Processors Co.LTD
AMCOS	Agricultural Marketing Cooperative Society
CBT	Cashewnut Board of Tanzania
CFC	Common Fund for Commodities
CORECU	Coastal Region Cooperative Union
NAC	National Advisory Committee
NRI	Natural Resource Institute
RCN	Raw Cashewnuts
TANECU	Tandahimba Newala Cooperative Union
UNOPS	Nations Office for Project Services
WRS	Warehouse Receipt System

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Problem

The ware house receipt is defined as a 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 trade counter-party which entitles the holder to take delivery of the commodity upon presentation of the Warehouse receipt at the warehouse (Onumah, 2003).

With the growing importance of logistics and supply chain management throughout the world, warehousing has emerged as one of the vital component of the supply chain. For that reason, globally, the warehousing industry has undergone significant changes in the last decades owing to the growth in world trade and expansion of international markets as well as increasing application of new technology (Patil, 2007). The Warehouse Receipt System (WRS) in Tanzania was introduced as a direct outcome of two related projects that were implemented together under the Ministry of Industry, Trade and Marketing; the coffee marketing development and

trade promotion, and improvement of cotton marketing and trade system in Eastern and Southern Africa. The launch workshop for the two projects was done in September 2000 in Arusha and the project activities started immediately. A project was signed between the then Ministry of Agriculture and Cooperatives and the United Nations Office for Project Services (UNOPS). Whereby parties agreed to implement a WRS in Tanzania as a pilot project and use two main cash crops (coffee and cotton) as pilot crops for a period of 36 months, then later to spread out the project to other cash crops.

Common Fund for Commodities (CFC) and the Government of Tanzania with UNOPS as an Executing Agency funded the project. The Natural Resource Institute (NRI) of the United Kingdom provided technical support to the local management unit of the project. The project was governed by the National Advisory Committee (NAC) composed of representatives from the government, and the coffee and cotton sub sectors. The NAC has a mandate to look at all matters related to the development of the warehouse receipt system in Tanzania to ensure the developed model will conform to the government policy of poverty reduction (TANECU 2012). This was followed by the enactment of the warehouse Receipt system Act no 10 of 2005 followed by its regulations of 2006. The main reason for the establishment of the warehouse system in the country was to stabilize the price of agricultural crops to the farmers.

The warehouse receipt system in cashew sector was started in the year 2008 in Newala Tandahimba and Masasi Districts in Mtwara Regions before being

disseminated in other areas of Tanzania in 2010/11. The reason is that these areas are the giant producers of the cashewnuts Tandahimba being a leader of them. The aim of the warehouse receipt system, apart from facilitating price stability is to guarantee farmers with the loans from the bank and using the stored crop as collateral until it is sold (CBT 2011). The farmers under this system are paid 70% of the farm gate price at the start and 30% is paid when the crop is sold in the designated auction. Then if the crop is sold over its breakeven point the excess amount is also paid back to the farmers through their AMCOS.

Moreover, the statistics show that the production of cashewnuts have increased after the introduction of the warehouse receipt system in the cashewnuts marketing in the country. Since the introduction of the system the production of cashewnut has increased to the level of 158,000 metric tones (Cashwenut Board of Tanzania 2012) which was never reached before the introduction of the warehouse receipt system. In which Tandahimba district is leading producer and in the year 2012 the production of the District has reached the level of 47,931 metric tones (Cashewnut Board of Tanzania, *ibid*). This shows that introduction of WRS foster production of cashewnuts, but did this increase of production associate with increase of farmer's income? In view of the fact that famers were complained of payment model, price drops below the farm gate price and other claims relating to the WRS.

1.2 Statement of the Research Problem

As stated above the statistics from the Cashewnut Board of Tanzania show that the production of cashewnuts have increased after the introduction of the WRS in the

cashewnuts marketing in the country; but given this statistics one cannot easily come with the conclusion that there was a direct linkage with the introduction of the WRS in the cashewnut marketing. This was proved in the statistics of 79,069 Metric tones and 75,367 metric tones in the year 2009 and 2010 respectively compared to 99,107 metric tones in the year 2008. Under this situation no one could link the existence of WRS and the increase of production because there was a drastic fall of production when the WRS was implemented.

Likewise some people were not happy with the system (Business Today,2009), as experienced in Tandahimba district, they were complaining that the system forced them to sell and being paid by installments on which 70% is paid at first when the cashewnuts were collected by the primary society and another installment of 30% of farm gate price was paid when the cashewnuts was sold to the traders from the warehouse. Whereby, they were not very much sure of the final payment which would depend upon the prices at the auction.

The terrible price fallen below the farm gate price had occurred during the last auction of the year 2012 in which maximum price of cashewnuts in Coast region was Tshs 800/= (CORECU 2012) per kilogram and in areas like Tandahimba the cashewnuts were sold at Tshs 1,300/= (TANECU 2012) per kilogram but the breakeven point was Tshs 1,514/= (CBT 2011) per kilogram. Conclusively farmers were complaining on the warehouse receipt system as the cause of this catastrophe. The study was aiming to provide a suggested solution to above problem and come up with the suggestions on how to improve the warehouse system.

1.3 Objectives of the Study

Defining study objectives is the most important step in designing a study question. Objectives decide interview topics, shape the questionnaires and guide analysis and reports while pointing the study in the right direction.

1.3.1 General Objective of the Study

The general objective of this study was to undertake *an assessment of the effectiveness of warehouse receipt system in cashewnut marketing in Tandahimba district.*

1.3.2 Specific Objectives of the Study

In order to achieve the stated general objective the proposed study had the following specific objectives.

i. To determine the income of the individual farmers before and after the introduction of the warehouse receipt system in cashewnut marketing.
ii. To identify mode of payment used by warehouse receipt system to pay farmers and the reasons behind it.
iii. To assess whether warehouse receipt system protect farmers against cashewnut price fluctuations in the world market.
iv. To identify any further market constraints experienced by farmers due to introduction of warehouse receipt system.

1.4 Research Questions

The study questions are a logical statement that progresses from what is known or believed to be true to that is unknown and requires validation.

1.4.1 General Research Question

In the study the general question will be; *what is the effectiveness of the warehouse receipt system in cashewnut marketing in Tandahimba district*?

1.4.2 Specific Research Questions

The study will have to answer the following specific questions

i. What is the income of the individual farmers before and after the introduction of the warehouse receipt system in cashewnut marketing?

ii. What is the mode of payment used by warehouse receipt system to pay farmers? And what are the reasons of using such mode?

iii. Does warehouse receipt system protect farmers against cashewnut price fluctuations in the world market?

iv. What are the market constraints experienced by farmers due to introduction of warehouse receipt system?

1.5 Significance of the Study

The main justification for this study based primarily on the importance of agricultural marketing in general and in cashewnut marketing in particular for the development of agriculture, improving foreign trade and securing food insecurity. Therefore, the critical analysis of cashewnut warehousing was very important before launching and implementing marketing development issues. The study result provided also general information for decision makers, planers, and other development stakeholder involved directly or indirectly in promoting agriculture. Besides, it provided valuable information to formulate warehousing development

programs, pinpoint constraints and recommend policy implications. It was hoped that the proposed study encourage and assist all those interested in the topic of agricultural development in our country and in other regions of the world to improve the conditions for and use of warehouse receipt system.

1.6 Scope of the Study

WRS study usually follows operational research questions. This implies that the study focused on the functioning of the warehouse and the relationship among the actors within the WRS. The study was limited to only cashewnut and besides, it covered a single district, Tandahimba as an initial and supply source of cashewnut in Tanzania.

1.7 Organization of the Study

Chapter one: In this chapter, the introduction and background to the study, statement of the problem, objective and study questions, scope of the study, and significance of the study and structure of the study was presented. Chapter two: It presented theoretical definitions of the study, theoretical review, conceptual framework and comprehensive review of the relevant research work done on related topics by the different authors. Chapter three: It outlined the features of the study design, study population, study area, sampling design followed, collection of relevant data and analytical tools used in the study. Chapter four: It devoted to present the main findings of the study through tables and present discussion of the results of the study. Chapter five: this chapter provided summary and suggest the policy implications arising from the findings of the study.

CHAPTER TWO

2 LITERATURE REVIEW

2.0 Introduction

Chapter two is the theoretical overview and discusses the literatures which the proposed study focused. This chapter gave the theoretical foundation for the study and the aim of this chapter was to ensure the reader that the study was at the cutting edge of the research in the chosen area.

2.1 Conceptual Definitions

The conceptual/theoretical definition gives the meaning of a word in terms of the theories of a specific discipline. This type of definition as sumes both knowledge and acceptance of the theories that the study depends on. According to Patrick (2007) theoretical definitions are common in scientific contexts, where theories tend to be more precisely defined, and results are more widely accepted as correct.

2.1.1 Warehouse Receipt System

The Warehouse Receipt is a document guaranteeing the existence and availability of a given quantity and quality of a commodity in storage for safekeeping; often used in cash and futures transactions instead of having to deliver the physical goods or commodities (www.investorwords.com/ warehouse receipt/21/January/2013). The warehouse receipt system is an arrangement that solves two problems: the lack of storage facilities and the difficulty of obtaining credit. These warehouses help

manage the food security issue and the marketing issue. It is a sustainable mechanism for increasing agricultural production, availability of good quality commodities and access to financial services. Overall the result is improved marketing of agricultural commodities (Onumah, 2010).

2.1.2 Marketing

Marketing is the process of communicating the value of a product or service to customers. Marketing might sometimes be interpreted as the art of selling products, but selling is only a small fraction of marketing (Kotler and Keller, 2012). As the term Marketing may replace "Advertising" it is the overall strategy and function of promoting a product or service to the customer. Therefore, Marketing is a process of finding out what the customer wants and meeting those requirements. Within the company, the marketing group has to consider customer values and customer satisfaction before considering offering a product. Marketing is part of our everyday world, and can be perceived everywhere and every time. At any time, everyone has been exposed to different kinds of marketing or advertising depending upon personal necessities (Kotler and Keller, 2012).

2.2 Theoretical Literature Review

A theory is an explanation which helps to understand and making predictions about a given situation. Theory is constructed by a set of sentences consisting entirely of true statements about a situation under consideration. However, the truth of any one of these statements is always relative to the whole theory. Therefore the same statement may be true with respect to one theory, and not true with respect to another (Mohr,

2008). This section of the study discusses theories that relates to the subject of the study.

2.2.1 Control Theory

Control theory provides a procedure for the construction of a control law. The control law specifies which input value to use for every state of the system. In the present day, the motivation for control theory shifts with the development of technology and with the needs of society (Schuppen, 2000). Control theory is an interdisciplinary branch of engineering and mathematics that deals with the behaviour of dynamical systems. The desired output of a system is called the reference. When one or more output variables of a system need to follow certain reference overtime, a controller manipulates the inputs to a system to obtain the desired effect on the output of the system.

According to this theory, officers of WRS are the controller of the system and responsible for any impact (output) caused by the system, whether good or bad, since they are the one to make policies (input) for the system. Therefore, as the proposed study aimed at assessing impact of WRS in Tandahimba, the result of the study will be used to judge efficacy of officers of WRS in management (control) of the system.

2.2.2 Participation Theory

Participation theory forwarded the concepts of intimacy, consensuality, coordination, competence and pretension as important in understanding and establishing true and lasting participation. The theory defines intimacy as the closeness and camaraderie

that is created when partners are able to satisfy each other's needs. According to the participation theory, consensuality and coordination are pillars of every successful partnership. Without the partner's consent, there is a risk of alienating them through coercion. Unless dissent is voiced, agreements are pretended. If one decides to do something but insists, it must be done his/her way, his/her partner(s) become irritated and frustrated. In order for development projects such as WRS to satisfy the deepest needs of its beneficiaries, they must first come to an agreement regarding what to do. Participation theory helps us to appreciate the difficulty inherent in reaching a consensus (Raymond, 1996).

The scopes of the WRS management issues that are often addressed by agricultural agency planners outweigh technical considerations. Most planners, however, are not formally trained to organize and manage the complex human and organizational problems associated with public participation programs. Paradoxically, Wright (1976) also stated that participation is valuable; it creates a community where people show more respect for one another. Thus, public participation is at the heart of development. And in relation to the study we can say that farmers' participation in the WRS foster understanding and development of the system. They are not only the ultimate beneficiaries of system, but they are also the agents of system.

2.3 Empirical Literature Review

A review of past research helps in identifying the conceptual methodological issues relevant to the study. This enables the researcher to collect information and subject them to sound reasoning and meaningful interpretation. A brief review of the earlier

research work related to the present study is presented in this subsection. However, researcher has noticed that there is limited number of studies on the impact of WRS in cashewnut marketing. Therefore, the available literature pertaining to this study had been reviewed under different headings.

2.3.1 The Warehouse Receipt system over the World

Alaouze *et al.* (1978) used dynamic programming to examine whether Australia should store wheat for subsequent sale at higher prices. The dynamic programming model was developed assuming that the demand for Australian wheat is perfectly elastic at the world price. The major conclusions of the study were: apart from interest rate, the most important factor affecting storage in any season was the price in the following season; the holding of a speculative reserve to be sold in seasons of episodic price increased was generally unwarranted; the optimal policies associated with simulations of the historical price series observed for the period 1953-54 to 1971-72 (when Australian wheat prices had a stable mean and a low variance) indicate that a storage policy based on storing wheat in seasons of below average prices would have been wrong more than half a time.

Recto (1980) undertook a study with the aim of improving the rice marketing system by determining optimal sizes and locations of warehouses and investigating ways by which the marketing costs of the product could be minimized. He examined the transport and storage systems in each of the 13 regions of Philippines during 1975-77. He found that warehousing facilities were inefficiently located, with shortages of storage facilities in some regions and surpluses in others. There had been an

improvement in the production of rice, but there was no corresponding improvement in marketing infrastructures and services. A large amount of the crop could be lost through inefficient handling and processing.

Ochoa, (2006) conducted a study in Jalisco, Mexico to examining if the WRS provides a better method of collateralizing crops for access to credits, using smart cards as a shortcut for cash withdrawals. By using agency theory the author reported that with the WRS the risk is not intended to be eliminated; instead it is a mechanism where the risk is shared between the producers, warehouse management and banks. In the study surveys were employed in order to obtain a broad picture about how farmers finance their activities, to provide knowledge concerning their agricultural and post harvest practices and their perception concerning the WRS and its feasibility. The result of the study shown that, almost half of the farmers agreed with the method of collateralizing their crops after harvest and using smart cards to withdraw cash from automated teller machines. This was because most of the farmers had been receiving financial support from the informal credit sector such as warehouse officers or suppliers and faces so several problems.

Patil (2007) in his comparative study he examined performance of warehousing in Karnataka, India. The North Karnataka region of Karnataka state was considered for the study to provide representative sample. He used both primary and secondary data. The data pertaining to establishment charges and maintenance cost like rent of warehouse, equipments, insurance, disinfestations charges, number of warehouses, capacity, depositor-wise utilization, paid up capital, total assets, gross receipts,

expenditure and profit of the selected warehouses were collected for the period from 1991-92 to 2004-05. A total of 18 warehouses were selected at the rate of 6 warehouses in each region of Hubli, Raichur and Gulbarga covering North Karnataka. Simple tabular analysis was followed to analyse data. The study found that high cost of storage keeps farmers away of using warehouses, especially for the small farmers warehouse operators did not give good response during the time of storage. The study concluded that, it is therefore, advised that warehouse owners have to treat that all the customers (big and small farmers) are equal.

2.3.2 Warehouse Receipt System in Africa

Onumah (2002s) Conducted a study in warehouse system In Africa in general following the trade liberalisation which affected most of African Countries especially those of the sub- Saharan, focusing the implementation of the system in Zambia. The specific objective of the study was to link between rural livelihood improvements with the introduction of the warehouse receipt system in Africa. Onumah pointed out that the Warehouse receipt system in Zambia has made easy the accessibility of rural financing by attracting deposit from small farmers, formalize the transactions and database so that the banks can use the available information to evaluate loan facilities to the farmers. The most aspect on that study was that the farmers could get loans by using the stored crops under the warehouse as collateral.

UNCTAD (2009) reviewed warehouse receipt system in Zambia, Malawi and Madagascar. The research used secondary data from agricultural organizations at national and local levels which were purposively sampled based on the functions and

participation in the WRS as well as some community Banks. The research examined different cash crops including cashewnut. It was reported that as far as could be ascertained, the WRS in cashew system had improved producer prices for raw nuts, but it had issues calling for more in-depth study, monitoring and evaluation in all these countries. It was also reported that public warehousing has developed much more slowly compare to private warehousing in the grain sector, because of the difficult policy environment with politically-sensitive food crops; public WRS in Malawi was the worst. It was also concluded that among all the three surveyed countries Madagascar had established a good regulatory framework in WRS. Madagascar had launched a regulated system involving the use of electronic warehouse receipts which had been well received by farmers, and even more so by bankers.

KENFAP (2011) conducted a study with the aim of improving produce marketing by smallholder farmers in Kenya through Warehouse Receipt System and Improving access by smallholder farmers to financial and insurance services and to secure markets (through contract farming) in maize marketing. Secondary and primary data was collected in main maize growing areas which covered Rift valley, Eastern, Western and Parts of Nyanza in Kenya. One hundred individual farmers were randomly sampled. The study revealed that there was inadequate awareness on WRS and mainly accessible to large scale farmers & traders (90%) with limited participation of smallholders in groups (10%). Majority (85 %) of the farmers interviewed did not meet quality standards especially moisture tests and minimum quantity 10 metric tones (111 bags of 90kg) required to earn a Warehouse receipt.

The result of the study established that there was No policy & legal framework in place to guide the process.

2.3.3 Warehouse Receipt system in Tanzania

Rweyemamu (2000s) conducted a study to examine performance of cashewnut industry in Southern Tanzania under the policies of market liberalization which was introduced in Tanzania 1992. He looked at the activities in the crop output market. The specific objectives of the study were to assess production performance of cashewnuts after liberalization, identify institutional changes that have taken place, and assess the behavior of market participants and how they influence price and marketing costs. The study was based on secondary sources of information where various documents and reports were reviewed as a basis for making assessment. The study found that, liberalization measures had led to strong private sector activity in cashew purchase and export. However, the partially liberalized industry still suffers from significant weakness that impairs the production and marketing system, resulting from both market failure and government interventions. The output market was found partially competitive. As for inputs, there is lack of demand caused by failure of the market for seasonal credit. Government interventions in terms of the structure of levies and activities of input trust funds were also responsible for reinforcing some of the difficulties.

Yusuph, (2009) from Sokoine University of Agriculture. Morogoro, Tanzania, who made the research in Mtwara, Region, He investigated that Economic Assessment of the Warehouse Receipt System for Cashew Nut Marketing In order to bridge the gap

in profitability between farmers and other players in the system, setting of an indicative price should base on the costs of production rather than the world market price per se.

Regarding socio-economic factors affecting cashew nut production, the study recommends planting of new cashew nut trees preferably short term varieties. This will enable farmers to generate increased quantity and quality of cashew nuts.

The findings show that, as far as the WRS is concerned there is no room for payments to be accomplished at once. If that the case then, the government should find a way of harmonizing the guarantees to enable the farmer to get 90% of the indicative price at first installment. Many farmers in the study area lack alternative sources of generating income; hence paying them 60% of the farm gate price is quite questionable towards their livelihoods. The high interest rates from the bank, gives an indication that the risk behind cashew nut business is quite big. Here, the government is advised to share such risk with the bank so that the interest charges get reduced. This is only possible by increasing the guarantee to 100%.

The system right from the grass root is non-transparent as no training was equally given to all players. The farmers are confused about the system and do not fully understand it. The impact here is that, it diminishes their ability to lobby for effective reform. Thus, the government is advised to give detailed training to all players.

2.4 Research gap

The literature reviewed illustrated different theories and explained how they relate to the WRS. The literature also reported different studies already conducted in this field

and how the Authors carried out their research on cashewnut marketing outside and inside Tanzania but they had not comprehensibly explain impact of WRS in cashewnut marketing to farmers. The researcher wanted to understand this missing information on impact of WRS to Tandahimbas' cashewnut farmers and bridge the knowledge gap on this area as well as add new approaches in the WRS researches for the future researchers to adapt.

2.5 Conceptual Framework

The conceptual framework is an approach showing either in graphical or in a narrative forms the main points to be studied in a work (Amofah and Ijaz, 2005; Miles and Huberman, 1994) as cited in (Oduro and Sobotie, 2009). Based on the purpose of the study three investigative questions have been stated in chapter one to guide the research.

In the previous section above (section 2.4), different kinds of empirical studies have been exposed dealing with WRS. In this study of *assessment of effectiveness of warehouse receipt system in cashewnut marketing* researcher sought to consider what was below in answering the aforementioned investigative questions.

2.6 Theoretical Framework

The warehouse system is the process of receiving keeping and selling the crops in through the designated warehouse operators. The crops under warehouse are used as collateral of loan funds provided by various financial institutions. In this case the system itself involves various players like farmer's traders, Institutions and banks (Yusuph 2009). In this study the players are grouped under two variables. A variable

is a characteristic that can assume two or more properties. If a property can change either in quantity or quality, then it can be regarded as a variable. In the study there will be three types of variables; independent variables, dependent variables and intervening variables (Kenneth 2005).

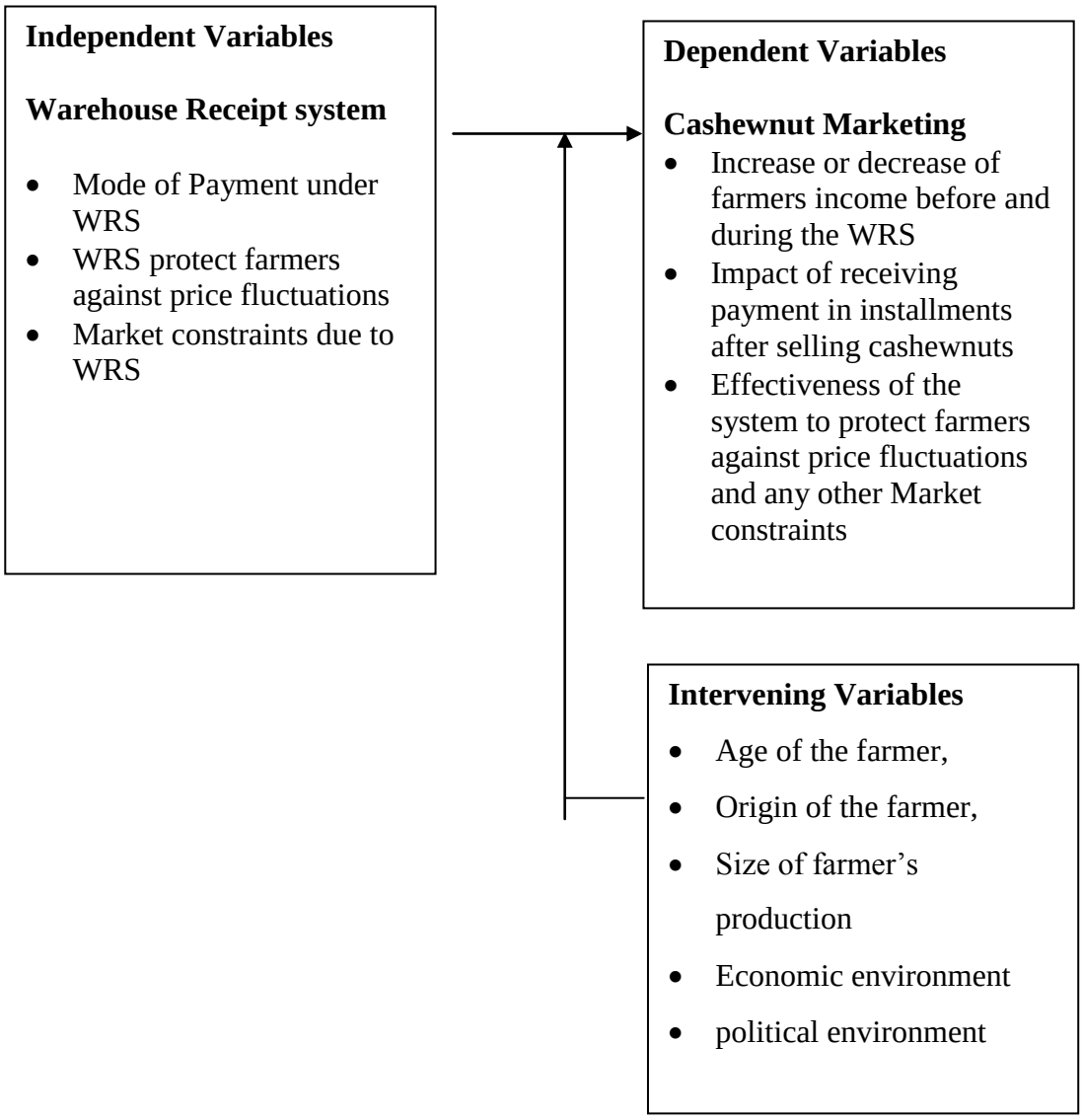

Figure 2.1: Conceptual Model for Impact of WRS in Cashewnut Marketing

Source: Researcher

2.6.1 Farmers and AMCOS

The warehouse system in the cashewnut marketing in Tanzania starts by farmers to collect their crops from farms and sell them to the local Agricultural Marketing cooperative societies (AMCOS) at 70% of the farm gate Prices. The Agricultural Marketing cooperative societies buy raw cashewnut from farmers and send them to the designated warehouse for storage. During the offloading officers from the Cashewnut Board of Tanzania (CBT) and the cooperative union are present to make sure that the right quantity and quality of the cashewnuts are entered into the warehouse. It is during this time where the samples are taken to test for quality by CBT Staff and the certificate is issued.

2.6.2 Warehouse Operator

The warehouse operator issue the warehouse receipt and witnesses the quality assessment procedures and release the quantity upon receiving release order from the Banks.

2.6.3 Sales Committee

From time to time the sales committee sits in order to determine the price to sell cashewnuts to the exporters and processors. The sales committee is formed by the members of CBT, Cooperative Unions and cooperative societies. The exporters are invited to submit their closed tenders in the selected tender boxes declaring the quantity and the price of cashewnut the buyer will want to bid. When the buyer wins the tender he will be given an invoice by the Cooperative Union (TANECU). The exporter is advised to pay the amount to the AMCO’s Bank which had granted loan

to the AMCOS to enable it to buy the cashewnut.

2.6.4 Financial Institutions

The Bank grants loan facilities to AMCOS for buying the crop and take it to the designated warehouse for storage. At the same time the banks receives all the proceeds on sales of cashewnut and deduct its principal amount of loan and interest. The remaining amount is sent back to the respective AMCOS for final payment of 30% and bonus if any to the farmers.

2.6.5 Independent Variables

An independent variable is the variable researcher has control over, what researcher can choose and manipulate. It is usually what researcher think will affect the dependent variable (Patton, 1990). The identified independent variables for the proposed study as shown in conceptual model above were: income of the individual farmers, mode used by WRS to pay farmers, WRS protect farmers against price fluctuations, and market constraints due to WRS.

2.6.6 Dependent Variables

A dependent variable is what researcher measure in the study and what is affected during the study. The dependent variable responds to the independent variable. It is called dependent because it depends on the independent variable (Patton, 1990). In this study researcher related what had been known to be independent/exploratory variables with impact of WRS to farmers. Therefore impact of WRS was considered as dependent variable of the study.

2.6.7 Intervening Variable

An intervening variable is a hypothetical internal state that is used to explain relationships between observed variables, such as independent and dependent variables, in empirical research (Edward, 1938). Thus facilitates a better understanding of the relationship between the independent and dependent variables when the variables appear to not have a definite connection. In the study age of the farmer, size of farmer's production, economic environment and political environment were considered as intervening variable this was because it had been showed in other studies that they had influence in risk analysis and management within an organization. Researcher used the said variables above as intervening factors since it was necessary to make sure that the potentially moderating effect of these factors were minimized.

2.6.8 Derivation of Hypothesis

All research studies are guided by a proposition, construct or hypothesis. A hypothesis is a testable proposition. In other words, it is a statement that may be judged as supported or not supported through testing in relation to an observed phenomenon (Blumberg et al., 2005). Leedy and Ormrod (2005) further noted that a hypothesis guides a research study in seeking direction based upon a supposition (or a reasonable guess or educated conjecture) that is held in ambiance until facts are available and have been interpreted to support or reject the hypothesis. In this way, a hypothesis: facilitates identifying the facts that are relevant to the study from a mass information; serves to guide the direction of study; facilitates the selection of an appropriate form of research design that might solve the problem; and finally

provides a basis for making conclusions (Blumberg et al., 2005). Therefore the following hypotheses (and associated alternative-hypotheses) were tested in view of objectives stated in chapter one above:

Hypothesis 1: ($H1_0$) the income of the individual farmers before the introduction of the WRS in cashewnut marketing was higher than after introduction of WRS.

($H1_1$) the income of the individual farmers before the introduction of the WRS in cashewnut marketing was lower than after introduction of WRS.

Hypothesis 2: ($H2_0$) the reasons for WRS to pay farmers in installments and not in a lump sum is significant.

($H2_1$) the reasons for WRS to pay farmers in installments and not in a lump sum is not significant.

Hypothesis 3: ($H3_0$) WRS protect farmers against cashewnut price fluctuations in the world market

($H3_1$) WRS does not protect farmers against cashewnut price fluctuations in the world market.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

It is understood that methodology is the strong foundation for systematic and scientific research or investigation. It is imperative to give the details of investigation and methods adopted by the investigator in finding out the fact or problems. The methodology followed was presented under the following heads: study strategy and design, study population and area, sampling design and procedures, type of data and methods of analyzing.

They are two research strategies; one is quantitative strategy and the second is qualitative strategy (Rajuldevi, *et. al* 2009). Quantitative strategy consist of quantitative data, this type of data includes information which can be measured numerically. The quantitative studies are considered to be more precise and they give better possibility for generalization than the qualitative studies. While qualitative data is more sensible and creates deeper understanding of a specific research area and answers questions like 'Why'.

This is considered as soft data and aims at capturing qualities which are neither quantifiable nor reducible to numbers such as feelings, thoughts, opinions and experiences. This approach is basically interpretive approach to knowledge and relies heavily on the verbal data and subjective analysis and has very less use of numbers and statistics (Rajuldevi, *et. al* 2009). As far as this study was concerned, the data

collected was more or less qualitative in nature which was collected using a questionnaire. Although there were some questions in the questionnaire which start with “How many”, “How much” etc, the only intention of the research was to have a comparison and the data collected were used to perform complex statistics. Therefore the study was mainly a qualitative one in spite of having some numerical values on some occasions.

3.2 Research Design

Research design is about turning research questions into the research project (Robson 2002). According to Palit and Hungler the term research design refers to the plan or organization of scientific investigation, designing of a research study involves the development of a plan or strategy that will guide the collection and analyses of data (Palit and Hungler, 1985). It means that in order to answer research questions, the appropriate design, strategies, methods and techniques should be chosen. Yin (1994) proposes that the types of research questions determine the most suitable design.

Fellows and Liu (2003) describe several types of research design, e.g. descriptive, exploratory, explanatory, instrumental and interpretive. The study was of a descriptive type. But the research questions in this study focused mainly on “how” questions. To answer this type of question, an exploratory design is suggested (Yin 1994). The broad purpose of exploratory research is the investigation of a relatively unknown research area in order to gain new insight into the phenomenon being studied (Malterud 2001).

3.3 Study Area

The study has been conducted in Tandahimba District as a sample of all the other places because it is one of the districts selected in the pilot project of the warehouse system in the country. Tandahimba is one of the districts in Mtwara region. On top of that Tandahimba is the giant producer of cashewnut in the country over other places. Tandahimba district is located in Southeast part of Tanzania mainland. It is one of the six districts forming Mtwara Region. It lies between latitude 10^{o}-11^{o} south of equator and Longitude 37^{o} - 40^{o} east. The District borders with Mtwara Rural District in the East, Ruvuma River in the south making a boarder with Mozambique, and Newala District in the west, and Lindi District in the North.

The district covers an area of 1,581 square kilometers and is divided into three divisions of Namikupa, Litehu and Mahuta with a total of 22 wards namely, Chaume, Chigungwe, Kitama, Luagala, Lukokoda, Lyenje, Mahuta, Maundo, Michenjele, Mihambwe, Milongodi, Mdimba Mnyoma, Mkonojowano, Mkoreha, Mkwiti, Mnyawa, Namikupa, Nanhyanga, Naputa, Ngunja and Tandahimba respectively, which are further divided into 157 villages with 461 Hamlets. The District has 157 registered villages, 22 wards and 3 divisions.

3.4 Study Population

A population consists of the totality of the observation with which researcher is concerned (Walpole and Myers, 1998). The study problem required assessment of impact of warehouse receipt system in cashewnut marketing in Tandahimba for that reason officers of Tandahimba Warehousing Cooperative Society and cashewnut

farmers were the one with more information concerning with WRS in the study area. And they were the one formed primary target for the issues under study. In this case cashewnut traders were eliminated in the study.

3.5 Sampling Design and Procedures

A sample was taken from the population in order to make a generalization of the population as a whole (Strydom, 2005). The study required a focus on a targeted sample of officials of TANECU and AMCOS who are supervisors of WRS in Tandahimba and cashewnut farmers who are direct beneficiaries of the WRS in the study areas mentioned. Two sampling techniques used: purposive and convenience.

Purposive sampling was used because it is recommended when sample elements and locations are chosen to fulfill certain criteria or characteristics or have attributes under study (Peil, 1982; Mbilinyi, 1992), while convenience sampling refers to sampling obtaining units of people who are most conveniently available.

Up to this point, Tandahimba district had been selected purposively for the reasons explained in the subsection above. The officers and farmers were selected through convenience method. Therefore, the criteria for selecting respondents from the population were as follows:

i. Being an officers of WRS in Tandahimba (TANECU and AMCOS)
ii. Being a cashewnut farmer living in Tandahimba
iii. Being a cashewnut farmer who have used WRS at least in the past two years

Table 3.1: Sample Frame of Respondents-*Frequency Table*

	Frequency	Percent
Farmer	61	93.8
Officers of WRS	4	6.2
Total	65	100.0

Source: Field Data

The planned total sample was 100 respondents. But the study managed to get total of 65 respondents. This is equal to 65% of the planed respondents and was distributed as follows: four (4) were WRS's Officers and 61 were farmers.

3.6 Methods of Data Collection

It is a well known fact that employing various suitable methods of data collection helps a researcher evaluate his/her data source and to detect inconsistent answers. Following a suitable methodology enabled a researcher to collect valuable data for his/her study, analyze and present them in a chronological manner. In the light of this, various sources of data collection methods were adopted in order to obtain a reliable data and achieve the stated objectives of this study. This entailed primary and secondary sources of data collection.

3.6.1 Primary Data

The primary source of data was especially collected so as to elicit the first hand information about the functioning of cashewnut WRS and Tandahimba Agricultural Marketing Cooperative Society (AMCOS), Tandahimba Newala Cooperative Union (TANECU) and also problems encountered by the user group and the officials of AMCOS and TANECU.

3.6.2 Secondary Data

Secondary data are those data obtained from literature sources. These are the ones that have already been collected by the other people for some other purposes. These are second hand information and include published ones (Sunders et al, 2000). In this regard information were fetched from documentary sources such as books, journals, newspapers, reports, articles and other research related to this study. The literature reviewed serve as both theoretical and empirical base for the analysis of the data collected. It also supplemented the information gathered during the fieldwork. However it is wise to know that secondary data must be used with caution (Patricia 2008). Such data may not give the exact kind of information needed, and the data may not be in the most suitable form. Therefore, the process paid great attention to the precise coverage of all information in the form of secondary data.

3.7 Data Collection Tools

The researcher used both primary and secondary sources of data collection. The primary source includes interview and questionnaires as well as document review for the case of secondary data.

3.7.1 Interviews

Maxwell (2005) states that interviews enables a researcher to collect rich data that is both detailed and varied enough to provide a revealing picture of what is going on. Interview is considered a useful method of data collection and as the first direct way of obtaining information. Interview is to listen to what people say about their lives, listen to their views and opinions in their own words, and learns from their view side

daily life experiences. Interview in this study included both face to face and phone methodologies. The exercise involved both officers of WRS and clientele of WRS (famers) who were interview separately to avoid improper information due to fear of exposing the sensitive matters. Face-to-face interview was conducted by researcher, in which he interviewed officers and clientele in selected area on matter under question. Phone interview were collected primarily by phone calls with the audiences, when impossibility of direct contact because of the distance arose. However interview were conducted in accordance with the policies of the selected credit scheme and the names of the respondents were not recorded.

3.7.2 Questionnaire

This is the technique of collection date beyond the physical reach of the researcher (Kotheri, 2004). According to Collis and Hussey, (2003) a questionnaire is a list of carefully structures questions, chosen after considerable testing, with the view to eliciting reliable responses from a chosen sample. Easterby et al (1991) state that although questionnaires seem simple to use and analyse, their design is not simple as the main decisions to be made in terms of their design, centre around the type of questions to be included and the overall format of the questionnaire. Based on this fact, questionnaires need to be constructed according to certain principles. The rationale behind using the questionnaire as a data collection method, it is less expensive and less time consuming.

Most of the data in the study were collected through the use of questionnaires centered on the impact of WRS to cashewnut farmers, and the questionnaires were

collected by the researcher alone. Actually researcher used both open and closed-end questions in questionnaires so as to get diverse view of the officers and farmers who were subjected to the study in this matter. A specimen of the questionnaire is available to the appendix of this study.

3.8 Data Reliability and Validity

In establishing trustworthiness of the research, three concepts were usually taken into account validity, reliability and generalizability (Robson 2002). Validity is concerned with the accuracy of the results.

3.8.1 Reliability

Reliability refers to obtaining the same results when repeating exactly the same study and following the same procedures. Generalisability is about applying research results to other situations or populations. In order to ensure reliability, all the steps of the research process were documented. The completed questionnaires were numbered before sent to respondents. All interviews was audio-typed and transcribed.

3.8.2 Validity

Triangulation is a widely used strategy to facilitate validity of the research. Triangulation involves use of multiple sources (data triangulation), methods (methodological triangulation), investigators (observer triangulation) and theories (theory triangulation) (Robson 2002). In this study three types of triangulation were used. Data triangulation was achieved by using several sources of data, i.e. officers

and farmers. Use of two different methods, questionnaire and interviews, resulted in methodological triangulation.

It is often argued that bias might be created when respondents answer the questionnaire. This bias may be the result of misunderstanding and misinterpretations or a desire to look better by answering correctly. Therefore, the methodological triangulation by using an alternative method (interviews) was extremely important for this study. Observer triangulation was obtained by involving scientific advisors in the interview process and cooperating with other intellectual (researcher's colleague) in discussing the results.

3.9 Data Processing and Analysis

Analysis is an interactive process by which answers to be examined to see whether these results support the hypothesis underlying each question (Backstorm and Cesar, 1981 cited in Hallaq, 2003). When the completed questionnaires were collected, data were entered into the Statistical Package for Social Science (SPSS). All questions and sub-questions were converted into variables. Each answer alternative was coded using value labels. With SPSS help frequencies, means, distributions and rankings were obtained. In order to illustrate statistical data, tables were constructed. The analysis of questionnaire data formed a basis for the interviews.

Interview is an example of qualitative data and the aim of the analysis is to determine the meaning of data (Fellows and Liu 2003). Therefore the researcher tried to find patterns, and understand the respondents' perceptions, opinions, and views of the

study area. All interviews were audio-taped and transcribed. It is important to mention here that transcribing is a very time-consuming task. As a large part of the interviews were structured, many questions followed the same order in each interview. This method gave a quite straight structure of answers and eased the processes of transcription and analysis. The most interesting and illustrative quotations were selected from the interviews and used in the presentation of results.

3.10 Ethical Issues

Research ethics relates to the way one formulates and clarifies one's research topic, design one's research and gains access, collects data, processes and stores the data, analyses data and discloses the research findings in a moral and responsible way (Sauders et al. 2007). Different codes and considerations were applied to different stages of the research, for example: Negotiating access: participants' rights to privacy were respected and credibility was established. Respondents were informed of the option to stay anonymous, to ensure that the information were confidential and for the purpose of the study alone. Ethical consideration during data collection, storing, analysis and reporting: the researcher had prepared to sign any confidentiality agreement with the entities that prefer to be anonymous. Privacy of the participants was respected and they were under no obligation to provide sensitive data or trade secrets. Personal data were kept securely only used for the intended purposes.

CHAPTER FOUR

4.0 PRESENTATION OF DATA, ANALYSIS AND DISCUSSION

4.1 Introduction

The previous chapter, Chapter Three, explains the designed methodology in this research, plus key elements in data collection and analysis as well as validity and reliability of the study. This chapter presents the researched results of the study based on the completed questionnaires and interviews with cashewnut farmers and WRS's Officers in Tandahimba District. The chapter had two sections, in which section one presented demographic characteristics of the respondents and section two presented results to the study objectives.

4.2 Demographic Characteristics of Respondents

The results that follow show the sample characteristics. Cross tabulations were used for presentation of sample characteristics. The respondents' characteristics include gender, age, level of education, and experience in cashewnut production. The results from the cross tabulation was presented as follows:-

4.2.1 Gender Distribution of Respondents

The results in the Table 4.1 below were generated using Chi-square test in order to explore the distribution of gender of respondents. The result shows that there was no significant difference between farmers and WRS's officers in their gender ($\chi 2$ = 0.685, df=1, p= 0.542). However, the result shows that male were more active in cashewnut farming as well as in management of WRS than female. Whereby, more than three quarters (85%) of responded farmers were male while female farmers

occupied 15% of responded farmers. In the management of WRS all responded officers where male and its true researcher did not find any female WRS's manager in the studied area. This was because the nature of job in WRS needed muscularity character to perform the work. However, this could be because the management positions in rural areas were commonly dominated by men in most public activities.

Table 4.1: Gender of respondents by Categories of Respondents- ***Crosstabulation***

			Category of respondent		
			Farmer	Officers of WRS	Total
Gender of respondents	Male	Count	52	4	56
		% within Category of respondent	85.2%	100.0%	86.2%
		% of Total	80.0%	6.2%	86.2%
	Female	Count	9	0	9
		% within Category of respondent	14.8%	.0%	13.8%
		% of Total	13.8%	.0%	13.8%
Total		Count	61	4	65
		% within Category of respondent	100.0%	100.0%	100.0%
		% of Total	93.8%	6.2%	100.0%
X2= 0.685		**df = 1**	**p= 0.542**		

Source: Field Data

4.2.2 Age Group Distribution of Respondents

The results in the table (**Table 4.2**) below were generated using Chi-square test in order to explore the distribution of the respondent categories by age.

Table 4.2: Age group of respondents by Categories of Respondents-*Crosstabulation*

			Category of respondent		
			Farmer	Officers of WRS	Total
Age group of respondents	20-29 years	Count	3	0	3
		% within Category of respondent	4.9%	.0%	4.6%
		% of Total	4.6%	.0%	4.6%
	30-39 years	Count	10	0	10
		% within Category of respondent	16.4%	.0%	15.4%
		% of Total	15.4%	.0%	15.4%
	40-49 years	Count	18	1	19
		% within Category of respondent	29.5%	25.0%	29.2%
		% of Total	27.7%	1.5%	29.2%
	50 and above	Count	30	3	33
		% within Category of respondent	49.2%	75.0%	50.8%
		% of Total	46.2%	4.6%	50.8%
Total		Count	61	4	65
		% within Category of respondent	100.0%	100.0%	100.0%
		% of Total	93.8%	6.2%	100.0%
X^2= 1.371		**df = 3**	**p= 0.712**		

Source: Field Data

There was no significant difference between farmers and WRS's Officers in their age group ($\chi 2$ =1.371, df= 3, p=0.712). In all categories mentioned (farmers and WRS's Officers) respondents had advanced in age. In case of WRS's Officers, all (100%) officers had more than 40 years old whereby three quarters of them were above 50 years old. For the farmers all most half (49%) of respondents had more than 50 years

old, one third (29%) were aged between 40-49 years old. Therefore it can be interpreted that youth in the studies society did not actively engaged in the cashewnut productions. Moreover it can be said that the studied had respondents who have involved in cashewnut production for long and have seen a lot in the cashewnut industry.

4.2.3 Education Distribution of Respondents

The results in the table (Table 4.3) were generated using Chi-square test in order to explore the distribution of the respondent categories by their level of education.

Table 4.3: Education qualification of respondents by Category of Respondents- ***Crosstabulation***

			Category of respondent		
			Farmer	Officers of WRS	Total
Education qualification of respondents	Primary	Count	60	4	64
		% within Category of respondent	98.4%	100.0%	98.5%
		% of Total	92.3%	6.2%	98.5%
	Sec/certificate	Count	1	0	1
		% within Category of respondent	1.6%	.0%	1.5%
		% of Total	1.5%	.0%	1.5%
Total		Count	61	4	65
		% within Category of respondent	100.0%	100.0%	100.0%
		% of Total	93.8%	6.2%	100.0%
X^2= 0.067		**df = 1**		**p= 0.938**	

Source: Field Data

There was no significant difference between farmer and WRS's Officers in their level of education ($\chi 2$ =0.067, df=1, p=0.938). Nearly all respondents had primary education qualification, except for one (1.6%) farmer who has secondary school qualification. Therefore it can be interpreted that in the studied society; cashewnut production and its market management was conducted by people with low level of education.

4.2.4 Experience of Respondents in Cashewnut Production

The results in the table (Table 4.4) were generated using Chi-square test in order to explore experience of respondents in cashewnut production. The results of the Table 4.4 below show that there was also no significant difference between farmer and WRS's Officers in their experience in cashewnut production ($\chi 2$ =2.664, df=3, p=0.446). All officer (100%) in WRS had experience of more them ten years in cashewnut production this can be interpreted as to work in the WRS depend on people experience with cashewnut production. For the case of farmers, more that haft (56%) of farmers had involved in cashewnut production for more than ten years. Therefore it can be said that data in this study were from experienced people in cashewnut business-people who have experienced all marketing behaviour before and after introduction of WRS in cashewnut production.

4.3 Presentation of Results to the Research Objectives

In this chapter the results that answer the research objectives were presented. To understand better this section a reader can go back to chapter one and review objectives. The collected data from the questionnaires were presented in tables while

interviews were presented in summary of propositions. However, as mentioned above (section 3.6) SPSS software package (SPSS version 16) was used to analyse data. Several tests were conducted such as normality test and regression tests depend on the aim of the exacting objective.

Table 4.4: Experience in cashew nuts production by Category of Respondents- ***Crosstabulation***

			Category of respondent		
			Farmer	WRS Officers	Total
Experience in cashew nuts production	2-4 years	Count	3	0	3
		% within Category of respondent	4.9%	.0%	4.6%
		% of Total	4.6%	.0%	4.6%
	5-7 years	Count	8	0	8
		% within Category of respondent	13.1%	.0%	12.3%
		% of Total	12.3%	.0%	12.3%
	8-10 years	Count	14	0	14
		% within Category of respondent	23.0%	.0%	21.5%
		% of Total	21.5%	.0%	21.5%
	Above 10 years	Count	36	4	40
		% within Category of respondent	59.0%	100.0%	61.5%
		% of Total	55.4%	6.2%	61.5%
Total		Count	61	4	65
		% within Category of respondent	100.0%	100.0%	100.0%
		% of Total	93.8%	6.2%	100.0%
X^2= 2.664		**df = 3**		**p= 0.446**	

Source: Field Data

4.3.1 Income of the farmers

The first objective of the study was to determine the income of the individual farmers before and after the introduction of the warehouse receipt system in cashewnut marketing. The aim was to examining the effect of WRS to the farmers' development. Accordingly respondents were given questionnaire with some variables to look at their income before and after introduction of WRS. The variables/constructs where:-*production of cashewnut before introduction of WRS, production of cashewnut after introduction of WRS, earning from cashewnut before introduction of WRS and earning from cashewnut after introduction of WRS*. In which respondents were told to rate their opinions/views on the Likert scale ranging from 1=very little to 4=very high.

The mean scores were employed to compute for the farmers' satisfaction with their incomes from the cashewnut production. In view of that normality test was also used to test distribution of the said constructs above. The aim of distribution test (normality test) was to find out how farmers satisfaction with their incomes could be predicted. The common test for normality is the Jarque-Bera statistics test (Jarque, 1980). This test utilizes the mean based coefficient of skewness and kurtosis to check the normality of all the variables used. Skewness measures the direction and degree of asymmetry. A value of zero indicates a symmetrical distribution. A positive value indicates skewness (longtailedness) to the right while a negative value indicates skewness to the left. Values between -3 and +3 indicate are typical values of samples from a normal distribution. While Kurtosis measures the heaviness of the tails of a distribution.

The usual reference point in kurtosis is the normal distribution. If this kurtosis statistic equals three and the skewness is zero, the distribution is normal. Unimodal distributions that have kurtosis greater than three have heavier or thicker tails than the normal. These same distributions also tend to have higher peaks in the center of the distribution (leptokurtic). Unimodal distributions whose tails are lighter than the normal distribution tend to have a kurtosis that is less than three. In this case, the peak of the distribution tends to be broader than the normal (platykurtic). Negative kurtosis indicates too many cases in the tails of distribution while positive kurtosis indicates too few cases. However to interpret the obtained data, the following numerical values and interpretations were used. Table 4.6 shows the income of farmers tested and their interpretations are shown in table 4.5

Table 4.5: Interpretation of Income of the Farmers

Rank	Mean Range	Response Mode	Interpretation
4	3.26-4.00	Very high	High satisfactory
3	2.51-3.25	High	Satisfactory
2	1.76-2.50	Little	Unsatisfactory
1	1.00-1.75	Very little	Vey unsatisfactory

Table 4.6: Income of the Farmers-*Normality Test*

	Cashewnut production **before** WRS	Earning from cashewnut **before** WRS	Cashewnut production **after** WRS	Earning from cashewnut **after** WRS
N	61	61	61	61
Mean	1.02	1.03	1.03	1.03
Mean of the Means	1.025		1.030	
Skewness	7.810	5.380	5.380	5.380
Std. Error of Skewness	.306	.306	.306	.306
Kurtosis	61.000	27.863	27.863	27.863
Std. Error of Kurtosis	.604	.604	.604	.604

Source: Field Data

From above table (Table 4.6) it can be observed that both cashewnut production before WRS, earning from cashewnut before WRS, cashewnut production after WRS and earning from cashewnut after WRS were rated low (mean 1.02, 1.03, 1.03 and 1.03 respectively) which was interpreted as vey unsatisfactory. However mean of the means show that in general income of the farmers before (Mean of the Means 1.025) and after (Mean of the Means 1.03) introduction of WRS was very little which indicated that farmers were regarding their income from cashewnut production to be very unsatisfactory both before and after WRS regime. Therefore it can be said that WRS has no effects on the farmers' income. Although both mean of the means before and after introduction of WRS indicated that farmers' incomes were very little but if one can think intently can say that statistically income after introduction of WRS was slightly better thatn income before WRS.

Testing of Hypothesis 1

Hypothesis 1: (**$H1_0$**) the income of the individual farmers before the introduction of the WRS in cashewnut marketing was higher than after introduction of WRS.

(**$H1_1$**) the income of the individual farmers before the introduction of the WRS in cashewnut marketing was lower than after introduction of WRS.

From what have been observed above concern with income of individual farmers before and after introduction of WRS, therefore, the discussion was to reject null hypothesis (**$H1_0$**) and accept alternative hypothesis (**$H1_1$**).

From the informal source of data it was revealed that the aim of starting WRS in Tanzania was increase incomes and improved livelihoods for small-scale farmers by

enabling them to get better prices for their produce and gain access to credit through a Warehouse Receipt System. The results obtained from this study signified that the system was effective and was moving with its objective of improving income of small-scale famers in cashewnut sector. The observed very little achievement of the system was because during the time of this study the system was still at its infant stages.

On the other hand these figures indicate unimodal curves for all the variables used to measure farmers' income before and after WRS. From the table it can be observed that Skewness value was greater than +ve 3 which signify the curves are not normal. However with positive value of skewness indicate a tail to the right for both curves. Therefore with the tail to the right it can be said that as time going on the use of WRS will contribute to the increase of farmers' income. In other words it can be said that WRS will have effects on the farmers' income in the future years.

Additionally Kurtosis values were all positive this means for the WRS to impact of the improvement of farmers income doesn't depend on very many factors. As explained above "negative kurtosis indicates too many cases in the tails of distribution while positive kurtosis indicates too few cases" therefore the only thing needed for the WRS to improve farmers' income was farmer willingness to continue using WRS in their cashewnut products marketing. Hence researcher encouraged farmers to continue use WRS as their market controller since effectiveness of WRS in improving their income has been identified to be increased with time and also depend on their frequently using of WRS.

4.3.2 Payment Mode used by WRS

The second objective was to find out which payment mode was mainly used by WRS and its acceptability to farmers. Therefore responded farmers were asked how they were normally receiving their payment from WRS and how did they want it to be. Table 4.7 below shows the results.

Table 4.7: Payment Mode used by WRS-*Frequency Table*

	The way I receive payments	The way I want to receive payments
Instalment	57(100%)	8 (14%)
Lump sum	-	49 (86%)
Total	57(100%)	57 (100%)

Source: Field Data

The results of table 4.7 above show that WRS pay farmer at installment basis; it was shown that all responded farmers (100%) were receiving their payments from WRS at installment. However it seems that farmers were not happy with this mode, more than three quarters (86%) of respondents voted receiving the whole some at once was their preferable mode.

The study tried to find out the reasons why farmers preferred lump sum payment instead of installment. Some said that it was cost-full to follow their payments from warehouse since most of them where resided a distance from warehouse. They were complain of money and time lost associated with installment mode used by WRS. Discussion with WHR's officer the reason for installment payment it was discovered

that the first payment was usually a loan obtained from commercial banks via SACOSSs, this was done when cashewnut price was very low especial during harvesting season(s). Warehouses had to stock RCN till the time when price goes high and sale at better price for the farmers to earn more and pay bank loans. One of officers explained that installment basis used was benefitable to farmers but the only problem was not having specific time for the farmers to wait for the whole payments to be completed. Therefore it was the challenge to cashewnut board of Tanzania to review payment system used by WRS and come up with proper payment mode and schedule.

Testing of Hypothesis 2

Hypothesis 2: (**$H2_0$**) the reasons for WRS to pay farmers in installments and not in a lump sum is significant. (**$H2_1$**) the reasons for WRS to pay farmers in installments and not in a lump sum is not significant. From the reasons given by WRS's Officer it can be said that paying farmers in installment basis was important then lump sum. Therefore the study accepted null hypothesis (**$H2_0$**) and reject (**$H2_1$**).

4.3.3 Protection of Farmer against Cashewnut Price Fluctuation

The second objective of the study was to know if warehouse receipt system protects farmers against cashewnut price fluctuations in the world market. Therefore three variables/constructs were designed to deal with this objective. SPSS statistical program where used to conduct regression analysis where by *stability of WRS in cashewnut's price preparation* was treated as dependent variable while independent variables where *WRS pay farmers more than usual amount when price increase, and*

WRS still pay farmers usual amount when price fall. Regression Analysis was to test the strength of the independent variables on the dependent. The constructs, therefore, were used to design questions in which respondents were told to rate their opinions in the Likert scale ranging from 1=Very weak or Definitely NO, 4= Very strong or Definitely YES. During analysis the mentioned variables/constructs were named as follow:-

STA_WRS_PRIC=Stability of WRS in cashewnut's price preparation WRS_PAY_INC=WRS pay farmers more than usual amount when price increase WRS_PAY_FAL=WRS still pay farmers usual amount when price fall. The estimated coefficients were statistically different from zero variously at the 5% levels of significance. Survey Scale was: Very weak/Definitely NO (1), Weak/NO (2), Strong/YES (3) and Very strong/YES (4).

Table 4.8: Protection of Farmer against Cashewnut Price Fluctuation

R Square = 0.004 F = 0.110 Adj R Square = -0.03 Sig = 0.896						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.531	.530		2.889	.005
	When cashewnut price rise WRS pay farmers more than usual amount	.048	.214	.038	.225	.823
	When cashewnut price fall WRS still pay farmers usual amount	.024	.138	.029	.171	.865

a. Dependent Variable: Stability of WRS in cashewnut price preparation

Source: Field Data

The results of regression analysis shows that (Adj R Square = -0.03), with negative value, this indicate that stability of WRS in cashewnut price preparation did not depend on how much WRS will pay the farmers when cashewnut price increase or decrease in the world market.

It can also see that the statistically significant predictors of stability of WRS in cashewnut price preparation were not amount WRS will pay farmers when price increase (B=0.048, t= 0.225, p= 0.823) or fall (B=0.024, t= 0.171, p= 0.865). Actually through out interview process with sampled farmers complains was about amount of money WRS was used to buy farmers' produced. Researcher noticed that respondents liked to discuss issues related to cashewnut price setting by WRS. They said that Indians (who were major cashewnut buyers before introduction of WRS) were paying more money for cashewnut that what WRS pay them at this time.

But if a reader goes back to the table 4.5 above can see that cashewnut productions had slightly increase after introduction of WRS, from mean 1.02 to mean 1.03 of production. It was researcher argument that Indians were merely looking for the immediate profit-they were not looking for what farmers will do in the future or how trend and magnitude of cashewnut production moving in the country. They did not provide fertilizers, pesticides and other agro-equipments to the farmers- the thing which WRS was doing. Before WRS introduced in cashewnut those who were involved in cashewnut production were getting much money from private buyers *mostly Indians* but general cashewnut production in the country was doing worse

than the period after WRS introduced. Stimulating agriculture production in the country does not depend only on the context of money/price incentives their other things involved, like lowering or free giving agro-equipment to the farmers.

Testing of Hypothesis 3

Hypothesis 3: (**$H3_0$**) WRS protect farmers against cashewnut price fluctuations in the world market. (**$H3_1$**) WRS does not protect farmers against cashewnut price fluctuations in the world market. Therefore base on the above findings and discussion the study accepted null hypothesis (**$H3_0$**) and reject alternative hypothesis (**$H3_1$**).

4.3.4 Market Constraints Experienced by Farmers

The third objective of the study was to identify any further market constraints experienced by farmers due to introduction of warehouse receipt system. From above findings the warehouse receipt system was identified to be economically beneficial to farmers; however there were some key challenges per value chain limit the benefits expected from the warehouse receipt system by farmers relating with the market.

The themes emerging from the discussion regarding market constraints experienced by farmers due to introduction of warehouse receipt system were the following:

- Minimum price setting
- Lack of transparency
- Improper measurements
- Lack of efficient quality control mechanism
- Lack of sufficient storage facilities

4.3.4.1 Minimum Price Setting

Actually all farmers were complaining of the price used by WRS to by their crops, few were a bit happy but still wanted WRS to increase on payments. However the diagnostics drawn from a review of existing literature describing the situation in the cashewnut value chain found that since introduction of WRS in the year 2004 price of cashewnut had steadily increased up to the year 2011 when the price fall sharply because of world economic crisis. But being people of lower education, farmers did not know the meaning of economic crisis; they wanted to see price increase year after year. This study was conducted 2013 it was only one year had pass this the price became somehow a bit unfair but farmers they had started complaining, accusing the system and want the system to be removed because of just a mere price decrease. Truly this reminds us the proverb which says “one mistake can delete hundred righteous.

To make this clear, from the review process researcher found and report that during April 2012, Tanzania reported unsold stock of about 90,000 tonnes of Raw Cashewnuts (RCN) and another 40,000 tonnes had not yet cleared Indian ports (CBT, 2012). At the same time, Mozambique reported 30,000 tonnes of unsold RCN. It was also revealed that since August 2011, the world price for RCNs had fallen from USD 4.1 per pound of cashew to around USD 3.1 per pound. That was a 25 percent fall in world RCN prices. The drop in price was mostly a result of the US importing fewer cashews as they became too expensive to compete with the other nuts on the market, according to market sources. These prices were passed upstream in the cashew market chain and in the Tanzanian system resulted in RCN farm gate

prices of around USD 0.60/kg (TZS 900) of RCN. These indicated that in the complained year, 2012, cashewnut price was the worldwide problem and not Tandahimba problem alone.

But let the study not to criticize farmers for not knowing what happed in the world regarding markets of their crops and the whole economic at large. Instead the study argued that somehow somewhere there was a problem in the whole management of cashewnut production in the country therefore the Cashew Board of Tanzania may need to be strengthened in order to be able to play its role as a provider of market information, advisory services and regulation functions in a more pro-active way. With their little education, farmers need to be informed what is going on in the world market at least issues involve their produce. Moreover it would be better if officers would be visiting farmers in their gathering/meeting places and explain to them market situation. This is because few farmers have access to media and, however, physically visiting farmers in their areas stimulate a sense of respecting and caring them and they will love the system.

4.3.4.2 Lack of transparency

Cashew auctioning in Tanzania appears not transparent enough; current practice involves bidding process behind closed doors perceived as a recipe for irregularities (UNIDO report, 2011). Lack of transparent in the cashewnut was reported mainly because the prices were set by other entity, cashewnut board, and not the owner of the product, here farmers. In the discussion with farmers, one youth farmers said that *"farmers we are forced to send our produces in the warehouses....prices set by other*

people while farmers we are the one who know how much money we used in production processes....no transparency."

Actually during the time of this study all raw cashew nuts, by law, had to be transported to certified warehouses where they would be stocked in designated lots separated for each cooperative. The warehouses provided a receipt for the reception of the goods. The lots then would be auctioned to buyers. The buyer paid the amount to a bank which would apportion payment to the various parties engaged. Now it can be seem that this system was intended to eliminate or minimize the number of middle players, and limits marketing to be operated only by receipt system.

The discussion argued that in order for the farmers to have faith with WRS they should be left to choose where to sell their crops, either through WRS-government program or to private buyers. Those who would feel WRS was better they would be client of the system. Moreover putting the system in the competition with private buyers it would help to increase efficiency of the system in dealing with the farmers needs i.e. better price for the produced.

There have been tendency of government projects to fail to meet their goals in this county especially when the project has no private competitors. One of the discussion members Mr. Mwelele said that *"....to have transparent in the Agro-market farmers need to be provided freedom to choose where and when to sale i.e. either through warehouse receipt system or spot sale their crop by measuring the benefits offered by alternative market available at their exposure." This is what it called free trade.*

Free trade is according to Smith (2008) fair trade. Fair trade does not aid economic development. Unfair trade operates to keep the poor in their place, sustaining uncompetitive farmers on their land and holding back diversification, mechanization, and moves up the value chain. This denies future generations the chance of a better life. Free trade relies on free individuals voluntarily seizing market opportunities, rather than attempting to manage production and restrict the marketplace. Free trade relies on the absence of the price-fixing arrangements and tariff barriers that restrict trade.

4.3.4.3 Lack of efficient Quality Control Mechanism

The study found that adequate grades and quality standards were the issues to be considered in WRS. Farmers were saying when they send their crops in Tandahimba warehouse-they were graded well according to their quality but usually when they were taken to the main warehouse in Mtwara town they were graded below the grades given by primary warehouse in Tandahimba. Therefore their gain become lower than what they expected to get previous according to the grade observed at Tandahimba warehouse. For that reason farmer where asking where is the problem? Was it with Tandahimba warehouse management or Mtwara management; in fact they had several questions which myself as the researcher I even failed to give answer to them. Nevertheless, farmers were blaming Tandahimba warehouse for this grade differences. They were saying may be the management did not know how to grade well or poor storage facilities in warehouse lead to the deterioration of products quality or WRS's officers mix their good products with poor products, but there was no clear answer concern with product quality problem in the system.

Because this study was limited by time, therefore, researcher suggested another study to be carried out in efficient quality control mechanism used in WRS and by cashewnut management in general.

Also in the discussion phase of this study it was argued that quality standards and grades need to be specific enough as to give a clear description of the quality of the crops stored without needing to physically examine the crops. In addition, there needs to be a system to resolve conflicts if the quality stated in the receipt turns to be different to the crop in storage. Although some crops can be stored ungraded, on an identity-preserved basis, the existence of appropriate quality standards and grades is necessary to allow more efficient use of storage space and the standardization of products stored (i.e., allow comingling) and ensure that the quality deposited is the same as that withdrawn. Thus, cashewnut board, and other governments and the private sectors involve in agriculture should examine together the adequacy of existing quality standards and grades in cashewnut marketing.

4.3.4.4 Lack of sufficient storage facilities

It was reported that storage spaces in available warehousing were not enough to absorb all RCN especial when harvesting season is at the pick. A chair man of visited warehouse said that *"farmers get discourage of using warehousing when they move a long distance from very remote area with RCN to warehouse and find there is no space to keep their crops."*

Researcher asked him what happen when farmers especially from those remote areas find no space to keep their crops in warehouse. And he continued to say *"....it is hard*

and very expensive for the farmer to return back his crops once he has reached up to this warehouse...when there is no space he will sleep outside with his crops for three to five days or even more waiting for his crops to be stored in and get a receipt."

The spaces for keeping new arrival crops were obtaining by selling what were inside already or by transporting them to WRS headquarter at Mtwara town. Accordingly it can be said that inadequate or low quality storage infrastructures made warehouses unreliable in maintaining the value of a raw cashewnut in Tandahimba. Researcher advised that warehouses to be often spread throughout the cashewnut producing areas, even in deep villages. This is because transportation costs become excessively high for distant producers, therefore they thought it was better to sell their crops to private buyers because private buyers visit them and buy from the farm; this reduced transport cost and disturbance of transporting crops to the warehouse(s) which was located very far from them.

4.4 Discussion of the Findings

The discussion highlighted that according to the report written by (TANECU 2012) in Tanzania, smallholder farmers had very limited access to markets and lack facilities to store their produce. As a result, they were forced to sell their surplus produce during the harvest season, when farm gate prices were low. Traders who can afford adequate storage sites often took advantage of smallholders' constraints: they collected agricultural products at very low prices and sold them during the most profitable market conditions. In addition, farmers faced enormous difficulty in obtaining credit for their agricultural activities because of the lack of financial services in rural areas. Moreover, banks require collateral that farmers cannot

provide; as agricultural productivity is uncertain due to weather conditions and other external factors, farm produce cannot be used as safe collateral to obtain a loan. However in this study it was found that under this scheme, cashewnut farmers were able to store their produce in warehouses during harvest, when prices were relatively low, and release them to the market at better prices during periods of low supply. And in meeting farmers' immediate financial needs while they deferred their incomes, the programme enabled them to access finance from commercial banks through Savings and Credit Co-operative Societies (SACCOS). A chairman of the visited cashewnut warehouse in Tandahimba district said that "when a farmer store his/her crops in the warehouse can get a loan of up to 70% of the value of his/her stored crops." He continued that "The problem is with Banks which delay to give farmers loan as the result farmers blame management of WRS as well as hate WRS's Officers to the extent of demand for the removal of the system"

The study identified that the role of the SACCOS was to mediate and provide guarantees to banks on behalf of farmers. In the study conducted by (Yusuph, 2009) found that WRS in maize production in Iringa had some other positive outcomes which can also exhibited in cashewnut farmers as the result of using WRS. For example, in the programme areas of Iringa, access to education and health improved and some communities were able to build new and modern housing, as well as purchase motorcycles and bicycles to ease transportation problems. He added that the system/programme also increased women's participation in SACCOS and promoted collective bargaining and selling among the farmers and farmer groups. Therefore we can say that WRS had positive impact on the small farmers; cashewnut farmers in

Tandahimba district. It was researcher suggestion that the Government, both central and local, should continue to create a better environment and expedite the full operationalisation of the Warehouse Receipt Act to motivate and protect the parties involved in the WRS.

Moreover the discussion argued that unlike private buyers WRS had an objective of assisting farmers in holistic manners starting from the production stage to ensure that the quality and quantity of their produces are up to the required international market standards. The discussion with TANECU Officers revealed that when price fixed with Tanzania Cashewnut Board for particular product grade in the year, management of AMCOS would pay farmers the agreed amount even if price in the world market will fall. And if the price increases CBT head quarter which is located at Mtwara Town use the excess of money to buy Agro-equipments, *the one have been explained,* and distribute to the cashewnut farmers either at very cheap price (Susidised Prices). Therefore since at the time when this study was conducted WRS was still a new concept in Tanzania, it can be said that with its newness the system was trying its best to protect farmers from cashewnut price fluctuation in the studied area and the whole country (Tanzania) at large.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented conclusion of the study based on the objectives, recommendation and area for further research were also given in this chapter.

5.2 Summary of Main Findings

The intention of the study was to assess efficiency of the warehouse receipt system in cashewnut marketing in Tandahimba district. Specifically the study dealt with determination of the income of the individual farmers before and after the introduction of the warehouse receipt system in cashewnut marketing, identification of mode of payment used by warehouse receipt system to pay farmers and the reasons behind it, examine if warehouse receipt system protect farmers against cashewnut price fluctuations in the world market and lastly was to identify any further market constraints experienced by farmers due to introduction of warehouse receipt system.

The study found that WRS had brought some small improvement in farmers' income. It was shown that what farmers were getting after introduction of WRS in cashewnut marketing was slightly higher than before. This was achieved by enabling farmers to get better prices for their produce and gain access to credit from commercial banks through SACCOSs. The study found that farmers were paid in installment basis although majority of them did not like the mode since it associated with loss of

money and time on frequently chasing for their payments. On the other hand it was informed that when farmer bring his crops in warehouse he receive a receipt which he can use to receive loan from SACCOSs up to 70% of the value of his stored crops to cater for his immediately needs. But remaining percentage he would receive later when warehouse had sold the products. Additionally the reasons for warehouse to stock RCN was to regulate cashewnut price for the benefit of the farmers and country at large.

It was also agreed that WRS was protecting farmers against price fluctuation. It was discovered that when price fall warehouse(s) used to stock RCN till the time when price goes high and sale at better price for the farmers to continue earning usual amount of income, and when the price rise warehouse use the excess of money to buy chemicals, fertilizers, as well as other agro-equipment and distribute to farmers.
Lastly, concern with market constraint experienced by farmers due to introduction of WRS, it was reported that there was minimum price setting-the price for cashew nut was fixed by government a scheme which did not consider how much an individual had hassled in production process, lack of transparency in the system, improper measurements of the RCN, lack of efficient quality control mechanism and lack of sufficient storage facilities in warehouse were reported to be market constraint faced by farmers after introduction of warehouses in cashewnut marketing.

5.3 Implication of the Study Findings

Since the results show+ that mean of the means for the farmers income after introduction of WRS was slightly greater than before introduction, it implies that

WRS has positive effect on the farmers' income. Therefore, the lesson drawn here is that farmers should continue using WRS because the results obtained from this study signified that the system was effective and was moving with its objective of improving income of small-scale famers in cashewnut sector. The observed small achievement of the system was because during the time of this study the system was still at its infant stages.

5.4 Conclusion

The agriculture sector contributes 24% directly to Gross Domestic Product (GDP) and 26% indirectly through linkages with service and manufacturing sectors. The sector contributes 65% of export earnings in the country. The smallholders' farmers in Tanzania account for 75% of the agricultural output and 70% of marketed agricultural produce.

With the growing importance of logistics and supply chain management throughout the world, warehousing has emerged as one of the vital component of the supply chain. The overview of WRS approaches revealed that WRS is global need for agriculture marketing security. It has been practiced in agriculture products secure industrialized countries such as United States of America, Europe. It is an attractive concept in developing countries and in Africa such as Tanzania. The Warehouse Receipt System in Tanzania was introduced in the year 2004 under the Ministry of Industry, Trade and Marketing.

The present study had concluded that WRS were useful in improving farmer's income in cashewnut marketing. The system was enabling farmers to get better

prices for their produce and gain access to credit from commercial banks. However since the system was in its infant stages at the time of conducting this study-the results show that the benefit had been obtained from WRS were still small. However it was reported that WRS was paying farmers in installment basis although majority of them did not like this mode. It was also agreed that WRS was protecting farmers against price fluctuation but the study proved that this does not happen. But also it was reported that WRS was associated with lack of transparency, improper measurements of the produce, lack of efficient quality control mechanism and lack of sufficient storage facilities.

5.5 Recommendations

Despite the fact that the WRS was economically beneficial to farmers, key challenges per supply chain limited both upstream and downstream chain players to fully exhaust benefits expected from the warehouse receipt system. Joint stakeholders' effort at every node of the supply chain required to perfect the system, therefore

i. Farmers were advised to continue using WRS since the system was effective at improving their household incomes in the near future. They should be patient and pay more attention to the quality of their produce.
ii. Since it was shown that WRS added on the income of the visited small scale farmers the study suggested that stakeholders and importantly warehouse licensing Board to consider further training to farmers on the benefits expected from the warehouse receipt system.

iii. Cashew Board to steer further transparency in cashew auctioning process (move away from closed/secret bidding to more open and participatory auction process), market and price updates to farmers and weekly auction results to parties involved.

iv. The study suggested that agriculture produces especially cashewnut should be free trade. It means that farmer should be allowed to sell their crops to either government schemes such as WRS or to private buyers. This is because free trade is the most effective poverty reduction strategy the world has ever seen. If we really want to aid small farmers' development we should abolish barriers to trade in their produced.

v. Lastly, the study suggested construction of more and modern warehouse very close to farmers. This will reduce disturbance and cost incurred by cashew nut farmers who are normally small earners in chasing for warehouse facilities in far distance.

5.6 Limitations and Delimitations

5.6.1 Limitations

The major limitation of the study was mainly related to the limited coverage of the study area. In the country, the major cashewnut production areas are Mtwara, Lind, Ruvuma and coastal regions, which may influence different warehousing systems. However, the study focused only in Tandahimba due to lack of budgetary and time limitations.

Form of bias: the following types of bias needed to be considered:

i. The attitude of the respondent could influence the responses
ii. Bias in the way that responses were interpreted
iii. Where credibility was lacking and

5.6.2 Delimitations

The following suggestions used to improve the standard of the questionnaire and thus the quality of the data:

i. Questionnaires were identical in order to improve reliability
ii. The questionnaires were proper prepared in order to ask the correct questions
iii. A detailed explanation were supplied to make clear the fact that the questionnaires was not intended to collect trade secrets and the purpose of the research was explained.
iv. All respondents were given the opportunity to complete the questionnaire at their own convenient time.

5.7 Area for further Study

Researcher suggested another studies in effectiveness of warehouse receipt systems in dealing with farmers marketing challenges and problems to be carried out in other part of the country other than Tandahimba and it would be better if other studies will consider farmers in other sectors of agriculture apart from cashewnut.

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APPENDICES

Appendix I: Covering letter for data collection

Dear Respondent

I am graduate student studying towards my MBA (Master in Business Administration) at Open University of Tanzania. The aim of my study is to improve the cashewnut production sector in Tanzania. I believe that my study will make a contribution to improving the cashewnut farming as well as cashewnut marketing, therefore, delivery of benefits to the Tanzanian population.

You are part of my selected sample of respondents whose views I seek on the above-mentioned matter. I would therefore appreciate it if you could answer a few questions. It should not take more than twenty minutes of your time and I want to thank you in advance for your co-operation.

I guarantee that all information will be handled with the STRICTEST CONFIDENTIALITY.

Thank you very much.

Mr. Ayubu Msali (Reg No: HD/B/196/T.07)

APPENDIX II:

Questionnaire to the Cashewnut Farmers

Introduction

Dear Farmer, I am master student at Open University of Tanzania undertaken an academic study on the warehouse receipt system in cashewnut marketing in Tandahimba district. Your responses will be treated confidential and used for only academic purpose.

Questionnaire No: _____

Name of District : Tandahimaba

Name of Ward _____

Name of Village _____

PART A: Respondent's Particulars

1. What is your gender?

Male (1)	Female (2)

2. Select your age group.

Below 20 years (1)	20-29 years (2)	30-39 years (3)	40-49 years (4)	50 and above (5)

3. Select your highest academic or professional qualification? Select only one

Primary (1)	Sec/certificate (2)	diploma (3)	Bachelor (4)	Master/PGD (5)

4. When did you start cashew nuts production?

Less than 1 year	2 -4years	5-7 years	8-10years	Above 10 yeas

5. Do you use warehouse receipt system in marketing your cashewnut products?

   YES [ ] NO [ ]

   - If YES, Since when and what motivate you to use this system

     _____

     _____

   - If NO, Why you don't?

     _____

     _____

PART B: First Objective of the Study

6. How you can rank yourself in cashew productions industry before and after you started using warehouse receipt system in cashewnut marketing?

	Micro Scale	Small scale	Medium scale	Large scale
Before				
After				

7. How do you rank your earning form cashewnut farming before and after you started using warehouse receipt system in cashewnut marketing?

Very high	high	Little	Very little

8. How can you rate effectiveness of warehouse receipting system in encouraging income of cushewnut's farmers?

Very strong	Strong	Very weak	weak

PART C: Second Objective of the Study

9. How do you want to receive your payment from WRS?

IN Installment	In Lump sum	In any mode

10. What is the mostly mode of payment by WRS?

Installment	Lump sum	Both

11. Are you satisfied the way WRS pay farmers in installments and not in a lump sum?

Definitely yes	a bit Yes	a bit No	Definitely No

12. What are the reasons behind installment payment mode by WRS?

_____

13. The following can be challenges of installment payment mode in the business. Rate your opinions on the Likert scale below (from Definitely YES to definitely NO) as you regard to installment payment mode in cashewnut warehouse receipting system

Challenges	Definitely YES	A bit YES	A bit NO	Definitely NO
Become expensive to follow the payment (in term of transport)				
Lost of time upon going for the installment payment				
take long to receive the whole amount				
Installment payment doesn't care depreciation of value				
Confusion in calculating total amount of each installment paid				

14. What other challenges caused by installment payment mode to farmers?

_____

PART D: Third Objective of the Study

15. How can you rate stability of cashewnut price before and after introduction of warehouse receipting system?

	Very stable	Stable	Unstable	Very unstable
After WRS				
Before WRS				

16. How can you rate rapidness of warehouse toward adjustment to the cashewnut price changes

Very weak	Weak	Strong	Very strong

17. When cashewnut price fall what does warehouse management do to ensure that farmers do not get loss or to minimize loss in cashewnut business?

_____

_____

_____

_____

18. When cashewnut price rise does warehouse management pay farmers more than usual amount it has been paying for the cashewnut products?

Definitely yes	a bit Yes	a bit No	Definitely No

- If NO what do you think is the reason for not doing so? You as the farmer have you asked them why they don't pay more since the price has been increase.

  _____

_____

_____

- If YES, what other criteria do they consider before increase the payments? Do you normal satisfy with the increment of payments?

_____

_____

_____

PART E: Fourth Objective of the Study

19. Have you received any train about the use of ware house receipting system?

Definitely yes	a bit Yes	a bit No	Definitely No

- If YES from whom? And what was the train was all about?

_____

_____

_____

- If NO why do you use WRS?

_____

_____

20. What are the key limitations of the WRS as far as cashew marketing is concerned? (Mention at least 5)

_____

_____

21. What do you suggest to be done to address these limitations?

_____

_____

22. Give your comment on the introduction of warehouse receipting system

_____

_____

THANK FOR YOUR RESPONSES

APPENDIX III:

Questionnaire to the Officers of WRS

Introduction

Dear WRS's Officer, I am master student at Open University of Tanzania undertaken an academic study on the warehouse receipt system in cashewnut marketing in Tandahimba district. Your responses will be treated confidential and used for only academic purpose.

Date: _____

Name of Ward _____

Name of Village _____

PART A: Profile of Respondent

1. What is your gender?

Male (1)	Female (2)

2. Select your age group.

Below 20 years (1)	20-29 years (2)	30-39 years (3)	40-49 years (4)	50 and above (5)

3. Select your highest academic or professional qualification? Select only one

Primary (1)	Sec/certificate (2)	diploma (3)	Bachelor (4)	Master/PGD (5)

4. For how long have you been working in the cashewnut warehouse

Less than 1 year	2-4 years	4-7 years	More than 8 years

5. What is your working position in WRS? _____

6. Name of this warehouse _____

PART B: Second objective of the study

7. How do you pay farmers who come for the WRS service? (tick ONE, the most appropriate answer)

In Installment	In Lump sum

8. If your answer in above question is INSTALLMENT, then, what are the reasons for installment payment?

_____

_____

9. Do the farmers complain about installment payment mode?

Not at all	YES=Very rare	YES=Sometimes	YES=Always

- If your answer is YES, then how do you handle the claims?

_____

_____

10. What is the merit of installment payment over lump sum payment?

_____

_____

PART C: Third Objective of the Study

11. What are the main causes of cashewnut price fluctuation in Tanzania and the world at large?

_____

_____

12. How can you rate stability of cashewnut price in Tanzania before and after introduction of warehouse receipting system?

	Very stable	Stable	Unstable	Very unstable
After WRS				
Before WRS				

13. How can you rate rapidness of warehouse toward adjustment to the cashewnut price changes

Very weak	Weak	Strong	Very strong

14. When cashewnut price fall what does warehouse management do to ensure that farmers do not get loss or to minimize loss in cashewnut business?

_____

_____

15. When cashewnut price rise does warehouse management pay farmers more than usual amount it has been paying for the cashewnut products?

Definitely yes	a bit Yes	a bit No	Definitely No

- If NO what do you think is the reason for not doing so?

  _____

  _____

- If YES, what other criteria do you consider before increase the payments?

  _____

  _____

PART D: Fourth objective

1. It has been known that any public program must receive some claims from public. Now what are the major complaints do you receive from farmers concern with warehouse receipting system? And how do you solve them?

Complaints	Solution

2. Do you have any specific problem in any of the operations performed in the warehouse? What are those?

   _____

3. What are your constraints and opportunities of introducing warehouse receipting system in cashewnut marketing?

   - Constraints :

     _____

- Opportunities:

_____

THANK FOR YOUR RESPONSES

APPENDIX IV:

Interview Guidelines to the Farmers

1. What do you understand about warehouse system used introduced by the Government?
2. What was the aim of introducing warehouse receipting system in cashewnut marketing?
3. What is the impact of Warehouse Receipts in achieving intended goals?
4. Is there any training given to farmers concern with warehouse receipting system? If YES how may often? And who conduct it? If no why?
5. What do you think is the key contribution of the WRS in cashew marketing?
6. In what ways did the WRS affect cashew farming?