



Contributions of Cooperatives in Agricultural Marketing

A Case study of the Cashew nut product in the
Mtwara Region

Grace Maulilyo Cholobi

Degree project/Independent project • 30 credits
Swedish University of Agricultural Sciences, SLU
Department of Economics
Agricultural Economics and Management - Master's Programme
Degree project / SLU, Department of Economics, 1497 • 1401-4084
Uppsala 2023



The Contributions of Cooperatives in Agricultural marketing – A case study of cashew products in the Newala District

Grace Maulilyo Cholobi

Supervisor: Karin Hakelius, Swedish Univ. of Agricultural science, Dept. of Economics
Examiner: Richard Ferguson, Swedish Univ. of Agricultural Sciences, Dept. of Economics

Credits: 30 credits
Level: A2E
Course title: Master Thesis in Business Administration
Course code: EX904
Programme/education: Agricultural Economics and Management - Master's Programme
Course coordinating dept: Department of Economics
Place of publication: Uppsala
Year of publication: 2023
Part number: 1497
ISSN: 1401-4084

Keywords: Agricultural, Cooperative, contribution, Famers, Market, Members, Tanzania

Swedish University of Agricultural Sciences
Faculty of Natural Resources and Agricultural Sciences
Department of Economics

Abstract

Tanzania's Government Cooperative Act 2008 presents a promising step in the right direction toward agricultural growth in Tanzania by promoting the development of a cooperative sector. Agriculture in Tanzania plays a significant role in the economy, particularly cash crops. This thesis investigates the Newala district cooperative in the Mtwara region to understand how a cooperative can support cashew nut production and international marketing.

This study gives an introductory account of cooperatives in agriculture, including cooperatives' meaning, history, and role, with a particular focus on the Tanzanian context. The researcher has collected primary data through a questionnaire sent to respondents at the Tandahimba Newala district cooperative. The research also used secondary data, such as government and company documents, the internet, and articles, to form a background of organisations in the Tanzania cashew nut market. The primary and secondary data present the basis for the report's findings, discussion, and conclusions.

The findings and conclusions suggest that cooperative marketing may be vital for bringing small farmers together to gain market power for collective benefits. The studied evidence shows how unions can be involved in the actual farming process to the marketing of produced goods by providing agricultural extension training and working as a bridge between different stakeholders, such as the farmers, banks, government, training institutions, and the market (buyers). At the same time, the continued development of the studied cooperative's market position is facing significant challenges from the government, which is intervening in the cooperative's decision-making in pursuit of political strategies and interests. Findings show that cooperative members would like the government to respect the instructional structures for the collective to be an independent entity to work accordingly to serve its purpose towards agricultural growth.

Table of Contents

1	INTRODUCTION	7
1.1	Problem background	9
1.2	Problem statement	9
1.3	Aim and research question.....	10
1.4	Delimitations	11
1.5	Structure of the report.....	11
2	LITERATURE REVIEW AND THEORETICAL PERSPECTIVE	13
2.1	Literature review on cooperative theory	13
2.2	Marketing	15
2.3	The importance of cooperative marketing	16
2.4	New Opportunites	18
2.5	Theoretical synthesis	20
3	METHODOLOGY	21
3.1	Research design.....	21
3.2	Literature review	22
3.3	Unit of Analysis	23
3.4	Case Study	23
3.5	Data Collection	24
3.5.1	<i>Secondary Data Collection</i>	24
3.5.2	<i>Questionnaire</i>	25
3.6	Data Analysis.....	25
3.7	Ethics	26
3.8	Reliability and trustworthiness	27
3.9	Quality assurance	27
4	EMPIRICAL DATA	30
4.1	Overview of Tanzania and its agriculture	30
4.2	Overview of Cashew nuts production in Tanzania	31
4.3	Overview of Newala cooperative	31
4.4	Empirical questionnaire results	33
4.4.1	<i>Agriculture training</i>	33
4.4.2	<i>Provision of New Opportunities</i>	34
4.4.3	<i>Cooperative member's perception</i>	35
5	ANALYSIS AND DISCUSSION	37
5.1	Agriculture training.....	37
5.2	Provision of new opportunities	38
5.3	Aligning cooperative members' perception	39

5.4	Contribution of the conceptualised theory.....	39
6	CONCLUSION	41
6.1	Implication of the study.....	41
6.2	Future research	42
	REFERENCES	43
	APPENDIX	48

Abbreviations

AMC: Agricultural Marketing Cooperative

CATA: Cashew nut Authority of Tanzania

CBT: Cashew nut Board of Tanzania

FAO: Food and Agriculture Organization

GDP: Growth Domestic Product

IMF: International Momentary Fund

IOF: Investor-Owned Firm

MTEF: Medium Term Expenditure Framework

RPF: Reform Rolling Plans and Forward Budget

SLU: The Swedish University of Agricultural Sciences

TANECU: Tandahimba Newala Cooperative Union Ltd

TCB: Tanzania Cashew nut Board

Tshs: Tanzanian shillings

URT: United Republic of Tanzania

U.K.: United Kingdom

WRS. Warehouse Receipt System

OALD: Oxford Advanced Learner's Dictionary

1 INTRODUCTION

Agriculture is a critically important economic activity in Tanzania, accounting for 31% of the GDP and employing 67% of the workforce (World Bank report, 2014). However, in many regions in Tanzania, agricultural productivity remains lower than its estimated potential (Maghimbi,2009). According to the World Bank Report (2019), agriculture grew by 3.6% in 2017 compared to 2.1 % in 2016. The performance was primarily due to favourable weather experienced in most parts of the country and the availability of farm inputs. (Cashew nuts Board of Tanzania, 2017).

Tanzania is among the countries that produce traditional cashew nuts (Cashew nuts Board of Tanzania, 2017). The land had over 10% of global production in the 1970s, but then in the 80s, it collapsed to 3%, before it regained in 2012. Tanzania exports about 94% of its total cashew nuts to India and Vietnam as raw ones, leaving only a tiny portion processed domestically (World Bank report, 2014). Currently, Tanzania loses revenue by exporting unprocessed cashew nuts. Increasing the amount of domestically processed nuts is also an opportunity to use by-products (Maghimbi,2009). According to Tesha et al. (2010), Tanzania's then Deputy Permanent Secretary in the Ministry of Industry and Trade, Maria Bilia, said at the annual Cashew Investors Conference in Dar es Salaam in 2013 that without value addition, it would be impossible to achieve a balanced trade in Tanzania. If Tanzania continues to export raw cashew nuts, it will always see nothing in profits, as it benefits the buyers who pay low prices for the product in its natural state (Tesha et al., 2010).

In the 1990s, Tanzania gave 12 cashew nuts processing factories to private firms. Currently, four factories process the crop with different capacities in which cooperatives are involved. Most farmers use manually operated machines: Olam Tanzania Ltd (Mtwara), Korosho Africa (Tunduma, Newala, and Mtwara,) and Mohammed Enterprises (Dar es Salaam), and they do not come close to absorbing the entire national production. (Tesha, 2010).

Table1: Tanzania cashew nut processing factories (Tanzania Cashew nut board 2017).

Name	Location	Capacity, tons/year
Haute	Mtwara	200
Olam	Mtwara	500
Mohamed Enterprise	Dar es Salaam	2000
Korosho Africa	Tunduma,Newala& Mtwara	2500

The Cashew nuts Board of Tanzania (2017) states that the total cashew nuts processing capacities for the large firms in Tanzania in 2017 were about 100,000 metric tons per season. However, the utilisation rate of these was less than 1000tons per season. The low utilisation is due to insufficient funds for purchasing raw cashew nuts to meet production costs, poor management skills, lack of entrepreneurship and business skills among factory owners, unskilled labour, inappropriate processing technologies, and product market uncertainty.

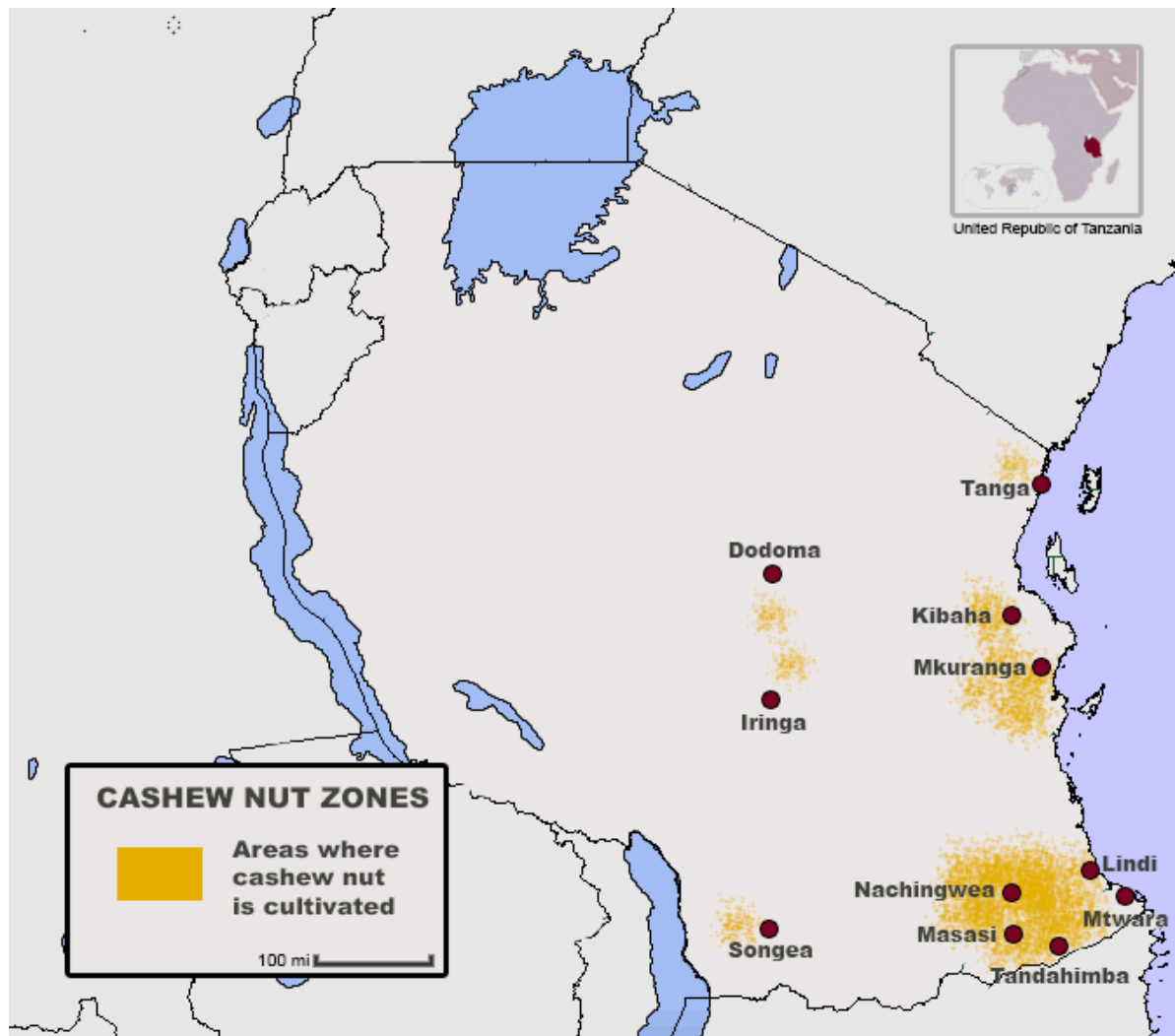


Figure 1: Map showing the location where cashew nuts are grown in Tanzania
Source: Wiki loves Earth photo contests.

1.1 Problem background

The cashew nuts sector is one of the main contributors to Tanzania's economy through exportation; hence Tanzania stands at the third position for the sale of tea, Tobacco, coffee, and cashew nuts in foreign exchange earnings from 2011 to 2016 (Cashew nuts Board of Tanzania,2017). Cashew nuts Board of Tanzania (2017), the contribution of cashew nuts in export earnings would have been even higher if the crop had a process before exporting. Exporting raw cashew nuts bears negative structural impacts on the industry, such as exporting employment opportunities and losing income for other cashews by-products. Recently the cashew nut sector in Tanzania has passed through a period of varied experience characterised by prices in the international market (World Bank Report, 2019).

The increase in production was due to increased acreage, government subsidy on pesticides, and adoption of good agricultural practices, including weeding, pruning, and spraying of pesticides (World Bank Report, 2019). Tanzania is known to produce premium quality cashew nuts fetching higher prices in the world market than other African countries. Tanzania cashew nuts dropped nearly half their directory price, from 3,500 Tanzania shillings to 2,000 Tanzania shillings which is an actual price on auction time. Here the e-government force intervenes to purchase all cashew nuts from farmers via cooperatives and store them in government storage (World Bank Report, 2019).

1.2 Problem statement

A study of cooperative development in Africa showed that the collaborative contribution was more significant to farmers and the market post-2015-2018 (World Bank Report, 2019).

Cooperative members in tea production have improved the product market and their income. However, criticism regarding the efficiency of their cooperative has a low level of transparency among the board members involved (Birchall 2004). It works as a hindrance instead of positively impacting the market to achieve economic improvement.

A study by Boenchnke (2003) in South Africa concluded that cooperative concepts tend to monopolise the market, reducing the stakeholder grey growth by vesting in agricultural production. However, according to Tesha (2010), regular small farmers access different agricultural services cooperatives in their daily farming activities, such as bank loans. The low amounts of collateral assets available to the farmers entail high risks for the banks, and the cooperative is a bridge to facilitate. Agriculture is quite a risky investment as many factors adversely affecting the farmer's income can be

beyond the farmer's control (World Bank Report, 2019). Examples are pests, extreme weather events (drought), or crop diseases. In Kenya, the findings point out that cooperative farmers have improved their overall agricultural productivity regardless of the farm size (Tesha, 2010). The article argues for more increase in the success rate of agricultural productivity and agricultural markets. Thus, a theoretical problem exists in the cooperative field today as there is conflicting evidence regarding the effectiveness of cooperation in marketing growth. More specifically, a debate exists on whether it is a valuable tool to improve agricultural markets in lower-income countries.

The problem background proves the existence of a practical problem to this as well; in Tanzania, cooperatives monopolise the cashew nuts product and all farming activities with the expectation of the market and profitability improvement, but the failure exists in product price stabilisation (World Bank Report, 2019). The study by Chambo (2016) also concluded concerning the cooperative's contributions and reasons for their lack of good productivity. A survey by Chambo (2016) on Tanzanian small-holder farmers found that poor Cooperative strategies mainly cause a majority (60%) of the agricultural international market to drop. However, only 25% of respondents were optimistic about the initial cooperative's idea to promote one collective voice on the market. Only 15% of the respondents in the study had, at some point, utilised a savings & credit cooperative to finance their agricultural activities.

From these sources, one can say that there is a theoretical problem when determining the relevance of using Cooperatives to improve agriculture in lower-income countries. There exists a practical issue to this as well, since the Tanzanian cashew nuts Cooperatives proved the failure on the international market. From these stated theoretical and empirical problems, it is relevant to investigate whether Cooperatives can address agricultural marketing issues in Tanzania. Thus, the next sub-chapter will present the approach regarding aim and delimitations.

1.3 Aim and research question

This research analyses the contributions of a cashew nut marketing cooperative in Tanzania to understand how cooperatives can support small-scale producers in international markets. The aim is to know how cooperatives support the unique properties of local producers of products sold in global agricultural markets, such as cashew nuts. More farmers elevate out of poverty by increasing cashew nut productivity and the international market in the country. In light of this aim, the research question for this thesis is as follows:

How can Tanzanian cashew nut cooperatives be utilised to address agricultural marketing issues small-scale producers face?

1.4 Delimitations

This study is limited to Tanzania as it has a significant potential of becoming a successful cashew nuts producer as a country and since cooperatives are the primary method of selling the product. The study's ambition is not to analyse the entire Tanzanian cashew nut market or the entire market set-up. Instead, the focus is on significant changes that have occurred in recent years in the cooperative cashew nut market relevant.

The study set out to use at least two cooperative cases to provide more context to the research but used one point due to the unwillingness of participants.

In regards to positioning the study in the business administration field, this thesis is positioning itself in the subfields of cooperation and marketing.

Regarding theoretical delimitations of the thesis, it is limited to the business administration subfield cooperative and marketing. The researcher chose this field as the most relevant concerning the thesis-stated problems and aim.

Concerning the methodological delimitations of this thesis, it uses a qualitative, inductive approach. Regarding data collection, it is limiting itself to using a questionnaire. The researcher will elaborate on why these specific methodological approaches are the most suitable for the study.

1.5 Structure of the report

The study is structured into six chapters, each addressing related topics to the subject under examination. *Chapter 1 (Introduction)* describes the background of the problem from a global level, narrowed down by providing an overview of the contexts of the research, including some historical and contemporary developments about cashew nuts and agriculture, while also formulating the problem. The research question will simplify the research process and determine the study's aim, scope, and limitations. After that, *Chapter 2 (Literature review and theoretical perspective)* discusses the theoretical and conceptual bases for the thesis, which is situated within the theory of cooperation and market to show how cooperation functions to contribute to agriculture

use. In *Chapter 3 (methodology)*, the research design and all the methodological choices clarify their advantages and dangers.

Moreover, the researcher will provide details regarding data collection and actions related to validity, reliability, and ethical consideration to assure transparency and quality of the research. *Chapte4 (presents Empirical data)* will focus on the presentation of the data collected. *Chapter 5 (analysis and discussion)* Will give the results obtained from the qualitative interview and the descriptive analyses from the texts. Finally, in *Chapter6 (Conclusion) presents the study's most important findings)* by reconnecting those to the aim and research question, including recommendations for future research.

2 Literature review and theoretical perspective

This study seeks to understand the cooperative contribution in Agricultural marketing through the case study of the cashew nuts product in Mtwara, Tanzania. In this chapter, the researcher will present the theory of cooperative and cooperative marketing using different authors' views on (1) the meaning of cooperative, (2) The meaning of market about the agricultural cooperative, and (3) The importance of cooperative.

2.1 Literature review on cooperative theory

Roy (1969) states, "A cooperative is a unique form of private business organisation that has been widely used for more than 100 years, especially in nations whose political systems are democratic and whose economies are capitalistic and market-oriented". The article adds that these unique private businesses are typical in many parts of the world and thrived during the 20th century in North America and Europe, generating more than 100 billion dollars and serving 100 billion business volumes (Roy, 1969). According to Hakelius and Karantin (2012), cooperative members are the primary tool for this business as the unit that differentiates the cooperative and other IOF (investors of firms). Also, cooperation is defined as "*Associations of individuals with mutual objectives to implement economic and social goals through enterprise undertaking on mutual aid and which conform to cooperative values and principles*" (Carlsson, Birchall, 2004). Modern cooperatives have roots in the credit and consumer society established in Rockdale in the U.K. in 1844 (Roy, 1969). Birchall (2004) adds that Cooperatives are organisations controlled by the members, who actively participate in setting their policies and making decisions. Also, cooperatives are owned by their 'users', who want to be provided directly with goods or services.

According to Birchall (2004), cooperatives as an institution started at least 50 years before 1987, when a similar use was to join small farmers to respond to the need of uniting small farmers with a shared vision to benefit from the market enormously. The main focus in analysing the success of a cooperative is on the two main factors: the growth of service provision between members and the change in the given market (Birchall, 2004). If the cooperative increases its outreach to members and the market, this indicates the cooperative's growth and success, which positively affects the agricultural market. There also exists a discussion in the field a today's cooperative is a suitable tool when trying to address issues of the farming market in developing countries.

There has been a critique against cooperation by Cornforth (2004). He argues that cooperatives tend to focus on and operate as other private businesses, relatively trading enterprises, hence the loss of its initial meaning to which few members are benefiting and leaving others behind, which sometimes can lead to the cooperative beehive. He further argues that cooperatives are responsible for an increased benefit to members only while the market includes all farmers or stakeholders in a specific industry.

However, according to a report presented by Tesha (2010), there have been successes with cooperatives in an agricultural context. The author states the features they found to constitute a successful-operative scheme in an agricultural market. He suggests from his findings that a more flexible lending scheme that considers agriculture's uneven cash flow structure is the right policy action for an international monetary fund.

A challenge mentioned by Tesha (2010) is that agriculture can demand investments that can be of higher cost than the total yearly income of the members. An example is buying recommended manuals, pruning the trees and farm preparation in the fields presenting all agriculture activities. The traditional way of a cooperative to distribute the inputs to members timely and make repayments more frequent is hence not appropriate here. The author state that member organisations can lower the transaction costs to the cooperative.

In Africa, however, the most popular agricultural cooperative model has historically been the one marketing agrarian products produced by small farmers. In some cases, agricultural cooperatives have combined input distribution and crop marketing (Chambo, 2009); Tesha, 2010). The size of the cooperative movement in Africa has been steadily growing over the years despite various impediments like state control up to the mid-1990s; and the liberal economic environment since the early 1990s, for which they had not been adequately prepared (Tesha, 2010, Wanyama *et al.*, 2008). Cooperatives create market opportunities by decreasing inequality through equal ownership of the means of production, starting community resources for self-sufficiency on local scale community networks and social capital, and focusing on self-education and individual empowerment (Birchall 2004; Wanyama *et al.*, 2008).

Globally more than 100 million people are estimated to be employed by cooperatives and have more than 800 million individual members (Maghimbi, 2009). In 2006, the world's top 300 cooperatives were estimated to have an annual turnover of US\$ 963 billion, which is equivalent to the GDP of Canada (Maghimbi, 2010). In Kenya, 303,455 people are directly employed by cooperatives, and up to 16.5 per cent of the population indirectly derives their livelihood from the increased demand and associated opportunities to provide goods and services to cooperatives (Maghimbi,2009). The

agriculture marketing cooperatives have been a significant development intervention aiming at promoting agriculture by collecting small-holder farmers spread out in the rural areas of Tanzania (Tesha,2010). The colonial governments announced the formation of agricultural marketing cooperatives, particularly for cash crops, mainly coffee, cotton, and Tobacco (Sizya, 2001).

In particular organisational arrangements, agricultural marketing cooperatives (AMC) are essential in motivating farmers to market the crops more efficiently by ensuring market and reducing the average costs of crop handling before reaching the market due to economies of scale.).

2.2 Marketing

According to the Oxford Advanced Learner's Dictionary (OALD) (2000), marketing is defined as the activity of presenting, advertising, and selling a company's products in the best possible way; the market should aim to provide value to its clients and its societies for at large. Also, Skoong (2009) defined the term *market* as used in a global theme that is the space in which the exchange of goods and services takes place through transactions between market actors, buyers,s and sellers. A marketing cooperative is a business organisation owned by farmers to collectively sell their products which is an essential factor in direct marketing (Carlsson, 1992). Birchall (2004) states that it allows producers to accomplish functions they could not achieve in their collections.

Sijaona (2000) states that in the 1990s, private buyers were licensed to buy cashew nuts from farmers, and the government stopped the price astounding. Since then, cashew nuts marketing has been under market privatisation till 2008, when the cooperative introduced the Warehouse Receipt System (WRS) for cashew nut marketing in the Mtwara region after some success obtained in other crops like maize, cotton, rice and coffee (Maghimbi, 2010). This system refers to the act where farmers keep the products after harvest and sell them through cooperatives, so the cooperative controls all the stored products; the system contributed to the increase of cooperative members Boenchnke (2003). Also, he states that through cooperatives, the government enforces a Warehouse Receipt System program to help the farmer solve the cost of farm business and anticipate the low price of farmer income during harvest time. Cashew nut farmers were mandated to sell through primary cooperative societies; selling outside this system is illegal (black market) (World Bank Report 2019).

Maghimbi (2010) states that the Warehouse Receipt System was introduced to address the exploitation of private buyers and intermediaries to cashew nuts farmers for several years. For example, in the 2006/07 season, some of the private buyers and mediators

exploited buying cashew nuts because they were not comfortable with the indicative price set by the government. Furthermore, the few who decided to buy did so at low costs of Tshs 2,000 per kilogram, disappointing the farmers from continuing with the cashew nuts production and seeking other alternatives to earn a living (World Bank Report 2019). Through these farmers having power over the e-market, their system eliminates mediation. They have had to legally register with the local government with the specific farm size to be cooperative members.

Skoong (2000) argues that "the market is not necessarily to be competitive with many sellers and buyers, but can be characterised as an *oligopoly* or *monopoly*, dominated by a small number of sellers or a single one". Some market actors have *market power* and can influence critical aspects of the transaction, such as the price (Skoong 2000). He adds that more than the market system has to include the different market schemes channel embedded in agricultural productivity.

2.3 The importance of cooperative marketing

Cooperatives are an essential tool in agricultural-orientated businesses (Brune 2016). Its initial goal gives it the power to influence the market if well-organised through the choices made during the management; it plays a significant role in how well the business performs (Brune 2016). The members of the cooperative themselves do the management and operations of the cooperative. The democratic procedure in operational functions is a high priority for the empowerment of the people and seems to be embedded in the organisational culture (Dogarwara 2005). Barton presents the cooperativeness of cultural markets by reviewing its benefit and responsibilities in daily performance, which can be different in operation due to the type of cooperatives.

Dogarwara (2005) and Levine (2002) put more emphasis on cooperatives as they play an essential role in global and national economic and social development as they, contribute to sustainable human development, and have an indispensable role to play in combating social and economic exclusion. According to Levine (2002), the function can positively be seen when the full participation of all people facilitates the more equitable distribution of the benefits of globalisation. Thus, cooperatives should be considered pillars of national and international economic and social development through agricultural markets (Levine 2002). He also agrees with Barton that through the direct benefits they provide to members, cooperatives strengthen the communities in which they operate. SCO cooperation contributes to an ideal high risk for members to increase productivity in the potential trial. Specific adverse events can lead to actions taken by the farmer household that, in the future, will affect their assets negatively. An example that Morgan (2012) mention is that members can remove their children from

school in worse economic times due to the high costs of education. However, as previous studies have shown, education positively affects cooperative management and members. Hence, there is evidence that members and management, in the long run, make it more difficult for the members to get out of poverty, making a weak contribution to the agricultural market. Ellis (2000) argues that if some of the member's futures are diverted to pay for the children's education, it could support the development of new sources of livelihood for the household. Thus, children going to school improve the community's human capital.

Moreover, cooperatives provide locally needed services and employment, circulate money locally and contribute to a sense of community or social cohesion. They can provide their employees with the opportunities to upgrade their skills through workshops and courses and offer youth in their base communities short and long-term employment positions. Students could also be employed on a casual-appointment basis during long vacations. Through these, cooperatives will contribute to economic development.

Gao et al. (2013) present social networks as an essential asset as it has a noticeable productivity effect on a market. For example, networks can help identify new business areas for the cooperative. Besides, social networks can also work as a tool to unlock previously unavailable knowledge. In that regard, social networks should be seen as an essential part of the risk management work of a company. They concluded that cooperation between the cooperative members was a valuable tool to manage production risks, increasing market penetration. Through cooperation, the farmers learn better farming practices from one another and find new markets for their produce. They go on to argue that the ability to save money is a perfect tool when farmers want to address the production risks associated with farming. Savings can, for example, address the risks related to the surrounding politics of the farmer Brune et al. (2016).

Training

Boenckne (2003) writes that in developing countries, a positive relationship exists between the adaption of new technology and the level of schooling farmers have attended. In agriculture, many decisions are made regarding distributing a limited number of resources to different activities (Skoog, 2009). Feder et al. (1985) concluded that improved human capital through higher education attainment played an important role in the farmer becoming an early adopter of new technology. They mentioned one study conducted in Bangladesh as an example that showed a positive relationship between the level of education and adoption of grain which produces higher yields. The authors also reach the same conclusions that (Skoog, 2009) does, that education has a positive effect on the allocation efficiency of resources for the farmer (Feder et al., 1985). A farmer tends to become more open to adopting new technology in their

production. Since the farmer has an education, they know how to utilise the discovered technology in their agricultural production effectively. Education also helps the farmer to become more responsive to events in their surroundings which can affect agricultural production.

A study conducted in Eastern Africa concluded that field schools efficiently support increased productivity for farmers in cases where the literacy level is low for the farmers (Tesha, 2010). The field schools are teaching farmers better agricultural practices or are assisting them in adopting new technology in their production. They used Kenya as an example to display how productivity had increased. By attending a field school, the farmers had overall increased their level of productivity. Even if it was significantly lower, in Tanzania, the participating farmers experienced a 23% increase in production. Income from agriculture also increased for the farmer households, with a 50% increase in Tanzania, 23% in Kenya and Uganda, and 18%.

In Tanzania, a study found that the level of schooling a member has will positively affect their agricultural farm output (Tesha, 2010). For example, a higher degree of completed instruction resulted in higher learning impacts. Education also affected the farmer's ability to use external inputs (e.g., fertiliser). Another effect was that the farmer was more likely to utilise more capital, which in this case can be a hoe (scraper), in their agricultural activities. The researchers also present an apparent trickle-down effect: if one farmer in a community is more educated, he is teaching, by showing by example, other less educated farmers more productive agricultural practices.

2.4 New Opportunitites

Cornforth (2004) stated that for the cooperative to experience more significant growth, it must involve looking for new opportunities that occur in the market. The author explains more by comparing the cooperatives that work in the modern scheme and the traditional cooperatives. Cornforth (2004) further recommends order for the cooperatives to grow in the market through the first information system. This system will ensure the allocation of new opportunities being a nation or international once. Also, Carlsson (1992) mentions that stronger regulations on information technology tend to have a formal and stable cooperative business.

A gathering of previous research regarding the relationship between gathering information for new opportunities and growth by Levine (2002) concluded that countries with well-developed information systems positively impact the level of development of firms, including cooperatives. The research also consistently supports the idea that developing efficient technology institutions reduces information barriers

in the indicated market. Therefore, according to previous analyses of cooperative communication, a more stable information system in a country is most likely to affect the growth of firms or cooperatives positively.

A study on cocoa farmers in Liberia concluded that higher access to information leads to new opportunities in the market hence business growth (Skoog, 2009). He displayed this by measuring the level of development of cocoa farmers who have access to information and others who do not have access to information and found the difference in business growth. In the agricultural context, cooperation and the availability of information are reliable marketing resources that impact economic development because they strongly influence decision-making (Skoog, 2009). It can also affect risky investments, for example, a technology that can increase profits of the agricultural enterprise and a facilitator for financial institutions to reach out into the rural context in a developing economy.

Institutions that support cooperatives

Institutional theory is a theory found in the broad social science, which combines theoretical inputs into a multi-level analysis of how institutions contribute to cooperative agricultural-market development. This sub-section discusses the institutional approach, primarily focusing on the government's role in the combined market (Tesha, 2010; Skoog, 2009). Skoog (2009) defines institutions as "behavioural rules of social interaction and are distinguished from organisations, which are seen as actors". Institutions are sometimes also referred to as the "rules of the game" institutions can be used interchangeably. With other contextual factors, institutions define the actors' operational context, thus helping to shape the resulting patterns of interaction outcomes and benefits uncoupled by actors (Douglass, 1991).

Skoog states that there are different kinds of institutions; regarding the government overall, the Economic institutions stand to guide economic activity – investment, production, value addition, and trade. He also mentions Political institutions that conduct political activity, such as the distribution of political power and decision-making (Skoog 2000). (Schmidt 2008, see Skoog2009), argues that institutions may be informal (undocumented) or formal (documented), and legal rules may be adhered to and applied in practice or remain nominal. It is applicable mainly in developing countries where the initialisation concepts are unknown to the organisations. Hence, the extent to which institutional rules are applied, adhered to, or enforced and thus effectively valid in practice is essential. In Tanzania, where enforcement of formal cooperatives structure tends to be unstable, informal rules often apply. *Socio-cultural constraints* are vital to patron-client relationships, political

patronage networks, relational exchanges, and corruption. (Schmidt 2008, see Skoog 2009).

2.5 Theoretical synthesis

Today, there is a discussion in the Tanzania cooperative agricultural marketing field about whether it is an excellent tool for agriculture productivity and marketing. From the literature review on the effectiveness of cooperatives in the farming market, the research needs to be done in a unified field, especially in developing countries, as the concept is not well understood. Lastly, evidence has been produced which supports that improved access to information through excellent communication positively impacts all market stakeholders. A vital intersection among stakeholders can be demonstrated with excellent communication for the cooperative to impact the market significantly.

3 Methodology

Chapter three will begin with a presentation of the research design and methodological approach, followed by taking account of choices made in the literature review, including the implications of those choices. After that, data analysis techniques and ethical considerations will be illustrated. The chapter will conclude with an explanation of how quality assessments were made throughout the research project.

3.1 Research design

Qualitative research design emphasises the phenomenon's importance as it occurs in its natural context and aims to describe and learn the meaning of the issue and situations from the perspective of those included (Bryman & Bell 2015; Carter & Little 2007; Creswell 2007; Robson 2011). As Morgan D & Guevara, H (2012) suggest, the approach enables one to gain an in-depth understanding of phenomena in real-world settings by focusing on social constructions and meanings created by human beings. For this qualitative project, the strategy is suitable since the purpose of the study is not to generate statistically generalisable data; instead, to acquire an in-depth understanding of the cooperative activities that can contribute to the international agricultural market, specifically in the cashew nut market. Creswell (2007) argues that qualitative design is preferable to explore the meanings that individuals or groups ascribe to a phenomenon, rendering the complexity of a situation significant.

Moreover, cooperation is a participatory social process that acknowledges the connection between society, business and the context. Therefore, it is crucial to consider the importance and effects of contextual characteristics and individuals' meanings. Also, Robson (2011) refers to flexible research, which is an unstructured "do-it-yourself" design, where it is the researcher's task to find a strategy for the study likely to support accomplishing the project's aim. This approach for gathering data in this study allows us to evolve the desired design and consider the framework and tools used in the project (Robson, 2011). It was instrumental in this project due to the inclusion of multiple data sources and the research design developed through interaction with the study.

The study adopts an abductive research strategy (Bryman & Bell 2015; Creswell 2007) to make sense of the information collected during the research process and derive a comprehensive understanding. The abovementioned logic emphasises tracking back and forth between theory, empirics and data (Bryman & Bell 2015). empirical findings have fed continuously back to the selected ideas while interpreting insights. This reasoning is a suitable choice in the current case due to the complexity of cooperation

and the inclusion of diverse perspectives and voices. By connecting the context of the industry and the company, secondary data, and meanings of actors included in the study to the appointed theoretical grounds, substantial insight into a problem can be grasped. To assure findings are more comprehensive and trustworthy and contribute to the academic knowledge with a broader understanding of the appointed phenomenon.

Lastly, when conducting social research, questions of ontological assumptions emerge, whether social phenomena can be considered external entities or social constructions, since these effects how the study is carried out (Bryman 2012). The study builds on this ontological standpoint since reality and shared value for business and society is assumed to be continuously created by interactions and communication (Porter & Kramer (2006; 2011)).

3.2 Literature review

Reviewing the literature, previous works, and what is already known and written down relevant to the research project is precision in formulating questions about the studied topic in proportion to the research (Yin 1994; Robson 2011). Additionally, a systematic review is a way of identifying general patterns, defining terminologies and research methodologies, exposing gaps in knowledge or finding areas of uncertainty, and designing an adequate framework for the study (Robson 2011).

When determining whether to conduct a systematic or narrative literature review, the researcher has decided that a narrative approach is suitable because it is not known beforehand what theories will be relevant (Bryman & Bell, 2015). Theories regarding cooperation and their role in the international agricultural market. By doing a narrative literature review, flexibility can be maintained (Bryman & Bell, 2015). As this study utilises theory concepts and an inductive approach to research this subject, the literature review of the unified field must make room for flexibility.

At the beginning stage of this study project, the researcher conducted a literature review to develop an understanding and identify gaps in academic knowledge. Specifically concerning cooperative and marketing views. With attempts to grasp definitions, compare different perspectives on the mentioned terms and concepts, and review recent empirical studies to identify undiscovered areas. Part of the secondary data used alone in the project's thesis constitutes a literature review of peer-reviewed journal articles to grant trustworthiness and high quality of the research. The researcher inspected previous literature in the databases; Primo (SLU's online library), Web of Knowledge,

Web of Science and Google Scholar around the critical themes of cooperative and cooperative marketing. With ambitions to find the most relevant literature consistent with the purpose of the study. By using the following keywords in the literature search and their combinations: " agricultural, cooperative", "cooperative duties and responsibility", "cooperative marketing", "agricultural marketing", and "transparent cooperative/ marketing". The researcher prioritised cooperative perspectives and previous empirical studies within agricultural cooperatives marketing.

3.3 Unit of Analysis

The unit of analysis in this project refers to collaborative practices that positively contribute to the agricultural market. The case cooperative, online sources and questionnaires grant to understand better their strategies and activities, which help in agricultural market growth, and also to gain a deeper understanding of the phenomenon perspectives of their target group. The choice, as mentioned earlier, of the unit of analysis has twofold implications for the results. On the one hand, the study is limited to one empirical example and a particular cooperative perspective. Also, their collective values and strategies actively contribute to the agriculture market; on the other hand, collaborative communication creates values and meanings in interaction with stakeholders, including the study's external perspectives.

3.4 Case Study

A case study design assists in researching current context-bound phenomena in empirical enquiry (Creswell 2007); since it facilitates studying real-world settings in detail. The lines between the phenomenon and context might not be evident by attaining evidence from multiple sources of information (Creswell 2007; Yin 2014). According to Schramm (1971, see Yin 2014), a case study mainly seeks to clarify a decision or a set of conclusions: why the researcher took and implemented it and with what result. Moreover, single-case studies have the potential to test the theories and explore implementation processes via an unusual case deviating from everyday occurrences while capturing the circumstances and conditions of a situation (Yin 2014). In particular, if the aim is to deal with functional links and depict those, "how" and "why" questions are advisable to be used, which are mainly associated with a descriptive case study (*ibid*). The aforementioned correlates with the purpose of the current study since it aims to reveal the cooperative activities that strengthen the international agricultural market by studying how reality is created through the interaction between a collective and its stakeholders.

The graphic single-case study design is a suitable choice since it enables a detailed study of cooperative activities which contributes to agricultural marketing in its natural settings, including multiple pieces of evidence and perceptions. Studying a phenomenon through a bounded context, as the empirical example of the Tandahimba cashew nut cooperative, their activities perspectives grant to gain an in-depth understanding of the phenomenon. In particular, to explain how the problem of the weak agricultural international is market addressed on a cooperative level and what should do in collaborative marketing practices. Moreover, using various evidence and diverse actors' perspectives, interlinkages, and enabling and hindering factors in constructing cooperative actions are likely to be revealed by considering contextual circumstances. However, single-case studies also call for attention to avoid misrepresentation and to maximise the access to compile enough evidence for the case study (Yin, 2014).

Picking the empirical illustration to explain the phenomenon is based on research findings indicating what might be the study forefront in the cooperative contribution of the agricultural market. The first criteria for the case study selection are related to its context, the firm stand of Tanzania cooperative in agricultural marketing (Brayman, 2012). In particular, the research project has selected agricultural cash crops and an empirical example Tandahimba cooperative market. Furthermore, choosing an extreme sample for the case study, in which the cooperative should volunteer to participate, supports proper evidence to be obtained and is likely to replicate or extend the selected theories.

3.5 Data Collection

According to Robson (2011), an excellent flexible design uses multiple means of data collection. Likewise, Yin (2014) highlights that convincing and accurate information is likely to be obtained through numerous sources of information. The purpose of utilising various sources, such as secondary documents and questionnaires, was an intentional decision in this study, firstly, with attempts to gain a deeper understanding of cooperative and agricultural marketing. Secondly, to enable triangulation to be performed.

3.5.1 Secondary Data Collection

Besides the literature review of peer-reviewed journal articles, *documents* and *secondary data* are elements of explicit data collection during

a case study that enables the attainment of specific details and collaborative information from diverse sources (Yin 2014). According to Yin (2014), observing particular documents in the case of empirical studies may uncover assumptions, communication and networking practices within an organisation and raise further questions. The case study basis on empirical data, which includes secondary sources, such as the cooperative act, World Bank report, articles and the cooperative website. The helpful information is publicly available on the cooperative's official website, as mentioned earlier. Besides printed sources and available online writings, some calls were included for further clarification and accounted for as secondary data to underpin the empirical results.

3.5.2 Questionnaire

According to Bryman & Bell (2015), the obtained investigation is by conducting a questionnaire whereby specific information and valuable insights are acquired. Likewise, Robson (2011) agreed that this method is preferable when the researcher and respondents are involved in the research process. This source of evidence provides standardisation intended to minimise the effect of the instruments on the research results; the researcher chose to conduct a questionnaire method to collect data because it allows for a set of predefined questions (Yin, 2014). Robson (2011) argued that this questionnaire does not give flexibility and freedom to the respondent. Still, it is advisable to have an open question, which serves as a helpful tool for the respondent to explain his view outside the researcher's limit. In this project, an online questionnaire was conducted with Tandahima cooperative members who are also cooperative workers to gain an internal insight into the perspective of the cooperative. The researcher formulated the questions with the superior testing after being sent to the Tandahima cooperative (e in *Appendix 1*). Five responded with the agreement of not revealing their identity names and positions.

3.6 Data Analysis

After data collection, qualitative content analysis is applied, which according to Bryman & Bell (2015), ensures the researcher examines the collected materials, including searching out underlying themes by moving back and forth between data collection, analysis, and interpretation of the findings. The qualitative content analysis consists of three stages; preparation, organisation and reporting information, as Elo et al. (2014) argue.

The preparation stage of this study included a literature review, forming the research questions, deciding on sampling, identifying the unit of analysis, and collecting data. Using flexible design allowed us to constantly refine the exact tool and the study framework as the research developed. The second organisation phase in this project entailed thematic coding, as suggested by Robson (2011). In this project, the researcher utilised the labelling technique during the analysis of the semi-structured interview, focus groups and documents and also required the revision of the previously set themes.

3.7 Ethics

Ethical consideration is important and seeks to protect both researcher and respondents from any harm that can happen; during the research, ethical issues might arise; therefore, the researcher should consider openness and honesty (Bryman & Bell 2015). Within research ethics, the main concerns related to protecting human participants and the lack of informed consent (Bryman, 2012). The principle means that participants in the study must be given as much information as needed to make an informed decision if they wish to take part in the research or not (Bryman, 2012). While obtaining consent should be explained to participants what the study includes by providing them with a consent form. It is advisable to double-check that they understand the research, its role and its implications (Robson, 2011).

The respondents will have the right to refuse to participate in the study, and the researcher will not force any respondent to respond to any question asked. The research also will not involve vulnerable people who cannot be informed of the content of the study, such as children, disabled people and mentally. The research will consider ethical questions throughout the study to protect the dignity, rights and benefit of all the respondents and ensure the research is legally (Robson, 2011).

The researcher will inform the respondents of the study's objective, the method and use of the research, and the potential risk that may be involved (Neumia 2015). The researcher will ask for permission and agreement before the interview to record the interview. The respondent will be encouraged to be free and open about their experience of the phenomenon. Eventually, any information that a respondent did not want to include in the research data, the respondents were willing to participate with the agreement, not having their identification.

3.8 Reliability and trustworthiness

Refers to what extent the findings are replicated; that is to say, the results will be the same if the study is conducted again (Yin, 2015). It creates problems in qualitative research since people's behaviours are dynamic and changing daily. Therefore, possibly the qualitative interviews that will be conducted again will not yield the same results. In that sense, this study will facilitate other researchers on the same issue and increase reliability. Yin (2015) pointed out that to approach the problem, documenting as much as possible and showing transparent producers and methods so that other researchers can repeat the procedures. Building on that argument claimed by Yin (2015) provided clear guidelines for collecting data and doing interviews will be written down, recorded, transcribed and documented. This documentation will create the claim of evidence, as pointed out by Yin (2015); this study, in that sense, will help other researchers in the replication of the research and hence the ease of its capability.

3.9 Quality assurance

Robson (2011) refers to the flexible design, where the research worker is an instrument while conducting the study. Hence, the quality of the research is highly reliant upon their prior understanding, knowledge, views and skills (Neuman, 2014; Robson, 2011). Therefore, the design calls for a rigorous approach regarding data collection, analysis and report writing and gives a substantial role to the researcher to justify the accuracy, accountability and trustworthiness of the results (Robson, 2011; See Table 2).

Applying multiple sources of data collection enables triangulation, which grants the study validation and reliability (Bryman & Bell, 2015). As a consequence, others can cross-check the findings, as well as greater confidence in the results, and more reliable substantiation of the constructs will be achieved (Bryman & Bell, 2015). Additionally, the establishment of validity and reliability can be safeguarded and strengthen the quality of the study by the four design tests of construct validity, internal validity, external validity and reliability (Riege, 2003; Yin, 2014).

Construct validity is essential when doing case studies. Thus, data is collected from multiple sources to let converging lines unfold. Moreover, a chain of evidence is documented and validated with interviewees' questionnaires; this study will use the questionnaire (Riege, 2003, Yin, 2014). *Internal validity* mainly concerns inferences in descriptive case studies (Yin, 2014). pattern matching is applied while analysing different sources of information and theory and es, and models introduced in the theoretical chapter are reused to analyse findings (Yin, 2014). *External validity* strives

to safeguard the overestimation of the particular conclusions beyond the current form of inquiry; hence, empirics fed back to theories (Yin, 2014).

Table 2. Case study design tactics and tests to ensure validity and reliability (based on Riege (2003); Yin 1994, modified by the author)

Tests of case study design	Illustrations of relevant case study tactics	Applied in this research
Construct validity/ Confirmability	Use multiple sources of data evidence	Triangulation: the use of questionnaire and multiple sources of secondary data
	Establish a chain of evidence sees	The questionnaire was organised ed, and secondary data usage was documented.
	Key informant to review the evidence	Questionnaires were tested before sending to the respondents.
Internal validity/ Credibility	Do explanation building - illustrations serve to underpin the analysis	Pattern matching, and graphic models, are used in the theories applied during data analysis
	Ensure concepts and theories are systematically connected to findings	Same ideas and themes are used for analysing different sources of data
External validity/ Transferability	Determine the scope and boundaries of the study	Clarified in chapters 2 and 5.
	Use theory in a single-case study, and compare evidence with existing literature.	Analysis established on theoretical, conceptual framework; connecting back and forth.
Reliability/ Dependability	Give a complete account of the theories and ideas applied	As explained in Chapter 1,2,3.
	Ensure coherence between the problems appointed and the design of the research	It was clarified in chapter 3.
	Apply case study database	Done for structuring data
	Record data as concrete as possible	The answers were recorded in the questionnaire.
	Grant meaningful linkages across findings from different sources of data	The same logic, themes, and framework applied in questionnaire preparation and analysing documents
	Apply peer-review and examination	The researcher submitted a proposal, and seminars with the supervisor, peers and opposition performed will go to the examiner.

4 Empirical data

This section presents the data collected from the study according to the research objectives through answers to questionnaires. First, a more general overview of Tanzania and its agriculture will be presented to give the reader a broader understanding of the context of this research. Secondly, the display of information about the Tandahimba cashew nut cooperative as a sub-chapter. Finally, the presentation and elaboration of the findings from the questionnaires. The developments will, in turn, lay the foundation for the data analysis and conclusions in this thesis's later chapters.

4.1 Overview of Tanzania and its agriculture

A short description of Tanzania and general information about agriculture: Tanzania is a country located in Eastern Africa, it has a population of approximately 60 million people as of 2017, and its capital is Dodoma (Tesha 2010). The official languages are English and Swahili. However, it is home to many other local languages, approximately 120 tribes. It is a presidential republic that achieved independence from the United Kingdom in December 1961.

As the background section proves, agriculture makes up a large share of Tanzania's economy. It is soil suitable for different agriculture activities with favourable yearly rainfall (Tesha 2010). The main agricultural products destined for export are Cash nuts, coffee, tea, Tobacco, cotton and other grains. According to the World Bank (2018), the most common tool for Tanzania farmers in their production as of 2018 is a hoe (scraper). Around 20% of the farmers use some animal power, such as an ox, in their production. Lastly, approximately 3% of the farmers use tractors in their production, meaning many Tanzania farmers are small-scale farmers.

In Tanzania today, different types of cooperatives are defined according to the size of the cooperativities type of groups, such as entrepreneurs and farmer's savings groups. Traditionally the cooperative that focuses on the marketing of peasant crops has been dominant in Tanzania mainland with successful results in the market. This cooperative was dominant in terms of members and trade volume since its birth of cooperatives in the 1920s. The present-day dominance of SACCOs is thus a recent phenomenon that started in the 1990s (Maghimbi, 2010).

4.2 Overview of Cashew nuts production in Tanzania

The Cashew nut tree usually takes approximately 5-6 years from planting to have its first fruits; at the age of 7, it usually reaches full yield potential (Maghimbi, 2010).

Harvest usually occurs one time in the year, around September to December. Tanzania is the first country to harvest cashew nuts, following Ivory Coast and Brazil, which gives it a good position in the market. The export value of cashew nuts currently stands at 16% of the total exports (World Bank Report 2019). India and Vietnam account for 94% of the Tanzania cashew nut production, respectively. The World Bank Report (2018) states that 6% of the produced cashew nuts are consumed within the country while the other 94% goes to export markets as raw cashew nuts decreasing country opportunities such as employment and the processing industry.

If Farmers handles a cashew nut tree well, it can increase its yield or maintain its constant output over the years. The productivity starts to decrease when the tree is at around 15 years of age, and it can expand to 30 due to the type of seed and treatment (www, FAO, 2019). One measure to maintain productivity until it reaches 20 years is to regularly prune the tree (www, FAO, 2019). If you are not pruning the tree, adding fertiliser will only thicken the tree branches and inadvertently support the growth of weeds surrounding it (www, FAO, 2019). Thus, by not pruning, fertilising is only considered an unnecessary cost as it does not result in increased cashew nut kernels.

4.3 Overview of Newala cooperative

Mtwara Region is located in the southern part of Tanzania and lies between longitudes 38° and 40° 30' East the Greenwich. It is the second smallest region after Kilimanjaro. According to the 2012 national census, the area had a population of 1,270,854, with a growth rate of 1.2%. It has a population density of 76 people per square kilometre. Administratively Mtwara Region is subdivided into six districts, 21 divisions, 102 wards and 554 villages United Republic of Tanzania (Tesha 2010). Economically, about 92% of the population engages in agriculture, apart from other rural activities like fishing, beekeeping and small-scale industries. Approximately 85% of the region's land is arable land. However, less than 20% of this is under cultivation. Principal food crops produced include cassava, millet and sorghum. Only recently, maize has gained popularity. Exchange crops are cashew nuts and sesame. The researcher selected Newala District because the area is one of the significant cashew producers in the Southern zone Regions (Tesha 2010).

4.4 Empirical questionnaire results

Presented here are empirical results from five individual responses to the questionnaire. The section mainly offers the information received, which seems to occur frequently. The answers were received from respondents with the agreement of not mentioning their details, names or work position. After that, the mentioned cooperative activities contributing to the agricultural market will be presented. Lastly, the member's perception will lead to other chapters. The questionnaire is attached as an appendix (appendix 1).

Table 3: Personal properties of the participating respondents. (Cooperative members who work in cooperative)

Number	Gender	Age	Education	Agriculture goals	Farm size(acres)	Production
1	Male	35	secondary	Increase in agricultural production	5	Cashew nuts
2	Male	45	primary	Expand the market	18	Cashew nuts
3	Female	30	collage	Expand the market	10	Cashew nuts
4	Male	30	Bachelor	Strong value chain	25	Cashew nuts
5	Male	40	secondary	Increase in agricultural production	30	Cashew nuts

4.4.1 Agriculture training

Members state that before they received the agriculture training, which had low impacts due to less commitment of both participants. Currently, the cooperative has Trainers and supervisors who come and visit the registered farmers on their respective farms and follow up on their progress. Members state that the agricultural training that they have received from the cooperative has been very beneficial to them in regards to improving their agricultural-Cashew nut productivity. Members noted that they now know how to arrange their cashew nut trees more productively, resulting in quality and higher harvests. Since implementing the practice, many have explained that nuts and cashew trees have more fruits.

Moreover, they stated that they previously ignored arranging trees; currently, they are placing the trees in a straight line and measuring the distance from each tree to the next to get proper spacing. They did not specify how land management has improved, though they claimed that by being more conscious about land management, they had noticed an increase in their overall agricultural production. Members become more aware of the benefits of proper storage of cashew nuts to improve the individual overall quality. In turn, it has helped them increase overall revenue from coffee production as the quality of batches is higher than before.

Before cooperative agricultural training, farmers would let their cashew nuts trees grow without any intervention. After receiving the training, the farmers state that they have learned the importance of pruning their trees. By pruning the trees, they noticed their overall production had increased. The improved cashew nut storing system has increased the overall quality of their product, knowledge in picking when harvesting hence reasonable price in the market, has a positive impact on the overall quality of sold cashew nuts batches.

Members state that they got more knowledge of farming practices when exposed directly to agriculture training, receiving a good flow of information concerning the cost of inputs, selling price, market and weather through a local cooperative. Farmers state that they have improved their storing of cashew nuts which has increased the overall quality of their cashew nuts. They also say that nowadays, they do selective picking when harvesting; previously, members would take all the cashew kernels from every tree, but after training, now only picks which are red, which indicates that they are ripe. It has a positive impact on the overall quality. Moreover, after joining the cooperative, they started implementing this practice and noticed a quality improvement in the harvests.

4.4.2 Provision of New Opportunities

Members are informed of the increased activity on their farms, in terms of short and long-term investment, in various ways and to varying extents. The pre-reported finding further supports this finding that members have contributed to price increases and stability by processing and to sell higher-quality cashew nuts. Cooperative members and workers in a group confirm this finding by recounting that members were taught how to prepare quality cashew nuts that helped them achieve a higher price. In the past, such processing was not worthwhile, as middle buyers mixed qualities and paid for all cashew nuts as the low-quality cashew nut. Regardless the Tanzania cashew nut is treated as the best in the market.

Members state that many members willingly learn and apply improved farming practices (crop husbandry) and work jointly work farmers' groups, which leads to under-brushing their farms more often. Hence benefiting from shared knowledge about crop husbandry and shared farm labour in cashew nut farms. However, some members still face challenges using inputs such as fertiliser and chemicals. As further stated, farmers who are not members were hoping or willing to use this little fertiliser, fungicides and pesticides to date, which means that black-pod may continue to have severe effects on the farms. The farmers/ members appreciate cooperative efforts and are easily motivated to work jointly since they all benefit.

4.4.3 Cooperative member's perception

The Tandahimba cooperative members are the key stakeholder group, and their goal is to be a voice and upgrade society through agriculture. Specifically, they focus on farmers' generations. Thus, the questionnaire proved to incite some questions to get an insight into how members/ workers see the cooperative and their activities. When asking the attendees about their impressions of the collective and what it evokes in them, all members said that they see it as an innovative, growth-oriented cooperative. Moreover, most of the respondents associate the cooperative with a sustainable company. None members see it as an honest Tanzanian cooperative that local people (members) are proud of initiative.

The impression of members regarding cooperative effects on their production and the market is that it has benefited them. The farmers state that their ability to access previously inaccessible financial tools has improved their agricultural production. The cooperative growth has led to an increase in service provision, members said. The necessary credit to make the planned investments is now easily accessible for members; they do not have to present any extensive collateral to receive it. All members get benefits through this. Many members, especially youth, join the cooperative because they want to learn how to save since the suitable provides agricultural training, they also get a chance to improve their agricultural knowledge.

The above empirical data were obtained from different sources, as summarised below in Table 4.

Table 4: Summary of different sources of data.

	Type of the data	Source of the data
1	Secondary data	Books, articles, reports, and some calls were categorised as secondary sources to clarify the empirical data.
2	Primary data	Questionnaires

5 Analysis and discussion

In this chapter, the researcher will analyse and discuss the empirical results grounded in the concepts and the theoretical synthesis developed in Chapter 2. The empirical results are interpreted by unifying cooperative, market and institution concepts. Building on these pillars, the findings are illustrated and expected to reveal the focus of joint agricultural marketing activities and their contribution to the market, especially in nuts and cashew products.

5.1 Agriculture training

The results show that many members directly access agriculture training from the cooperative. Trainers and supervisors visit the registered farmers on their respective farms and follow up on their progress, which implies collective strength; the cooperative manages almost all chains from input distribution to out. It means that the cooperative market includes the farmers from the beginning stage of the product, which has a positive impact on demand and agricultural productivity, unlikely before when cooperatives were used as a store for farmers to sell their cashew nuts. Moreover, they stated that they previously ignored how to arrange trees. Still, they place the trees in a straight line and measure the distance from each tree to the next to get a proper spacing between them, managing the land better after undertaking agricultural training. Through this, members are more aware of the price, market information, and adequate storage of cashew nuts to improve the overall quality of batches. In turn, it has helped to increase individual overall revenue from cashew nut production as the quality increases than it was previously.

The previous works of literature made on the subject prove that education needs to be an integral part of the cooperative. Boenchke (2003) and Tesha (2010) concluded that cooperative members' completed schooling played a decisive role in agricultural productivity and the market. In this case, the educational impact on the allocative efficiency of the members is not to be underestimated (Feeder et al. 1985). An empirical example is that the members now document the production procedures. As mentioned in the practical part, regarding the properties of cashew nut production, fertilising without pruning would only result in unnecessary costs for the members (www, FAO, 2019). Davis et al. (2012) argue that if farmers get loans without education, they might have bought the fertiliser used but not noticed significant changes in their productivity. The findings made by Tesha (2010), which presented a positive relationship between farmer participation in agricultural field schools and increased agricultural productivity in Eastern Africa, have further supported this argument.

The research made by Tesha (2010) supports the claim of this grounded concept that education has a positive effect on the productivity of cashew nuts farmers, especially cooperative members. One example he mentioned was the increased yield of cashew nuts kernel and the positive relationship with the level of schooling and training completed. Even if he uses schooling as an example, it is not farfetched to say that the agricultural & Financial Education provided to the members, in this case, has resulted in increased productivity. As stated previously, some farmers have noticed productivity increases by implementing new practices learned from the education offered to them. Appelton & Balihuta (1996) indicated that showing by example is the right way to support Ugandan farmers' learning process. Thus, the vital role of network extension comes into play as the farmers meet and show each other new farming practices. (Schultz 1988). Argue that network as an input in the market can support the financial and agricultural education input suggested in this proposed theory. Further strengthens the relevance that providing farm training and extended network to members hence passively impacts the international agricultural market and Farmers who are engaged in the cooperative

5.2 Provision of new opportunities

Results show that members are individually informed of the increased activity on their farms in terms of short and long-term investment. The pre-reported findings further support this finding that members have contributed to price increases and stability prejudicing quality cashew nut; also, the stable price of cashew nut is a result of better access to markets. Cooperative members respond to improved price incentives in the market and take advantage of the opportunities provided.

Cooperative members confirm this finding by recounting that members were taught how to prepare quality cashew nuts which helped them achieve a higher price. By increasingly processing and marketing quality, small-holders are *adding value* to their cashew nut, which is now bought by buyers from integrated value chains and promoted by cooperatives. In the past, such processing was not worthwhile, as middle buyers mixed qualities and paid for all cashew nuts as the low-quality cashew nut. Regardless the Tanzania cashew nut is treated as among the best in the market. However, some members still face the challenge of inputs such as fertiliser and chemicals, e.g., pest control applications. As further stated, some farmers who are not members were hoping or willing to use, but there are limited use fertiliser, fungicides and pesticides to date, which means that black-pod may continue to have severe effects on the farms.

5.3 Aligning cooperative members' perception

Respondents perceive the cooperative is clear and consistent with the values of the members to believe the response to the question of the responded perception was that the cooperative has a clear stake that they want to stand for in the society, underpinned by a plan they seek to deliver with similar products and activities. These reflections justify that marketing practices create communication between the members, resulting in shared understanding regarding the desired personality of the cooperative (Pringle & Thompson 1999). What the cooperative offers as a product correspondent with what it expresses and does. In other words, product truth, consumer insights, and brand character coincide in close meanings and prove that distinct corporate brand values are salient to the company and its stakeholders (Carlsson, 1992; Birchall, 2004; Schultz *et al.*, 2010).

Tandahimba's marketing practice is perceived as unique in the market since they "loudly" communicate what they believe. Still, everyone agreed that this provocative style is "attractive, cool and hype". Some argue that it is an innovative and successful marketing strategy; they show a new way of thinking. The above practice enables the cooperative to "humanise" the offered plant-based cashew nuts alternative and reach broader audiences to try the products. Even though this style evokes mixed feelings, participants express advantages, threats and dislikes. Among respondents explained that though the cooperative is doing well, it still has to develop a transparent character to its members, especially on governmental issues. It is clear that the government intervene in some cooperative cases by providing money to the cooperatives for input price reduction to its members hence intervene in management decision making.

Maghimbi's (2009) study, excessive concluded that the lack of transparency among cooperative members and other stakeholders could quickly destroy the collaborative mission of the brand. Similarly, findings in this study reveal that poor communication evokes scepticism in some respondents. This study illustrates Tandahimba's cooperative case since the products are consistent with the market values, beliefs and actions. Still, cooperative misuse of some information's resulted in an unclear perception of the agreeable brand promise. However, it should be clear that the findings show a snapshot and a representative group of targeted members.

5.4 Contribution of the conceptualised theory

The reviewed cooperative theory has discussed whether suitable is an excellent tool to address agricultural Marketing issues in the international market. This proposed

conceptual theory suggests how to do it when addressing problems by looking at the interaction and performance of main stakeholders through communication. The communication scheme of this theory supports Weber's (2013) more flexible information system schemes are needed for microfinance to succeed in an agricultural context

The conceptualised theory agrees with Carlsson's (1992) conclusion that cooperation is the best tool to address agricultural marketing. Still, it adds some insight into communication to balance the actors in the market. The findings support the conceptual theory by addressing the shortcomings in cooperative management. However, it should be noted that, as mentioned previously, focusing too much on one production, in this case, cashew nuts, could increase market growth (Schultz 1988). As recommended in the analysis, education in other agriculture productions can arguably help cashew nut production since the farmer can communicate through the product value chain.

The main aim of this thesis was not to find out if it could address the international agriculture market. It aimed to find improvement points to increase its efficiency, which was grounded in how the farmers felt about the cooperative. The qualitative studies made on the subject supported these arguments made from the generated theory. Thus, it cannot be farfetched to state that previous approaches indeed support the subjective reasoning of the farmers regarding productivity increases and market growth. An example of this is the conclusion that Brune et al. (2016) made in their quantitative study on farmers in Kenya. They found that many tea cooperative members have a positive life change.

It uses empirical evidence as a counter-argument and discusses if the purely quantitative theories that have previously studied the cooperative phenomenon have accounted for certain factors. An example of elements in the empirical evidence of this thesis can be the failure of supporting institutions and the effect that the level of individual education has on agricultural performance. Cooperative theory tends to, as mentioned in the literature review, focus on the outreach and sustainability of agriculture to determine its success or failure (Skoog, 2009; Tesha, 2010). It could mean that other underlying, but essential factors are ignored or not discovered.

6 Conclusion

This study aims to determine the cooperative activities contributing to agriculture marketing to assess the collaborative contribution of agricultural marketing in cashew nuts products in Mtwara, Tanzania. The study also aimed to determine how members perceived the cooperative's services and their impact on their agricultural market. It determined how cooperatives are utilised to address agricultural marketing issues in Tanzanian cashew nuts. The cooperative could better fit the agricultural need, specifically the cashew nuts market, by improving the services. Following the stated aim, this thesis had the research question:

How are cooperatives being utilised to address agricultural marketing issues in Tanzania cashew nut farming?

The cooperative members included in this study stated that the supportive services fit well to their production due to the new opportunities, training provision. Membership provided improved payments as well as other factors such as information on weather and production. The theory used in this study contributes to a cooperative, transparent information system in the agriculture industry. The study also confirmed previous theoretical standpoints that cooperatives aimed at agriculture must be more flexible in their payment structure to perform well.

To summarise, this research and its resulting theoretical framework place itself among the cooperative literature that argues for using cooperatives for agricultural market development to support sector develop, particularly in developing countries; and that cooperatives should operate independently, without political interference. Moreover, this research supports using cooperatives to address local agricultural marketing issues by providing members with opportunities, training, improved payments and information. The findings suggest that successful use of cooperatives hold the potential to address the practical problems of agricultural marketing growth, such as in Tanzania's cashew nuts market as of 2018. However, a key to effectively increasing cashew nuts productivity in Tanzania, is for the cooperative management to address transparency through clear communication to facilitate good information flow.

6.1 Implication of the study

In this thesis, the researcher examined ways a cooperative is used to address agricultural marketing issues in Tanzanian cashew nut farming. The collected empirical material provides an understanding of cooperative activities that contribute to the

international agricultural market and cooperative members' experiences and perceptions, particularly in the Mtwara region.

The results are from one case study based on volunteer participation, and the specific geographical location must be considered in broader generalisations. At the same time, the results from this study provide empirically grounded evidence to support the development of hypotheses for further study. The observations and conclusions in this study help illuminate cooperative activities in developing countries, and therein contribute to the academic, international agricultural market and members' understanding of the cooperative concept. The results also contribute insights relevant to policymakers, advisors, and banks in the agricultural sector, clarifying the potential value in investing in cooperative-member farmers.

6.2 Future research

A study suggests that for the cooperative to be equally beneficial to its members and the market, the government and other sectors which act as stakeholders have to give the total power for it to operate primarily in decision making.

The findings in this study are limited to cashew nuts cooperative members who are cooperative's workers. It would be interesting to investigate further what members are missing from the cooperative.

Also, it would be interesting to apply this study to cooperatives with different primary production, such as other cash crops and animal production, for example, if the findings are alike or not and what more to do to develop cooperation in developing countries.

7 References

- Appleton, S., & Balihuta, A. (1996). Education and agricultural productivity: evidence from Uganda. *Journal of International Development*, 8(3):415-444.
- Birchall, J. (2004) Cooperatives and the Millennium Development Goals. *Geneva international labour office*.
- Boenchnke, R.W.(2003). The Challenge of Introducing a Warehouse Receipt System in Developing Countries. *Journal of agricultural economics*, 34(2):21-3.5
- Bryman, A. (2012). Social Research Methods. Fourth edition. *United States of America*: Oxford University Press. Bryman, A., Bell, E. (2015). Business Research Methods. Fourth edition. *United States of America*: Oxford University Press.
- Bryman, A., Bell, E. (2015). *Business Research Methods*. Fourth edition. United States of America: Oxford University Press.
- Brune, L., Giné, X., Goldberg, J., & Yang, D. (2016). Facilitating savings for agriculture: Field experimental evidence from Malawi. *Economic Development and Cultural Change*, 64(2), 187-220.
- Carter, S. M., Little, M. (2007). Justifying Knowledge, Method, Taking Action: Epistemologies, Methodologies and Methods in Qualitative Research. *Qualitative Health Research*, vol.17. (10), pp.1316- 1328.
- Carlsson, A (1992). Cooperatives and the State: Development partner, a human resources perspective; *Institute of International Education, Stockholm University*.
- Cashew nut Board of Tanzania, 2017. Investment opportunities in the cashew nut industry in Tanzania.
- Chambo, S. A. (2009). Agricultural Co-operatives: Role in Food Security and Rural Development. Paper Presented to Expert Group Meeting on Cooperatives. Held on 28 – 30 April 2009, *New York*.
- Chambo, S.A., Esther, T., Mtenga, H., *et al* (2016). Business Enterprise Development, Governance and Gender Mainstreaming among Rural Producer Organisations in Tanzania. *Beep Research Report*, Vol 1- 2007
- Cobia, D & Andersson, B (eds). (2004.) *Cooperatives: An Economic and Management Perspective*. Prentice-Hall, Englewood Cliffs, NJ.

- Cornforth, C. (2004). The governance of cooperatives and mutual associations: a paradox perspective. *Annals of public and cooperative Economics*. Open University Business School. The U.K.
- Creswell, J.W. (2007). *Qualitative inquiry & Research Design*. Choosing among five approaches. Second edition. United States of America: Sage Publications.
- Davis, K., Nkonya, E., Kato, E., Mekonnen, D. A., Odendo, M., Miiro, R., & Nkuba, J. (2012). Impact of farmer field schools on agricultural productivity and poverty in East Africa. *World Development*, 40(2), 402-413.
- Dogarwara, G (2005). Agricultural Co-operatives: Role in Food Security and Rural Development. *Paper Presented to Expert Group Meeting on Co-operatives Held on 28 – 30 April 2009 New York*.
- Ellis, F. (2000). The determinants of rural livelihood diversification in developing countries. *Journal of agricultural economics*, 51(2), 289-302.
- Eriksson Skoog, G. (2000). *The Soft Budget Constraint – The Emergence, Persistence and Logic of an Institution*, Kluwer Academic Publishers, Dordrecht.
- Eriksson Skoog, G. (2009). 'Internal Concept Paper: Economic Development – Towards a Strategic Focus', Memo for Team Liberia's Thematic Discussion, Swedish International Development Cooperation Agency, Monrovia.
- Feder, G., Just, R., & Zilberman, D. (1985). Adoption of Agricultural Innovations in Developing Countries: A Survey. *Economic Development and Cultural Change*, 33(2), 255-298.
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *The SAGE Open publication*, January-March 2014, pp.1-10.
- Gao, S. S., Sung, M. C., & Zhang, J. (2013). Risk management capability building in SMEs: A social capital perspective. *International Small Business Journal*, 31(6), 677-700.
- Hakelius, K. Karantininis, K. (2012). The resilience of the cooperative form: cooperative Beehving by Swedish cooperative.
- Levine, R. (2002). Finance and growth: theory and evidence. *Handbook of economic growth*, 1, 865-934.
- Maghimbi, S. (2009). The Organization Capacity of Cooperatives for Peasants and Small Farmers and Small Farmers: *A View from an Outside*, paper presented to

REDET's Training Workshop for Leaders of Cooperatives, Bwawani Hotel, Zanzibar 1st – 2nd February 2006.

Maghimbi, S. (2010). The Abolition of Peasant Cooperatives and the Crisis in the Rural Economy in Tanzania, in Forster, Peter G. and Sam Maghimbi (Eds) *The Tanzanian Peasantry: Economy in Crisis*, Aldershot, Avebury.

Morgan, D & Guevara, H (2012). *The SAGE Encyclopedia of Qualitative Research Methods* Thousand Oaks, CA: SAGE Publications Inc.

Neuman, L., W. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*. Seventh edition. United States of America: Pearson Education Limited.

North, Douglass C. (1991). *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge and New York.

Porter, M. E. & Kramer, M. R. (2011). The big idea. Creating shared value. *Harvard Business Review*, January- February, pp. 62-77.

Pringle, H., Thompson, M. (1999). *Brand Spirit: How to cause-related marketing builds brands*. Chichester, England: John Wiley & Sons Ltd.

Riege, A.M. (2003). Validity and reliability tests in case study research: a literature review with "hands-on" applications for each research phase. *Qualitative Market Research: An International Journal*, vol. 6, 75–86.

Robson, C. (2011). *Real-world research*. The Atrium, Southern Gate, Chichester, West Sussex, United Kingdom: John Wiley & Sons Ltd, vol 3.

Roy, E. P. (1969). *Cooperatives Today and Tomorrow*. The Interstate Printers and Publishers Inc. Danville. pp 612.

Schultz, T. P. (1988). Education investments and returns. *Handbook of development economics*, 1, 543-630.

Schultz, F. and Wehmeier, S. (2010). The institutionalisation of corporate social responsibility within corporate communications combines institutional sensemaking and communication perspectives. *Corporate Communications: An International Journal*, Vol. 15 No. 1, pp. 9-29.

Sijaona, M. E.R. (2000). Assessment of the situation and development prospects for the

Cashew nut sector. [http://www.unctad.org/infocomm/francais/anacard_e/Doc/tanzania.pdf] site visited on 12/04/2019.

Sizya, M. J. (2001). The Role Cooperatives play in Poverty Reduction in Tanzania [http://www.un.org/esa/socdev/social/papers/poverty_panel_sizya.pdf] site visited on 01/05/2019.

Tesha, J (2010). Contribution of Agriculture marketing cooperative in poverty alleviation, *Sokoine University Agriculture*

Weber, R., & Musshoff, O. (2013). Can flexible microfinance loans improve credit access for farmers? *Agricultural Finance Review*, 73(2), 255-271.

Wanyama, F.O., Patrick, D. and Ignace, P. (2008). Cooperatives and Poverty Reduction in Africa. *Encountering the evidence*.

Yin, R.K. (1994). *Case Study Research: Design and Methods*. Second Edition ed. Thousand Oaks: SAGE Publications.

Yin, R.K. (2014). Case Study Research: Design and Methods. *Sage Publications*-2nd Edition.

Yin, R.K. (2015). Case Study Research: design and methods. Fifth Edition: *SAGE Publications*, The United States of America

Internet references

Oxford Advanced Learner's Dictionary (2000). *Meaning of Market in English* Retrieved:

<https://dictionary.cambridge.org/dictionary/english/marketing> (2019-05-23)

World Bank (2014) Ending Poverty and Sharing Prosperity Retrieved: https://www.worldbank.org/content/dam/Worldbank/gmr/gmr2014/GMR_2014_Full_Report.

World Bank (2018) World development report Retrieved:

www.worldbank.org/en/publication/wdr/wdr-archive (2019-02-15)

World Bank (2019) *Measuring poverty overview* Retrieved <https://www.worldbank.org/en/topic/poverty/overview>

FAO (2019) *Global Report on Food Crises* <http://www.fao.org/resilience/resources/resources-detail/en/c/1187704/>

Acknowledgements

I want to thank my supervisor Karin Hakelius at the Department of Economics at the Swedish University of Agricultural Science, for her special valuable comments and inputs and her guidance throughout my work with the thesis. I would also like to thank cooperative leadership who so kindly accepted and volunteered to participate and shared their thoughts and feelings that have been essential to making this study possible. Finally, I would like to thank my family and friends for their support throughout the process.

8 Appendix

The Study On: COOPERATIVES CONTRIBUTION TO PRICING STABILITY IN AN AGRICULTURAL MARKET: A Case Study of Cashew nut

Cooperatives in the Mtwara Region, Tanzania

Background information:

Name of interviewer _____; Date _____

Name _____ of _____ respondent

(Optional) _____

Gender of respondent: 1: Male (); 2: Female ()

District _____ Ward _____ Village _____

Work Identification Number (Optional) _____ Questionnaire No _____

Respondent membership status: 1: Member (); 2: Non member ()

A. Members characteristics

1. What is the average age of members? _____ years. 1 youth (); 2 elders ()
2. What are the members who form the cooperative? 1 Only cashew farmers (); 2 middlemen & brokers (); 3 Others
3. What is the member's status?: 1 H.H. head (); 2 Spouse (); 3 Relative ()
4. What is the average member's education level?: 1: None (); 2: Primary (); 3: Secondary (); 4: Tertiary ()
5. How many members of the cooperative? () persons.
6. What size does the member's production have?: 1: large scale (); 2: medium (); 3: small scale ()
7. How does the cooperative register members? ()
8. Main cooperative workers' occupation: 1: Farming (); 2: Farming and employment (); 3: Off-farm activities
9. How does the cooperative select workers/leaders? ()
10. What is the average age of leaders? () years: 1: Youth (); 2: Elders ().

B. Cashew production and cooperative aspects

11. Do you distribute inputs and training support to the members? 1: yes (); 2: No ()
12. How long do you distribute the input before the season? ()
13. Quantity of inputs: i) sulphur/dust in kgs _____ ii) sulphur fluid in litres _____ iii) insecticides _____ litres/acre; Price of input/kg /litres _____ TSH.
14. How long do you accomplish the following activities in your cooperative with cashew? collecting the cashew _____ days; separation and grading _____ days;
15. How many cashews do you obtain per season? () kg.
16. Did you sell cashew last season? 1: Yes (); 2: No ()

If yes, to whom did you sell your cashew? ()

17. Who are the buyers?

1: In-country (); 2: International ()

18. How many buyers did you contact before you decided to sell your cashew? _____

19. Have you been selling to the same buyer every season? 1: Yes (); 2: No ()

20. Did you get the information about the cashew price before you decided to buy or sell?

1: Yes (); 2: No ()

21. From whom or where did you get the price information?

22. Were you satisfied with the information regarding the price of cashew before the buying/selling season started? 1: Yes (); 2: No ()

23. Do you know the prices before taking your consignment to market?

1: Yes (); 2: No ()

24. How do you collect information on market prices?

1: the direct visit to market (); 2: cross-check with different buyers ();

3: Expertise (); 4: Extension service () 5: through the media ()

25. Do you sometimes sell products on a credit basis? 1: Yes (); 2: No ()

26. What kind of measuring instruments do you normally use? ()

1: standard weigh scale () 2: local measuring instrument. (Kangomba) ()

3: Other specify ()

29. To what extent is the selling price different from the expected one?

1: above expected (); 2: equal to expected (); 3: below expected ().

30. In which month was the price high? _____ And low? _____

31. Have you ever experienced a lack of payments from buyers? 1: Yes ();

2: No ()

32. How many times do you have to make a follow-up for your payments from the buyer before the payment?: 1: none (); 2: many times ()

35. Do you make a prior contract with the buyer before the season? 1: Yes (); 2: No ()

36. Why do you develop/ make a contract with the buyer?

37. If not, do you trust the buyer? 1: Yes (); 2: No ()

38. Before the transaction (selling), how many times do you meet/ contact the buyer

39. How long does the buyer take to affect your payments _____

Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your own work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file. If you are more than one author, the checked box will be applied to all authors. You will find a link to SLU's publishing agreement here:

- <https://libanswers.slu.se/en/faq/228318>.

YES, I/we hereby give permission to publish the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

NO, I/we do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.