

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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AgriSciences**

**The Potential for the Development of Farmers' Groups in the Cashew
Value Chain in the Coastal Region of Kenya.**

MASTER'S THESIS

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Declaration

I hereby declare that this thesis entitled “Potential of development of farmers’ groups in cashew value chain in the coastal region of Kenya” is independently done by me and all the sources have been duly acknowledged by means of a complete reference and in accordance with the FTA Citation rules.

In Prague

2020

Winifred Okpo

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Abstract

Using a cross-sectional farm level data from 263 cashew farmers, this study analyses the potential for the development of farmers groups in the cashew value chain in the coastal region of Kenya. It uses logistic regression and the theory of planned behaviour to analyse farmers inherent characteristics and external factors believed to affect farmers decisions to join producer groups. The results indicate that more than 50% of the farmers expressed their willingness to participate in producers group membership. The most influential factors of farmers' willingness to join producer groups are gender, number of cashew trees per farm, total harvest of cashew, direct sales to market and the level of active participation. The results of theory of planned behaviour illustrate important behavioural effects, such as conflict resolution, access to market and labour availability affect farmers' willingness to join producer groups. In addition, influence of the family as one of the normative beliefs significantly influenced the decision of farm families to join producer groups. We also found that control beliefs, such as government supports, subsidies, and access to extension services significantly influenced the decision of farmers to join collective action.

Keywords: Willingness to join, Factors of group formation, Farmers' decisions, Producers' group.

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List of the abbreviations used in the thesis

WTJ	Willingness to join
MTJ	Motivation to join
CM	Cooperative movement
CS	Cooperative society
PGs	Producers' groups
VC	Value Chain
HI	Horizontal Integration
ACs	Agricultural Cooperatives
MOA	Ministry of Agriculture
Obs.	Observations
GP / GM	Group participation / Group membership
TPB	Theory of planned behaviour
SD	Standard deviation

1. Introduction

Farmers' groups play a crucial role in promoting optimal resource allocation, efficiency in production and marketing decisions. In the past, the coastal province of Kenya has experienced a decline in cashew production, with many farmers' groups collapsing during the liberalization of the economy. However, the formation of new producers' group(s) may not only create employment for women and young people, but can also enhance livelihoods (reduce poverty and improve living standards) and reduce the control of intermediaries taking advantage of the low bargaining power of smallholder farmers (Noni et al. 2017). Although farmers in the coastal region of Kenya are familiar with the creation of such groups, their success depends solely on the choices of members, attitudes and loyalty (Backstrom et al. 2006).

The main objective of this study is to investigate the potential for farmers' groups creation in the cashew value chain, and to examine the factors that could influence farmers decision to participate in producers' cooperatives in the three main cashew producing coastal counties; Kilifi, Kwale and Lamu in Kenya.

This study used both quantitative and qualitative methods to empirically determine farmers' decisions to participate in producers' groups. The value chain approach by Porter on competitive advantage is used for the descriptive analyses of the study's objectives. For the quantitative approach, a representative sample of 400 cashew farmers is used to analyse farmers' willingness to join (WTJ) producers' group.

Ajzen's Behavioural Model (TPB), Mutual Incentive Theory (MIT), and Birchall and Simmons participatory chain theory were also used for the qualitative approach. To determine the behavioural intentions of farmers towards membership in producer groups, 26 cashew growers, 5 field workers and 2 cooperating stakeholders were obtained

This work presents; the current situation of cashew production and the development of famers' groups in the coastal districts; Kilifi, Kwale and Lamu in Kenya.

The outline of this study is presented in the following sections; 1. A concise introduction, 2. Comprises of a review on cashew value chain, stating the importance of producers' cooperative, a brief overview on cooperative movement in Africa and a background information on Kenyan's agricultural sector, the producers' group (PGs) and factors influencing farmers' decisions towards the PGs membership, and the behavioural

model. 3. The aims of study. 4. Begins with the methods; providing a brief description of the study area, methods of data collection, sampling, variable definitions, data processing and analysis. 5. Presents results. 6. Discussions. 7. Conclusion, and implication policy, and lastly all the references used in the course of this study.

2. Literature Review

2.1. Cashew Value Chain in Kenya

Value chain describes the full range of activities performed sequentially to bring a product from its conception to end use and beyond. In agriculture, value chain can be considered as processes which flows from inputs to outputs; from production, processing, packaging, branding, marketing and ultimately to the consumer (Porter 2001). The term 'Value Chain' was used by Michael Porter in his 1985 book “Competitive Advantage: creating and sustaining superior performance”.

Porter’s value chain analysis focuses on systems and activities with consumers as the central principle, linking systems and activities together, determines the effect on costs and profits, identifies the sources of value and losses found in the system. This system can be compared to the development of producers’ group in the cashew sector in the counties of Kenya, as shown in *Figure 1* below.

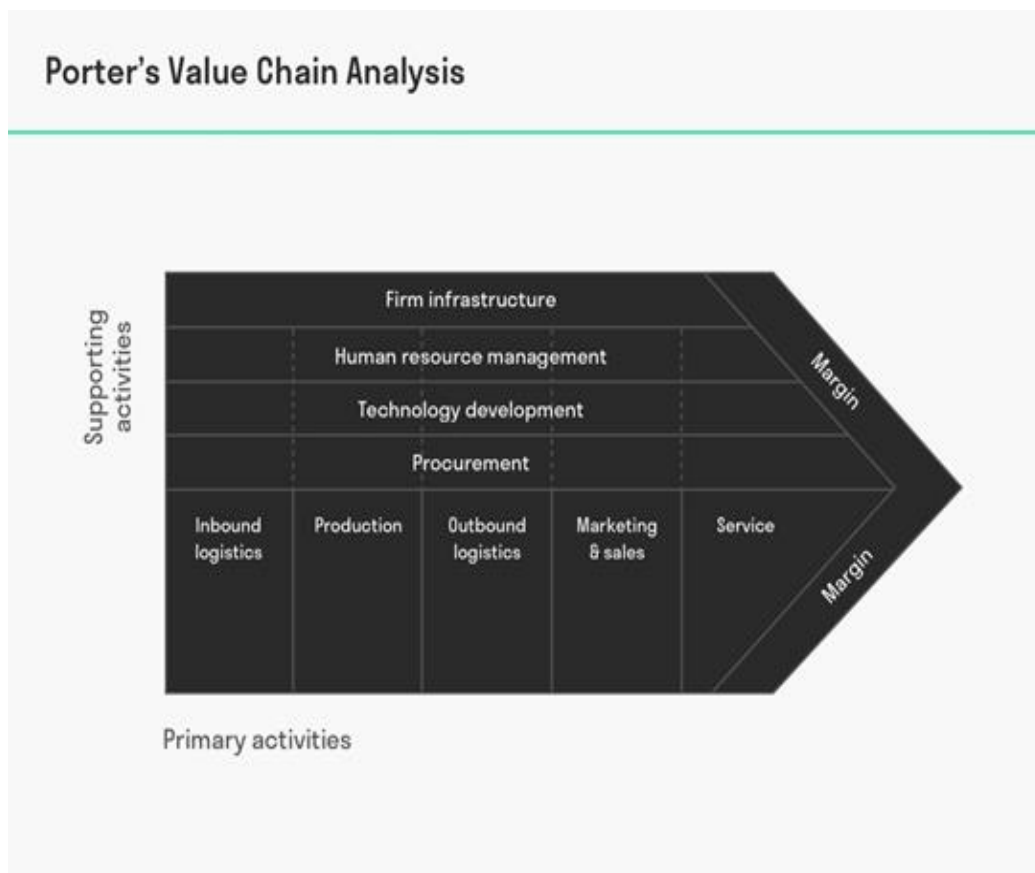


Figure 1: Porter’s value chain analysis. Source: (Porter 2019)

In 2018, the world production of cashew nuts with shell was estimated to be 5.9 million tonnes (FAO 2018). Where, Vietnam happens to be the leading producer of raw cashew nuts, India the first processor and exporter of processed nuts. The market value of cashew is also expected to remain strong due to the high production progress in some regions; such as Africa and Asia (Corsi et al. 2014). In Kenya, for example, approximately 30,000 tonnes of cashew nut production per annum have been observed in the last 5 years (FAO 2018). It is therefore essential that cashew farmers understand the role of collective action in managing the potential bottom-up reconfiguration of the cashew value chain. Objectively change from captivity to relationship management; where members of a producer group see themselves not only as owners and key players in the group, but also in full control of the price rules of their production instead of intermediaries. This is expected to have a positive impact on the development of local industry, reducing transaction costs and information asymmetry. Increasing local growth and development by increasing job creation and alleviating poverty (Noni et al. 2017). An environment where there is competent and ethical leadership ensures that cashew farmers receive a fair share of the market price.

There is also a growing study of high-value cashew by-products especially cashew nut liquids. Cashew production is of immense value for smallholder farmers in developing countries, despite the relevance of cashew products in the international markets, the potential for rural development and poverty reduction, the full assessment of cashew cash and its value chain is not fully explored and industry still lacks appropriate incentives (Corsi 2014).

The analysis is therefore focused on the formation of producers' groups, processing and marketing in the cashew value chain. Nevertheless, there is still a knowledge gap due to the lack of integrated research framework on the principles and function of the producers' cooperatives. Small farmers face several constraints in the cashew sector at the local level, from insufficient support; subsidies and dissemination services from the government.

A review by Rabany et al. (2015) shows that cashew have high potential for revenue creation and plays an important role in developing countries. While another study by Antonio and Griffith (2017) examined opportunities in the cashew value chain

amongst small farmers and large processors in Mozambique. Their findings showed a positive contribution to revenue generation for the rural population of over one million. Specific benefits for small farmers included empowering women, generating income and job opportunities for the rural population, and cashew nuts could also be sold to generate income to buy basic foods.

Although the cashew sector is already well established in the coastal province of Kenya with a long history as far back as 1970s, cashew production was at its peak, until in the 1990s. Marketing of cashew was liberalized, and the system was opened to all; middlemen and merchants who bought and sold cashew nuts from Kenya cashew nut limited, the only main processor at the time. This combined with the spread of the cashew disease; the powdery mildew, caused the collapse of the then thriving cashew industry in the coastal province. Production output decreased in the 80s from 30,000 metric tonnes to 10,000 metric tonnes by 1996 (Muniu et al. 1995; Muniu 1997). Previously, the license to purchase raw cashew nuts was granted to the Nation Cereal and Production Board (NCPB) as the only government representative who also appointed cooperative societies members as sales representative.

Farmers' in the region are used to growing cashew and have considerable experience in production. Nevertheless, the cashew sector is still underutilised in production, and almost non-existent industries have caused the cashew trade to be limited to local consumption. The sector has huge potential to create employment through value addition and fetch the exchequer billions of shillings through exports if only it could be explored (Otieno et al. 1994; Kega et al. 1994; Islam et al. 1994). Currently, marketing of raw cashew nuts in Kenya involves simple linkages of farmers to processors and exporters through middlemen. The processed product(s) still find its way into local and international markets through the tourism industry and confectionary processors. Though, the export quantity is very limited. The government is not able to provide systematic support for the cashew industry yet, besides the distributions of 50,000 new seedlings in 2008, and 30,000 seedlings in 2014. There has being no direct support for cashew farmers until 2008 to 2009; the Ministry of Agriculture established the cashew nut revival task force, composed of 4 national experts, with a comprehensible report providing recommendations for development in the cashew sector. Nevertheless, that, was the last initiative.

There has been no active national association of cashew producers, cashews for commodities, or any export promotion associations that are common practice in large cashew producing countries. The Kenya Nut Grower Association does not reach many cashew producers. However, the Regional Director of Agriculture is in touch with the African Cashew Alliance, which is the most important coordinating body in the cashew industry in Africa.

Though, the demand for cashew nuts is growing and there is a wide speculation that it is possible to increase production by increasing the current 32,000 hectares of cashew production area, which was up to 80,000 hectares as in the 80s. Due to more favourable economic conditions, farmers have once more become enthusiastic about the crop and have started to invest money and labour in rehabilitating abandoned farms (Muniu & Mrabu 2001). See *Figure 2* below; showing the peak, and the fall in the growing trend in cashew production in Kenya.

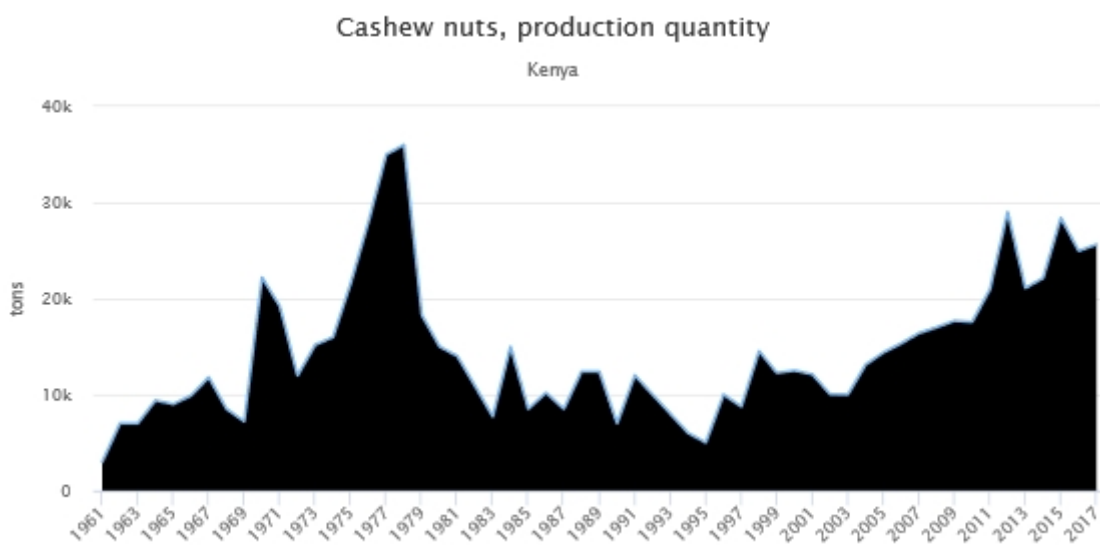


Figure 2: Statistics of cashew nuts production in Kenya (tons). Source: (FAOSTAT 2019)

2.2. The Importance of Cooperatives

Cooperatives are producer groups, which are member-owned and member-operated organizations. They are an important tool for empowerment to smallholder producers, improvement of their market access and bargaining position within the value chains. The potential for such group formation is the main research question for this analysis not omitting the marketing groups since the former is dependent on the latter.

Worldwide, group formation (cooperation) is a network of individuals working together to achieve a common goal with the acceptance of new members. The propensity of people to participate in group formation is essential for the structure of the group, the society, and the ways in which these groups take form and progress over time is important in analysing the potentials of group formation (Backstrom et al. 2006).

Cooperation is a major aspect of the socio-economic growth and development of any society, and it is important to examine the various types of cooperatives; (Credit unions, consumer, producer, educational, processing, and marketing cooperatives) independently (Austin Cooperative Business Association 2014).

Over the years, the cooperative movement and its awareness have increased worldwide. Although the advantages and disadvantages of the cooperative movement cannot be exaggerated. It is important to ensure that the benefits are fully explored, and the disadvantages are reduced. In this study, the strengths, the weaknesses, and the strategies to enhance agricultural coops performance particularly in Africa is reviewed.

Although, the cooperative has always been criticized and compared to investment owned company (IOF) which is not a justifiable comparison. The criticism is based on property rights and agency theory; members cannot control management, investments are short-term, accumulated investments are below the economic optimum. The property right of coop is collectively owned, the distribution dividends and capital to members is par individual value and its ownership is not transferrable. Cooperative members receive the surplus in the form of improved terms of trade, for example, better prices and services unlike IOFs owned by the principal and its affairs are managed by agent(s) or management with the interest of the principal. This is usually not the case as agents could be untrustworthy in most cases, difficult to monitor and ownership is transferable at a cost.

Another argument is that cooperatives are inefficient in all respects, this is also not valid because coops have not ceased to exist but still thriving and growing even in very competitive markets and counteract market failure on market products (Cook 1995).

Nevertheless, cooperative usually faced market constraints and distortion in market signals due to unallocation of capital. Cooperatives gain very limited space in the financial media due to lack of non-tradable residual claims in the stock market. Without concentrated ownership and the democratic principle, it is difficult to mobilize members to become loyal owners. Individual action (free riders) may have some negative effects due to the common ownership rights given to both old and new members. These resulting negative effects do not only affect members, but also becomes a socio-economic problem. The advantages created by cooperatives for their members are, in particular, savings in transaction costs and the development of countervailing power through market prices (Bonus 1986; Staatz 1987). On the contrary, incentive problems (over-reliance on government) have been identified as institutional disadvantages of cooperatives (Jensen and Meckling 1979; Schmitt 1993; Vitaliano 1983).

Advantages of coops: voluntary membership, ease of formation, democracy equitable distribution of surplus, limited liability stable existence, motto: one for all and all for one, greater identity of interests, government support, elimination of middle men, low taxes, role in agricultural progress, access to rural credit, own sources of finances, encourage thrift, fair price, good quality, and social benefit.

Disadvantages of coops: limited funds, over reliance on government, imposed governance, regulations by government, benefit to rural rich, inadequate rural credit, lack of managerial skills, misuse of funds, inefficiencies leading to loses, lack of secrecy, conflict, and its resolution amongst members, lack of accountability, low public confidence, lack of motivation.

The major problems of collective membership are the indifference of members to the organisation and organisational activities (Cummings 2009). Researchers have found that members' attitudes and perceptions play a significant role in members' behaviour toward their organization and also influence the performance of such organizations (Chacko 1985; Birchall and Simmons 2004). Effective association of members, communication between members and management is also crucial for the success or failure of cooperatives (Wadsworth 2001). Overall, Members are an essential part of

every cooperative and their active participation and loyalty is important for the success or failure of the cooperative. (Hakelius 1996).

Who might benefit?

Agricultural cooperatives not only improve farmers' income or small-scale farming operations (Maharjan and Fradejas 2006). However, it also improves the overall socio-economic benefits of farmers' households. The cooperative society has made significant contribution to poverty reduction, mobilization and distribution of financial capital, employment and income generating opportunities in Africa (Wanyama et al. 2008).

Farmers in cooperatives received more production income than their non-cooperating counterparts and their agricultural products were more competitive on the market. In fact, the creation of producers' group(s) will benefit farmers, stakeholders and consumers.

2.3. The Cooperative Movement in Africa

Globally, the origins and the principles of the cooperative movement (CM) is linked with the Rochdale society founded in 1844; involving members coming together with a common goal to meet a common need collectively. The history of the cooperative movement in Africa can be grouped into four (4) eras: the pre-colonial – indicating the existence of cooperative movement in Africa before the colonial, post-colonial and the liberalisation era (Okem and Stanton, 2016). The cooperative movement and its principles at that time was termed; “*self-help*” which was established in communal and traditional activities. (Ayodele and Arogundade 2014). In the colonial era, the cooperative movement was neither a member-owned organisation nor established to meet members' collective interests. It was solely for the benefits of the British settlers and the advancement of the economic interest of the British Crown; a typical example in Kenya (Nyagah 2012). The cooperative movement was used as an instrument to promote the economic interest of the then colonial powers instead as an independent socio-economic movement for growth and development.

It is best to say that membership in the colonial times was a personal motive for the British crown and involuntary membership for its members who have given certain

criteria to become members. An approach to cooperative movement where; “*the motives for a system of cooperatives without co-operators was propagated*”. This highlights the current situation of cooperatives in Africa. Although the colonial approach to cooperative is less homogenous, because the ideas of cooperation differ according to languages such as French, Portuguese, Belgian and English. (Nyagah 2012).

The English has adopted a unified (hierarchical) model - a graduated structure and a specialized administrative unit that relies on a single law of cooperation, where primary companies form secondary cooperatives known as unions. Trade unions, in turn, form tertiary organizations known as national cooperatives, which is the pinnacle of organizations. It is practiced in English-speaking Africa, for example in Kenya, Zimbabwe, Tanzania, Ghana, Zimbabwe and Nigeria. The French came up with a model of social economy that took root in many Francophone countries in Africa. These were measures taken to promote cooperation and reciprocity in different fields, such as the promotion of agricultural cooperatives which played a key role in marketing of cash crops, water management projects or rural resettlements. In francophone countries such as Cotonou, Benin, Burkina Faso, Côte d’Ivoire, Cameroon, Senegal and Togo, a number of cooperation policies and laws have been presented in French, a language that most of the members concerned have not been able to speak. The extension officers were responsible for one-way communication between the government and the people.

The Portuguese adopted a model of producers, which was linked to the Ministry of Agriculture to support agricultural cooperatives and products. It was practiced in Lusophonic Africa: Angola, Equatorial Guinea, Guinea-Bissau and Mozambique. The Belgian accepted the model of the social movement as a very liberal and dual system of cooperation in Congo, Rwanda and Burundi with control left in the hands of a very marginal government. Countries such as Egypt, South Africa and Ethiopia still maintained the original model - self-help or communal cooperatives. (Okem and Stanton, 2016).

The post-colonial era did not bring about the needed change, although, the new independent leaders saw cooperative movement as a means of improving social unity and deepening economic development. However, this was not done due to social, political, state-controlled and military laws, which led to the failure of most cooperatives in Africa including Ethiopia which did not experience institutional colonism (Getnet and Anullo

2012). Given the widespread dependence of cooperatives on government for funds, administration, marketing, training and state resources, this means that failure in a state institution will result in cooperative failure, as they are in principle associated with government largely flooded with inefficiency and mismanagement (Wanyama et al., 2009). In order for the necessary change to take place, the cooperative movement in Africa must implement and apply the guiding principles of cooperatives; "Evaluation and informed social activity". We do not forget the value of consistent and persistent participation and cooperation between members. (Vogel 2012).

Since the failure between state institutions and cooperatives has been identified, the separation of cooperatives from state-control in Africa will reflect commitment, principles and the values of cooperatives, which also re-emphasises the values of precolonial cooperation when supported by self-help in the absence of state support (Zeuli and Cropp 2004; Wanyama et al. 2009). Co-operators now have the chance to become owners of their cooperative businesses and members of their cooperatives.

Nowadays, it is difficult to statistically identify the existing and active cooperatives in most Africa countries. A key issue is the lack of records of daily activities and / or transactions. On the international scene, African cooperatives and co-operators are rare. This is one of the reasons for low participation in international organisation such as international cooperative alliance (ICA). However, in some countries across the continent, there are enormous cooperatives; Ghana, Kenya, Rwanda, Ethiopia, Egypt and South Africa) with credit unions in the forefront.

2.4. Producers' Groups and Cooperation in Kenya

Agriculture is one of the pillars of the Kenyan economy. It employs about 75% of the national labour force, and more than 80% of the Kenya's population lives in rural areas and derive their livelihoods directly or indirectly from the sector (CIA 2018). Kenya's foreign earnings come mainly from black tea, tourism, coffee, horticultural exports, such as green beans, onions, cabbages, snow peas, green grams, avocados, mangoes, and passion fruit. Flowers exported include roses, carnations, statice, astromeria, and lilies. Other important crops are; sugarcane, corn, wheat, rice and cotton.

Smallholders grow most of the corn and produce significant quantities of Irish potatoes, beans, peas, sorghum, sweet potatoes, cassava, bananas, and oilseeds.

The origin of the cooperative movement in Kenya began in 1908, when the Lumbwa cooperative was established. It was originally the idea of then colonial government to develop the agricultural sector through group formation to maximize raw materials for processing and export. However, it took more than 50 years for the cooperative movement to experience a shift. In 1963, when Kenya became independent, about 1,000 cooperatives were registered in the country. This initiative motivated the then present Government of President Jomo Kenyatta to encourage the promotion of cooperative societies as a key strategy for national development and set up laws and regulations governing cooperatives through the Act No. 10 of 1965 and 1966. As one of the results, the Ministry of Cooperative Development was established to strengthen and nurture the movement and to facilitate the necessary legal and regulatory environment. Now, the cooperative societies in Kenya contribute about 45% of the country's GDP.

However, the cooperative societies went through challenging process from full government control, protection and monopolistic position in 60s - 80s to recent cooperatives operating on behalf of member in open and free markets. In the past, the government policies shielded the cooperatives from competition and directly linked producers' cooperatives with parastatals. Also, the Cooperative Bank of Kenya, owned 65% of the cooperative societies and 35% by other investors, which had been incorporated into the system in 1965, and given a close monopolistic license to operate.

After liberalization, the cooperative societies were financially and incapable to pay farmers cash on delivery for their produce as usual at collection centres. There was a significant lack of management skills in business operations under free market conditions and competition. This time led to the loss of confidence and trust of members (farmers) towards cooperative societies. This lack of skills and lack of trust are the main obstacles for cooperatives till today.

The Kenya Cooperative legislation amendment act of 2004 guides the formation and management of current cooperatives. It originates from the Cooperative Societies Act No. 490 of 1966 and was revised in 1997 Act No.12 of 1997, which sought to reduce the strict state supervision of coops to support liberalization of cooperative enterprises. The agricultural cooperatives form 46% of all cooperative societies in the country, with 3

million members out of a total of 49 million of the entire population. 63% of Kenyans obtain their livelihood from cooperative enterprises in general.

There are several types of cooperative societies according to the legislation. With the less active being the agricultural and marketing cooperatives – involved in marketing members' produce (cash crops) such as; coffee, cotton, sugar cane, pyrethrum, dairy, horticulture and nuts). There are also Savings and Credit Cooperative Societies (SACCOS) (most active) – financial institution providing credits and loans for small, medium and large enterprises. As a support for SACCOS, the Government also introduced subsidies and free access to government credit and related free extension services through extension officers. SACCOS on its own, controls over KES 250 billion with 1.8 million members granted with loans and savings.

Kenya's cooperative sector is reputed as one of the most regulated in Africa and the most active in East Africa. One out of every five Kenyans is a member of a cooperative. This means that, at least eight million Kenyans are members of cooperatives while 20 million depend on the movement indirectly. Kenya officially has about 15,000 registered cooperatives with 12 million members. There are more than 320,000 employees and more than 1.5 million people engaged in small scale and informal enterprise funded by cooperative loans.

Agricultural Cooperatives (ACs) have subsequently been a tool for farmers worldwide towards the commercialization of farm produces especially cash crops, such as; coffee, tea, rubber, cotton, palm produce, cashew and other exotic nuts (Fischer & Qaim 2012). Incorporation with the economies of scale and its benefits at all levels in cashew farming with the sum of its value chain could be categorised into negative externalities and positive externalities which influences farmers opinions and willingness for group participation.

Since Cooperative is the pillar for agricultural development, Agriculture Cooperatives is termed producers' groups, giving inclusive opportunities to small and medium scale farmers such as; market access, access to extension services and agents, credit and government support. According to FAO (2018), linking producers to markets is very vital by focusing on linkages through cooperatives, this could likely underline farmers motivation and willingness towards group participations. The type of linkage to be considered in this research, is the linkage of farmers to export which involves grouping

of farmers with the aid of external technical support. Working to achieve quality, which will result in high potential returns. Bearing in mind the risk in export markets, compliance with standards for example; Organic, Fairtrade, quality and traceability problems even with technical assistance.

2.5. Factors influencing farmers decision to join cooperatives

The Theory of Planned Behaviour (TPB) commonly used in behavioural economics allows cooperatives to identify motivations that may lead to the desired intentions of the actual behaviour of decision-making units. Human behaviour is guided by different personal probabilities, that is; beliefs about the consequences of ones behaviour, beliefs about the normative expectations of other people and beliefs about the presence of factors which may facilitate or impede performance of the behaviour (Fishbein and Ajzen 1975). Beliefs are based on a wide range of background factors. In their summaries, behavioural beliefs produce attitude towards behaviour, normative beliefs result in subjective norms and control beliefs generate perceived behaviour control. The combination of all these elements leads to the formation of a behavioural intention (Ajzen 2002). Behavioural intention could be described as “instructions that people give to themselves to behave in certain way”. In other words, intention represents the motivation of an individual’s conscious plan to exert effort to perform the behaviour. Intention could be understood as an immediate antecedent to behaviour (Ajzen 2002).

The ability of farmers to act positively or negatively towards membership of producer groups is therefore examined on the basis of TPB; As personal beliefs, social norms and perceived control of behaviour emphasize, these are factors that could play a significant role in farmers' intentions, which could lead to behaviour leading to membership in producer groups. The analysis of different types of intentions can be predicted with high accuracy from attitudes to actual behaviour. These attitudes are also responsible for significant changes in an individual's intention that could predict actual behaviour or engage in behaviour at a particular time and place (Ajzen 1991). When considering the motivation to join producers’ groups, the three constructs of TPB which is used to explain farmers’ motivation were developed by adopting the seven (7)

principles of human behaviour in behavioural economics (Dawney and Shah 2005). These seven principles summarises the fore mentioned constructs by Ajzen.

- i. **Other people's behaviour matters;** people do many things by observing others and copying; people are encouraged to continue to do things when they feel other people approve of their behaviour.
- ii. **Habits are important;** people do many things without consciously thinking about them. These habits are hard to change – even though people might want to change their behaviour, it is not easy for them.
- iii. **People are motivated to 'do the right thing';** there are cases where money is de-motivating as it undermines people's intrinsic motivation, for example, you would quickly stop inviting friends to dinner if they insisted on paying you.
- iv. **People's self-expectations influence how they behave;** they want their actions to be in line with their values and their commitments.
- v. **People are loss-averse;** (an endeavour to avoid any form of losses over an unforeseen gain) and committed to what they consider 'theirs'(having a sense of ownership).
- vi. **People are bad at computation when making decisions;** they put undue weight on recent events and too little on far-off ones; they cannot calculate probabilities well and worry too much about unlikely events; and they are strongly influenced by how the problem or information is presented to them.
- vii. **People need to feel involved and effective to make a change;** just giving people the incentives and information is not necessarily enough.

Hence, what determines how well intentions predict behaviour? This consideration leads to two different aspects: first, which conditions generally influence the predictive power of TPB; second, what are concrete determinants of intentions as well as behaviour using the three given constructs as illustrated below;

Individual attitude to behaviour: as stated earlier, this refers to the possible outcomes (positive or negative) of a person's action and how these outcomes can be evaluated. This might be as a result of personal experiences, beliefs and attitudes, and are

expressed as emotions, moods and traits. Although attitudes are continuing, they could also change.

Normative beliefs (personal standards): are simply how others’ expectations could affect ones’ behaviour and motivates to comply to these expectations.

Control beliefs (perceived behavioural control): refers to the presence of factors that may facilitate or impede performance of behaviour and the perceived power of these factors could be external or internal. Since giving incentives; provision of inputs subsidies and extension services is not necessarily enough, therefore, implementing favourable policies with government support would have facilitate farmers’ positive intentions towards producer’s group membership.

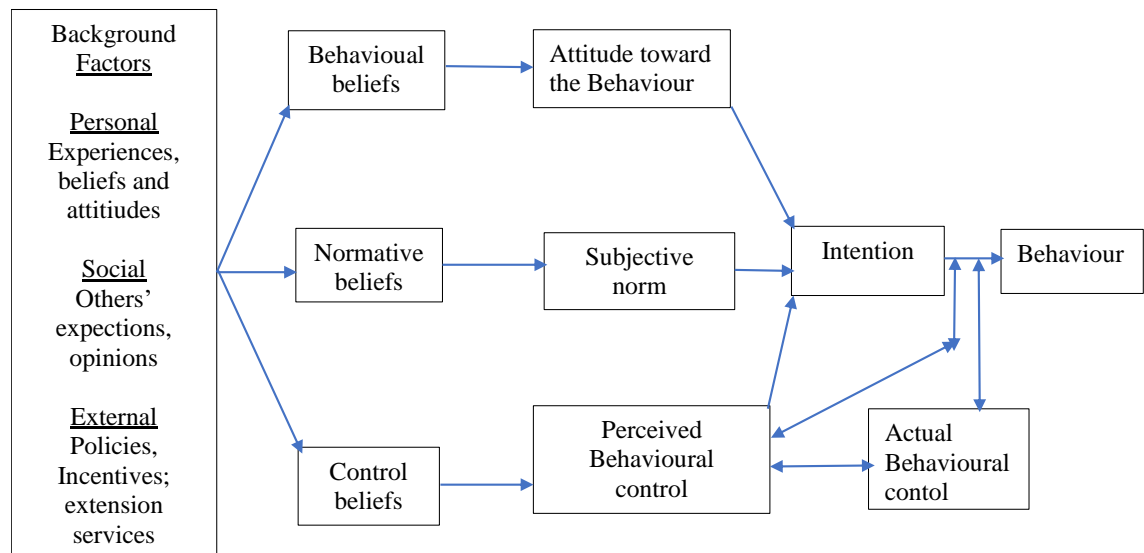


Figure 3: The theory of planned behaviour with Background factors and constructs. adopted from Ajzen (2019)

To simplify the TPB model, Birchall and Simmons (2004), developed a synthesis based on ‘Mutual Incentives Theory’ (MIT) of the motivation(s) to participate. The MIT examined two general social-psychological theories of motivation that are developed from the individualistic approach; a social exchange which assumes that people are motivated by individual benefits or punishments which could literally translate to advantages; involving personal benefits or disadvantages; these benefits are not shared. These individualistic characteristics are not easily identified as an individual could be a

key part of a collective group with personal agenda. This is also known as the free rider(s) which is the exact opposite of the collectivistic approach; drawn from the theories of social co-operation, which interprets human behaviour very differently. It was assumed that participation can be motivated by three variables:

- i. Shared goals: people express mutual needs that translate into common goals.
- ii. Shared values: people feel a sense of duty to participate as an expression of common values.
- iii. Sense of community: people identify with and care about other people who either live in the same area or are like them in some respect.

The collectivistic view generalizes that the more each of these three variables are present, the more likely people will be motivated to participate. According to Birchall and Simmons (2004), the insights of Mutual Incentives Theory (MIT) are important, but on their own, they are insufficient to explain what makes individuals participate. This led them to propose a general model; termed the 'Participation Chain' theory (Simmons and Birchall 2005). The model has three (3) levels linked in the chain;

The first level: is the resources and capacities of the participants; time, money, skills and confidence (Parry et al. 1992; Verba et al. 2000). Resource-based theories are thought to provide an important explanation as to why people participate. Verba et al. 2000, observed that "participatory activities vary in their resource requirements and individuals vary in their resource endowments". Therefore, resource constraints are an important factor in determining who becomes active in what way'.

The second level: is the mobilization of participants; a number of factors are examined here, first, it has been proposed that some participants are more active by certain 'catalyzing issues' than non-participants (Lowndes and Wilson 1999). Positive evaluations of the opportunities to participate, particularly in terms of their appeal, timeliness and relevance, are therefore thought to be important in mobilization. Finally, research has also pointed to the importance of recruitment efforts (Klandermans 1984; Jordan and Maloney 1996). Hence, while some individuals seek out participation opportunities themselves, 'being asked' is commonly reported as an important factor in mobilizing participants. This is particularly the case where the recruitment agent is known

to the participant through his or her existing social networks (Rosenstone and Hansen 1993; Brady et al, 1999).

The third level: is the motivation to participate. It is worth noting that although these three levels are linked, the participation chain model is non-sequential and are susceptible to change resulting to a stronger or weaker link. Hence, factors on each of the three levels work independently to affect the likelihood that members will participate. In theory at least, this means that positive steps can be taken to enhance the likelihood that members will participate, through strategies to ensure that, there are no ‘weak links’ in the chain.

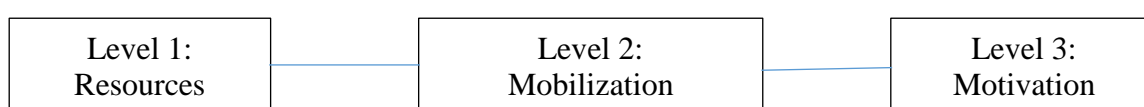


Figure 4: The participation chain source: Birchall and Simmons (2004)

It is vital to understand that collective action can help address the inefficiencies, coordination problems, and the barriers to market access (Markelova et al. 2009). Collective action and producers’ organizations are among the efforts of the pro-poor market approach. (Markelova et al. 2009). Therefore, farmers as one of the value chain actors require certain conditions, services, and support organizations to effectively participate in the market. (Hazell et al. 2007). What matters for collective action? Characteristics of the resources, user groups, institutional measures, and the external environment are important factors of influence. (Thorp 2002; Thorp et al. 2005).

It is also important to consider the social capital; it is the sum of resources, actual or virtual, that arise for individuals or groups based on a strong network of more or less institutional relationships and recognition (Bourdieu & Wacquant 1992). At its core, social capital emphasizes the importance of communal ties between individuals in facilitating and enabling collective action. Social capital permits society to do things that it otherwise would not do, and though it is utilized by individuals, it originates in associations between people in society. Like other forms of capital, social capital is productive, making possible the achievement of certain goals that might not be attainable in the absence of group actions (Coleman 1990).

As a resource, social capital can be used to promote individual and collective interest (Lin 2001), emphasis trust, shared norms, values (Fukuyama 1995), and highlights the importance of cooperation between individuals in the society. The knowledge and trust between group members promotes more voluntary activity and civic engagement leading to economic externalities which are actions arising from transactions with external effects. Cooperative behaviour strengthens interpersonal and intrapersonal trust, efficiency, and reduces mistrust associated with the transaction cost with new group members (Putnam 2000). The importance of social capital to the TPB model, is that, it serves as a bridge; connecting individuals from various background through their involvement in collective action.

Therefore, to better understand the role of cooperatives in Kenyan agriculture, it is important to identify precisely the factors influencing the behaviour and willingness of farmers to participate in agricultural cooperatives. From the existing theoretical literatures, studies have shown that variables such as; socio-economic factors (gender, education, cultivation experience, access to extension services and availability of labour) are seen as potential factors of influence for group membership in countries like Ghana, Tanzania, Uganda, Senegal, South Africa and Kenya. (Towo 2004; Asante et al. 2011; Adong et al. 2012).

In Ghana, for instance, the threshold theory of decision making was used to examine the factors influencing decision to join producers' group. A reaction which occurs only after the strength of a stimulus increases beyond the individual's reaction threshold (Hill and Kau 1981). This implies that each individual facing selection, has a reaction threshold influenced by several factors. Joining a producers' group is said to occur when the individual registers with a producers' group (PGs), attend meetings regularly, and pays dues. Although PGs could provide several services, such as; access to information, access to inputs, access to credits, access to machinery services, yet, some farmers are not members of any PGs. Just as in the case of any innovation or technology, small-scale farmers will take several factors into consideration before opting to join PGs. It is therefore important for policy makers, non-governmental organizations and development partners to understand these factors and their effect on farmers' decisions to join PGs. (Asante et al. 2011).

With regards to gender, studies have shown that women and youths' participation is lower in producers' group compared to men due to gender issues and lack of control on land and / or ownership (Towo 2004). For example in Uganda ; a cross-sectional research design was used to determine the participation index of both men and women in an integrated pest management group. The result showed a high number of male participation compared to their female counterparts; membership in economic groups, being a man, access to extension services, age, total number of household labour and participation in non-farm income generating activities significantly and positively influenced group participation (Ochago et al. 2017). In another study which used the Uganda Census of Agriculture 2008 / 2009 data, showed that the key policy variables found to influence participation in farmers' group included; educational attainment, distance to extension service and quality of road infrastructure (Towo 2004; Wheeler 2006; Benin et al. 2008; Davis et al. 2010).

A study was carried out in Tanzania and Malawi to understand the role of motivation and the balance between external incentives and self-motivation for the use of sustainable intensification practices. The result showed that farmers' decisions depend not only on external incentives, but also on intrinsic values which farmers attach to their production resources and farming practices. Despite the various perceived benefits, farmers highlighted the lack of financial resources as a major constraint. (Jambo et al. 2019).

Therefore, it is necessary to implement favourable policies and strategies of farmers' group concept by improving extension services, extension workers and cooperative societies, to influence farmers' decision toward producers' group membership and also enhance sustainable membership (Adong et al. 2013). It is in this context that many government agencies have developed national policies for rural development and designed a policy framework to help farmers to become organized so that the delivery of services could be channelled through the various types of farmers' groups (FAO 2019).

3. Aims of the Thesis

Kenya is prominent in cooperative movement. There are different types of cooperative societies in the region, for example; savings (predominantly in operation), producers, marketing, social and services cooperatives. The question is, why a considerable number of farmers in the coastal counties are not member(s) of producer group likewise marketing group? What is the motivation of most farmers to join producer groups? The responses to the willingness to join producer groups can be unique for each farmer according to his or her specific need(s), experiences and social background. This study is interested in the cashew producers' and marketing groups, so far the group participation of farmers in the coastal counties in the above groups, particularly in the producer groups is insufficient. What are the potentials of producer groups for cashew farmers, its value chain and the improvement of their livelihoods in the coastal counties of Kenya? What are the main factors that influence the opinions and willingness of cashew farmers towards producer groups?

Specific Objectives

The main objectives of this research are;

1. To analyse the current situation in terms of local membership of cashew farmers in local groups (Quantitative descriptive analysis).
2. To examine the internal factors that influence farmers joining current producers' groups - resources, personal characteristics, individual and collective motivation. (Econometric analysis).
3. To analyse farmers motivation, intention and potential behaviour that influence farmers decision towards producers' groups in cashew value chain and the improvement of their livelihood (TPB model framework using personal interviews with cashew farmers, extension officers and other coop stakeholders - Qualitative analysis).

4. Methods

This study used the quantitative method to analyse the current situation of producers' group in terms of local membership of cashew farmers in local groups, and the internal factors influencing cashew farmers willingness to join (WTJ) the producer groups. While a qualitative method was used to analyse the behavioural model, and the external factors that could influence cashew farmers to join producers' group in the coastal counties in Kenya.

4.1. The coastal region of Kenya

The study is conducted in Kilifi, Kwale and Lamu in the coastal provinces of Kenya as shown in *Table 1*. Kilifi County covers an area of 12,246 km². The county administrative centre is in Kilifi town and there are seven sub-counties (constituencies) and 35 wards. Kwale county is on the southern coast, occupying 8,270 km². The county's administrative centre is in Ukunda and it has four sub-counties (constituencies) and 18 wards. Lamu county is located at the northern end of the coast of Kenya and covers an area of 6,273 km². Its administrative centre is in Lamu town and it has two constituencies divided into 10 wards. A graphical presentation of the three region of interest in the coastal counties (Kilifi, Kwale and Lamu) in Kenya is shown in *Figure 5* below.

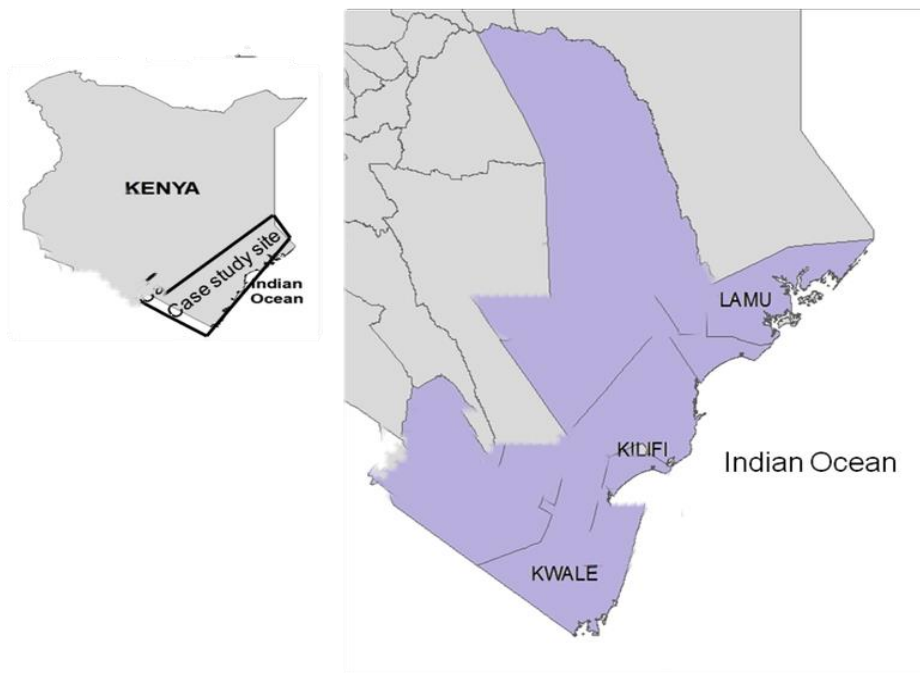


Figure 5: The three (3) regions of interest in the coastal county of Kenya (Kilifi, Kwale and Lamu) Source: (Hassan et al.2019).

Table 1: Counties in the coastal province with study area in bold (Kilifi, Kwale and Lamu counties). Source: (County Trak, 2018).

S/No.	County	Population
1.	Kwale*	649,931
2.	Taita Taveta	284,657
3.	Mombasa	939,370
4.	Kilifi*	1,109,735
5.	Lamu*	101,539
6.	Tana River	284,657

Farming in the Coastal province can be divided into three different cropping systems – annual, biannual and perennial – and farming activity is determined by the pattern of rainfall. This is show in *Table 2.* below;

Table 2: Most common crops in the coastal region. Source: (FAOSTAT 2019).

Annual crops	Biannual crops	Perennial crops
Mboga (collection of vegetables)	Mnazi (Coconut)	Korosho (Cashew)
Mahindi (Maize)	Muember (Mango)	Mapera (Macadamia)
Kunde (Cowpeas)	Mchungwa (Orange)	
Mhogo (Cassava)	Ndizi (Banana)	
Pojo (Green grams)		
Viazi tamu (Sweet potatoes)		

4.2. Data collection

The data for this study is grouped into two (2) namely:.

- i. Quantitative data
- ii. Qualitative data

4.2.1. Quantitative modelling of farmers’ motivation to join cooperatives

For the quantitative data collection from 15,000 local farmers, the minimal representative quota sample of 375 respondents with an extra 10% of farmers included to cater for non-responses. A multi-stage sampling method was used; First stage using the stratified sampling to identify the specific areas across the three (3) counties; Kilifi, Kwale and Lamu. Second stage using the quota sampling with a random choice of respondents categorised into male and female farmers representatives.

Data collection was carried by Ten sense Africa and Farm Africa from March 2018 to August 2018. This, is in line with the V4 (Slovak, Czech Republic, Poland and Hungary) EU project; “Enhancement of livelihoods in Kenyan Coastal Region to support Organic and Fair Trade certification of smallholders” and was implemented in accordance

with the intervention programme “Conflict prevention, peace and economic opportunities for women and youth (EUTF05-HoA-KE-18)”.

Main organization partners; Slovak Agency for International Development Cooperation and the Ministry of Foreign Affairs as its budgetary organization.

V4 project partner and main contractor; Czech University of Life Sciences Prague (CULS) the Faculty of Tropical AgriSciences (FTA). The final questionnaire was prepared, approved and programmed into open data kit (ODK) by Farm Africa (FA). Sixteen (15) Ten Senses Africa (TSA) and FA field officers were given quotas of twenty five (25) respondents each, after a series of training on pilot data collection. This was to analyse the current situation in terms of the local membership of cashew farmers in local groups and the internal factors influencing the willingness to join (WTJ) producer groups.

4.2.2. Qualitative approach to cashew farmers’ motivation to join cooperatives

A formative study on human behaviour based on three kinds of considerations: beliefs about the likely consequences of the behaviour.

Behavioural beliefs; Personal beliefs towards producers group membership,

Normative beliefs; beliefs about the expectations of others and how this, could influence personal beliefs towards producers group membership.

Control beliefs; social beliefs or presence of factors that may facilitate or impede performance of the producers group membership. This is also referred to, as external factors of influence.

The data collection was carried out using an open ended structured interview with a purposeful representative of samples of (n=26) cashew farmers, (n=5) field officers and (n=2) professors; Professor Esther N. Gicheru - Director of Cooperative Development, Research and Innovation of Institute of Cooperative Development, Nairobi, Kenya, and Professor Patterson Poli Semeye - Dean of School of Agricultural Sciences and Agribusiness, Pwan University, Kilifi, Kenya. To identify the three (3) fore mentioned beliefs respectively.

Each response from respondents was categorised into two (2); positive and negative beliefs; giving rise to a sufficient degree of actual control over the behaviour, as cashew farmers’ are expected to carry out their intentions when the opportunity arises. A

summary of all responses was written in form of texts and direct responses are written in quotation marks “ ”.

Constructs of the Behavioural model with specified questions

- i. **Personal beliefs:** What are the perceived advantages and disadvantages of producers' group membership?. What might come to mind at the mention of cooperative?. What are your expectations for becoming a member of producers' group?
- ii. **Normative beliefs:** Whose opinion(s) matters most when it comes to making the decision to join producers' group? Who and / or what else can be an influence?
- iii. **Control beliefs:** What are the enabling and disabling circumstances to producers' group membership?

These questions were aimed at understanding the innermost intentions of cashew farmers. The dynamics in the pattern(s) of group membership in the various existing groups; such as; producers, marketing and savings groups and why the participation of members is prevalent in a particular group (savings group) than the others. The experience of cashew farmers; past and present, motivations and perceptions of the future of producers' cooperatives.

The inclusion of interviews with field officers and professors was a triangulation to give deeper understanding of the current situation of producers' cooperative in the coastal counties in Kenya. This was based on the external factors of influence towards group membership in the producers' group. The key questions were based on the history of cooperative in Kenya and the coastal counties, do cashew farmers' in these counties see agriculture as a competitive advantage? Does the Kenyan government have the capacity to support farmers?. If yes, what kind of support? And if not, what are the measures being put in place by the government to ensure cashew farmers get the support required.

4.3. Data processing and analysis

The data collected was analysed sequentially in line with the study objectives;

4.3.1. Quantitative data analysis using the econometric model

To analyse the current situation in terms of local membership of cashew farmers in local groups the survey data (n=375) was used. The sample covered all farmers including those that are already members of the producers group. On the other hand, to examine the internal factors that influence farmers' decision towards joining current producers' group(s), a probit regressing model with (StataMP 14) was used to analyse the survey data (n=263) cashew farmers – those who do not belong to producers' group but are willing to join (WTJ) and not willing to join (NWTJ).

The variables used are defined and categorized based on the willingness to join (WTJ) producers' group as the dependent variable. While the independent variables derived from the survey data are grouped into the following factors as shown in

Table 3

Table 3: Summary of the Willingness to join (WTJ) producers' group variables

Factor	Variables	Units	Type	Obs.	Mean	S.D	Min	Max
Personal characteristic of member	WTJ	Yes = 1 No = 0	Binary	263	0,574	0,495	0	1
	Age	Years	Continuous	263	48,91	13,35	19	86
	Gender	Male = 1 Female = 0	Binary	263	0,669	0,471	0	1
	Household size	No. of persons	Continuous	263	7,235	3,988	1	30
	Education	Years	Categorical	263	1,030	0,847	0	3
Resources	Farm size	Acres	Continuous	263	6,605	5,224	1	42
	Hired labour	Yes =1 No = 0	Binary	263	0,262	0,441	0	1
	No. of cashew trees on the farm	No. of cashew trees	Continuous	263	25,437	29,721	1	300
	Advanced practices (use of fertilizers, pesticides, pruning)	Yes =1 No = 0	Binary	263	0,289	0,454	0	1
	Any additional income besides farming	Yes = 1 No = 0	Binary	263	0,342	0,475	0	1
Individual motivation	Satisfaction with cashew price	Kenyan shillings	Categorical (Likert scale 1-5)	263	2,209	1,344	1	5
	Total kg harvested cashew in last season	Kg	Continuous	263	255,975	1413,465	0	22500
	Frequency of visit by extension service	Freq. of visits.	Categorical	263	2,243	1,221	1	4

	Training on production	Yes = 1 No = 0	Binary	263	0,167	0,374	0	1
	Broker	Yes = 1 No = 0	Binary	263	0,627	0,484	0	1
Market outlet	Directly to market	Yes = 1 No = 0	Binary	263	0,688	0,464	0	1
	No selling	Yes = 1 No = 0	Binary	263	0,582	0,494	0	1
	Active participation in the group	Yes = 1	Binary	263	0,441	0,497	0	1
Social capital and collectivistic motivation	As a member how active are you in participation in the group (voting)?	Likert scale (1-5)	Categorical	263	3,757	1,481	1	5
	Can neighbouring farmers be trusted.	Likert scale (1-5)	Categorical	263	4,190	1,031	1	5
	Membership in any Farmer association	Yes = 1 No = 0	Binary	263	0,456	0,209	0	1

To estimate the willingness to join (WTJ), the variables in **Error! Reference source not found.** were analysed using (StataMP 14) the econometric model is expressed as follows and the results displayed and interpreted in 355.2

Equation 1: Regression model $Y_i^* = \alpha Z_i + \varepsilon_i$

Y^* = the latent variable representing the degree or number of farmers' that are willing to join producers' cooperative.

Z_i = is the vector of observed factors (farm and household characteristics) believed to influence participation in producer groups. The variables include; **(personal characteristic of member;** age, gender, household size, education), **(resources;** farm size, hired labour, no. of cashew trees, advanced practices (use of fertilizers, pesticides, pruning), any additional income besides farming), **(individual motivation;** satisfaction with cashew price, total kg harvested cashew in last season, frequency of visit by extension service, training on production), **(market outlet;** broker, directly to market, no selling), **(social capital and collectivistic**

motivation; active participation in the group, as a member (in other groups such as; savings and / or social and marketing group other than producers group) how active are you in participation in the group (voting)?, can neighbouring farmers be trusted and membership in any farmer association)

ε_i = the residual term i.e. other factors which are not captured in the model but also influence farmers' decision to join coop.

4.3.2. Qualitative data analysis

As above-mentioned, a framework analysis was used to analyse the behaviour model (TPB). The three constructs was used as the main structure of the analysis.

Personal beliefs; A list of advantages and disadvantages was written down as a reference point (referred in the questionnaire as Hints) to cashew farmers' responses. The frequency at which a given hint was mentioned by individual farmer(s) was recorded. and the external factors that could influence cashew farmers' participation in the producers' groups.

Normative and control beliefs; were written in form of text with direct responses from respondents in quotation marks and italics.

The frequencies of the positive and negative outcomes was used to identify factors that could influence farmers' decision making towards PGs membership positively and / or negatively. Finally, the content from external responses was used as the supporting statement(s) to cashew farmers' responses on external factors that could motivate farmers to PGs participation.

5. Results

5.1. Analyses of the current situation of local membership of cashew farmers in local groups.

As shown in *Table 4* below, the level of participation of females in farmers groups is relatively larger than males. This can be explained in the context of personal interest, values and attitudes towards cooperatives. Where an individual (cashew farmer) chooses to be a member of a particular group or not given the opportunity.

Table 4: Current group membership of cashew farmers in local groups

Group membership (%)	Male (n=206)	Female (n=169)	Total (n=375)
Yes	26	34	30
No	74	66	70

Table 5 illustrates farmers willingness towards group membership. It can be observed that more than 50% of the farmers expressed their inclusion in producers group membership.

Table 5: Cashew farmers' decision towards group membership (%)

No group membership	Male (n=201)	Female (n=62)	Total (n=263)
Willingness to join	65	55	60
No willingness to join	35	45	40

As stated earlier, most cashew farmers who are not members of producers group, are members of other group(s). Some farmers are members of more than one group as shown in *Table 6* below.

Table 6: Types of existing groups, activities and benefits (%)

	Male (n=206)	Female (n=169)	Total (n=375)
Types of Group			
Producers' group	21	6	13,5
Savings' group	56	81	68,5
Marketing group	13	5	9
Social group	10	8	9
No. of group membership			
One (1) group	78	55	66,5
Two (2) groups	17	26	21,5
Three (3) groups	5	19	12
Schedule for group meetings			
Weekly	49	60	54,5
Bi weekly	6	2	4
Monthly	34	38	36
Quartely	7	0	3,5
Annually	4	0	2
Benefits of Coops			
Advocacy efforts	22	45	33,5
Collective efforts	58	22	40
Access to funds	3	9	6,5
Ready market	4	6	7,5
Conflict resolution	9	3	3

Cashew farmers in the coastal province are likely to belong to more than one group at a time. Some are members of savings group and at the same time producers' and / or marketing group. Just a few belong to 3 groups at the same time. The members of producer groups are predominantly men although with a low membership compared to the savings' group; where more women are members. There exist four major types of groups in the coastal counties, namely; producers' group, savings' group, marketing group and the social group. The Savings' group has gained the highest patronage among farmers, this could be due to the fact that members have easy access to funds, this incentive is a major advantage to participation and has limited producers' and marketing group participations. All year round, group meetings are scheduled by the male farmers unlike their female counterparts, who would rather have their meetings scheduled weekly and sometimes monthly. This schedule does not estimate the actual number of members in attendance during each group meetings. Therefore, active membership maybe difficult to estimate. Members usually enforce penalty in the form of a fine in order deter members from absenteeism. The final item on *Table 6* is the benefit of co-ops, male farmers' think that collective efforts' tops the list while the female farmers see co-ops as a tool for advocacy and vice versa. Co-ops can also be seen as a tool to conflict resolutions, to improve livelihood, access to funds and ready market in this order by farmers in coastal region.

Table 7: Cashew farmers level of members active group participation (%).

	Male(n=206)	Female(n=169)	Total(n=375)
Level of MAP			
Very active	54	49	51,5
Somewhat active	0	0	0
Neutral	37	44	40,5
Somewhat passive	9	7	8
Very passive			

*MAP = members active participation.

Observing *Table 7* above, male farmers are more active in group activities compared to their female counterparts who are unbiased in terms of active participation.

From the level of active participation by members, to the types of cooperation that exist amongst members in their various groups as shown in *Table 8* below. Members of a group are willing to render help when needed and there exist some level of trust amongst them. Whereas, solidarity and trust somewhat exist between members of same group and members in the community.

Table 8: Types of cooperation amongst cashew farmers in their various group(s) (%).

	Male(n=206)	Female(n=169)	Total(n=375)
Are most neighbouring farmers willing to help farmer if in need?			
Absolutely yes	49	43	46
Somewhat yes	37	45	41
Neutral	1	1	1
Somewhat no	9	8	8,5
Absolutely no	4	3	3,5
Over the past 5 years, has the level of trust and solidarity in the community become better?			
Absolutely yes	42	47	44,5
Somewhat yes	49	42	45,5
Neutral	3	5	4
Somewhat no	5	5	5
Absolutely no	1	1	1
Can neighbouring farmers be trusted?			
Absolutely yes	47	41	44
Somewhat yes	43	38	40,5
Neutral	0	8	4
Somewhat no	8	13	10,5
Absolutely no	2		1

List of registered cooperatives

The informal group Kiwapa operating within the former plantation of Millennium cashew plantation can be such example of a registered cooperative in the county. They even harvest from younger trees planted by the Millennium company and sell them to brokers (middlemen). However, this group (3,450 residents) occupy the land (350 acres) illegally, since the legal dispute has not ended. Some of the other groups are just one step from becoming registered cooperatives. From the personal interviews, it was discovered that there exist about 16 registered farmers' Cooperative societies in Kilifi County.

However, most of these Co-ops are involved in other sectors; tourism, health care and not completely involved in cashew production, as shown in *Table 9*

Table 9: List of registered cooperatives in Kilifi

S/N	Cooperatives in the Coastal Province	Sector & Agricultural products
1.	Kilifi county Co-op	Tourism, dairy & animal husbandry
2.	Kilifi southeast farmers' Co-op	Maize
3.	Chonyi farmers Co-op	Maize, rice, cassava and cowpea
4.	Godoma farmers' Co-op	Tea & coffee
5.	New Galana farmers' Co-op	Maize
6.	Magarini farmers' Co-op	Health care, maize & kales
7.	Malindi farmers' Co-op	Maize, coconut, cashew & fruit trees
8.	Jibana farmers' Co-op	Fish, poultry & maize
9.	Kaloleni farmers' Co-op	Fish, poultry & maize
10.	Ruruma farmers' Co-op	Fish, poultry & maize
11.	Tezo / Roka farmers' Co-op	Nuts; macademia, coconut & cashew
12.	Kaya Fungo farmers' Co-op	Fruits & cassava
13.	Marafa farmers' Co-op	Cassava, pineapples, & indgenous chicken
14.	Kambe / Ribe farmers' Co-op	Maize
15.	Rabai farmers' Co-op	Maize
16.	Kwa Maya farmers' Co-op	Beans

The informal group Kiwapa, operates within the former plantation of Millennium cashew plantation can be such example. They even harvest from younger trees planted by the Millennium company and sell them to brokers (middlemen). However, this group (3,450 residents) occupy the land (350 acres) illegally, since the legal dispute has not ended. Some of the other groups are just one step from becoming registered cooperatives”.

5.2. The internal factors that influence farmers joining current producers' group.

Table 10: Logistic regression result for willingness to join (WTJ)

Factor	WTJ	Coef.	Std. Err.	P>z
Personal characteristic of member	Age	-0,005	0.005	0.316
	Gender	0,485	0.170	0.004***
	Household size	-0,020	0.019	0.295
	Education	-0,151	0.104	0.149
Resources	Farm size	-0,011	0.016	0.474
	Hired labour	0,085	0.207	0.681
	No. of cashew trees on the farm	-0,001	0.002	0.004***
	Advanced practices (use of fertilizers, pesticides, pruning)	0,016	0.180	0.931
	Any additional income besides farming	0,106	0.169	0.530
Individual motivation	Satisfaction with cashew price	0,043	0.058	0.455
	Total kg harvested cashew in last season	-0,002	0.006	0.071***
	Frequency of visit by extension service	-0,056	0.065	0.386
	Training on production	0,167	0.220	0.448
Market outlet	Broker	0,200	0.161	0.216
	Directly to market	0,282	0.169	0.095***
	No selling	0,026	0.160	0.870
Social capital and collectivistic motivation	Active participation in the group	0,189	0,155	0,224
	As a member how active are you in participation in the group (voting)?	0,557	0,014	0,014***

Can neighbouring farmers be trusted.	0,083	0,078	0,295
Membership in any Farmer association	-0,058	0,429	0.892
Number of observation			263
Wald chi ² (21)			35.14
Prob > chi ²			0.020
Pseudo R ²			0.090

Table 10 above shows the results of the logistic regression model estimating the probability of joining producer groups. The chi-square test statistic is significant at 5% which shows the joint significance of the parameters for the willingness to join producer groups. This is substantiated by the Pseudo R² of 0.090 which also shows how much of the variation in dependent variable that is explained by the independent variables.

The results show that the probability to join producer groups increases with gender. The significant and positive effect of gender on farmers' willingness to join producer groups means that male farmers have greater propensity to join producer groups compared to their female counterparts. This can also be explained that because of the unmeasured economic activities of female farmers such as household duties, more men are willing to participate in collective action.

Furthermore, households with a smaller number of cashew trees per farm are willing to join producer groups. That is, farmers believe that affiliating themselves with producer groups can help increase the number of cashew trees per farm in turn can affect their farm incomes.

As expected, farmers with low cashew harvest in kilogram, are more likely to join producer groups in order to increase their output levels. In addition, farmers who sell directly to the market are more willing to join producer groups. This is because there is a higher chance of increasing their access to market when they associate with producer groups and they also have a chance of higher producer price.

With regards to social capital and collectivistic motivation; the level of how active a farmer is in participation in other group(s) other than producers group will determine the how active such farmer would be, if he or she eventually becomes a member of PGs. Therefore if farmer participates less in current group, participation in PGs would also be less as well and vice versa.

5.3. **The result of the TPB model and factors that influence farmers' decision towards joining producers' group**

Behavioural model results

The beliefs (behavioural, normative and control) give rise to individual intentions irrespective of the collective views; meaning, same beliefs are perceived by individual farmers differently. Which in turns results to the actual behaviour exhibited by the farmer. The result is presented below using the given constructs of TPB.

Behavioural outcomes

Based on the interviews with farmers, we were able to assign the first category of behavioural outcomes thus;

Positive outcomes to farmers motivation; access to cheap labour, access to ready market, and conflict resolution. To support these motivations, direct responses from farmers' is presented.

Access to cheap labour; this could be in form of teamwork, where farmers take turns to work on one another's farm. Respondent; "*My fellow farmers will help me with farm work during planting, weeding and harvest season.*"

20% that is; 5 out (n=26) farmers will join producers group if labour is readily accessible.

This also points to the type of cooperation a collectivistic motivation; clear indicating that, the willingness to help do exist amongst farmers and could also enhance teamwork amongst farmers in PGs.

Access to ready market; for most cashew farmers, this implies the ability to sell produce (cashew), at a specific price, place, and time.

Respondent; "*The cooperative use to pay cash on delivery at selling centres and this motivates us (cashew farmers) to grow the crop (cashew)*".

The frequency of access to market is 70% of the (n=26) cashew farmers interviewed. Therefore, 18 cashew farmers agree that access to market is a key motivator to PGs membership.

Conflict resolution; is a strong factor of influence to motivate cashew farmers' decision making towards PGs participation. More farmers believe that in order to make and keep peace amongst neighbours or fellow farmers, this could be possible when they are in the same group and / or at group meetings.

Respondent; *“If I am not in good terms with my neighbour, due group meetings and being in the same group is an avenue to resolve our differences”*.

While 10% 3 out of (n=26) farmers agree with conflict resolution as a motivator, that would influence their decisions towards PGs membership

Negative outcomes to farmers motivation; access to hired labour, lack of access to ready market and lack of conflict resolution.

Hired labour; this involves having to pay for labour, which can be readily available with producers group membership through teamwork. Most farmers are unable to pay for labour, as farmers prefer to use household labour whenever necessary.

Lack of access to ready market; this is the negation to access to ready market. When there is lack of market, cashew farmers display some form of individualist approach by selling to middlemen who are always willing to buy. Taking advantage of the low prices to their favour instead of the farmers. This is as a result of the inability of cooperatives to pay in recent years.

Respondent 1; *“Middlemen will pay cash on delivery but at low prices. It is better to sell to middlemen and you are sure of getting your money once the price is agreed”*.

Respondent 2; *“The cooperative selling centres take the goods without payment and promise to pay later but they never do”*.

Respondent 3; *“The cooperative use to pay cash on delivery before now, but suddenly they stopped paying. I have to look for somewhere else to sell my cashew nuts”*.

This particular aspect of breaching trust on the part of the cooperative, had led to the distrust amongst cooperative(s) and cashew farmers. Leading us to another negative outcomes to farmers motivation.

Breach of trust; this particular aspect has led to the distrust and disapproval amongst cooperative(s) and cashew farmers.

Therefore, in addition to positive motivations trust is an essential prerequisite,

Trust; This motivation is a ripple chain of advantages; trust amongst members and in the community, willingness to help, these, summing up the types of cooperation’s amongst farmers and cooperative members.

Lack of conflict resolution;

Respondent; *“If I am not in good terms with my neighbour, I will not like join the group he or she is a member”*.

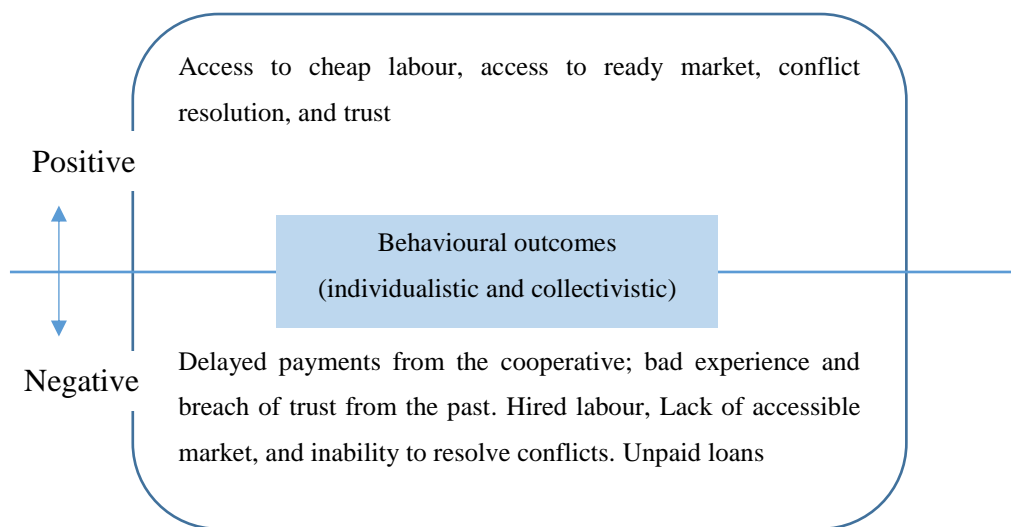


Figure 6: Summary to Behavioural outcomes to farmers motivation towards producers group

In summary, the detriments from past experiences; mismanagement of resources (inability to pay for produce at selling centres, outright theft of group funds and unpaid loans; loans from cooperatives to cooperative members, disloyalty, unclear objectives, and absenteeism of members’ influence farmers decision to join in rather a negative way.

Nowadays, farmers consider the cooperative as corrupt, also as an entity that cannot be trusted.

Payment for produce is crucial to cashew farmers, as the revenue for sales are usually used to meet basic needs in the family. Failure of these payments on the part of the cooperative are usually not explained or accounted for, this only intensifies the level of distrust between farmers and coops.

Outright theft of cooperatives funds as emphasized by the Dean of Pwan university Kilifi, happens because management is never held accountable as in most cases there are no records of transaction(s) or records for future reference.

Unpaid loans; cooperative members are usually granted loans with the intentions to payback when due, depending on the time limit on loans. These loans are possible due to members individual and collective contributions, and members' take turns in acquiring these loans. Recently it has been observed that some members lack the ability for a refund, this behaviour hinders the cooperative from granting loans to other group members who are likely due for a loan. This on its own is a detriment to farmers' motivation towards producers' group membership. The inability to achieve personal and / or collective gains from coops. and the notion that producers' cooperatives is corrupt.

Lastly on personal beliefs, cashew farmers can be motivated if they can meet their immediate needs (food, rent, school fees and miscellaneous), but the extend of the motivate cannot be clearly measured as more or less significant. Hence, few farmers believe that by participation in PGs, their immediate needs will be met. Basically, these are farmers who are also members in the savings group). Although, most cashew farmers are members of the saving group. This is believed to give farmers access to funds.

Normative outcomes:

Other peoples' opinion could influence the willingness to join producers' cooperative negatively or positively. These individuals could be spouse or neighbours; for married females, this would mean seeking permission(s) from their spouse even if the intention is to become a member. For married men this could be completely indifferent. Spouses (especially being a male) have the strongest influence on their partners when it comes to producers' group membership. Another drawback to motivation to participate

in PGs is the masculinity dominant of the group (PGs). If the group is mostly males, the female farmers become reluctant and would not want to join even if the intentions are positive towards producers' cooperative. According to a married female respondent, *"I will ask my husband before I will join. If my husband is a member, I don't think I should be a member too"*. While most male farmers and few unmarried females responded in this manner, *"If I see my neighbour is living better than me and he or she is in a group, I will like to join his or her group so I can live better too"*. This indicates the pressure or the effect others opinions on a person's intention and the actual behaviour. Not excluding the *"success stories of an existing PGs"* as a positive motivations of farmers to PG membership. To elaborate on how this affects PGs membership, the Dean, made mention of ownership, and permission and how it could significantly motivate or deter producers' cooperatives participation. *"Ownership is tied to land, therefore whoever owns the land in the family; usually the head of the family has the authority and decides who does what. Females have to seek permission from their spouses or fathers except in very rare cases such as; when the female is the head of the family and / or owns the land"*. Recently, the government of Kenya has authorised the legislation which gives women the right(s) to own land(s). Hopefully, this shift in legislation will enhance PGs membership for female farmers especially.

Emphases on the effects of these negative deterrents; as mentions in behavioural outcomes such as breach of trust and outright theft are why farmers are afraid of cooperative participation. This was articulated by the Dean of School of Agricultural Sciences & Agribusiness, Pwan University, Kilifi, Kenya (*Professor Patterson Poli Semeye, 2018*). *"The major challenge has been governance issues with reported cases of malpractices among the leadership, which resulted into non-confidence from the general membership. There is need for more education on the membership to understand how the cooperatives are supposed to run, since now majority of the farmers see cooperative as something inefficient and government-related from the past.*

The cooperative movement needs serious "re-branding" and functional models of modern cooperatives in the region. On the other hand, farmers are used to working and sharing resources in many different forms of informal groupings". He also added that *"Most members are unable to pay back loans due to inability or just outright disloyalty on their part. Absenteeism of members in group meetings is also an issue, as members especially male farmers' do not feel oblige to attend meetings"*. And when asked, what

are the measures put in place to ensure attendance and / or deter absentees? He replied that, “*fines are being made obligatory*”, *lastly personal conflict or conflict with neighbours could discourage membership as earlier stated by a farmer; “If I am not in good terms with my neighbour, I will not join the group he or she is a member in”*”.

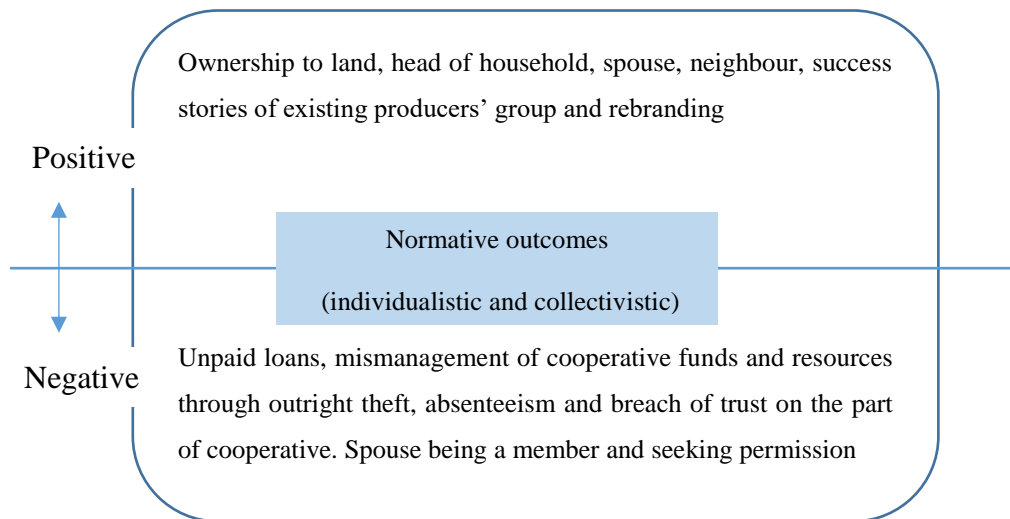


Figure 7: Summary to Normative outcomes motivating farmers to become members of PGs

Control outcomes:

These are external factors influencing farmers’ decision towards producers’ group membership. Government support; provision of inputs, subsidies, access to extension services and extension agents.

The access to these external factors are key motivation of cashew farmers’ decision towards producers’ cooperative. To elaborate on these control beliefs, and exclusive interview with the Director of Cooperative Development, Research and Innovation of Institute of Cooperative Development, Nairobi - Kenya (*Professor Esther N. Gicheru, 2018*) was used. She began with a background history of cooperatives in Kenya. “*What necessitated cooperative was to produce for export and improve livelihood. The core principles governing cooperative should be made known to its members and ensure it is practiced by members. Members should also be made aware of*

the role of cooperative which is to serve and protect its members from all forms of exploitations from the internal and external bodies.

With regards to government support in Kilifi, the local government plans to provide subsidized loans to cooperatives and renewed interests among farmers can be expected. Farmers' are expected to maximize every incentives received; by providing labour, willingness to cultivate produce (cashew), commitment and to live by the cooperatives values; self-help, communal accountability, equality, trustworthiness, openness and solidarity. These values help to keep farmers focused and grounded towards the attainable goals”.

When asked; if farmers in the coast see agriculture as a competitive advantage? She replied;

“Yes, with all the setbacks that the cooperatives had experienced in the past, it is still striving and the advocacy of the principles of cooperatives cannot be over emphasized. The cooperative institute, Nairobi and other cooperative bodies in Kenya are ensuring farmers get all the support and protection possible”.

“No, excessive reliance of cashew farmers on the government and donors. Most farmers see cashew farming as long period of wait and lose motivation to cultivate cashew in the long run. Necessary supports; provision of inputs, extension services and trainings have been put in place to motivate farmers”.

While still deliberating, if farmers in the coastal counties see agriculture as competitive advantage,

The responses from the field officers somewhat supported the Dean's response. *“Yes, farmers in the coast see cashew farming as an advantage, but lack the capacities, in terms of government support, extension services and agents”.* This lack of capacities are both on the part of government and the cashew farmers' as well. Farmers do not feel carried along but rather feel abandoned as the government support is not forth coming.

“There is no standard market or price regulations for cashew produce. Therefore, farmers are neglecting cashew farming due to low prices. No standard processing factory for cashew, after the Kilifi cashew nut factory collapsed into debt in the early 1990s and was sold to Millennium investment limited; still not in operation. Cashew nuts are been

process manually which is a very tedious process. These are major control deterrents to cooperative participations by cashew farmers”.

To conclude this section, we considered cashew farmers’ view point in the course of the personal interview, to identify the external factors and the extend of motivation on farmers decision. It was discovered that; lack of cooperation amongst farmers has been the major hindrance to prosper the cooperative, as many think dealing with other farmers limits their ability to generate income. Passivity of members and lack of attendance in group meetings is another limitation as majority of the farmers are hesitant to share information or attend. Youth apathy is also a constraint in joining cooperatives due to the elderly holding on to leadership positions for longer periods (succession management). Another observation is the fewer numbers of women belonging to cooperatives with a mixed membership of gender. The unmet expectations; provision of inputs, subsidies and extension services from the government due to lack of capacity. These, with the fact that farmers do not often get visits or trainings from extension agents. There are lack of mobilisation as there are lack of resources as well.

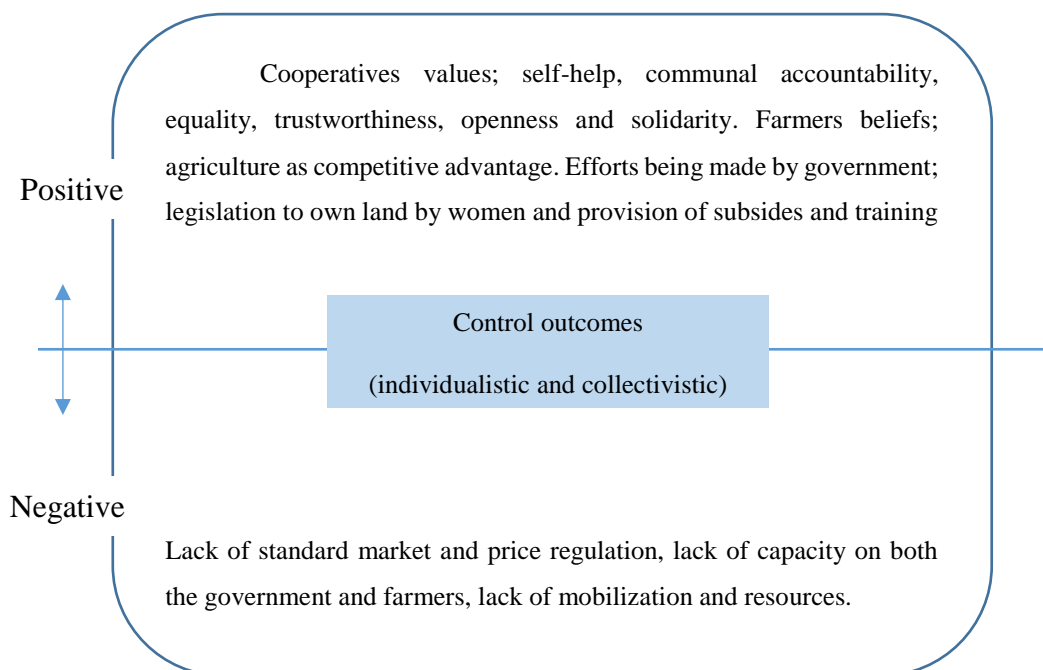


Figure 8: Summary of control outcomes that can motivate farmers decisions toward producers group membership

6. Discussion

Starting with the internal factors that influence farmers' decision towards PGs membership is observed to be gender and the number of cashew trees on the farm.

Male farmers' are more inclined to participate than their female counterparts. Although female farmers encounter various challenges that limits the ability to make their membership a reality. According to Towo's (2004) studies; "*women and youths' participation is lower in producers' group compared to men due to gender issues and lack of control on land and / or ownership*". Being a male, significantly and positively influenced group participation (Ochago et al. 2017). On the other hand, the producers' group is seen as a male leading group; for owning the land or the cashew trees, though the women prune the trees, prepare the soil for planting and weeding. Culturally, producers group is dominated by men, leaving little or no room to the women to participate. This leads to a single gender group membership. It is rare or almost does not exist mixed (male and female) producers' group. This could also hinder the growth of the producers' group. If female farmers can freely join the producers group without having to seek for permission from their spouses this will lead to high producers' group membership. The youths are somewhat indifferent in terms of producers' cooperatives and could only be interested in marketing of the cashew nuts.

While according to Hill and Kau (1981); "*each individual facing choices, has a reaction threshold influenced by several factors*". The influencing factors are summarised by the TPB outcomes; as an advantage or disadvantage that could be derived from performing a certain or given behaviour. The role of spouse, neighbours and government policies.

Cashew farmers with less number of cashew trees have higher tendency to participate in producers' cooperatives which is expected because they believe that coops can assist them increase number of trees through an increased access to inputs, subsidies

and extension services. Aligning with Birchall and Simmons' (2004) the first level of participatory chain theory; resources; the availability access, and the capacities of potential participants play a crucial role in farmers decision to participate.

farmers with low harvest of cashew in kilogram per annum are more likely to join producer groups to increase their output levels. In addition, farmers who sell directly to the market are more willing to join producer groups to increase their chances to market access and better price. Active participation in a group other than producers group will imply active participation in producers group as well.

The current situation of local membership of cashew farmers in local groups; there is low membership in the producers' group(s) for both male and female farmers. Although, a sizeable non-members are willing to join or participate in producers 'cooperative. The savings group is dominant in terms of membership, as farmers can easily access funds for basic needs. There are several Savings and Credit Cooperative Societies for example the famous (SACCOS), the Cooperative bank, and the Village Savings and Loan Association (VSLA); (mostly dominated by women and youths) – these are financial institutions in operation, providing credits and loans for small, medium and large enterprises. A high percentage of the farmers are members of the savings groups. This is as a result of easy access to funds, and farmers wanting to meet the immediate household needs (payment of school fees, rent, food and other basic needs).

The number of group(s) a cashew farmer belongs to could also be used to determine the level of activeness of the group members'. In my opinion it is difficult to measure the how active or passive a member is. Active participation could have different meanings; to some, it could mean attendance and to others teamwork or collective responsibility. Membership in one group is ideal but the savings group has become a major part of cashew farmers' in the coastal province.

According to Cummings (2009); the passivity of members and lack of attendance in any groups meetings is another limitation as majority of the farmers are hesitant to share information. Youth apathy is also a constraint in joining cooperatives due to the old people holding on to leadership positions for longer periods (succession management). Another observation is the fewer numbers of women belonging to cooperatives with a mixed membership of gender.

Most Farmers' in the coastal provinces agree that cashew farming is competitive, but some farmers' are still not convinced with this idea. This is due to the fact that cashew farmers are willing to join farmers' group in order to meet their immediate household and / or personal needs rather than a long-term cooperation or loyalty to the group's future.

Government and stakeholders efforts towards improvement in this sector (cashew) is always seen as a drive to group participation, but usually short-lived due to external control which is often perceived by farmers' once their needs are not met or internal influences that trigger past experiences. This immediately leads to reluctance and disloyalty to group membership, other members and the group. Whether the government has the capacity for cooperatives or not cannot be measured due to the fact that, there has been no records of accountability and monetarily, farmers expectations have not been met and the government is sceptical if farmers in the coastal counties see agriculture as a competitive advantage or not. According to Simmons and Birchall (2004); the second level of participation chain is necessary which involves the mobilization of active members and only possible if field officers are given the capacity needed.

The Kenyan government in collaboration with EU V4 are making efforts towards increasing cashew production in the coast by providing high variety seedlings, extension services to cashew farmers and pruning old cashew trees. The professors in the coastal counties; Pwani cooperative university-Kilifi, and the Cooperative university, Nairobi-Kenya, also emphasises the revival of the cashew sector and the role of cooperatives to bring back the trust in its farmers. Since the benefits of cooperatives far outweighs its drawbacks.

7. Conclusions and Policy Implication

This study analyses the potential for the development of farmer groups in the cashew value chain in the coastal region of Kenya using a farm level data from (n=263) cashew farmers. It uses logistic regression (a logit or probit function used to model a binary dependent variable), and the theory of planned behaviour (TPB) to analyse farmers' inherent characteristics, opinions and perceived external factors believed to affect farmers decisions to join producer groups. The results indicate that the level of participation of females in farmer groups is relatively larger than males. Overall, more than 50% of the farmers expressed their interest in producers group membership. The most influential factors of farmers' willingness to join producer groups are gender, number of cashew trees per farm, total harvest of cashew in kilograms, direct sales to market and the level of active participation. The results of theory of planned behaviour illustrate important positive behavioural motivation associated with group membership, such as; potential for conflict resolution, access to market, and the availability of labour. In addition, influence of the family as one of the normative beliefs significantly influenced the decision of farm families to join producer groups. We also found that control beliefs, such as government supports in terms of subsidies, financial support and access to extension services significantly influenced the decision of farmers to join collective action. It is recommended that the government should roll out policies to support producer groups, as government support may influence farmers' decisions to join collective action but this leaves in mind the question of the sustainability of the collective action created.

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Appendices

COLLECTION TOOL - (QUESTIONNAIRE)

Date:/...../.....

Objective 1 - To analyse farmers behaviour towards the formation of producers' groups for the development of value chain and the improvement their livelihood

Section A: Farmers in a group (Producer's groups) – 20 Respondents in total

A ₁	What type of group do you belong to? (Producers', Savings', Social, Services', Marketing groups)	
	When was the group established or founded?	
A ₃	(From 1 to 10), How long have you been in the group? Please specify.....	<input type="radio"/> Day(s) <input type="radio"/> Week(s) <input type="radio"/> Month(s) <input type="radio"/> Year(s)
A ₄	How did you get to know about the group?	
A ₅	What motivated you to join the group?	
A ₆	How many times do you participate at the meeting?	
A ₇	In the future, do you still see yourself belonging to the group?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> No idea
A ₈	Give reason(s) to your answer to question A ₆	
A ₉	What will make you remain in the group?	
A ₁₀	What will make you leave the group?	
A ₁₁	Give reason(s) to your answer to question A ₁₀	
A ₁₂	Have you ever thought of leaving the group?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Sometimes <input type="radio"/> Most times
A ₁₃	Give reason(s) to your answer to question A ₁₃	
A ₁₄	What are your plan(s) for the group	
A ₁₅	How is the profit generated in the group distributed amongst members?	
A ₁₆	Does the group process its produce?	
A ₁₇	What other products does the group get from cashew apart from cashew nuts?	
A ₁₈	How many members?	
A ₁₉	Who is more likely to join the groups in cashew – youth, educated, women?	
A ₂₀	What is the total size of the farm?	
A ₂₁	How is the group managed?	
A ₂₂	Is there any financial participation of members?	
A ₂₃	Is the membership open to anybody – any criteria?	
A ₂₄	What are main benefits of the group?	
A ₂₅	What are the main challenges of the group?	
A ₂₆	Are there functional internal structures for democratic participation of members?	

A ₂₇	Do you already cooperate with other farmers?	<input type="radio"/> Yes <input type="radio"/> No
A ₂₈	If yes to question A ₂₇ , How?	
A ₂₉	If no to question A ₂₇ , Why?	

Section B: Farmers not in a group – willing to join a group

B ₁	What motivated you to wanting to join a group?	
B ₂	What are benefits you think you can get for joining a group	
B ₃	What are your impression(s) of a group?	
B ₄	How soon will you like to join a group?	
B ₅	Do you have any group in mind you will like to join?	
B ₆	Name of the group? Please specify	
B ₇	Why the group? In question B ₆	
B ₈	What are your perception(s) of joining a group	<input type="radio"/> Sense of belonging <input type="radio"/> Gender balance / equality <input type="radio"/> Increase in yield <input type="radio"/> Others, please specify...
B ₉	What influenced your opinion in joining a group?	
B ₁₀	What is the challenge you are facing joining a group?	

Section C: Farmers not in a group – not willing to join a group

C ₁	Why don't you want to join a group?	
C ₂	Have you ever thought about joining a group?	
C ₃	What will motivate you to join the group?	
C ₄	What are your perceptions towards joining a group?	
C ₅	What are your beliefs towards producers' groups	
C ₆	What influence you not to join a group?	
C ₇	Have you had any passed experience(s) with group(s)	<input type="radio"/> Liquidation <input type="radio"/> Monopoly <input type="radio"/> Defaulting <input type="radio"/> Criminal histories <input type="radio"/> Others please specify ...
C ₈	What can change your mind to join a group?	

Objective 2 – To examine internal factors that influence farmers joining producers’ groups - resources

Motivations and behaviours of farmers towards group(s) formation and participation

Attitude:

1. What do you see as main advantage of producers’ groups?
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.....
2. What do you see as main disadvantages of producers’ groups?
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.....
3. Do you see any benefits for yourself?
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.....
.....
4. Do you see any benefits for your community and relations among farmers?
.....
.....
.....

Norms:

5. Who might influence your decision to join the group?
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.....
.....
6. How important is their opinion for you?
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.....

Barriers:

1. What are the main barriers for joining producer group?
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.....
2. Is there any support from government?
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.....

Behavioural outcomes:

1. What do you see as the advantages of joining a group?

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2. What do you see as the disadvantages of joining a group?

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3. What else come in mind when you think about joining a group?

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Narrative referents:

1. Please, list what will make you approve joining a group?

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2. Please, list what will make you disapprove joining a group?

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3. Please, list from your past experiences what will make you like joining a group?

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.....

4. Please, list from your past experiences what will make you dislike joining a group?

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.....

Control factors:

Please list any factors or circumstances that will make it easy or enable you to join a group

Please list any factors or circumstances that will make it difficult or prevent you to join a group

Motivation

- Ready market
- Increase income
- Financial support
- Provision of inputs
- Access to processing
- Access to better markets
- Training
- Diversification
- Ability to cooperate with others
- Improving relations with other neighbours
- Sense of community – I am part of the debate, my vote counts, I think my voice is heard, sense of belonging, taking part in the decision-making.
- Others, please specify

Independent variables

- Geographical location – distance of farm to market in km
- Education
- Income
- Government support
- Years of establishment group
- Frequency of meetings
- Age and gender
- Extension services

Dependent variables

- Farmers in group (Producers' group) (Membership in a group)
- Farmers not in a group – willing to join a group (No membership in a group)
- Farmers not in a group – not willing to join a group

Objective 3 – To examine external factors that influence farmers joining producers’ groups - motivation

Questions for external factors that influence group formation or producers’ groups.

1. Briefly, could you tell me about cooperatives, farmers and the Kenyan society?
(What necessitated it)
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.....
2. What impact has the coops on Kenya and its people?
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.....
3. What is the Kenyan government doing to support the cooperatives?
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.....
4. Are there policies in place to support the growth and development of the cooperatives?
What are some of these policies and legislations?
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.....
5. From you point of view will you say it’s been effective or not?
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.....
6. From research, 70% Kenyan citizens belong to one cooperative society or another and get their livelihood from agriculture which is the highest earner of country’s GDP, why do the farmers in the coastal region still struggle with formation of producers group and marketing their produce?
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.....
7. Was the drop-in cashew production related to the destruction of former government-controlled cooperatives?
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8. Who are the major stakeholders of the cooperatives in Kenya?
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9. What are the stakeholders doing to increase production especially in the cashew production and to improve the livelihood of the farmers in these coastal regions?
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10. What do the government of Kenya expect from its farmers? With any support or incentives in place?
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11. Apart from cashew what other cash crops are grown in Kenya and where are these cash crops grown?
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12. Do you feel farmers in the coastal region see agriculture as a competitive advantage and good for business?
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13. Is there processing, packaging and preserving factories for farmers' produce at every harvest season?
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14. Are there some pricing and marketing regulations for farmers in the coastal counties?
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.....
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15. Is there processing, packaging and preserving factories for farmers' produce at every harvest season?
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16. Are there some pricing and marketing regulations for farmers in the coastal counties?

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17. What is the future for coops and their members so far from the government and relevant stakeholders?

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18. What do you think could be the factors that influence farmers' joining cooperatives?

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19. Do you think local cooperatives have internal structures that ensure democratic participation of members in decision making?

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20. What are the typical advantages and challenges of cooperatives?

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21. Why so many cooperatives collapsed?

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22. Is there any direct governmental control over internal cooperative decision-making?

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23. Does the government have capacity to effectively help development of cooperatives?

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24. What are the most frequent cooperatives – saving cooperatives? Marketing cooperatives? Service cooperatives? In which products?

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25. Do farmers “want” to be in cooperatives or rather “need” to be there? (Do you think farmers feel obliged to join or form coops for their own good)?