

**A HISTORY OF KHAT PRODUCTION AND ITS SOCIO-ECONOMIC
IMPACT IN SIAKAGO SUB COUNTY, EMBU COUNTY-KENYA FROM
1980 TO 2018**

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**A Thesis Submitted to the Graduate School in Partial Fulfillment of the
Requirements for the Award of Degree of Master of Arts in History of Chuka
University**

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DECLARATION AND RECOMMENDATIONS

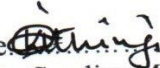
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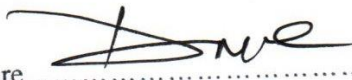
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DEDICATION

I dedicate this work to my husband Mr. Fredrick Njiru and my children Joygail Kanana and Emanuel Muchiri.

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ABSTRACT

Before diversification into Khat production in Siakago, most of the households were engaged in subsistence farming activities. The agricultural sector was performing poorly being a semi-arid area raising a serious concern. The area was characterized by poor households and was unable to meet their most basic needs, low productivity, subsistence farming as well as deprivation of social infrastructure. Diversification into Khat production in Siakago Division was aimed at improving the socio economic lives of the households which it seemed not to have achieved, since the area is still characterized as a food insecure zone, poor households and deprivation of social infrastructure. This study sought to explore the Socio-economic impacts Khat production on rural households of Siakago division from 1980 to 2018. The study traced the history of Khat production in Siakago division between 1980 and 2018, examined the social and economic activities of the people of Siakago division before introduction of Khat and examined the social and economic impacts of Khat production on rural households of Siakago Division from 1980 to 2018. The study was guided by the theory of articulation mode of production. The study employed descriptive research design. The target population was 380 people who were Khat producers in Siakago division. A total of 196 people were randomly sampled and interviewed from 6 sub location. The instruments to collect data were interview schedule, focus group discussion and observation schedule. Secondary data was collected from archival, oral sources and secondary sources. Khat existed in Siakago long enough before it was discovered, used and cultivated for economic purposes. Khat adoption and commercialization in Siakago occurred within a decade and by 1980, the crop had spread in many areas altering the previous form of production. The adoption of khat production was as a result of its economic benefits attached to its sale. The support by the government on khat production by 1980 was a means of agricultural diversification in the area. This was aimed at making the area self-sufficient in terms of agricultural production. The people of Siakago grew food crops for subsistence use while Khat is the main cash crops grown. Labour was provided collectively and shared among men and women in the family. Production was mainly aimed at curbing food insecurity. The Siakago people engaged in trading activities to exchange for what they did not produce. The study finally concludes that khat production had both social and economic impacts among producing households. The previous communal land ownership was replaced with a more centralized and formal one for people to own their specific khat farms. Khat production and use resulted in extinction of social relations and gender roles as men spent much time in khat chewing joints. School-going pupils were absorbed by khat farms to provide cheap labour for cheap money thus dropping out of school. The previous decentralized trading methods were replaced with a more centralized one characterized by central trading centres. It is hoped that the study may help the government devise better policies that can promote the living standards of the people in the area.. The results of the study may also provide empirical data that can be utilized by other scholars in carrying out related studies.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Khat (*Catha edulis*) is an evergreen shrub which is cultivated and grows as small bushes and at times medium to tall trees depending with the region where it is found (Carrier, 2005). Khat trees are native to Ethiopian highlands, East and South Africa, Arabian Peninsula as well as in Madagasca Islands (Gebissa, 2010). The leaves of khat tree have an aromatic odor and an astringent and slightly sweet taste and it has been widely chewed for its stimulant action by the population in these regions for many years. Khats young buds and tender leaves contain amphetamine-like psycho active substances, which produce euphoria and stimulation to the consumer. By now there are more than 10 million people in the world who use Khat on a daily basis for its euphorizing and psycho-stimulant effect (Andualem, 2002; Bongard *et al.*, 2011).

The historical evidence for the beginning of Khat suggests that the practice instigated in Yemen or Ethiopia prior to the mid-fourteenth century (Weir 1985). Rodinson (1977) believes that there is evidence to the introduction of the khat into Yemen at around 1300 A.D., but Schopen's (1981) opinion is that the use of the stimulant existed in Yemen in the initial 13th century. Kennedy (1987) assessment indicates that use of the drug may well have begun in Yemen at least as early the 12th century and diffused to Ethiopia at that period. According to Ethiopian and Yemeni legends Khat was discovered by Yemeni goat herders who observed the effects of the branch on his goats. The goat herders tried it themselves and found out that their action and energy was amplified and they were able to stay awake all night.

Arabic trace sources trace Khat at the commencement of the 11th century in Turkestan and Afghanistan (Schopen (1981); Schopen & Kennedy (1987). The initial mention of in Yemeni literatures (mid-sixteenth century) and scholars from Yemen visited Mecca to request the judgment of the renowned holy man Ibn Hajar Al-Haythami on the religious status of Khat. But Al-Haythami consulted other scholars writing and solicited views from users. He found that opinions conflicted. Some were of the opinion that Khat led to confusion, inebriation and insomnia, reduced the desire for sex and foodstuff and caused thirst and spermatorhea while some argued that it had

stimulating and pleasurable effects and that by its use they achieved closer communion with God but he did not rule that it should be made illegal (haram), (Rodinson, 1977; Schopen's, 1981; & Wier, 1985). Khat consumption was limited to these areas because it was a perishable commodity and its effects reduce and rapidly lose commercial value within a few days.

Khat production in the past has been a custom practice only by certain social or ethnic groups in the parts of Africa and Arabian Peninsula where it is grown. However, on the context of Khat in East Africa, Carrier (2003) stated that originally Khat trees grew wild in most of East and Southern Africa bushlands and forests. In all the mentioned countries of East and South Africa, the history of Khat dwells on more curbing use of Khat by highlighting its negative social impact in the communities Carrier (2003); Carrier (2005). In Kenya context, Khat is cultivated by Meru Bantus mostly the Igembe and Tigania sub-ethnic communities, (Carrier 2004)' Gebissa, (2004). Kabeca (1986), associated existence of Khat in Nyambene with earlier immigration and occupation of this regions by the *Gumba* in early 12th century who were believed to have introduced Khat in the region from Ethiopia. *Gumba* was an ethnic group who inhabited the plains of what is now central Kenya but is now either extinct or assimilated (Kabeca, 1986). In Meru County, Khat have been of social and economic important for several decades. According to Kabecha (1986), commercial activities in Khat began in 1940s as a result of initiative of the *lubeta* age group of Igembe and more specifically during the Second World War when people of Nyambene started selling Khat to soldiers in Isiolo barracks, although they used to trade with Khat with the neighbouring Somalia people even before the war.

From Nyambene and Igembe Khat has consequently spread to the other surrounding counties like (Tetu) in Nyeri County by 1990s (Mbataru, 2008), Embu, Mbeere, Chuka and Maara from 1980s to 1990s (Mwenda, *et al*, 2003); (Njiru, *et al*, 2013); (Mugendi, 2017) observed. According to (Mwaniki, 1986), although Khat was associated with Nyambene and Igembe, in Mt. Kenya forest there was also miraa trees which grew naturally and in Chulu Hills in Machakos County there is another variety of miraa commonly called "Chulu" but produced in small quantities.

According to Mugendi (2017), in Mbeere and more specifically in Siakago's locations of Riandu, Siakago, Gituri and Thura, diversification to Khat production started in mid 1980s. Since 1980s a new variety of Khat emerged in the local market centers although in small quantities and selling locally normally called '*muguka*'. The word '*muguka*' in the local dialect means steady and resistance to change of weather. The term is given to this variety due to its resistance to weathering out during the dry seasons. However, since mid 1980s in Mbeere just like other khat producing areas of Kenya, Khat farming in Siakago came with changes in agricultural production of the areas. Gitari et al (2002) observes that previously miraa in Siakago used to grow naturally in the bush lands and was not of any economic value.

Siakago division being on the Arid and semi-arid land (ASAL), characterized with frequent drought, low rainfalls and declining soil fertility which had affected farming for a long time (Gitari et al, 2002). The population in Siakago district from late 1980s also witnessed declining arable land and shrinking land holding for farming through land adjudication (Wangari, 2010). The production continued to be low and accelerated by fluctuating cash crop prices of cotton, tobacco and other food crops due to market liberalization of 1984. These factors forced the peasant farmers of Siakago to diversify to alternative sources of income to supplement their economic needs (Mugendi, 2017). According to Njiru, *et al.* (2013), the farmers in Siakago diversified to other source of income like magoes, watermelons and burternuts, but Khat farming became more prominent in Siakago than the latter, and as such diversification in Siakago became evident. Many farmers shifted to Khat farming because Khat was resistant to drought and required small amounts of rainfall; labour and quick returns Gateri et al (2002).

In Siakago, small scale holders farmers began growing Khat in small patches of land and distributed throughout the markets both locally and nationally (Nelly, 2013). The labor input on Miraa farming was minimal in comparison to tobacco and cotton which ensures good returns therefore making it a good economic investment for many households. In reference to Mbeere demographic survey of (2010), more land has continued to be used for Miraa cultivation in Siakago divisions than other cash crops. Mugendi (2017) noted that in Siakago region, the traditional food crops such as

maize, beans, pigeon peas, black peas and millet which was produced to feed the region was being abandoned due to over cropping of Khat (*Muguka*) in the lands previously occupied with subsistence crops questioning the future of diversification on the indigenous food crops.

However, Khat production in many producing regions, Khat is a very pervasive commodity (unwelcome), because when examined socio-culturally, the chemistry of Khat takes centre stage and it gets strongly demonized, but when Khat is examined from economic perspective, the economic value of miraa over rules all the negativities associated with it which may be the same with Khat production in Siakago as observed by (Mwangi, 2009); (Njiru, *et al*, 2013); (Mugendi, 2017). Kathata (2017), studied Khat in Igembe subtribe from 1940-2014, observed that Khat was politically and socially guarded commodity where the policy maker face stiff opposition when they propose diversification in farming. Kathata further observed that regardless of millions of money in circulation in Igembe, the money is owned by men who traditionally own Khat plants and they spend the fortune in town by eating in towns and really found in the households. Men don't support their families making women the bread winners of the families (Kathata, 2014).

Khat is associated with increased psychiatric morbidity among other negative impacts. In an analysis of published data and interviews of regular Khat users by Mwenda *et al.* (2003) in Kenya, it was revealed that Khat chewing lowers libido in men and could also lead to sexual impotence following long term use. In pregnant women, consumption of Khat affects growth of foetus by inhibiting utero-placental blood flow and as a consequence, impairs foetal growth. A study on pregnancy outcome and Khat use by Erickson *et al.* (1991), where 316 cases out of 1,154 women (31.3%), were sampled for study, showed a significantly increased incidence of low birth weight among the off springs of women who chewed Khat during pregnancy in comparison to those who were non chewers during pregnancy. The women had delivered babies with low birth weight LBW (less than 2.5kg). In a nutshell, Erickson in his study found that the difference between the control group and the study group was statistically significant.

After a full review of Khat by the World Health Organization (WHO) in the year 2006, it was not subjected to international control. Nevertheless, the alkaloids contained in Khat, (Cathine and Cathinone) became scheduled constituents under the United Nations (UN) Convention on Psychotropic substances in 1988. Though the scheduling was not intended to provoke legislation against Khat, it led some countries to introduce Khat prohibition. However the first report, commissioned on Khat by the United Kingdom (UK) National Drug Intelligence Unit (NDIU), found no link between Khat to psychosis, which led to a deduction that, Khat consumption was not harmful and therefore the restriction was considered unnecessary (NDIU, 1990). Data originating from Somali immigrants in UK showed that Khat has a role in community building through forming communities around community based behavior. According to anthropology study of Somali migrants in Holland, the Somali migrants chew Khat to reinforce their self-esteem in the alien society. More so, Khat chewing session provide social forum for exchange of news and information. Khat chewing session within migrants with Africa origin living in Australia was an identity marker for various communities.

Regardless of social and cultural negativities of Khat production in Kenya, Khat production has boomed at a rate impervious to national trends and international disapproval (Mwenda, *at al*, 2003). The world poverty index (2016) posits that 80% of the total land in Kenya is arid and semi-arid lands (ASALs) with low productivity. As a way to mitigate this, there has been an outstanding trend of most smallholder farmers in the study area to expand from little value crops to high value and as such Khat (Demurger *et al.*, 2009). These adjustments in agriculture have an important impact on income among most rural households. Such diversification is common in Siakago Division of Embu County. This community has highly embraced the cash crop which is even exported to Amsterdam, London and Somali and also saleable in local market. It has provided employment to many people. Despite this, poverty levels among the mbeere rural households estimated to stand at 57.4%. This study therefore sought to explore the socio-economic impacts of Khat production on rural households in Siakago division, Mbeere Sub County.

1.2 Statement of the Problem

In every region of the world it is necessary to find or develop appropriate techniques for production. The goal of any agricultural production is to ensure continued food security for the involved community or country through income sustainability. Although Khat was introduced in Siakago to make the area agriculturally sustainable and improve the socio economic lives of producers, it seems not to be doing very well in spite of its high income because the people are unable to meet most of their basic needs. Poor households and deprivation of social infrastructure is still witnessed in the area. Hence Khat contribution to the rural household's socio economic lives has not been given scholarly attention. This scenario necessitated a study on the socio economic impacts of Khat production on rural households of Siakago Division in Mbeere sub-county from 1980-2017.

1.3 Purpose of the Study

The purpose of this study was to assess the social-economic impacts of Khat production on rural households in Siakago Division, Mbeere Sub-county; Embu County from 1980 to 2017.

1.4 Objectives of the Study

The study was directed by the following objectives;

- i. To trace the history of Khat production in Siakago division, Embu County between 1980 and 2017.
- ii. To examine the social and economic activities of the people of Siakago of Mbeere before introduction of Khat.
- iii. To establish the social and economic impacts of Khat production on rural households in Siakago Division, Mbeere sub county Embu County.

1.5 Research Question

- i. What is the history of Khat production in Siakago division Sub county Embu County?
- ii. What were the socio-economic activities of the people of Siakago of Mbeere before introduction of Khat?

- iii. What are the social and economic impacts of Khat production on rural households in Siakago Division, Mbeere Sub County, and EmbuCounty?

1.6 Significance of the Study

The study underscores the socio economic impacts of Khat production in Siakago Division. The findings of the study may help the government devise better policies that can promote the living standards of the people in the area. The study will also be of great importance in the whole county and will create sentience on both progressive and destructive impacts of Khat farming. The research will be useful to scholars of history on athropology and archaeology, Art, social sicence and political studies who would wish to conduct the research on the impacts crop deversificationin reference to Khat.

1.7 Scope of the Study

The study examined the socio economic impacts of Khat on the rural households of Siakago from 1980-2017. The focus on Khat production in Siakago as a research topic was informed by the fact that although Khat is relatively new commercial crop in the region, it has displaced other forms of agricultural production, it has affected land management and resources ulitlization particularly indeginiuos food crops which used to feed the peasants houshoolds questioning the advantages and disadvantages of crop diversification to Khat in the area. The study mainly dealt with Khat producers and sellers in Siakago Division. The study targeted the households which produced Khat in Siakago Division. The area was chosen because it is one of the division which produces Khat in high quantity in the sub-county and no historical study has been carried in the proposed study area on socio economic impacts of Khat. The period 1980 to 2017 was chosen because from 1980 is when the people of Siakago started growing Khat for commercial purpose. It enabled the researcher to trace the socio economic organization of the people of Siakago and the impact of Khat on rural households. More so it explained why most of the people shifted to Khat farming in Siakago division.

1.8 Limitations of the Study

The study encountered language barrier since some of the people interviewed were illiterate and did not understand English or Kiswahili. However, an interpreter was used. The study also encountered contradicting information from archival, oral traditions and secondary sources. However, all the sources were collaborated.

1.9 Assumptions of the Study

The study was based on the assumption that;

- i. Khat was introduced in Siakago in order to improve the livelihood of the people socially and economically.
- ii. Respondents' responses were a true reflection on influence of diversification into khat production in Siakago both socially and economically.
- iii. The locale of the study provided adequate information required to answer the research questions

1.10 Definition of Terms

- Agricultural innovation:** Introduction of a new idea or undertaking of „new combinations“ of the productive forces to change the way agriculture has been practiced in the past. The idea may be an invention or an adaptation of an existing technology. Innovation is a subset of entrepreneurship.
- Diversification:** Refers to the substitution of one crop or other agricultural product for another or an increase in the number of enterprises/activities carried out by a particular farm.
- Social change:** Is the effects of external and internal forces on people’s lives resulting in an economic and political reorientation of the way things were or were done in the past. Agricultural transformation is one such force behind social change. People’s determination to improve their lot is another force. Social change subsumes peasant transformation because the latter refers to significant or fundamental changes in peasant lives and livelihoods.
- Socio-cultural** : Changes in general relations, traditions, customs and interactions within a community. Entails norms , negotiations within a community
- Household** : Persons who belong to same homestead/compound
- Household head** : Person who is mostly looked up to in the household, makes decisions and gives direction.
- Peasant transformation :** The social change or progressive positive changes in the lives and livelihoods of peasants through time, from subsistence farmers to agricultural diversification. It is operationalized as poverty reduction, social differentiation, infrastructural growth and local development. Transformation represents fundamental change from the original self.

CHAPTER TWO

LITERATURE REVIEW

2.1 Historical Background of Khat

Historically, the origin of khat is quite obscure. However, Khat was first identified and included in the botanical book of compounds by a French botanist Pehr Von Forskal in 1762, who categorized the plant in group of spinosa plants, although later classification placed Khat botanically under the family of Celastraceae plants (Kalix, 1991). The history of Khat consumption and production has conflicting oral and documented evidence of origin since majority of producing areas claim their areas as the origin of Khat. However, according to Anderson, Beckerleg, Hailu, & Klein (2006), the earliest documented use of Khat was in Ancient Egypt during the reign of Pharaoh Hatshepsut in 1458 BC, where the cult's religions and the imperial dynasties considered Khat plant as a sacred plant or substance reserved for the ruling class. Khat was believed to intensify their mystical experience and to facilitate a sense of union with Gods.

Another earliest known documentation description of Khat is found in the *Kitab al-Ssaidala fi al-Tibb*, an 11th –Century work on pharmacy and materials written by a Persian scientist and biologist *Abu Rayan* who referred to its origin from Turkestan (Anderson, et al, 2006). Arabic sources also indicate that Khat was known as early as the beginning of the 11th century in Turkestan and Afghanistan (Schopen, 1981); Schopen & Kennedy (1987). Khat consumption was also documented among the Sufis Islamic mysticisms around 1318-1389 AD, where men used Khat to intensify their mystic experience and spiritual closeness with God. However, among the Sufis, Khat served both social economic and cultural importance (Kennedy, 1987), a case in question whether the producers of Khat in Siakago use Khat inform of class or not.

On other accounts, the historical evidence on the origin of Khat suggest that the practice originated in the southern Red Sea area (Yemen or Ethiopia) prior to the mid-fourteenth century (Weir 1985). Kennedy (1987) assessment indicates that use of the may well have begun in Yemen at least as early the 12th century and diffused to Ethiopia at that period. There are a number of legends in both Yemen and Ethiopia about the discovery of Khat plant. Rodinson (1977) believes that there is evidence to

the introduction of the into Yemen around 1300 A.D., but Schopen's (1981) opinion is that the use of stimulant existed in Yemen in the early 13th century.

According to Kalix (1990), Ethiopian and Yemeni folklores the possessions of Khat are traced to Yemeni goatherd who detected the influence of the branch on his goats. The goatherd tried it and found his motion and energy increased and he was able to stay all night to pray. Other accounts states that Ethiopia is the country of its origin and it is the world's largest Khat producer, where a Khat chewing habit was started in the 15th century, just before the start of use of coffee. Alem,*et al* (1999) on another account states that the social importance of Khat in Ethiopia was that it was given to soldiers in war to counter fatigue and for invigoration as well as for recreation purposes. Alem *et al*, further observes that the production of Khat expanded between 1970-80s at the expense and substitute of crops like maize, sorghum (Alem,*et al* ,1999).

The use and trade in khat as a drug was brought to international attention in 1935 when it was discussed at the League of Nations. Bulletins by United Nations Office on Drugs and Crime (UNODC) suggest that dry khat leaves may have been used in a manner similar to tea leaves in the past periods. The habit of chewing khat has an immense social importance within the communities where it is practiced. Fresh shoots and leaves of the khat plant are chewed mainly for their psycho-stimulant properties. In some places, khat chewers believe that khat has medicinal properties. The study by (Peter, 1952) focused on the overall history of khat production worldwide, but does not trace the origin of khat, thus, it is important to establish how Khat came to Siakago and how it is grown and traded by residents of Siakago.

The relationship between humans and Khat is shaped by multiple factors including culture, society, religion, beliefs; individual psychology, neurobiology, cognition, and genetics (Croq, 2007). Getahun, *et al*,(1973), examined historical and cultural aspects of man's relationship with addictive drugs. The current study aimed at identifying the period when khat chewing habit started in Siakago, the reason behind the chewing habit and the first people associated with the habit. According to CBS (2001) Miraa farming in Kenya grew steadily from 1980. Between 1980s and 1990s Kenya was

exporting approximately eleven to seventeen tonnes of khat annually (CBS, 1996). During these periods the biggest producer was Nyambene regions of Meru County and the biggest market for Kenyan khat was Somalia before the war. However, since 1980s a new variety of khat started emerging in the market although in small quantities and selling locally 'the *muguka* variety'. The word '*muguka*' in the local dialect means steady and resistance to change of weather. The term is given to this variety due to its resistance to weathering out during the dry seasons. From 1980s in Siakago just like other khat producing areas of Kenya, *muguka* farming came with changes in the history of the areas. However, the study by Mwenda *et al.*, (2003) Wanja (2010) and Mugendi (2017) captured the social effect of Khat farming in broader Mbeere but did not capture Siakago as a stand alone area and also did not look at the impact of Khat production on the household of Siakago.

Alem *et al* (1999); Aderson & Beckleg (2006) and Bentur *et al* (2008), tried to show how Khat is friendly in agricultural production Ethiopian and Kenyan since it can be inter cropped with food crops. The scholars show how Khat can do well particularly with maize enabling food crops to be grown in a lower-risk system than mono cropping. In Hararghe region, khat holdings by rural households are associated with greater food security and better nutritional status of children. Low-income households benefit relatively more than high-income households, according to Tefera, partly because while khat gives much higher yields when irrigated, even when not irrigated - as in the fields of lower-income people who can't afford irrigation systems - it provides reliable revenue at low risk.

As noted by Njiru, *et al.*, (2013) following his in-depth study of 100 households in Mbeere being a semi-arid region, they concluded that the "majority of farmers embraced khat production as a diversification strategies to boost their income as well as mitigate the production risks inherent in food crop production. Though the study by Njiru and others looked at the advantages of mixed farming in regards to Khat and the effects of khat production on rural household's income in Gachoka Division, the study does not cover Siakago or the origin of khat in Siakgo thus this study wished to look at the origin of khat before identifying the perceived effects.

2.2 Social and Economic Activities of Siakago before Introduction of Khat

The Siakago people belong to the Ambeere ethnic group of Bantus speaking people, with similar language and customs with Embu people (Mwaniki, 2010). However land use of Ambeere is different from Embu since agro-ecology is different (LUCID, 2004). According to Mwaniki (2008); Mwaniki (2010); Brokensha and Riley (1977) in between 1950's and 1960's, most Siakago was mostly covered by bush or grassland that was used for raising large herds of goats and cattle. The Ambeere of Siakago were herders and practiced shifting cultivation, the study would like to establish how this form of peasant social and economy was interrupted by the diversification to Khat production (Muriuki, 1974). Ordhiambo et al., (2004), shows that cash crops such as tobacco and cotton were familiarized in the area between 1960 to 1970s and they became the most important cash crops for the two decades. The people of Siakago valued livestock, particularly cattle, sheep, and goats (Mwaniki, 1974) and (Mwaruvie, 2012). Muriuki (1974) study also focused on self-sustainability of people of Siakago through mixed farming, while Ordhiambo's study shows when cash crops were introduced in the area. Both studies did not show the impact of changing economy of Siakago within that timeframe nor the drivers of diversification in the area.

The study by Mbugua (2002) and Njiru *et al* (2013) gives an insight of how land was distributed and the form of ownership which is important to the study, since by extension the land size and availability was a paramount indicator of Khat ownership and cultivation in Siakago division. Individuals or family groups could claim pieces of uncultivated bush and begin clearing. A woman did not inherit lineage land but was allocated gardens by her husband from his own lineage property. Beginning in the 1950s and continuing with the independent government, this pattern has gained legal sanction, as individual ownership has become the centerpiece of a land-reform program. According to Mwaruvie (2012), among the Ambeere of Siakago, the crafts were pottery and woven basketry, both practiced by women and leather was worked by men. Mwaruvie (2012), study showed the local craftsmanship of the Ambeere although it does not specifically target Siakago, but the analysis was important when looking at division of labour among the men and women which would later inform the division of labour in Khat production in Siakago area.

Trading was practiced in the area and helped even out the effects of shortages or famines. Men in the area grazed livestock, gathered honey, hunted and cleared fields. Both women and men harvested in farms and other wild foods (Njeru, 1998). According to Mwaniki (2008), the Ambeere traded with various goods, livestock, and foodstuffs with their neighbors. Njeru (1998) study showed how household division of labour was among the Ambeere before diversification to other crops. The study was important because (Wanja, 2013) argued that women were highly involved in Khat production in Siakago which is different from what (Kathata, 2017) established in Nyamabene hills of Meru. According to Mwaniki (2008), the Ambeere had patrilineal descent organized lineage of varying depth. *Themucii*, or home, constituted a shallow lineage, which sometimes embraced four generations. It held land collectively. Lineages in turn were embedded in dispersed non-corporate exogamous clans. Terms of address and reference were distinguished for several categories of kin. Bifurcate-merging terminology marked Ego's parental generation. Mwaniki (2008), give a good impression of how lineage owned land, but as indicated by (Ngeranwa, 2013), currently women of Siakago own land cultivated with Khat and they are in forefront in Khat production showing how cultural fabric has been torn in Siakago, thus its important for the study to establish the role of gender in Khat production in the study area.

At marriage, a woman would occupy her own dwelling at the homestead of her husband. The man would sleep in his own sleeping quarters where he would amuse his age mates. If he married a second wife, she would have her own residence, where she would cook and support her children separately from her co-wife. Traditionally, divorce was infrequent. Secondary patterns of marriage included the true levirate and the fictive marriage of women. These forms of marriage could occur when a union had failed to produce male heirs. Numerous changes in marriage patterns included increasing numbers of Christian unions and growing resistance to bride-wealth payment.

2.3 Socio-Economic Impacts of Khat Production in Siakago

This study focused on identifying the socio-economic impacts of Khat starting from production, consumption and trading on the involved households in Siakago.

2.3.1 Social Impact of Khat Production

Khat chewing is a common habit in East Africa, South Saudi Arabia, Yemenis and including Ethiopia. This habit involves picking tender leaves of Khat, putting them into one side of the mouth, chewing for a while and storing the chewed leaves in the same side of the mouth to get psycho- stimulation effect in the form of euphoria and excitement resulting from the cathinone contents. In the traditional social setting, the chewers meet in a house some time after mid-day, usually bringing their own supplies. The social gatherings where Khat is chewed, otherwise known as majlis al qat (Yemen) or bar'cha (Ethiopia), help in strengthening social bonds, solving social problems, building relationships and reinforcing a sense of nationalism (Al-Motarreb *et al.*, 2002b).

Herbold (1999), explains that Khat chewing sessions in Ethiopia and Yemen are time consuming on the productivity output, Khat can be both incapacitating and time wasting. From observation made in Somalia Khat chewers (Klein, 2004), a Khat chewing session takes 3 to 8 hours, so costs a full day's wages or more and is followed by a hangover so does reduce productivity. Studies by Patel (2004), among the Somali people indicate that, habitual Khat use per individual costs to the tune of \$1,500 a year yet a significant majority of Somali house-holds live in absolute poverty. Khat is perceived as a massive drain in resources (money and time), as destructive to productivity when working at both household and macro levels (Green, 1999; Feyisa, & Aune, 2003) and as the largest cause of non-support of families by men. Men abandon their families or abuse their spouses, leading to the high incidence of female instituted divorce. According to Klein (2004), there is a large number of people who chew Khat all night long, becoming increasingly aggressive, go home in the morning, beat up their wives and go to sleep throughout the day. This happens as the women go out to work, taking the children to school, doing shopping while men do nothing but sleep or at times chew Khat. Many users of Khat secure daily portion at the expense of vital needs, indicating dependence (Odenwald, 2007). The study by

Herbold (1999) and Klein (2004) were conducted on different social setting from those of Siakago area and its important to establish whether Khat has similar effects among users in Siakago households.

In Kenya, for the past decades, Khat has been grown mostly by the Igembe and Tigania in Meru County (Carrier, 2005) and (Mwaniki, 2008). The plant has had good economic value to the inhabitants. The plant "*Miraa*" is incorporated into their social and cultural heritage including circumcision where boys took khat along to the elders to let them know that they were ready for the rite of passage, and the preliminary to marriage, where a prospective son-in-law takes khat along to his prospective bride's parents to request permission to marry her (Mwaniki, 1986). *Nchoolo* bundles are offered by junior men to their seniors, suggesting a gerontocratic hierarchy maintaining elders as welders of power in theory, if not in practice (Mwaniki, 1986).

According to Kathata (2017), Khat in the Meru producing regions, crime rate is normally high compared with other regions. Kathata attributed this to high money circulation in that region, thus attracting many criminals Bongard, *et al* (2011). On other quarters, khat chewing is seen as an activity that actually prevents people from carrying out various economic activities since it occupies a lot of time consuming (Kinoti, 2007). Thus on public order, there is limited evidence that khat is associated with public disorder in any way except spitting aimlessly on the streets, or talking very loud, and lack of courtesy which depends with individual treat (Klein, 2004). On violence, khat is associated with domestic violence mostly in the producing areas than in consuming points. The association of khat with domestic violence is mentioned mostly by Somali and Tigania women in a study by (Aden *et al.*, 2006). However there was conflicting evidence on this notion since many producing area like Ethiopia, Yemen and Kenya have no recent study on the influence of Khat on crimes.

The evidence of associating family breakdown is very minimal, although many women feel personally affected by male partners' mood swings or tempers as a result of using khat (Liloba, 2013). According to a study by Aden *et al.*, (2006), family breakdown due to heavy khat uses was very common in Somalia before the civil war 1980s, even leading to divorces. Income diversion is the most commonly expressed

concern with khat in proportion of income spent on other purchases, Fahim (2006) regardless of the stereotype of the 'andolent chewer' spending a lot of time chewing and spending excessive amount on khat has been challenged by some scholars. Many interviewed in Kenya (Omolo, 1987) reported that khat caused them financial problems, while others posed that their spending on khat was problematic, while others did not know how much they spent on khat. Kathata, Kinoti and Aden *et al*, study provides social cultural aspects of Khat in both Nyambene and North Eastern regions of Kenya which had different social setting with Siakago and thus its important to establish whether the same behaviour challenges highlighted in these regions are replicated in Siakago.

In another context, Khat consuption in Kenya before 1990s was social shunned by the upper level of the society, but today khat uses are found across the board in Kenya (Kinyanjui, 2000). In Kenya a half a kilo or a kilo of the shrub may be sold from as little as \$ 2 dollar up to 3 dollars during the dry seasons. Social repercussions arises when the bread winner of the house spend their earnings on khat (Carrier, 2006). Researchers are divided on relationship between khat and productivity and men libido effects. However, the possible explanation for these differing opinions is set of shared presumptions that khat does not affects everyone's the same way and thereby determines how people behave and that all khat is the same (Kalix, 2005) argues it is a fallacy to assume that the pharmacological properties of a drug dictate the consequences following using khat. The effects of using khat, from different schools of thought give very contradictory characteristics of the consequences of khat but no strong evidence has been given, which is an area the study would focus on.

Gebissa (2008), notes child labour is yet another social problem prompted by Khat growing in Kenya around Mount Kenya region and its environs. Children who fall within the school going age bracket form part of the labour in Khat industry, more so in harvesting. Some children do it voluntarily while others are compelled to do so by their parents. This study aims at identifying whether Khat growing can be referred to as a social problem in Siakago which is part of the Mount Kenya region studied by Gebissa. Becker *et al*. (1973) came up with an assumption that, children have no bargain power in the household, and parents make decisions regarding their own

interest. In this situation parents tend to invest more human capital in children who are deemed to be more intelligent and highly skilled. This is because; the cost of investing in human capital for a more able child is cheaper than that of less able child. Moreover parents anticipate that children with higher skill levels transfer resources to the siblings which decrease the average cost of parental investment. The assumption by Becker and others is that only intelligent children are taken to school while the others provide labour especially in poor communities. The study intended to identify whether child labour is common problem in Khat production chain among households in Siakago which has high food insecurity levels.

In some circumstances however children are able to actively make decisions about household activities (Basau & Van, 1998; Moenhling, 2005; Rubkwan, 2007). However, as Moenhling further observes, children participate in making household decisions with minimal bargaining power. Parents bear most of the influence on what activities their children undertake and in this case, whether to persistently pursue schooling or not, and in the same vein whether to take part in Khat farming activity or not. In developing countries, one of the determinants of household decision, about sending children to school, is the opportunity cost of revenue, generated from engaging children in work. Poverty has much influence on parents' decision over their children's education. Parents withdraw their children from labour market when the adults' wages reaches a critical level. To utilize the luxury axiom, which states that; "when a family is below the poverty level, then they will need income from child labour." In such a situation, the children are less likely to attend school. This implies that children from higher income families are less likely to become child laborers. On the other hand Child labour decreases with increase in the number of adults in a family. The study aimed at identifying whether Khat production in Siakago has influenced parents' decisions to take their children to school.

A cross-sectional study was done in Agaro secondary school, south western Ethiopia regarding Khat chewing. It was concluded that the Khat chewing prevalence among 248 students of Agaro secondary school was 64.9%. These students were aged from 15-22years old. This is a demonstration of how widespread Khat chewing is among secondary school students was (Adugna et al 1994). Khat chewing had an

overwhelming impact on the students' psychology and social life. It was also related to decline in academic performance. The media unearthed the impact Khat chewing has on the students education. On a similar observation, an educational officer reported that in Gikiiro Secondary school, in Nyambene, Meru County, there were more girls than boys as the latter drop out due to Khat chewing. This report stated that in form four there were 26 students out of which only 4 are boys. Since the school started in the year 2000, none of its students has been admitted to the university (James, 2012). The findings from both studies sends light on effects of Khat chewing among school going children and it was imperative to establish whether the same trend is replicated in Siakago among children of school attending age. Kinoti and Sum look at dropout rates in Khat growing areas as a social problem in those families. The study however, looked at the overall social impact of Khat production on education and it is also important to establish whether the same challenges of child labour in Khat production exist in Siakago and its impact on Khat producing household.

2.3.2 Economic Impact of Khat Production

Ethiopia and Kenya are the top khat producing countries in the world. From the report, farmers in khat industry get five times payment from khat in comparison to other crops like coffee, tea, pyrethrum and other crops. Likewise Khat farming is easier to produce than the above crops since it does not occupy a farmer with spraying, fertilizers and pest sides. Khat requires simple labour, is easier to grow (Fahim, 2006). Khat has huge economic benefits for the farmers, traders and even governments in form of taxes upon the Khat business. Income from Khat contributes substantial amounts of GDP in countries like Ethiopia, Yemen and Kenya.

One of the most comprehensive studies on the economic value of Khat was done in Yemen by Beckeneg (2006). Beckeneg observed that the main motivation factor for Khat cultivation in Yemen widely is the highest income Khat providers to farmers. Beckeneg study in 2001 estimated that the income from cultivation of Khat was about 2.5million Yemen Rials per hectare annually compared to other fruits such as grapes which would produce 0.57 million rail per hectare. Beckeneg estimated that the amount of money spent on Khat increased from 14.6 billion rails in 1990 to approximately 41.2 billion rails by 2006. By late 1990s and early 1980 there was

improved roads network, off-roads, motor vehicles, and a lot of effort was put by farmers to increase more of their hectareage in Khat. Another motivational factor for Khat cultivation in Yemen was the high demand from Diaspora. Khat was exported to UK in large quantities to meet demand of African immigrants' communities. Beckrlos work helped the study to make informed knowledge to evaluate the economic value of Khat in Siakago.

Another study done on economic impact of Khat in Yemen was done by Elmi, (1983) and Fahim (2006). Both studies give a clear insight of how a new valuable cash crop as affected the existing form of production in reference to Yemen. Elmi, (1983) states that in Yemen the cultivation of khat consumes much of the countries water supply which goes towards irrigating khat with production increasing by 10 percent to 15 percent every year from 1990. It is estimated that between 1970 and 2000, the area on khat in Yemen grew from 8000 hectares to 103000 hectares. Fahim (2006) on a similar observation of Ethiopia states that, since 1970s khat production in Ethiopia has been expanding and it has created employment for many Khat network of the furthest growing business and most profitable occupation and in 2000 – 2010 khat became the third biggest export from Ethiopia with \$ 238.4 million worth of khat being exported. Both research worked well in our studyon the impact of Khat production in households of Siakago region economic wise.

Another most profound existing literature on agricultural diversification in relation to Khat farming was done by Gebissa (2003) "*The leaf of Allah*" Gebissa's work contributed on Ethiopian agrarian studies and opened up a new chapter on commercialization and rural development debates. Being a historical transformation in agriculture, the study attempted to map the ways in which commercialization of khat in the Horn of Africa transformed the agrarian economy of the Harar region in eastern Ethiopia. The study triangulated he effects of four agents in explaining Harar's relatively successful agrarian commercialization and economic growth at a time when most rural producers in other regions became progressively impoverished. This historical account elucidates how the peasants of Harar region "turned sand into gold".Gebissa concluded that khat farming could not solve the region's underdevelopment, despite the ingenious efforts of peasants to partially escape

Ethiopia's rural decline in the 1970-1980s and the growth of agriculture-driven commercial enterprises in the region. Although the work was done in a comparatively different area it can be a refraction of what would happen or is happening in Siakago division.

On economic platform Kalix (2009) posits that in Ethiopia since 1970s Miraa farming has been expanding and it has created employment for many. Khat network is the farthest growing business in most profitable occupation. Khat has become the third biggest export for Ethiopia with \$238.4 million worth of khat being exported and In Ethiopia, the regions of Harangue is considered to be the main area of cultivation and trade, Ethiopia National Bank predicted that in 1975 they earned 5,424 Birr and by 1983 the earning increased to over 28,862 Birr. The time of this study concurs with the period farmers in Siakago stated to commodify Miraa as a cash crop. In that regard the study will act as a measure of what can happen in a short period in regards to agricultural production transformation in Siakago division. Since 1970s, Ethiopia khat production has been expanding. The economists have been weighing the economic impact of khat cultivation in comparison to other social concern of khat cultivation in Ethiopia, which also prompts to question the economic impact of Khat production in Siakago division in relation to other social issues concerning Khat production.

Khat production is documented to have a long history of economic benefits in reference to the traditionally producing areas of Nyambene and Igembe of Tigania (Mwaniki,1986); (Carrier, 2004). In Kenya the colonial government attempted to prohibit Khat production and commerce through what was known as the 'khat ordinance,' a piece of legislation that owed much to the efforts of colonial official Gerald Reece, a District Commissioner in-charge of northern Kenya who saw khat as an alien introduction that was polluting the pastoralists of that region (KNA DC/ISO/3/7/26). This law was crippled Khat production from the source that is Nyamabene and Igembe regions of larger Meru in 1941. These ambiguities of the Ordinance led to the substance being prohibited in the north while Meru cultivation and consumption was protected as a cultural right. These colonial attempts failed to curb the substance due to its economic value and Khat commodity eventually trumped concerns over use, although traces of the ordinance remained in place into the

postcolonial era. Bans imposed in this era, including in Somalia (which banned it in the 1980s), also failed through lack of legitimacy, ever-increasing demand, and inability to police multiplying smuggling routes.

According to Government of Kenya report (1996), Khat provides employment over 100,000 farmers, harvesters, packers, loaders, wholesale and retail traders, and transporters. 60% of Nyambene population depend directly or indirectly on Khat for their livelihood. A survey carried out for the preparation of a report by the National Council for Science and Technology, 1996 indicated that the amount of Khat exported to Mogadishu through Wilson Airport in January, April and July 1996 was 124,360, 79,300 and 134,180kg respectively. This gives an average of 112,613kg per month. Total income generated by Kenyan market is estimated at K.shs. 432,000,000 (GoK Report 1996). This therefore indicates that Khat production has perceived economic benefits on producing European nations and thus this study wishes to assess the economic effects of Khat production in Siakago Kenya. In a similar study by Nyambari (2005) on “Farmers socio-economic diversification in Nyeri Division, in reference to shift from coffee farming to other crops such as Khat farming” is another relevant study in regard to the current study.

According to Mwaruvie (2012) coping strategies of the people in arid and semi-arid areas have been previously examined by various scholars with the aim of exposing the problems that bedevil people in such areas. On the contrary, this work proves that there is a possibility of having economic opportunities and benefits in semi-arid areas. Such benefits, to a greater extent, make inhabitants to remain in their areas which, to outsiders, look appalling. In this regard, Dr. Mwaruvie explores the benefits of various socio-economic activities undertaken by the Mbeere people in the pre-colonial period in Kenya. He demonstrates that with proper exploitation of the environment, the Mbeere had an advantage over their neighbors who were well endowed with conducive socio-economic environments. This book is recommended for pre-colonial African economic history researchers, political economists, students of history in higher learning institutions and people with an interest in pre-colonial African history. Though Mwaruvie explores the value of commodities among the Mbeere community in pre-colonial Kenya, it does not explore the socio economic impacts of those crops

and thus the current study focused on establishing the socio economic impacts of Khat as a commodity production in Siakago division.

2.4 Theoretical Framework for the Study

This study used the articulation of modes of production theory to analyse data obtained on Khat production in Siakago division. According to Karl Max a mode of production means the way of producing. It is a combination of producing forces which include human labor, knowledge level and means of production for example tools and equipments. According to Karlmax (1834) a competitive labor market was established in England leading to industrial capitalism as a social system. England began a large scale and integrative approach to mercantilism during the Queen Elizabeth era (1558-1603). This stressed on accumulation of goods for export. It encouraged only raw materials that could not be extracted at home should be imported. British East India Company and Dutch East India Company inaugurated an expensive era of commerce and trade. These companies were characterized by their colonial and expansionary powers given to them by nation. The Marxist concept of mode of production entailed a system of social relation that organized and directed forces of production in the transformation of nature.

Through Articulation of mode of production the capitalist modes of production penetrate and established dominance over pre-capitalist mode of production, it does not automatically replace the existing modes of production but rather reinforces them. It gradually aligns with the non-capitalist modes of production and uses them to its own benefits (Essese1990). It also glorifies the role of external forces especially colonialism in changing and weakening social economic and political institutions in Africa.

Wolpneed, (1980) has developed the Articulation of mode of production from Marxist social science tradition. In recent decades the problems associated with underdevelopment, development, dependency and capitalism were put forward by dependency theory. Articulation of modes of production theory looks at the impact of capitalism on the third world societies. According to J.Taylor one of the proponents of the M.O.P the process of articulation between capitalism and pre-capitalism modes of

production started in the 16th century with the expansion of Europeans to the rest of the world. After the British conquest, the colonial states had to facilitate the relations and penetration and growth of capitalist social relations and mediate the new colonies external dependency (Zezeza, 1985). Maxon (1992) adds that the imposition of colonial rule effected the articulation of indigenous modes of production and the integration of African economies into the capitalist system. This theory is suitable in the study area as it explains how capitalist ideas spread in Siakago Sub County leading to change from subsistence farming of indigenous crops to khat farming for cash. The planting of Khat replaced subsistent crops hence affected food production. Articulation of modes of production theory was suitable for the study because it examined the introduction of khat farming in Siakago and its relationship to the food situation in the area. The theory was used to reinforce the main argument of the study thus despite the introduction of Khat cash crop farming in Siakago, Poor households and deprivation of social infrastructure are still witnessed in the area.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Location of the Study

The study was carried out among households in major Khat producing zones in Siakago Division of Mbeere Sub County which were mainly close to paved roads. The Siakago division has three locations namely Nthawa, Muminji and Evurore. The Division has an area of approximate 361.3KM² with a population of 43,453 and a population density of approximately 115km² according to 2009 Population Census (CBK, 2009). The altitude ranges from 1200M above sea level to about 500M on the Tana River basin. Siakago division is the highest producer of Khat (miraa) “muguka variety” although there lacks documented socio-economic potential of the industry (MoPND, 2005). Miraa production is commonly grown in the three wards, while agriculture and off-farm activities such as quarry, sand harvesting, transportation activities among others employ 92% and 7% of labour respectively. Siakago is the highest producer of Khat in Mbeere sub county, and is also came to be known with Khat or (muguka variety) where it is the second largest producer of Khat in Kenya after Meru. The Khat crop is commonly grown in the northern part of Mbeere Sub County, mainly in Siakago as shown in figure 1& 2.

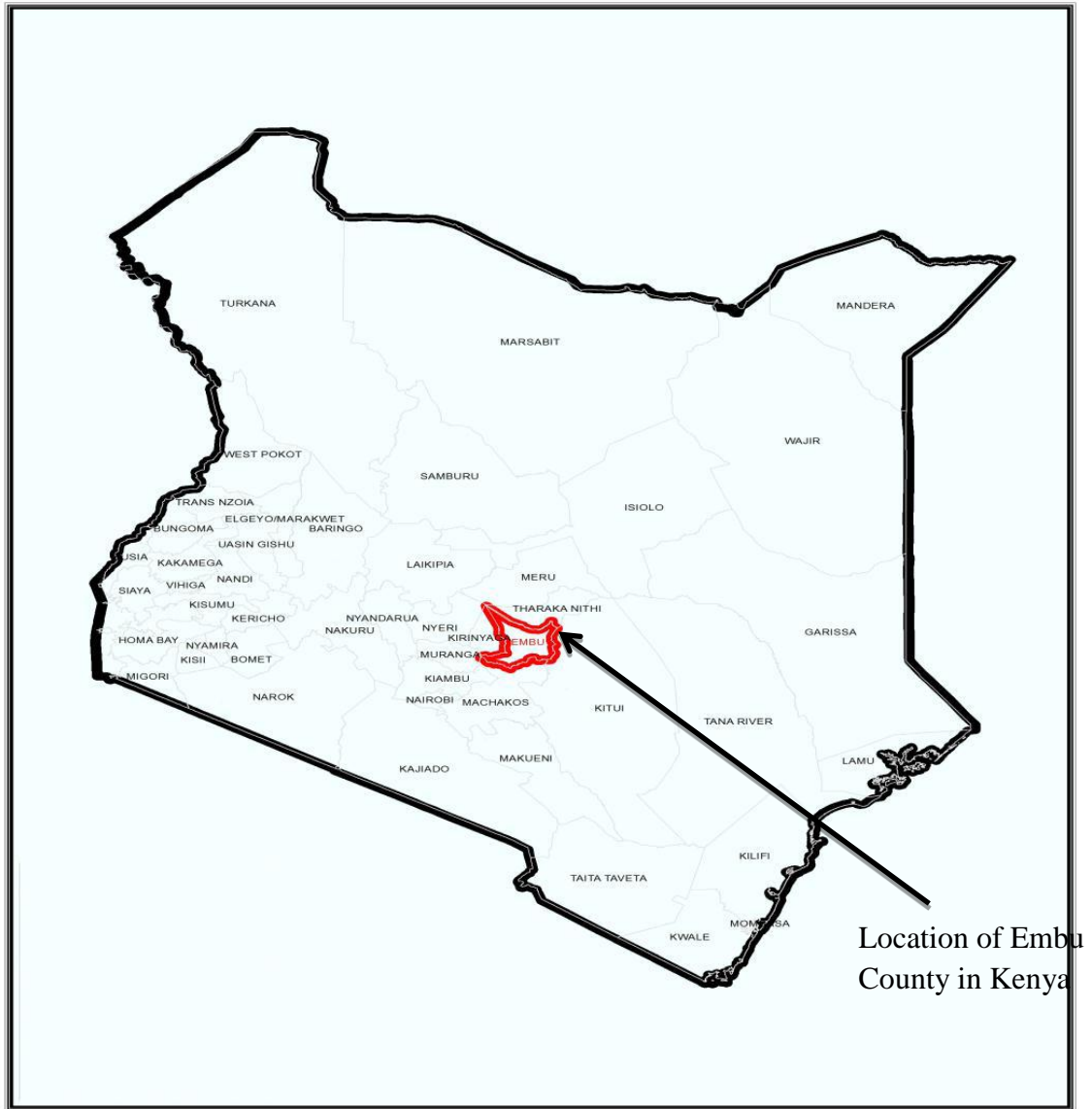


Figure 1: Map of Kenya Showing Embu County

Source: Ministry of Agriculture, Embu County; 2013



Figure 2: Map of Embu Couty Showing the Administrative Wards

Source: Embu County Intrgrated Development Plan 2013

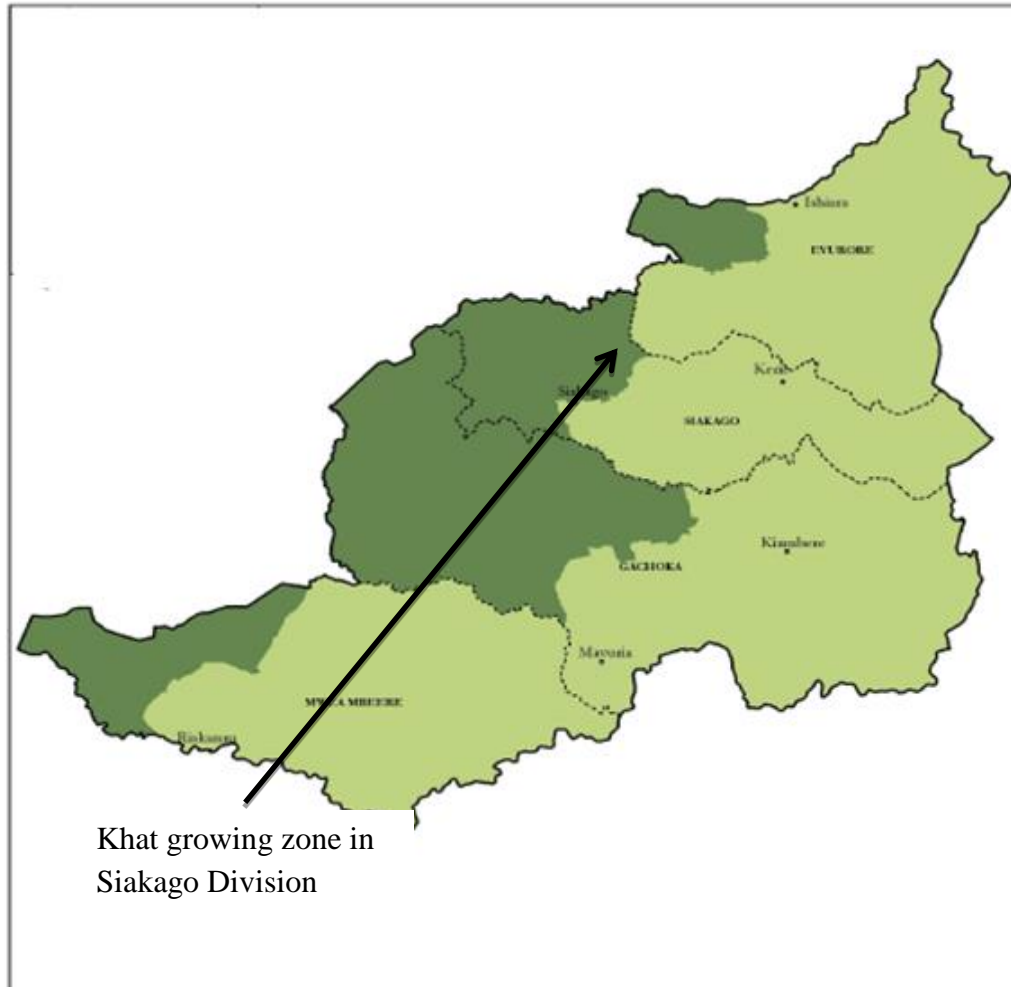


Figure 3: Map of Mbeere Sub-county Showing Khat growing zones in Siakago (Dark zones).

Source: Ministry of Agriculture, Embu County; 2013

3.2 Research Design

The study employed the descriptive research design. Kothari (1985) noted that descriptive survey design is concerned with describing, recording, analyzing and reporting conditions that exist or existed. Mugenda and Mugenda (1999) also assert that descriptive research is a process of collecting data in order to answer questions concerning the current status of the problem to the subject in the study and that it determines and reports the study findings as they are. Kerlinger (1973) also noted that descriptive surveys are widely used to obtain data useful in evaluating present practices and in providing bases for decisions. For Kathuri and pals, descriptive research design is a means of ensuring that the process is systematic and scientific and

results obtained are valid and reliable. Descriptive research design was used in this study as the researcher collected, described, recorded, analyzed, and reported events and factors that have affected the Siakago people socially and economically due to Khat introduction in the study area. It also fitted in this research because the researcher collected data and reported the way things were without manipulating any variables.

3.3 Target Population

Siakago division was chosen for the study because a similar study has not been carried out in the area. Also Siakago division is in the arid and semi-arid lands (ASAL) where diversification to Khat production was previously unthinkable due to climatical condition and the study would be a fair representation of what can happen in an ASAL in terms of agricultural difersification. As the study shows, the innovative Siakago peasants have harnessed this climatic condition to their benefit. The study targeted more on household in Siakago's division, and more specifically the two locations of Siakago division namely Muminji and Nthawa. The two locations are the highest producers of Khat in Siakago division.

The study being descriptive in nature, there was need to have at list two categories of respondents which was crucial in comparision of the information provided. Thus, the two categories was the 'producers' and 'consumers'. The produce group involved the farmers at houslhold level, both men and women since they held different view towards khat farming on social and economic impact at household level. The second group was consumers group targeting the khat harvesters commoly refered to as (mukei), small scale traders, chewers (consumers), transporters and bookers to complete the chain who were expected to give life experience of Khat market chain, origin of Khat and motivational factors towards diversification to Khat in the division. The two major producers of Khat were Nthawa with a population of 26,727 and Muminji with 16,728 according to (CBK, 2009).

3.4 Sampling Procedures

The study endeavored to correct data from all fermers engaged in Khat production in Siakago Division of Mbeere North Sub County. The study zeroed down to Nthawa

and Muminji location of Siakago division owing to their leading role on Khat production in the study area, and resource constraints in term of time frame to conduct the study. Other factors considered were the locational factor such as the accessibility and proximity to the main Khat collection centers, selling sheeds and transport routes were an important consideration for narrowing down to the two locations. Further, in respect to the homogeneity of Khat production in the study area, 3 sub-locations per location were purposively selected to get 6 sub-locations and the respondents were indentified using simple random sampling method. This was also based on their geo-physical characteristics such as accessibility and physical existence of Khat in the farms, closeness to local Khat correction and trading sheeds. The selected sub-locations are shown in Table:1.

Table 1:
Basis for Selecting Sample Areas

| Locations | Sub Locations | Basis for being selected |
|-----------|---------------|--|
| Nthawa | Riandu | - Proximity to road which is key in Khat transporttition. - Expansive Khat farms - Is a Khat collection center |
| | Siakago | - Proximity to tarmac road - Expansive Khat farms - High Population - Big Town - High number of Khat selling sheds |
| | Gitiburi | - Proximity to tarmac road - Expansive Khat farms - Has Khat marketing sheeds - Is a Khat collection center |
| Muminji | Karambari | - Proximity to tarmac road - Expansive Khat farms - Has Khat marketing sheeds - Is a Khat collection center |
| | Kirie | - Proximity to road which is key in Khat transporttition. - Expansive Khat farms - Is a Khat collection center |
| | Gangara | - Proximity to tarmac road - Expansive Khat farms - Has Khat marketing sheeds - Is a Khat collection center |

Source: Fild Work (2018)

3.4.1 Sample Size

According to the 2009 National Population Census, the cumulative population of the 6 Sub Locations was over 10,000. Since the total population is greater than 10,000, an ideal sample size was determined using the following formula by Mugenda and Mugenda (2003).

$$N = \frac{Z^2 pq}{D^2}$$

Where:

n= the desired sample size (if the target population is greater than 10,000)

Z= the standard normal deviation at the required confidence level (standard value of 1.96)

P=the proportion in the target population estimated to have characteristics being measured (0.5)

Q=1-p

D=the level of statistical significance (per cent margin error)

In the case of the study,

$$N = \frac{1.96^2 \times 0.5(1-0.5)}{0.07^2}$$

N= 196

A sample size of 196 was adopted and identified through simple random sampling method. This translated to the administration of 32 instruments per sampled Sub location. The sample subjects were determined randomly based on the assumption that they would adequately explain the dynamics of Khat production in the study area and the fact that the study was geared towards answering research questions specific to Khat production. In addition, the sample was considered optimum in terms of efficiency, reliability and representativeness, in line with the argument by Kothari (2003) that the sample size should neither be excessively large, nor too small, but rather optimum. An optimum sample size is that which fulfills the requirements of efficiency, representativeness, reliability and flexibility. The sample size is shown in Table 2.

Table 2:
Sample Size

| Categories | Groups | Sample size | Percentages (%) |
|------------|----------------|-------------|-----------------|
| Producers | Farmers Male | 60 | 30.6% |
| | Fermers Female | 60 | 30.6% |
| Consumers | Pickers | 15 | 7.6% |
| | Retailers | 15 | 7.6% |
| | Brokers | 15 | 7.6% |
| | Transporters | 15 | 7.6% |
| | Chewers | 15 | 7.6% |
| | Others | 1 | 1% |
| Total | | 196 | 100 |

Source: Author (2019)

3.5 Research Instruments

Data was collected using an interview schedule, focus group discussions and observations.

3.5.1 Interview Schedule

An interview schedule was administered with the help of an interview guide featuring mainly open- ended questions. Interview schedules give the right balance between maintaining control of the interviewee and space to redefine the topic and hence generate novel insights (Willing, 2001). All possible effort was made by the researcher by establishing proper rapport with the interviewee. the researcher interviewed the 20 youths and middle aged both at household level and in the farms, 20 elderly and 5 government officials to find out the historical perspective of Khat production in Siakago.

3.5.2 Focus Group Discussions

Focused group discussions were held to elicit information from 3 or more chewers and retailers found at the selling sheds at the time of study, the other group consisted of 3 or more brokers and transporters found on the collection center at the time of the study. Pickers were interviewed in the farms they were found picking Khat. The groups of 10 participants per group were guided by a moderator (research assistant) who introduced the topics for discussion and help the group to participate in a lively and natural discussion amongst them. The members of the three groups were allowed to participate fairly and give their contributions especially on questions relating to the

focus of the study. The Focus group discussion was used so as to get diverse information relating to the study topic.

3.5.3 Observation

The researcher used observation checklist to establish the socio economic impacts of Khat on households of Siakago Division.

3.6 Data Collection Procedure

The study used three types of data that is primary data/oral, secondary data and archival data.

3.6.1 Primary Data

The primary data was collected through oral interviews and focused group discussions with respondents. The information in these data collection tools assisted trace the historical background of Khat production, the socio economic impacts of Khat production on households and the measures put in place by the government to curb the negative impacts associated with Khat production.

3.6.2 Secondary Data

The secondary data was collected from various libraries. These include Chuka University library, Kenyatta University, and Embu Library. The secondary data was also gotten from books which have information related to the study topic, magazines, seminar papers, journals, newspapers, published and unpublished thesis logs, diaries, official records, reports, non-textual information such as maps, pictures and audio-visual recordings among others.

3.6.3 Archival Data

Archival source contain primary documents that have accumulated in the course of an individual. It gives first-hand information. It could be an eye witness account of Khat production. Archival data was collected from Kenya National Archives specifically on history of Khat and socio economic activities of Mbeere people.

3.7 Data Analysis and Presentation

A thematic data analysis was undertaken in this study. A thematic analysis is the most useful in capturing the complexities of meaning within a textual data set (Tesch, 1990). It is also the most commonly used method of analysis in qualitative research. In this study, thematic analysis process involved data familiarization, coding, categorization, identification of patterns and interpretation of the patterns. The identified data was used to develop themes that address study objectives. Thus, themes in this study was related to the historical origin and the development of Khat production and trading in mbeere Sub County; the socio economic impacts of Khat production both positive and negative among rural households since 1980 to 2017 and the measures put in place by the government to address the impacts of Khat. The data was first grouped in accordance to research instrument under the identified themes. This was followed by a comparison of the themes emerging from various data collection instruments. Finally, data addressing similar themes was merged from various data collection instruments. This ensured that the findings of the study were credible and presented the general picture on the ground.

3.8 Ethical Considerations

Most ethical issues fall into one of the four categories; confidentiality and privacy, anonymity, physical and psychological harm, and voluntary and informed consent (Mugenda & Mugenda, 1999). According to Leedy and Ormrod (2005), whenever human subjects are used in research, there is need to look closely at the ethical implications of the whole process. Therefore, the researcher requested for research permit from NACOSTI, see appendix IX. The researcher was flexible to fit in peoples schedule through the use of chiefs and sub chiefs and also create rapport with the administration. The researcher sought informed consent from respondents. This is because it is recommended that informed consent be gained from all research participants (King, 2000). All respondents of this study were informed that they were free to withdraw at will at any stage of the study if they felt their rights were being infringed on. The introductory part of the test items informed the respondents of the purpose of the study and also enhanced informed consent. Informants were also informed that a list of respondents would be presented as evidence of data source.

CHAPTER FOUR

HISTORY OF KHAT PRODUCTION IN SIAKAGO DIVISION BETWEEN 1980 AND 2017

4.1 Introduction

The main purpose of this study was to trace history of khat production in siakago division between 1980 and 2017, to examine the Social and economic activities of the people of Siakago of Mbeere before introduction of Khat and to establish the social and economic impacts of Khat production on rural households in Siakago Division, Mbeere Sub County, Embu County.

This chapter presents the findings of the first objective of the study which is to trace history of khat production in siakago division between 1980 and 2017. The discussion starts by giving the background characteristics of respondents. This is followed by a short history of the people of Siakago in terms of their origin and linguistic orientation. The discussion is based on data derived from primary sources located in the Kenya Government National Archives in Nairobi, oral sources from the people of Siakago and secondary data from the libraries in Kenya mentioned in chapter 3. This served as background information for the study.

4.2 Demographic Characteristics of Respondents

This section presents data on demographic characteristics of respondents who participated in this study. The study used simple random sampling to select respondents. The information on demographic characteristics was considered crucial in understanding the respondents and in interpreting the study findings.

Table 3:
Demographic Characteristics of Respondents

| Demographic characteristics of the respondents | Attributes | Frequency | Percentage % |
|--|--------------------|-----------|--------------|
| Gender | Male | 113 | 57% |
| | Female | 83 | 43% |
| Age of respondents | 18-35 years old | 62 | 32% |
| | 36-59 years old | 79 | 40% |
| | 60 years and above | 55 | 28% |
| Education level | None | 38 | 19% |
| | Primary | 68 | 35% |
| | Secondary | 59 | 30% |
| | Tertiary | 31 | 16% |
| Occupation of respondents | Farmers | 86 | 44% |
| | Traders | 42 | 21% |
| | Formal employment | 48 | 24% |
| | Transports | 11 | 6% |
| | Others | 9 | 5% |
| Place of residence (Sub location) | Riandu | 33 | 17% |
| | Siakago | 34 | 17% |
| | Gitiburi | 32 | 16% |
| | Karambari | 33 | 17% |
| | Kirie | 30 | 16% |
| | Gangara | 34 | 17% |

From the 196 respondents interviewed in the study, 113 were male forming up a 57% proportion of the entire sample whereas 83 were female being 43% of the entire sample involved in the study. This implied that majority of the respondents interviewed were males compared to the females attributed to the fact that most respondents in the study were males. It was paramount to include and interview both genders as they perceive and are affected by the socioeconomic impacts of khat differently. The respondents were resourceful in providing insights on socioeconomic impacts of khat. The old for example explained easily the way the Ambeere people were organized socio economically before the 1980's. This was because most of them were actively involved in the socioeconomic activities in their community as young men then or delegated these socioeconomic duties as family heads. Through their insights, it was possible to trace the history of khat in the Mbeere community.

From the analysis, 32% of the respondents were in the 18-35 years age category while an equal proportion of 40% of the respondents were in the 36-59 years and 60 and above year's age category. However, from individual response analysis, the youngest respondent was 26 years of age while the oldest was 86 years. Despite having not gone through the formal education system, the 86 year old Joshua Wambari together with his close age mate Igandu Mbengi, 85 years old said that they were born during a severe drought period that occurred in the country and which they referred to as *ngaragu ya mianga*. The drought was projected to have occurred in the 1930's thus qualifying their ages. The age categories were carefully selected due to the contribution they made to the study in terms of achieving the objectives. For instance, the 18-36 years category marks the youthful stage of life. It characterizes a group of people who are highly charged for or against khat production due to the effects it has on the economics of the community. They are thus better placed to identify what needs to be done collectively by the government and the community to make Mbeere a better place. The 36-59 years category characterizes a bunch that has experienced some degree of transition from one form of production to another in the community and hence their input vital for drawing conclusions and recommendations for the study. The final category comprising of elderly people above 60 years was useful in tracing the history of khat on first account basis as they experienced the traditional forms of production practiced in the area and how khat found its way into the community.

The respondents were requested to indicate their highest education level. The researcher used the completed level of education whereby the respondent received a certificate as the highest level of education. For those that had started secondary education and never completed were classified as per their primary education certificate. From the respondents sampled and interviewed in the study, 19% had not gone to school for formal education, 35% forming the majority had primary education followed by 30% who had secondary education. Only 16% of the respondents had attained tertiary level of education. It was however noted that most people in Mbeere had started education in a higher level than that which they were classified into but never completed. The education level of the respondents was crucial in this study as it is an indicator of socioeconomic well-being of the people in a society. The researcher

also used education level to unearth why the respondents did not further their education and find out whether khat production could have contributed in any way to the situation thus describing the state of affairs as they are in Mbeere.

The respondents were further asked to indicate the activity that they engaged in on daily basis in order to earn a living. From the 196 respondents who participated in the study, 44% forming the majority engaged in farming as the chief economic activity followed by 24 % who were in formal employment. 21% of the respondents interviewed were traders/business people while the remaining 11% were in other forms of activities such as students and pastors as well as retired people. It was prudent for the researcher to identify the occupation of the respondents since it is an indicator of the socioeconomic well-being of the people. The form of agricultural production directly influenced the kinds of economic activities people in engage in, thus aiding in realizing the socioeconomic impacts of any form of production.

Finally on the demographic characteristics of the respondents, they were requested to indicate the place they hailed from mainly the village or location. From the analysis most respondents represented by 17% were from Siakago followed by 17% who were from Riandu. Further, 16% were from Gitiburi, 16% from Karambari while least of the respondents were from Kirie accounted for by 16%. This comprised the entirety of all respondents including the government officials. The government officials were requested to indicate their place of work in the area of study. The researcher used the information on residence to identify the major khat producing sub-zones and further compare the socioeconomic effects of this production in different subzones for an informed conclusion. This is because different areas are affected differently by khat production and perceive production differently. The government officials on the other hand provided information on the interventions put in place in various areas by the government to address the situation in the area of study. For those officials hailing from non-producing zones, their proximal khat producing zones were used as their working areas.

4.3 History of the People of Siakago – Origin

According to Mwaniki (2008) the people of Siakago are classified as the Mbeere or Ambeere. The Mbeere people are a Bantu speaking ethnic group. The original homeland of the ancestors of the Mbeere is not certain. Oral respondents noted that the Mbeere ancestors share an ancestry with other Bantu speakers and thus share an origin. Others noted that the Mbeere are closely related Eastern Bantu people thus the Kikuyu, Embu, Meru and Kamba. This made the researcher to conclude that the origin of the Mbeere was Central Africa which many interviewees contended with. This information is confirmed KNA EMB(1932) which noted that the origins of the Mbeere were the same as those of the Bantu-speaking Kikuyu, Embu, Chuka and Meru peoples, notably that their ancestors moved eastwards from central Africa some time before the sixteenth century, and had settled in the Nyambene Hills. From there, the people moved slowly southwards into the foothills of Mount Kenya, where they settled and gradually acquired their present-day ethnic identities

A contradicting account was provided by a Mbeere elder Jerusa Wagugu who argued that the ancestors of the Mbeere came from the east, from the direction of Mombasa “*Mboa*” from the coast and settled in the Nyambene Hills. The association of the people of Mbeere and the nyambene settlement also made the researcher to inquire on whether they could have had borrowed the practice of Miraa growing from them since the Nyambene are the leading producers of the crop. The respondents however could not confirm. They also stated that Mbeere and Embu was one people. The respondents agreed that the Mbeere split from the Embu in the mid 16th century after a war between the Embu and Mbeere in which the Embu emerged as winners and pushed the Mbeere to their present day settlements of Gachoka, Evurore, Siakago, and Mwea. These according to oral respondents are the drier and infertile areas in the region. According to the deduction made by the researcher this is one of the factors that made the people of Siakago to embrace Khat farming because the weather conditions are not favourable for seasonal crops.

4.4 Linguistic Orientation

It was noted from Joshua Wambari, an interviewee, that the language spoken by the Mbeere people is known as Kimbeere. The language is closely related to the other

Bantu languages of the Mount Kenya region but it was significantly noted that the language had a lot Kamba borrowing especially for the Mbeere of Siakago.

4.5 The History of Khat in Siakago Sub County between 1980 and 2017

4.5.1 Khat Cultivation in Siakago Sub County

Observably, Muguka or Khat in Siakago Division is a slow growing shrub or small tree that grows to 2 Meters tall just like tea bush, depending on area, rainfall and genetic strain. The evergreen leaves are serrated and 5 to 10 cm long and 1 to 4 cm broad, with the new tip growth frequently showing distinctive caramel colour. The flowers are produced on short axillary cymes 4 to 8 cm long. Each flower is small, with five white petals. Cuttings 30–50 cm long, taken from orthotropic branches or suckers near ground level, are the main source of planting material. Cuttings prepared from pleiotropic branches root poorly and do not produce good plants. Planting distances on fairly level land or gentle slopes are 1.5–2.5 m in rows 2–2.5m apart. Narrower spacing is used where plants are grown as low shrubs. Khat is left to grow undisturbed for 3–4 years, until about 0.8–1 m tall. Maintenance includes weeding and cultivation to keep the soil loose, thereby helping to preserve soil moisture. Most leaves are then removed to induce the development of young shoots for a first light harvest. Normal yield levels are reached at 5–8 years after planting.

Planting is undertaken until the plant has another growth season, when it will be large enough to establish itself quickly in the ground. Other than access to sun and water, Khat in Siakago division requires little maintenance, but irrigation in dry periods is recommended for good growth. It takes seven to eight years for the Khat plant to reach its full height, but harvesting can happen after 5 years. Plants are watered heavily starting around a month before they are harvested to make the leaves and stems soft and moist. A good Khat plant can be harvested four times a month, providing a yearlong source of income for the farmer. Plants are best trimmed back to create a hedge or small shrub for easy harvesting, and fed heavily in spring to help new growth. Young shoots are picked 2–3 times per week during the season. Harvesting is restricted to the early morning to preserve the freshness of the leaves. When grown as a low shrub in Siakago, only 10 cm long tips of twigs, with about three expanded leaves are picked and packed in plastic basins (*karai*).

Khat is a relatively simple crop because it has long periods of harvesting and, in contrast to cotton and tobacco, which is harvested in small quantities throughout the year, muguka cannot be accumulated as it loses its potency within 48 hours of picking, (Muchiri, 2018). Further, it does not require fertilizer and thrives when interplanted with legumes. Muguka is a steady crop in Siakago division in terms of its dependence on rainfall, and the fluctuations associated therein.

4.5.2 The Origin of the Crop in Siakago upto the 1980s

An inquiry was addressed to the respondents seeking to ascertain the origin of Khat farming in Siakago and the chronology of events which commodified Khat as a cash crop in discount of the traditional form of agricultural production.

According to mass of respondents, farming of the Khat as a commodity existed for a long time. It was tough to exactly say what time this commodity started in Siakago since Khat shrubs were found in all regions. It was even hard to find recognized literature that could acme the discovery and origin of this substance in Siakago. Informants had varied views on the origins of Khat in Siakago, with Njiru (2018) arguing that khat is a traditional plant in Siakago and it was a natural plant found in the forest within the region. According to Ngure (2018) Khat grew wild and that the Siakago people found it in the bushes as they migrated from “*Mboa*”, their mythical place of origin. The researcher therefore concluded that khat could have been an indigeneous plant in Siakago sub-county. The position of oral sources was that the discovery of Khat in Siakago and Mbeere at large was accidental because, for every old person interviewed, the shepherds noted that their goats were feeding on the khat leaves and getting euphoria and when they tasted they felt some alertness. This oral history concurred with the findings of Mwaniki (1986) and Carrier (2003) and Mwenda et al (2003) in regard to the origin of miraa in Siakagowho noted that khat initially grew as a bush in the area.

According to Wanja (2012) the people of Siakago invented names such as *Muguka*, *Mukurukuru*, *Mutimutiri*, *Gitune*, and *gugs* referring to Khat from Siakago. This was adopted by the sellers and the young generation consuming Khat during the commercialization of khat from Mbeere to make a distinction with the variety

cultivated in Meru. In Mbeere and Embu Khat farming does not have a long history in comparison to Nyambene and other parts of Meru County. Thus the study observed that the oral history of origin, production and consumption of Khat is more similar to oral history of other producing regions such as Nyambene in Kenya, Harareh in Ethiopia and Yemen. Dominic (2018), a Khat farmer from Muchonoke observed that *“that it is not possible to state when Miraa came or was planted in Siakago because I found Miraa in this land in form of short shrubs which I was not even interested with because it was not even consumed by cows. These shrubs are very old to establish their origin. He said that Khat outlived the owner and it’s hard to establish when they were grown or how they germinated in this area”*. Another informant Rianjiru Mugo (2018) noted that Khat in Siakago was just another type of bushes and its only importance was that it was chewed by people grazing as a way of keeping them busy and no previous importance was noted. Further he observed that it was hard to identify the period on which people started to chew Khat because he just found people chewing; especially the elderly people grazing. He explained that areas that no much agricultural activities had taken place, shrubs grew naturally which was the case before khat production took over on commercial scale.

Remarkably, majority of informants from Siakago regions affirmed that Khat became important in the region between 1983 and 1984 during the great famine of Yellow Maize. Ndwiga (2018) from Siakago acknowledged that the first time he found Khat in the market was in 1984 when he bought the bunch of twigs at Siakago town on a market day. Another informant Muriuki (2018) observed that he bought a bunch of twigs in Siakago town in 1984-5 just for fun and that as time continued he started seeing people especially young people chewing Khat in the open and in beer selling places. Muriuki, Njiru and Muchiri (2018) from Gitiburi Khat collection center, all observed that between 1983 and 1984 the Siakago region and the surrounding area experienced continuous drought, which led to lack of food resulting in the government supplying relief food. Njiru further said that the famine was so severe that people were consuming yellow maize brought by the government. *Muchiri* further contended that, at that time one would have money but nothing to buy and that how he ended up buying Khat to keep him going since there was nothing to buy.

Majority of informants strongly agreed that the 1983-4 drought was so severe that it affected them all. It was hard then to grasp what was going on during these two years. The farmers were getting frustrated because the only source of their income that is cotton and tobacco had dried up on them. Besides the failure of the rains, agricultural inputs were getting more and more expensive, and many small farmers ended up exhausting all of the meager savings that they had put aside. The ordinary citizens had a hard time trying to pay the rising food prices for the few commodities that could be found. Theft had already increased because the situation had turned out to be 'survival of the fittest'. Muchiri (2018) further said "If you did not have the money to buy the little there was, then you tried other means". And the obvious alternative was sharing by force or without the knowledge of the owner.

Many people were turned away from farms because there was no much work for them since the farmers had reduced their commitments. Labour reduction also became the order of the day, therefore great fear of what the future would be. This was followed by a high school dropout at all levels. There was a general lack of capital, the youth and general public started to look for alternative source of capital. Njiru, Simon and Muchiri (2018) who sell Muguka (Khat) at Kirie center observed that, sand harvesting was their only available source of income, but waiting for the lorries to come and buy sand was very boring and at the same time one would get hungry yet buyers were not guaranteed to come. They would wander in the nearby bushes to look for Khat to keep them busy as they waited for the buyers. As the time went by, they started becoming used to it and some of the youth would go into the bush and come with Khat to sell. With time it became their daily routine and subsequently turning into a daily business.

By the end of 1980 according oral respondents noted that majority of the youth were searching for Muguka (Khat) variety in Kiang'ombe Mountain which is wet throughout the year due to its high attitude. The endeavor turned to be a good source of income for youth. '*Small time marketing*' started at Karambari, Kirie, Gitiburi and Siakago among others small markets centers. One informant, Mr. Njiru affirmed that he was without school fees balance because of the proceeds from khat.

By the year 2000 the business which started as an alternative turned out to be the most lucrative within the community. Muguka is the most preferred and consumed variety locally due to cheap price. Currently, Muguka is planted like stamps of tea leaves occupying the biggest portions of land in and Siakago division. The speed of growth, and the rate at which it is harvested, that is twice per month has motivated the community to adopt its cultivation. This has contributed to the negligence of cultivation of other crops like maize, beans, sorghum and other crops which are very essential for domestic upkeep. More so, it has lured the school-going children to abandon their education to engage in Muguka farming and harvesting which generates more money. Figure 3 presents a photo of how Shrubs grew naturally on Uncultivated Land



Figure 4: A Photo of how Shrubs grew naturally on Uncultivated Land

4.6 Changes in Khat in Siakago Sub County from the 1990s to 2018

From the 1990s to 2017, the following changes occurred in agricultural production in Siakago Sub- County which immensely affected Khat production. There was diversification of crops since there was realization that khat production alone led to deteriorating standards of living as people stopped producing food crops in favour of khat whose monetary returns was not channeled to buying food. Land adjudication was done in Siakago during the same period which further transformed Khat production in the area. During the same period commercialization of khat as a cash crop moved to a higher scale. This is discussed in the subsections that follow.

4.6.1 Diversification of Crops in Siakago Sub County from the 1990 to 2002

During the period 1990 to 2002 producers principally moved to other harvests that could provide food for the families. Food production for subsistence was given priority. This information was obtained from Njeru (2018) who noted that this change came as a need to supply food for the growing population (Chayanov, 1966). Agricultural development process in Siakago is extremely complex since the process was influenced by people density and resource obtainability but also by behavioral factors and economic opportunities which influenced diversification and adoption of Khat farming in Siakago. Other factors that prompted diversification were in response to the dominant market hassles, in an effort to maximize profits according to Nelly (2012). Khat production however took the lead after the cotton and tobacco market crisis of 1980 and 1990s as a need to seek out new economic opportunities.

Igoki (2018) argued that diversified production provided smallholder farmers with an prospect to select a particular produce for viable production and other indigeneous crops for provision of food. The main factor that accelerated crop diversification in the area was the land adjudication process of the 1990s.

4.6.2 Effects of Land Adjudication in Siakago on Khat Production in Siakago Sub County

The first major factor that may have influenced agricultural diversification in Siakago division was the issue of land adjudication. Land tenure in Siakago before 1990s included both formal and informal rights and obligations associated with particular

categories of individuals and groups in relation to land and its products (Glazier, 1985). These rights and obligations concern the acquisition, use, preservation and transfer of specific land or products of the land. According to Kathunju (2018) such land rights included the rights of use, for example, cultivating annual or perennial crops, grazing, hunting, collecting fuel wood or water, transiting or building. Rights of transfer included sales, rentals, gifts, inheritance or mortgages KNA/VQ/10/7/80 Land Consolidation Complaints, (1960).

In addition to its immediate economic importance as a source of food and cash income for rural peoples, land became an important social asset in Siakago because access to rural folks, land became a symbol of wealth as well as a means of membership in a descent group or rural polity (Nthambiri, 2018). This, in turn, created entitlement and a person would make claims on other resources which were controlled either by the group as a whole or by its individual members.

During the adjudication period many land disputes within and between clans were settled by elders who required payment from the litigants, a process in which wealthy and influential disputants used their positions to acquire larger plots and land in more favorable locations. The largest consolidated holdings could be acquired in the sparsely populated zones, which had been used primarily as a common grazing ground and as a buffer between the Embu and Siakago peoples. According to Wambari, Nthabiri and Domiano (2018) few people who lived in this zone when land adjudication began were poorly informed about the meaning of the new government demarcation procedures. The inadequate knowledge made it easier for better-informed and more influential individuals to acquire large land assets.

It was however recorded from oral respondents that a major effect of land adjudication led to a major shift from annual and perennial crops agriculture to more permanent crops. The argument was that the right to ownership of land was guaranteed unlike when one could occupy and use land anywhere. This consequently led to adoption and commercialization of the khat as a cash crop as it was now grown in large scale.

4.6.3 Adoption and Commercialization of Khat in Siakago Sub County from the 1990 to 2002

From the 1990s the people of Siakago started growing Khat on large scale and it became a cash crop and changed the agricultural mode of production from subsistence to cash crop farming. This is in line with the theory of the articulation of modes of production that the capitalist modes of production penetrated and established dominance over pre-capitalist mode of production. Oral respondents noted that a mere shrub of no importance revolutionized the agricultural production of the siakago people and changed the agricultural mode of production from communal to the capitalist mode. Khat production, consumption and commercialization spread to all regions of Siakago sub-County from 1980 and became the dominant crop. Kathunju (2018) declared that in a few years from 1980s Khat had been transformed from a shrub to a crop grown for domestic consumption and finally to the region's predominant cash crop, from a substance chewed on few occasions to a visible and pervasive social habit, from a product sold in local markets, to the most profitable commodity, whose trade involved thousands of farmers, traders, and other service providers in Siakago.

Avinja (2018), an oral respondent explained that in 1988 many people in the area sought after seedlings from various farms and planted large acreages with the crop. The first to do so were members of his extended family which may suggest that the first crop in the area could have spread from there and the new idea then spread to the rest of Siakago area. According to Wambari (2018), the growing importance of Khat in Siakago sub-county was contestable with some arguing that Khat is a health menace with socio-economic consequences and ought to be banned. Others opposed any policy that ignores Khat's micro- and macroeconomic benefits. The most significant aspect of this crop was the pecuniary value it brought to the grower compared to cotton and tobacco that was previously grown in the area.

According to informant Ndwiga (2018) from Gangara, the vacuum created by Khat ban in Europe tended to be filled by Muguka variety from Siakago Sub-County. Muguka currently is the most chewed variety locally due to its low price, availability and high khat effects of Cathine. Informant Ngogotia, (2018), from Gitiburi was

proud to say that Muguka has made many people in Siakago instant millionaires, a fact manifested by the mansions that have been put up in many of the Muguka growing areas, which were hitherto remote neglected villages.

Ngoroi (2005) observes that, during the dry season, when the leaves fetch them much money, one can easily make more than KSh100, 000 a week from a one-acre farm. The high demand has also motivated farmers from other cash crop areas to change to khat farming, especially in Embu coffee zones, Siakago cotton zone and Nyeri coffee and tea zones. The high prices have been the main motivational factor, followed by low price rates of the indigenous cash crops. Lack of occupation and high school dropout has been a major course towards khat farming.

4.7 Current Trends of Khat Farming in Siakago Division upto 2018

Between 1980 and 1990 khat farming was embraced in the entire sub-county and the benefits of khat are evident in its farming strongholds of Siakago sub-county. The study established that the household's participation in khat production is dependent on the characteristics of households and farms; hence the decision of a household to participate in Khat production is based on each household's self-selection instead of random assignment. Therefore, the basic assumption to Khat production is more of household income. The collapse of tobacco and cotton industry in 1980s deprived the community their source of income and farmers had no alternative but to slowly shift to khat farming. Initially, khat was only identified with a few and the community attached little or no commercial value to it. Today the story is different with many people regardless of social status engaging in the vibrant business.

With khat farming getting entrenched and attracting good prices, tobacco and cotton in Siakago, Tobacco and cotton farming has been neglected. These crops are also labour intensive and require a lot of input as compared to khat. The frustrations witnessed in the cotton industry where bureaucracy, poor prices and market uncertainties which pushed the farmers to khat farming. Today, miraa is the cash crop

Figure 5 shows an area previously covered by Tobacco now under khat;



Figure 5: A photo of area previously covered by Tobacco now under khat

Source: Field Survey

According to Njiru and wagugu (2018) the introduction of khat has been occasioned by improved corporeal standards of the natives. Khat has capacity to generate quick cash at minimal maintenance. Picking of khat is normally under the cover of darkness between 4am and 5am for the farmers to be able to reach the selling point by 6.30am. A working day in the khat growing area involves harvesters commonly referred to as *mukethi* who are paid Sh50 per kilogram.. However, others view the shrub as a curse as it has adverse directly or indirectly effects on people.

Figure 6 shows a family that has developed their home from khat production



Figure 6: A family that has developed their home from khat production

Source: Field Survey

According to young farmer Muchiri (2018) who owns 300 stems at Karambari khat buying center Selling khat is a well paying undertaking because it fetches good income and the market is readily available. At Karambari khat is sold in plastic basins (*karai*) and depending on the quality and market, each container fetches between Sh1, 000 to Sh2, 500. Prices are better during the dry season. With his basin Muchiri pockets Sh1, 000 daily while Kinyua Njue (2018) from Karambari sub location goes home with Sh2, 400 after selling two karais at 1,200 each. At Kirie miraa buying centre, Dominic (2018) a farmer and seller stated that he can sell eight basins karai at Sh 2,000 in a good day to traders from Nairobi, Embu and Garissa County. Depending on one's acreage of khat, some farmers comfortably make up to Sh20, 000 or Sh30, 000 each morning. According to Kanyenji (2016) who has 2,000 stems, in this area you cannot talk ill of miraa, miraa farming and trading in Siakago is very lucrative and cannot be compared with tobacco or cotton farming. A miraa farmer at Gitiburi sub location, Macharia (2018), says during the dry season, when the leaves fetch them much money, one can easily make more than Sh100, 000 a week from a one-acre farm. Carrier (2005a) and Carrier (2005b) look at some aspects of Khat

farming, trade and consumption hints at the vast scope of the substance's heterogeneity, but scarcely does it full justice. It does, however, suggest just how important variety is in the generation of khats cultural and economic value, as that from trees strongly linked to forebears becomes most valued culturally and economically.

4.8 Conclusion

The discussions on this chapter conclude that the origin of khat growing among the people of Siakago Sub County can be traced to the 1980s though earlier species of the crop were reported. The area has experienced agricultural diversification between 1990 and 2018 with a chronology of events happening between 1990 and 2002. Between these periods, agricultural diversification, land adjudication and the adoption and commercialization of khat as a cashcrop. Current Trends of Khat farming in Siakago Division upto to 2018 are also discussed in this chapter potraying the crop production as an important and potentially lucrative one. The chapter that follows discusses the social and economic activities of the people of siakago before introduction of khat.

CHAPTER FIVE

SOCIAL AND ECONOMIC ACTIVITIES OF THE PEOPLE OF SIAKAGO SUB COUNTY BEFORE INTRODUCTION OF KHAT IN THE 1980S

5.1 Introduction

This chapter discusses the social and economic activities of the people of Siakago before introduction of Khat under the following headings: Traditional Crop Production System in Siakago Sub County before 1980s, Cotton Farming in Siakago Sub County, Tobacco Farming in Siakago Sub County, Division of Labour and Land Management in Siakago Sub County, Droughts and Famines in Siakago Division and Trading Activities among the Siakago people.

5.2 Traditional Crop Production System in Siakago Sub County Before 1980s

After examination of the form of land ownership among the Siakago people, the researcher found it necessary to examine the crop production and land use among the people of siakago. This helped shed light on the food situation in the area before the introduction of khat. This was achieved by highlighting the economic activities that happened before the start of the current form of production. According to interviewees the Siakago people were hunters and gatherers during their initial settlement in the area. Hunting and gathering, therefore formed an important economic aspect in most of the pre-colonial period. The settlement formation was mainly influenced by the availability of water and proximity to farming land *migunda* and grazing land *ruriyi* (KNA/DC/EMBU/SIAKAGO/1/2/1939). They gathered vegetables and fruits such as *managu*, *rwoga* or *terere* (*amaranthus lividus*) and *mukengeria* (*commelina benghalensis*) according to Maria (2018).

According to Muruwambari (2018), Siakago people were originally gatherers and hunters “*Athii*”, just like the Agumba. Agricultural activities were adopted later as the community intermingled with other ethnic groups. Nevertheless, according to (Ndwiga Josia & Eunis Wajuki, 2018) before and after 1980s the Siakago people’s life was based on mixed economies thus farming and livestock-keeping which emphasized on sheep, goats and some cattle keeping.

Njeru (2018) noted that Boys and young men did hunting. They created hunting bands or groups that dispersed the hunt spoils among the band. Young boys killed different birds using slings or trapped them. The game animals mostly hunted included antelopes, rabbits, warthogs, elephants, birds thereby making hunting one of the chief sources of food (Wambari 2018). Leopard and monkeys were hunted for their skins, which were used for ceremonial purposes (Igandu, 2018). All the hunted food was just a small portion that supplemented animal and food crop production (Wanjuki, 2018).

Before the 1980s, crop production acted as the chief economic undertaking of the Siakago community. Traditional foodstuffs were scarce but increased with foreigners who introduced more varieties. During the pre-capitalist period, the original foods though not entirely indigenous were *nthoroko*, *njavi*, *njugu*, millet and sorghum, bananas called *mitika*, *itigi*, *mitabato*, then arrow-roots and sugar canes called *ibogo* and *micore*. Beans and maize came very recently (Mwaniki, 1974).

Maize emerged among the most consumed grains by the Siakago people generally. Maize although important to the Siakago people was not widely grown in the area. The staple cereal and perennial crops among the people during this time were sorghum, yams, bulrush millet, lablab beans, sweet potatoes, finger millet, foxtail millet and later maize (Mwaruvie, 1991). Bulrush millet was not only a favorite dish among the Siakago people, as it was used in all ceremonial occasions such as marriage ceremonies according to Igandu (2018). According to the Siakago people food crops such as sweet potatoes that were exchanged with goats (Waturi, 2018). In addition to these food crops, there were several wild vegetables like *mathorokwe*, *managu*, and *rwoga* that were used as green supplements.

There were also several wild fruits that boys and girls enjoyed while herding like: *macuca*, *matunda*, *mbota* and *ndare*. Bulrush millet and other millets were stored in a special store called *mururu* (Wambeti, 2018). Siakago farmers had knowledge on intercropping and this was based on soil types knowing which crops could be intercropped in which soils. Different crops were cultivated in different places with crops cultivated on valleys being different from those grown on ridge tops. Different

mucege (Black jack), *rwoga* or *terere* (*amaranthus lividus*) and *mukengeria* (*commelina benghalensis*) if found growing in a certain area; this was recognized as fertile soil (Wambeti, 2018). Nonetheless, some crops couldn't be intercropped such as millet according to majority of informants. They instead indicated that the crop could only be grown separately to allow bird scaring during crop ripening. It was also not planted during the long rains because it would be fully mature before the dry season and thus rot before it was harvested.

Since early 1960s there was an increase in number of farmers who expressed interest in producing cash crops, but only a small minority had actually taken the risk (Njeru, 2018). Igandu, Ndwiga and Ruamba, (2018) stated that the main cash crops grown from early 1960s up to 1980s was cotton, tobacco and to a lesser extent sunflower from mid-1970 and 1980s. Notably, livestock before the 1980s was not flourishing well in most areas of Siakago division, and livestock species kept were mainly indigenous breeds (KNA/DC/EMBU/SIAKAGO/1/14/1980: Runji, 1987: Mwaruvie, 1991).

The researcher concluded that though the people of Siakago had adequate food before the introduction and consequently cultivation of khat they needed a cashcrop to enable meet their monetary needs. This was realized in the introduction of khat and its in line with the articulation of modes of production theory where pre-capitalist societies must embrace capitalism.

5.3 Cotton Farming in Siakago Sub County

Wagugu (2018) notes that the Siakago people experience frequent drought leading to exchange of labour for food with neighboring communities such as Embu and Chuka and therefore any new cash crop would be highly adopted by farmers to fill the existing gap in terms of cash crop and the proceed was to be used to buy food crops during drought periods. Cotton as a cash crop was introduced in the region in late 1960s and the climax of it production was in early 1970s to late 1980's as a suitable cash crop for the region. The production reached its peak in 1984/85 with a production of 13,300 metric tons. However, there was a decline in cotton seed production after cotton industry was liberalized in 1984 and cotton production

drastically reduced in Siakago (Ikiara *et al.*, 2002). Njeru (2018) also concurs with (Ikiara *et al.*, 2002) and adds that sometimes even cotton could not withstand the Siakago drought. It was reported however that the decline in cotton seed production from 1990 was a result of lack of finance and credit facilities for the small-scale farmers for land preparation and procurement of farm inputs, lack of organized supply of seed for planting, poor quality planting seed and poor agricultural practices leading to poor yields and low ginning outturns, lack of reliable market for farmers' produce and delayed payments for the produce bought.

According to Runji (2018) from 1982 is when we started abandoning cotton farming. Cotton farming collapsed due to poor returns and also we abandoned cotton farming due diseases and poor returns. We started turning back to millet and green grams farming and even miraa (khat), depending on what crops thrived as per localities. Farmers from Siakago South, which for decades was a major producer of cotton often made losses. In Gitiburi, Siakago and Gangarasub locations, which before 1980s led in cotton production in Siakago, production started to decline and farmers were unable to get adequate raw materials to process due to low production "(Ndwiga, 2018). Those farming cotton could not raise the volumes required by the Kitui and Mwea ginneries. Johana Wakarigica and Patrisio Njiru (2018) admitted returns from cotton were poor due to an erratic market and pest infestation, high costs of production, inadequate quality inputs and over-reliance on rain-fed production. During the cotton boom in the late 1970s and 1980s, the government had supported the industry through the Cotton Board of Kenya, which had an organized marketing system that saw farmers get paid promptly. But the textile market was liberalized in 1991 and the Cotton Board became ineffective.

5.4 Tobacco Farming in Siakago Sub County

In early 1970s tobacco was also another cash crop introduced for the same purpose as cotton. Matiri (2002) observes that by 1970s and 1990s the areas main cash crop was mostly tobacco and cotton. In the turn of event the two cash crops were affected later by falling prices leading to farmers abandoning and shifting to other activities which would cater for their needs. Mitambo and Njoki (2018) stated that most of 1980s,

tobacco drew a lot of attention of most farmers interested in cash crops in the high-potential area of in Southern Siakago.

According to Ngogotia (2018) farmers had to balance the labor demands of the subsistence food economy against similar labor requirements to produce tobacco. From early 1980s-1990s, due to new cash crops introduced, the land started becoming highly prized both for its cash value and for its cash crop potential especially in tobacco in the lower area zones of Siakago and Evorore. Ruaria and Wambeti (2018) observed that, since the introduction of tobacco in early 1970s, farmers were required by the local cooperatives to cure their own tobacco. This critical aspect of tobacco culture necessitated the construction of a curing barn on each farm. These barns were considerably larger than the traditional huts or other structures around a typical homestead, and a good deal of labor went into their construction. Ruaria and Wambeti (2018) also stated that, by 1980 majority of farmers had decided to abandon raising tobacco due to their fear that the high labor expenditure for erecting a curing barn, in addition to the work of planting, weeding, harvesting, and curing the crop, would put at risk the more essential tasks surrounding the production of food crops.

Ruaria and Wambeti (2018) posits that, in the past Siakago, almost every homestead had livestock shed and a granary for storing agricultural produce for domestic consumption. But all that changed with the introduction of tobacco as a cash crop. This prompted in almost all homesteads, the livestock shed and the granary/food stores to disappear. All you could see after introduction of tobacco were dwellings and tobacco drying kilns in the compounds. Tobacco, the cash crop, had replaced the food crops and livestock and threatened the food security of every family. Yet tobacco was not yielding enough money for the people to buy food for subsistence and viable livelihoods. According to (Wabeti, 2018), a tobacco farmer, “I quit growing tobacco after I realized how little I was actually making.” I worked on my two-acre tobacco farm with my husband and six relatives to get the work done. When I began to cost their labor, I found that my annual profit was 50 shillings (less than one dollar),” she said.

Asking farmers why the area is classified as a hunger stricken zone and yet they were chief tobacco producers, they informed me that since the tobacco trade was liberalized, they no longer had guaranteed buyers for their produce. Before free market or liberalization, they told me they could get free seed, pesticides, delivery of dry leaves, and their checks on time. With free trade, there was competition among the tobacco manufacturing companies compounded by brokerage who lowered the prices to the rock bottom. This among other factors adversely hit the farming communities at a time when they had already abandoned subsistence crops. This resulted to Siakago division being one of the worst famine stricken sub-counties in the country. With the persistent droughts, the farmers were surviving on food rations and famine relief supplies.”

5.5 Division of Labour and Land Management in Siakago Sub County

Agrarian activities schedule among the Siakago people stemmed at inclement season and harvesting periods. Time between planting and harvesting created an opportunity for people to rest while engaging in other duties like hunting, trading with neighbouring communities as well as crafts. Men were involved in hunting and fence repairs while women engaged in sisal basket making (Waturi, 2018). Prior to the introduction of the lunar calendar by the Europeans which the Siakago gradually adopted, their year was marked by two rainy seasons namely the long and short rains season. Mainly, the count of moons from the rain onset helped determine the appropriate time for planting main crops like millet and harvesting time. The short rains brought the millet season while the long rains brought the season of *njavi* (or maize) (Mwaniki, 1973).

Land preparation was a mutual endeavor between women and men. Both genders played specific roles which predisposed making of decisions and labour division (Kariuki, 2018). As noted earlier, a prime piece of land for cultivation was indicated by the help of specific grasses or plants that thrived on it. The family head who normally owned the land would allocate portions for cultivation to his wives prior to onset of digging. Men could clear bushes and burn gathered refuse as they were perceived as stronger than their female counterparts. Men could further loose the soil while women followed with planting process (Dionisio, 2018). As the head of her

own hut, a woman directed her children to work on her assigned portion of land. Initially, most of the tools used were wooden but were effective in cultivation. The most important wooden tool for men was a big digging stick known as *munyago*. It was made from hard woods like the *mikwego*, *miringa* and *migaa* (Kathunju, 2018).

Several tools were used for agriculture among the Siakago people such as an axe (*Ithanwa*) which blacksmiths (*aturi*) made. The blacksmiths lived in specific ridges though these tools could be acquired through trading. Metallic tools could only be found in few wealthy families who got them through trade with neighbours or bought them directly from blacksmiths (Muriuki, 2018). The informants were in agreement that these families had characteristics of possessing large herds of cattle. The tools included knives which were double edged known as *ruviu rwa mengere* and axes used to fall trees. Metallic tools were preferred as they were more efficient than wooden ones hence enabled one to clear large tracts of land (*gutuguta*) thus producing more food. Women used smaller tools to weed known as *askaviu ga kurima* (David, 2018).

Division of labour was structured at the family phase and alternated around patriarchy with power bestowed on the male gender (Mbogo, 2018). Carney and Watts (1990) found the existence of power structures within the household while discussing rice growing in Senegal and Gambia. Among the Siakago people, the family had to organize his family to ensure clearance of the entire land they owned. In case of small families, neighbours were invited whereby farming groups (*marima*; sing. *irima*) were formed. Cultivation was oftenly done in form working parties (Mbogo, 2018). This system is similar to *ngwatio* among the Kikuyus from Kiambu in reference to (2009) normally applied where a person was unable to complete the work on her own or it would take longer than expected to complete the work. The parties involved in the *irima* would be notified sometimes before the actual day. According to the informants, it was out of order to invite people for *irima* that was happening the following day unless on matters of urgency. The host was supposed to not only prepare enough food for the working party, but also beer which was taken in the evening after work was satisfactorily done (Wanjuki, 2018).

According to Wangari (2010), this system of working together as a group was crucial in not only benefiting the economic wellbeing of the people but also acted as a vital social organization that promoted the social welfare of the people thus enhancing harmony and togetherness in the community. This form of community work was adopted before the rain started and strived to assist a family accomplish field preparations before the rains started. It was an exact opposite of the capitalist relation where work is basically aimed at the economic gain while the social aspect is mostly compromised resulting in tension between the owner of means of production and the worker (Mwangi, 2009).

The land cultivation method among the Siakago makes it difficult to describe it as shifting or rotational cultivation. However, the informants agreed in one accord that the land was left to rest for some time before cultivation could resume. The period that a piece of land was left to rest depended on several factors such as soil type, the available land and the geographical location of the area. More fertile grounds were rested for lesser time periods than less fertile grounds. However, most of the informants concurred that, in Siakago the soil was rested for four to five seasons (two to two and half years).

This exercise of leaving the tenable land for some time to regain fertility helped the Siakago mitigate their food shortage menace bearing in mind the unpredictable environment of the Siakago. Other than soil fertility maintenance, this mode of cultivation helped in controlling soil erosion and increasing productivity. Moreover, there was little change in the eco-system as the cultivated land reverted to vegetation (Omwoyo, 2002). In addition, the flexibility of the system allowed movement to another plot if adverse environmental or ecological circumstances occurred in the form of pests' damage, weeds, or unanticipated poor soil performance. By having plots in different micro-environmental and micro-ecological areas, crop producers had the chance of spreading risks.

5.6 Droughts and Famines in Siakago Division

The form of land ownership among the Siakago people was designed to ensure adequate food production to feed the community. There was interplay between

ownership and production to mitigate food shortages. According to most informants, shortage of food was highly felt at the household more than the community level. Most food shortages in households were attributed to poor farming methods, unenterprising households, poor coordination of weeding and diseases (Igoki, 2018). Famines however, affected the entire community. Famines were either severe or occasional and the people were in a position to distinguish them easily. Severe famines were known as *Yura* while the occasional and less severe were referred to as *Wathima* (Igoki, 2018). Famines were as a result of extended drought periods experienced for over two consecutive seasons or more, invasion of crops by locusts before maturity or a combination of both calamities.

One landmark famine (*Yura*) among the Siakago people was known as *Nvaraganu*, (destroyer). The famine was severe in such a way that it claimed several lives and forcing other to migrate to neighbouring communities. The cause of the famine was prolonged drought period coupled with locust invasion that devastated food crops as well as game plants leaving behind no livelihood for both people and animals. Key informants estimated the famines to be in the early 1900's.

Nonetheless, this era of disaster was not specific to the Siakago community but instead featured in the Eastern side of Africa. Kjekshus, (1977) has reported about the great rinderpest of 1890s in many parts of Tanganyika. Similar disasters have been reported among the pastoralists Maasai (Jacobs, 1965). Moreover, Mwanzi (1977) reports the famine of 1890 among the Kipsigis. The famines had diminishing repercussions to the Siakago people. They resulted in malnourishment and to some extent death of people and animals. They further caused competition for available resources such as water and pastures causing hatred between members of the community. Depletion of livestock was a common phenomenon as a result of the famine which was commodity of trade exchanged for grains. Famines also forced people to move into forests in search of forest fruits (Njeru, 2018).

As previously recorded in this context, several measures were employed to curb food shortage among the Siakago people. To begin with was the mode of preparedness for disaster culminated in the land ownership system and form of crop production.

Owning several land portions and farming on fertile grounds was an attempt to curb food shortage. Secondly, crop selection was aimed at curbing food shortage. For instance, root crops such as cassavas, yams, sweet potatoes and arrowroots were grown not just for occasional consumption but to save in case of a famine. These crops survived invasion by locusts because they are tuber crops and the tubers couldn't be affected. This scenario is similar to one recorded by Wangari in Kiambu whereby men could grow yams and cassavas which could be dug out usually in periods of famine (Wangari, 2010). In times of locust invasion, these crops were planted since their tubers could not be affected. On the other hand, people could catch locusts which were killed and consumed as a zest meant to supplement scarce food reserves such as vegetables (Wanjuki, 2018).

Furthermore, the land ownership system as well as form of crop production permitted excess production especially for grains. The surplus produce was stored for future consumption in a granary (*ikumbi*) or *mururu* (Wakarigica, 2018). Whenever there was surplus produce among the Siakago people, it was exchanged with neighbouring communities such as the Embu or Ndia (Mwaniki, 2010). It is worth noting that men grew crops that would remain in the ground longer acting as a way of storing them. Furthermore, in each *mucii* a wife possessed her *ikumbu* to store up produce to feed her house. In times of drought/famine, the stricken families could at time move round other families begging for food or on extremely severe famines move to areas that were food secure (Ndwiga, 2018).

Therefore, just like in other parts of the country, the Siakago people experienced shortages of food as a result of weather changes and invasion by locusts. Nevertheless, ecological reserves and social mechanisms were employed to ease the effects of food shortage (Zezeza, 1986). In addition, the organization of the extended homestead, as both a production and consumption unit, reduced the vulnerability of the whole household. The system of helping needy neighbours and relatives in the community strengthened the ability to withstand the crisis of food shortage (Omwoyo, 1990). Elaborate techniques of storage which permitted grain to be stored for long periods insured the community against food shortages.

5.7 Trading Activities among the Siakago People

Excess production among the Siakago people was attributed to their form of owning land and effective food production necessitating trade. This implies that production among the Siakago people was not meant only subsistence but also aimed at trading with its neighbours. Similar to many Kenyan communities, the conditions of the ecology and the environment necessitated reliance on other people to cater for household needs. In order for the Siakago people to get commodities they did not produce, undeniable need to exchange excess produce developed among the people. Hopkins (1973) notes, 'exchange, and subsistence activities were integrated', it is therefore inaccurate to term societies such as the Siakago people one as having been subsistent.

Thus, among many pre-colonial societies, local trade resulted from the urge to satisfy complementary requirements in the community. Many communities similar to the Siakago people were lived in close proximity to one another and thus having surplus production was a strategy to accessing required goods. Generally, each household produced for not only subsistence but also surplus to sustain it in case of disasters and if there was no crisis, the surplus was disposed of through exchange to acquire other products (Omwoyo, 1990). In the sub-county local trade mostly involved women who did it on part time basis to secure goods, which their household lacked. The trade was small in volume and numerous people participated especially at the time of food crisis (Johana, 2018).

The Siakago people were involved both in regional as well as local trade. Majority of the informants agreed that local trade had not specific day (Mbogo, 2018). The system of trade involved those in need moving personally to they that possessed the commodities they were in need of for exchange. The commodities commonly exchanged included blacksmith tools, grains and animals. The value for commodities was arrived at through negotiations between the buyer and the seller as there were no standard measures of exchange. An agreement between the buyer and the seller marked the end of the transaction (Mwaniki, 1973). Periods of famine and cultural activities were times of significant trading activities among the Siakago people. Trading during these instances was aided by clan leaders who organized trading days

and selected people of trade for particular days. These arbitrary marketing places were referred to as *Tugu* among the Siakago people for example, Mwombombori by the boundary of Embu and Siakago near Riandu (Mwaniki, 1973). Similar to communities in Central Kenya in those periods, local and regional trade was irregular in terms of location and market days but crucial during times of disasters and famines (Presley, 1992). Through these periods, trade was carried out under peace circumstances even if the trading societies were at conflict (Angelica, 2018).

Trading among the Siakago people attracted both women and men though according to (Mbogo, 2018) women were involved more compared to their men counterparts. This was majorly attributed to the women involvement in agricultural production. They were the custodians of food production and management at home in charge of storage, determining the amount to be eaten and traded in exchange for home commodities. They were further involved in food transportation (Wambeti, 2018). This was similar to their central Kenya neighbours who vested the responsibility of transporting cereals on the women whereas the men were involved in skin trade exchanging leopard skin trade as well as animal and ivory trade. Presley (1992) asserts that in Kikuyu land, men could wait for women's trade caravans at specific points to welcome them and help carry the trade goods the last leg of the journey.

5.8 Conclusion

This chapter has highlighted the social and economic organization of the Siakago people before the introduction of khat. It has been noted that among the Siakago people land was communally owned and acted as a permanent factor of production. The Siakago people were organized into families, clans and society with a common ancestor. Power was controlled among the ruling units of families, clans and society by family heads, elders and *atahmaki* who settled disputes in their units of jurisdiction. The Siakago people were originally hunters and gatherers as well as crop producers (farmers) growing subsistence crops such as cereals, millet and sorghum. Tobacco and cotton was introduced later as chief cash crops in Siakago before their production went down. Labour was divided in the families depending on gender with men being involved in strenuous activities such as hunting and gathering while women and children were engaged in tilling the land and home chores. "Party system"

was employed in land preparation which boosted unity in the community. Production was based solely in the rainy season with persistent droughts and famines adversely affecting the community's food stores. They engaged in trading activities to acquire and exchange for commodities they didn't produce or to boost their food supply. Trading was between them and their neighbouring communities such as Chuka and Embu.

CHAPTER SIX

THE SOCIAL AND ECONOMIC IMPACTS OF KHAT PRODUCTION ON RURAL HOUSEHOLDS OF SIAKAGO SUBCOUNTY, EMBU COUNTY

6.1 Introduction

This chapter examines the socio-economic impacts of khat production among the rural households in Siakago Sub County. It discusses the impacts of khat production on land ownership systems. The impact of khat on land labour organization is also examined. The chapter ends with an examination of the impacts of khat production on trading activities among the Siakago people.

6.2 Impacts on Land Ownership and Crop Production in Siakago Sub County

The land ownership among the Siakago people can be traced before the 1920's when political and economic policies were formulated. Before this time, the Embu and the Siakago people had expanded their agriculture system to respond to the monetary market system following colonial government support. These policies chose to replace the indigenous land tenure systems of the people which would negatively impact on the land ownership and system of crop production. The policies encouraged people to produce excess food for consumption and export thus impacting on the previous land ownership. According to Njiru (2018), with introduction of cash crops in Siakago, the pre-capitalist form of owning land was slowly being substituted with that of cash land payment. This led to increased number of land crisis witnessed in the area prompting settling of land issues through commissions. This did not only happen in Siakago since according to (Sorrenson, 1967; Lipscomb, 1972), the Kenya Land Commission of 1932 headed by Morris Carter was formed to estimate African land requirements, and recommend, if necessary, the extension of African reserves. The increased need for more land for production of marketable crops led to increased land cases.

Prior to the introduction of khat, the Siakago people produced indigenous crops such as sorghum, millet, yams among other food crops. The people's engagement in production of market-based crops especially maize in the pre-colonial period was a result of interplay of many factors within the colonial regime. The introduction of the tax system required the people to access the monetary economy. This was done

through commodity production and wage labour. Those who had enough land opted for commodity production since it was more profitable than the low wages (Mwaniki, 2010). Of all the crops grown, maize had the greatest impact on the system of land ownership and crop production. Although, extensive production of the new maize variety seems to have started from 1920s, the people of Embu had a traditional variety that was low yielding which was not widely produced (Kathunju, 2018).

The new crop (khat) that was considered more marketable started to replace the traditional maize, sorghum and bulrush millet which were the chief grains produced by the Siakago people. The Siakago people started to embrace the production of khat though reluctantly. The reluctance was due to their traditional form of production and consumption. The practical reason why khat mainly the muguka variety gained popularity among the Siakago people was mainly due to its adaptability to the dry climate of Siakago. Comparatively, the economic gain of khat was much higher than that of the traditional crops and the producer was guaranteed of harvest despite times of drought.

This new crop greatly impacted the system of land ownership as well as crop production in Siakago. It affected the relationship between crop production and the system of land ownership with introduction of khat as a commercial variety. The pre-colonial land ownership system which was guided by the traditional laws and driven by individual needs for crop production started to experience changes. Most crop producers yearned to increase their area of cultivation totally disregarding the clan elders. This led to land conflicts which led to litigations using the new colonial laws (Njiru, 2018).

With khat farming getting entrenched and attracting good prices, the importance of tobacco and cotton which were the main cash crops produced in Siakago now sound like "Once upon a time "story. "Tobacco farming was labour intensive and to make a shilling required a lot of input while peanuts payment ended the day, said a farmer (Wambari, 2018). Similar frustrations were witnessed in the cotton industry where bureaucracy, poor prices and market uncertainties pushed the formers to subsistence forming. "Today, khat is our cash crop, and soon it will be to Siakagowhat oil is to

Saudi Arabia," Nyaki (2018), a former assistant chief, said. "Look over there the field is covered with khat crops. This was the main area for cotton farms but as you can see the whole field is covered with khat bushes." Nyaki Ngure said.

6.3 Impacts on Living Standards among the People of Siakago from 1980

Between 1980 and 1990 khat farming was embraced in the entire sub-county and the benefits of khat are evident in its farming strongholds of Siakago division. The study established that the households participation in *khat* production or not is dependent on the characteristics of households and farms, hence the decision of a household to participate in *Khat* production is based on each household's self-selection instead of random assignment. Therefore, the basic assumption to *Khat production* is more of household income. The collapse of tobacco and cotton industry in 1980s deprived the community their source of income and farmers had not alternative but to slowly shift to khat farming which today holds the "gold" status. Initially, khat was only identified with a few and the community attached little or no commercial value to it. Today the story is different with many people regardless of social status engaging in the vibrant business.

According to Njiru and Wagugu (2018) Picking of khat is normally under the cover of darkness between 4am and 5am for the farmers to be able to reach the selling point by 6.30am. A working day in the khat growing area involves harvesters commonly referred to as *mukei*. Those involved in the *mukei* or harvesters are usually paid a minimum of Sh50, which is quite a tidy sum since not a lot of labour is involved. Today, khat can, undoubtedly, be said to be an integral part of Siakago's economy as many people have built their lives around it.

According to young farmer Muchiri (2018) who owns 300 stems at Riandu khat buying centre stated that "Selling khat is a well paying undertaking because it fetches good income and the market is there, " At Riandu Khat is sold in plastic basins (*karai*) and depending on the quality and market, each container fetches between Sh. 1, 000 to Sh. 2,500. Prices are better during the dry season. With his basin Muchiri pockets Sh1, 000 daily while Kinyua Njue from Karambari Khat buying center goes home with Sb.2, 400 after selling two *karais* at 1,200 each. At Gangarakhat buying centre,

Ndovo (2018) a farmer and seller stated that he can sell eight basins (*karai*) at Sh 2,000 in a good day to traders from Nairobi, Embu and Garissa County. Depending on one's acreage of khat, some farmers comfortably make up to Sh. 20,000 or Sh30, 000 each morning. According to Kanyenji (2018) who has 2,000 stems, in this area you cannot talk ill of khat, khat farming and trading in Siakago is very lucrative and cannot be compared with tobacco or cotton farming. A khat farmer at Gangara area, Ndaru (2018), says during the dry season, when the leaves fetch them much money, one can easily make more than Sh100, 000 a week from a one-acre farm.

According to Jerusa (2018), her family used to live in abject poverty during the epoch of tobacco and cotton production. The revenue from tobacco production was only meant for men since it was paid through their accounts. She continued to narrate that men could go to collect the money and never come back until all the money was used up in drinking alcohol and prostitution. When they showed up the family had nothing to depend on and education their children was a nightmare. Possibilities of building good houses were at the least minimum and life was miserable. She pauses to thank God for khat in the area and says she can now sell khat and pocket the money since there are no complicated ways of payment. She has cultivated her own khat away from those of the husband and says she can finance her requirements. She has now managed to move from a traditional house to a modern house with a water tank all credit going to khat production. She posits that all the house construction cost was covered without assistance for her husband since she could manage it herself from the money from khat. She says that khat is a friendly crop and can be intercropped with other food crops but she gives prefers khat to maize and beans. Jerusa believes that with money it is possible to purchase food hence it is better to grow khat rather than growing food crops. Figure 6& 2 shows respondent's house after khat production



Figure 7: Respondent's house before khat production
Source: Field survey.



Figure 8: Respondent's house after khat production

Source: Field survey

6.4 Impacts of Khat on Social Organization in Siakago Sub County

An item was included which sought to establish the perception of local farmers on Khat production on their families. According to Mbora (2018) his wife was initially hostile to Khat and was attached more to tobacco farming much more than the

husband. According to Mbora (2018) the wife had initially opposed the inter-cropping of khat with other food crops arguing that khat was a sin. This unlike many women interviewed who showed little attachment to tobacco and cotton. Women initially responded that Khat: *ni mti ya arume* (it is men's crop). However this an isolated case of 'feminine' attachment to the crop, some women had 'acquired or adopted khat' from men long before the boom of the business.

In another case Kariuki & Munyiri (2018) from Siakago sub location, insisted on inter-cropping the cuttings with other food crops like maize, beans and sorghum, which her wife Jacinta (2018) reluctantly accepted. He confirms that he would grow his khat separate from other crops to please his wife. Munyiri (2018) asserts that his wife far ahead developed support when it turned out to be more favorable financially than tobacco and cotton . Figure 9 shows Khat grown alongside other food crops.



Figure 9: Khat grown alongside other food crops

Source: Field survey Maize crops alongside khat

The introduction of the new crop variety that is khat resulted in the extinction of social relations and gender roles. According to Wanyaga (2018), the labour demands for khat ended up overburdening women in terms of work. According to Mwaruvie (1991), the Siakago had to adjust to new labour demands and overworking of women

to be able to produce for the household. In addition, Muchoki (1988) indicates that women in Kiambu shouldered men's agricultural responsibilities of heavy work like, clearing the bush, planting and harvesting men's crops, as well as providing food for their families. Therefore, khat production changed the Siakago people organization in terms of labour. Unlike the previous labour organization where family members produced to sustain their households, supply of labour in khat farms in order to gain personal money became the order of the day among the Siakago people. Women had to participate in khat planting, picking and transportation to the market. Khat production is therefore seen as an all gender endeavor as far as money is concerned in Siakago division. Figure 10 shows women involved in Khat harvesting exercise



Figure 3: Women involved in Khat harvesting exercise

Source: Field survey

Labour provision in khat farms was required throughout the year mainly in terms of weeding, pruning, picking and transportation to collection centres. This time encompassed the time people used to work in their farms to produce staple crops. The 1979 Annual Report indicated that, “efforts were made to persuade natives to go out to work (KNA/DC/EMBU/1/2/1979). Actually, most poor rural households in Siakago relocated to khat farms leaving behind their women as the only people to till their fields alongside other family chores. This worsened the state of food security

whereby the Siakago people are still classified as food insufficient despite producing a high value crop.

Furthermore, the development of khat production as a form of capitalism eliminated the previous customary land rights mainly they that covered the landless. The landless that depended on large scale land owners were forced to exit since most land owners were expanding their production and their lands under khat. Although the *ocwa* system of land ownership was threatened from the early colonial period most sub-clans (*mbari*) continued the pre-colonial land tenure system to 1946. Most respondents concur that, the adoptee system was not entirely eliminated by capitalism but has continued to prevail to-date (Igoki, 2018). But, although the adoptee system existing in Siakago today is entirely different from the pre-colonial customary system, some of the pre-capitalist modes of production have prevailed up to date though with some alteration from their original outlook. This confirms Goodman and Redcliff (1981) argument that, pre-capitalist modes of production may continue to exist though subordinated to the capitalist system through a process of ‘preservation and destruction or dissolution and conservation.

Social and economic differentiation broadened with time in Siakago. Most of the government interventions benefited the large land owners. For example, most informants pointed out that government demonstration plots for new varieties and better farming practices were located in the large holder’s farms. They also benefited from varieties distributed by the agricultural officers for demonstration purposes (Avinja, 2018). This class was advancing within the capitalist system while the land poor stagnated.

Many respondents further agreed that khat production and consumption has in a negative way affected the gender roles in the community. According to Wambeti (2018), men were known in the area as the bread winners and family providers. She notes that the story has now changed with most men carried away by the chewing habits hence leaving all the family duties to their wives. Rwamba, (2018) also notes that khat chewers are aggressive and quarrelsome who normally beat up their wives when they lack money to chew and want to skip family responsibilities. He thus

attributes khat production as the source of many divorce cases experienced in the area. This is in line with (Feyisa, and Aune, 2003) who in their study in Ethiopia observed that khat is a major cause of waste of resources mainly time and money. They attribute it to non-support of families by males. They further posit that khat is a corrosive form of production when working at both household and macro levels. Men abandon their families or abuse their spouses, leading to the high incidence of female instituted divorce. According to Klein (2004), there is a large number of people who chew Khat all night long, becoming increasingly aggressive, go home in the morning, beat up their wives and go to sleep throughout the day. This happens as the women go out to work, taking the children to school, doing shopping while men do nothing but sleep or at times chew Khat. Many users of Khat secure daily portion at the expense of vital needs, indicating dependence (Odenwald, 2007). Figure 4 shows Men in a khat chewing joint



Figure 5: Men in a khat chewing joint
Source: Field survey

As previously indicated in this work, Khat in Siakago division goes by different names in the streets including *Muguka*, *Mukurukuru*, *Mutimutiri*, *Gitune*, *gugsketepa*, *jaba*, *gomba* and *guks*. It is consumed by chewing the leaves together with either gum or nuts. A soft drug it is, and with the crop going for as little as Ksh 50 for a handful

of leaves, this trade has boomed and the money from it is quite enticing. Normally bought in large bags, *muguka* leaves can be purchased from various kiosks that have hanging banana leaves on the outside. Users commonly divert their income into Khat chewing neglecting their families' needs according to Kavyanyu (2018), from *muconoke* village. The average family income can sometimes be halved to support the habit. Nguru (2018), of Kamugaa village, implicated Khat as a casual factor for family instability, divorce and encouragement of prostitution and criminal behavior in Siakago.

6.5 Impacts of Khat on Education in Siakago Sub County

Khat production was also depicted by respondents to affect education of children in the area. According to Muriuki, (2018), khat production and sale has drained so many school going pupils in terms of chewing and source of labor. School children are the ideal bunch that provides cheap labor in khat farms during harvesting. This is in line with Gebissa (2008), who observes that child labour is a major social menace attributed to khat production among many areas in Kenya especially around the Mt. Kenya region. Njiru (2018) also notes that children who should be to schooling are the ideal for harvesting khat. This is because children have no say over their parents implying that parents make resolutions that are against the interest of their children. In this condition parents tend to invest more human capital in children who are deemed to be more intelligent and highly skilled. This is because; the cost of investing in human capital for a more able child is cheaper than that of less able child. More over parents anticipate that children with higher skill levels transfer resources to the siblings which decrease the average cost of parental investment.

According to Wanyaga (2018), most pupils have dropped school to be involved in various khat farms activities such as picking, sorting, preparation, working in khat shops and kiosks, provision of manual labour as well as hawking it in neighbouring towns. He further notes most khat activities such as picking and marketing takes place early in the morning from 6 a.m. to 10 a.m. the time for going to school. Therefore pupils have to miss classes in order to work provide labor in the khat farms which guarantees them cheap money. This has resulted in most pupils dropping from school in pursuit for quick source of money. This is in line with the Meru North District

Strategic Plan (2005-2010) which revealed that the labour force in the region consisted 49.7 per cent of the total population and was composed mainly of school going boys.

According to Wambeti, (2018) a mother in a family of young boys, notes that khat chewing affects the academic performance of pupils. She notes that when pupils converge to chew khat which normally happens during the evenings, a huge proportion or entire study time is consumed. This result in deteriorated performance in school coupled with multiple punishments following failure to finish homework give at school. As the pupils evade punishments they drop from school and resort to khat producing activities. This agrees with results from various scholars who studied the effects of khat production on education performance of students. According to Gebissa (2004), most of the people who chew khat are young people, school going children and farmers in khat growing areas. According to Reda, Ayalu, Asmamaw and Biadgilign (2012), about 28.5 per cent of females and 71.5 per cent of male students in Ethiopia are involved in chewing khat. In Ethiopia, students say that they are using khat to “increase” their concentration levels, examination performance and attention span (Reda, Ayalu, Asmamaw & Biadgilign, 2012). In Saudi Arabia students who chew khat are lazy, sleep a lot and many of them suffer from insomnia. Most of them are less effective at their school work (Ageely, 2009). Maithya (2009) and Sternberg (2003) have reported that students who use khat lose their concentration span, interest in school work leading to absenteeism and eventual dropping out of school. An academic research carried out by Mohamed, Jibril and Ibrahim (2012), found out some effects of khat on education of children in Somali. According to their findings, khat users spend reasonable amount of time searching for the substance and using it other than concentrating on their studies.

Although the crop has transformed the economic status of the people of Siakago, debate is now raging over its cultivation, which has had a serious negative impact on education with many students, enticed by the lucrative trade, dropping out of school as observed by respondent Mr. Nguru (2018), of Kamugaa village. The retired teacher from the area notes that, the crop has become a necessary evil in many families. While on one hand it has improved the economic fortunes of many, its effects on the

education sector is a challenge which requires urgent attention. He further said that the churches, the main sponsors of schools in the area, have joined education officers and the provincial administration in fighting the Khat menace. A lucrative business man Mwangi (2018), who immigrated to Siakago town in 1997, says that “the main culprits are Standard Eight school leavers who don’t see the need of going to secondary schools when they can join the lucrative business”. Others leave even before sitting their Kenya Certificate of Primary Education exams.

A good example was a boy called Ileri, who was interviewed along Gikiiro village in Kiriewho dropped out of Gikiiro Primary School in Standard Six after he started plucking the leaves from his father’s farm. With a smile, he said that “I don’t regret leaving school even those who are in school are pursuing education so that later in life they can get money. It will not matter how I will make mine (money). I might one day employ my former classmates, with a tint of arrogance”. Ileri’s attitude and that of many teens engaging in the trade presents don’t want to hear about going back to school. Johana (2018), a Church pastor with CPK Church in the area, observed that the challenge being posed by the crop on education, unless urgently addressed and reversed, would be disastrous. Generations of zombies "In the next 20 years or so, it will be difficult to find adequate human resource in this area. At the rate at which the pupils are dropping out, we might have many generations of zombies," Johana said, sadly. A teacher at Gikiiro Primary School, Kiura (2018), said discipline in the school has been compromised as some pupils start undermining the teachers, who they perceive as being poor. He says pupils start planting the crop when they are in Standard Five. By the time it matures for plucking after three years, they quit school. The school had a population of more than 400 pupils before the crop was introduced but now it has a paltry 240 pupils. Some classes, says the teacher, have only 17 pupils and yet they are supposed to have 35. "We are no longer role models to many of these pupils. They think we are poor. They would rather have role models in miraa farmers who have suddenly become millionaires. That is why some quit school," says Mwangi. He says those pupils who don’t drop out of school are no better as they have a poor attitude towards education. "You can easily tell even in class that the pupils are not motivated. To them miraa is as an option to education," he says.

6.6 Effects of Khat on Other Trading Activities in Siakago Sub County

As it was noted earlier on, trading was a major economic activity between the Siakago people and the neighbouring communities such as the Embu and Chuka. Trade was mainly prompted by the need for communities to dispose off their surplus produce and get what they didn't produce. The trade had developed into caravan trade by the time of European colonialism (Mwaniki, 1973). Although trade developed in the area since the time of colonialists, it was affected adversely by calamities such as drought and locust invasion. Trade mainly involved women as they were in charge of storage of grains in homes.

The failure of many markets for crops produced in Siakago such as cotton, maize and food crops such as millet coupled with ravages by locusts negatively affected the running of agricultural economy in Siakago. This resulted in fall in prices of commodities produced in Siakago. For instance, maize price fell by 50 percent of its value in 1969. This was a drop from about 11.10 to 5.06 in 1969. By 1973, the maize price stood at Kshs. 3.30 (Kanogo, 1989). Although, market instability reduced African prices of sesame, beans, hides and maize, which largely commanded the internal market, they were not severely affected for they had from the mid-1960s, expanded the area under cultivation.

In spite of failure of market prices for other crops, khat was a crop variety that was rarely affected by invasion by locusts hence its prices remained high in local and foreign markets. By 1981, over 250 tons of khat was exported from Siakago (KNA/DC/EMBU/1/2/1981). It is worth noting that commercial production of khat was highly influenced by its good prices both in local and foreign markets. Wattle, legumes, potatoes and coffee were the other crops traded at this time though not in large quantities. Khat thus occupied areas that were formerly under millet and sorghum. Thus khat as a new crop variety was used to entrench capitalism in Siakago. The accumulation of capital from the proceeds from khat enabled people to establish trading centres for selling on khat replacing the old form of trading. This attracted market-oriented people who were not only farmers of khat but previous traders in traditional crops grown in the area. This group of early capitalists accrued wealth in diverse forms. From the cash netted through the sale of agricultural yield and from

wage labour, a set of well-off people was evolving. They used their accrued fortune in various ways. Some of them invested in small *dukas*, which were springing up throughout the area (Nthambiri, 2018).

6.7 Conclusion

Study concludes that khat growers are not only producers but also traders and consumers in most cases. Khat consumption has become a widespread habit from primary school to all social groupings in the area. Highest numbers of consumers were found to be among young people of between early 20 and above.

Production of the plant is mainly positioned close to the road linkage and on farms with irrigation conveniences. The income generation from intercropping with maize is another added advantage of high returns as compared to mono-cropping of agriculture. Income from maize mono-cropping is less as compared to intercropping system, which provides 3 times higher return. The production of this crop has expanded at the expense of important rainfed cereal crops like maize, sorghum etc. and serves as a good substitute, as it is less vulnerable to drought. The cultivation of cereals is expensive, as it requires fertilizers and irrigation. The crop being perennial, farmers in the area considered this as a way to ensure land entitlement because annual cropland is more affected by land redistribution than land under perennial crops.

Agricultural labours also show more interest to work in khat cultivated fields as its cultivation offers wage or bonus to the workers. Credit is also available more easily for khat growers as the income is more or less assured in comparison to other crops. The khat yield in the area ranges from 500–800 kg/ha per month through monoculture. During the study, the average monthly income of the family practicing khat cultivation was from Ksh 10,000 to 13,000 per month in Siakago cultivating areas. When the average cost per/ha was Ksh 3000/kg. The study shows that during the recent past, leaf consumption has increased significantly. Its cultivation continues to play an important role in the social life of people in most parts of Nairobi, Mombasa and areas of formerly Central province.

CHAPTER SEVEN

SUMMARY, CONCLUSION, RECOMMENDATION AND SUGGESTIONS FOR FURTHER RESEARCH

7.1 Introduction

This chapter outlines the summary of the findings for the study, conclusion, recommendations, and suggestions for further research.

7.2 Summary of the Findings of the Study

The first chapter of this study represents an introduction giving a background to the study upon which the study was founded. It is against this background that the problem statement and the purpose of the study were placed. Further, the objectives of the study, the research questions, significance as well as the scope of the study alongside research limitations were presented. The chapter concludes with an outline of the operational definitions of terms.

Chapter two of this study entails an examination of literature on the socio-economic impacts of khat among producing households. The impacts are reviewed after examining critically the history of khat and the socioeconomic impacts on people before and after embracing khat production. The chapter ends with a theoretical framework that guided the research.

The third chapter represents the research methodology used in carrying out the research. It describes the research design (descriptive research design). The study location was the khat growing zones of Siakago and neighbouring areas in Siakago South Sub-county. In details, the chapter discusses the target population, the sampling procedure and sample size, research instruments, data collection procedures and data analysis and presentation. The chapter concludes with the ethical considerations for the research.

Chapter four, five and six were guided by the study objectives and the answers provided by the research questions. The research objectives for the study were;

- i. To trace the history of Khat production in Siakago division Embu County between 1980 and 2017.

- ii. To examine the social and economic activities of the people of Siakago before introduction of Khat.
- iii. To examine the social and economic impacts of Khat production on rural households in Siakago Division, Embu county

It is from the above research objectives that the research questions for the research study were derived.

Chapter four commences by reviewing the demographic characteristics of the respondents in terms of gender, age, education level, and place of residence and the occupation of the respondent. From the 40 respondents interviewed in the study, 26 were male forming up a 65% majority proportion of the entire sample involved in the study while 14 were females. On respondent's age, from individual response analysis, the youngest respondent was 26 years of age while the oldest was 86 years. Out of the entire sample from which the results were generalized, 5 respondents had not acquired any formal education, 15 had primary education 14 had secondary education while 6 had tertiary education. From the 40 respondents, 17 were farmers, 4 were business people/traders, 14 had formal employment while 5 had other sources of their livelihoods. On respondents' place of residence, 12 hailed from Siakago, 11 from Muchonoke, 9 from Gitiburi, 5 from Kambaru while 3 resided in Cianyi and neighbouring areas.

On the history of khat in Siakago division, the study revealed that the exact time when khat plant was planted and used in the area could not be clearly established since the plant grew naturally as one of the many shrubs. From the oral responses, the study adduced that the discovery of khat in the area was accidental through herders who realized the euphoria effects of its leaves. The shrub (khat) was older in the area than most respondents and its history passed over to them by their grandparents. However, from literature, khat farming in Siakago and Embu in general does not have a long history in comparison to other khat producing zones such as Nyambene and other parts of Meru County.

On khat adoption and commodification in Siakago, the study revealed that in a span of ten years from mid 1980s, the crop had spread in the area and changed the agricultural mode of production in a big way. Oral responses revealed that in the 1980's khat had been transformed from a shrub grown for domestic consumption to the region's predominant cash crop, from a substance chewed on few occasions to a visible and pervasive social habit, from a product sold in local markets to the most profitable commodity, whose trade involves thousands of farmers, traders, and other service providers in Siakago and Siakago at large. However, its adoption and use received an equal measure of support and criticism from the community.

The study shows that Muguka is a variety of Khat family which is specifically found in Siakagosub-county and it is distinctive from other types of Khat because the shrub grows up to 4 feet, evergreen throughout the year and it does not dry up due to hot weather associated with the region making it the more adaptable. Alongside its adaptability to the dry climatic conditions of Siakago, the fall of tobacco and cotton industries led to the adoption of khat production as an alternative form of farming. By the year 2000 the business which started as an alternative turned to be the most lucrative business within the community. Muguka is the most liked and consumed variety locally due to cheap price. Currently, Muguka is planted like stamps of tea leaves occupying the biggest purchase of land in and Siakago division. The speed of growth, and the rate at which it is harvested i.e. twice per month has motivated the community to adopt its cultivation. This has contributed to the negligence of cultivation of other crops like maize, beans, sorghum and other crops which are very essential for domestic upkeep.

The study examined the socio-economic organization of the Siakago people before the introduction of khat. It was revealed that from oral responses from the interviewees, the Siakago origins were the same as for the Bantu-speaking Kikuyu, Embu, and Chuka and Meru peoples and had settled in the Nyambene Hills. Land among the Siakago people was a highly valued property and a permanent factor of production acting as the chief source of food for people and livestock. Land among the Siakago people was therefore communally owned though according to oral traditions the system changed after the most famous famine in Embu and Siakago called

Nvaraganu. Social grouping that emerged originated at the family level. Men and women that gave in in marriage left their villages of origin to settle in a different village. Siakago people were originally gatherers and hunters “*Athi*”, just like the Agumba. Agricultural activities were adopted later as the community intermingled with other tribes. A boundary was fixed by the trapper around the area expected to give him a catch. Boundaries set by the trapper were meant to ease conflicts among other trappers and reduce theft of animals trapped. Land was perceived as a vital element in socioeconomic organization of the Siakago people and each *mucii* expected to own land. Siakago people had customary laws that helped solve land disputes by not only safeguarding the owner’s interest but also of the tenants. The land laws and regulations in the traditional Siakago society were meant to govern the agricultural production among the society. All the land laws and regulations together with the tenant relationship regulations enhanced agricultural production leading to food security.

After examination of the form of land ownership among the Siakago people, it was prudent to examine the crop production and land use. Hunting and gathering formed an important economic aspect in most of the pre-colonial period. The settlement formation was mainly influenced by the availability of water and proximity to farming land *migunda* and grazing land *ruriyi* (KNA/DC/EMBU/SIAKAGO/1/2/1939).

Gathering was done by women and as a way of supplementing their cultivation of food. They gathered vegetables and fruits such as nightshade. Boys and young men did hunting as they were energetic. Siakago people farmers had knowledge on intercropping and this was based on soil types knowing which crops could be intercropped in which soils. Tobacco and cotton were the main cash crops grown before the introduction of khat. Land preparation was a mutual endeavor between women and men. Both genders played specific roles which predisposed making of decisions and labour division. Men could clear bushes and burn gathered refuse as they were perceived as stronger than their female counterparts. Men could further loose the soil while women followed with planting process. Division of labour was structured at the family phase and alternated around patriarchy with power bestowed on the male gender. The Siakago people were involved both in regional as well as local trade. Majority of the informants agreed that local trade had not specific day.

The system of trade involved those in need moving personally to they that possessed the commodities they were in need of for exchange. The commodities commonly exchanged included blacksmith tools, grains and animals.

On the examination of the socio-economic impacts of khat production among the rural households in Siakago Division, the study revealed that with introduction of cash crops in Siakago, the pre-capitalist form of owning land was slowly being substituted with that of cash land payment. This led to increased number of land crisis witnessed in the area prompting settling of land issues through commissions. This new crop greatly impacted the system of land ownership as well as crop production in Siakago. It affected the relationship between crop production and the system of land ownership with introduction of khat as a commercial variety. Khat production improved the living standards of households as per the respondents as well as literature. It has earned cheap income for natives enabling them to build better houses and achieve basic necessities.

The study further reported that khat production has affected the social organization of the community in different ways. The introduction of the new crop variety that is khat resulted in the extinction of social relations and gender roles. The labour demands for khat ended up overburdening women in terms of work. Most poor rural households in Siakago relocated to khat farms leaving behind their women as the only people to till their fields alongside other family chores. This worsened the state of food security whereby the Siakago people are still classified as food insufficient despite producing a high value crop. Social and economic differentiation broadened with time in Siakago. Most of the government interventions benefited the large land owners. Many respondents further agreed that khat production and consumption has in a negative way affected the gender roles in the community. Men were known in the area as the bread winners and family providers. Most respondents note that the story has now changed with most men carried away by the chewing habits hence leaving all the family duties to their wives. Khat production was also depicted by respondents to affect education of children in the area. Khat production and sale has drained so many school going pupils in terms of chewing and source of labor. School children are the ideal bunch that provides cheap labor in khat farms during harvesting. Finally, the

study revealed that khat production has impacted on the community's trading organization. Trading was a major economic activity between the Siakago people and the neighbouring communities such as the Embu and Chuka. Trade was mainly prompted by the need for communities to dispose off their surplus produce and get what they didn't produce. The accumulation of capital from the proceeds from khat enabled people to establish trading centres for selling on khat replacing the old form of trading. This attracted market-oriented people who were not only farmers of khat but previous traders in traditional crops grown in the area.

7.4 Conclusion of the Study

From the research findings summarized above, it can be concluded that khat existed in Siakago long enough before it was discovered, used and cultivated for economic purposes. Its existence in Siakago was as a shrub that grew naturally but its effects (euphoria) discovered by herders. However, khat production history is shorter compared to other khat producing zones in Kenya.

As it is evident in chapter four, khat adoption and commodification in Siakago occurred within a decade and by 1980, the crop had spread in many areas altering the previous form of production. The adoption of khat production was as a result of its economic benefits attached to its sale.

The support by the government on khat production by 1980 was viewed and concluded in this study as a means of agricultural diversification in the area. This was aimed at making the area self-sufficient in terms of agricultural production. Since khat was adaptable to the area, its introduction was the best alternative crop. Furthermore, it required less labour compared to the previous cultivated crops such as tobacco and cotton. Diversification was achieved through land adjudication process of the 1970's – 1980's and market liberalization coupled with globalization that characterized many economies.

Before the introduction of khat, the Siakago people were mixed farmers having evolved from hunting and gathering. They grew food crops for subsistence use while cotton and tobacco were the main cash crops grown. The family was the basic social

unit headed by the eldest member of the family. Land was communally owned with minimal disputes since the resource was abundant. Labour was provided collectively and shared among men and women in the family. Production was mainly aimed at curbing food insecurity. The Siakago people engaged in trading activities to exchange for what they did not produce.

The study also concludes that khat production had both social and economic impacts among producing households. The adoption was viewed as a blessing and a curse among producing areas. The previous communal land ownership was replaced with a more centralized and formal one for people to own their specific khat farms. The traditional organized labour supply scheme was overridden by the urge to produce and earn own money (capitalist system). Khat production and use resulted in extinction of social relations and gender roles as men spent much time in khat chewing joints. School-going pupils were absorbed by khat farms to provide cheap labour for cheap money thus dropping out of school. The previous decentralized trading methods were replaced with a more centralized one characterized by central trading centres.

7.5 Recommendations of the Study

Based on the research findings, the study recommends the following measures that can curb the negative impacts of khat production in Siakago;

- i. The government, having the greatest mandate in enforcing law in the country should come strong in abolishing child labour in khat farms. Processes involved in khat production and sale should be restricted to adults and administration involved in eliminating school going children from working in khat farms. Further, huge penalties should be charged on those found guilty of employing school children in farms.
- ii. The government should develop poverty eradication measures by creating of alternative sources of employment to Khat production. This can be achieved through provision of subsidized water for irrigation and introducing a variety of farming methods suited for the area such as horticulture, bee-farming, dairying etc. Introduction of subsidized inputs as an agricultural initiative would encourage the people to take up the new venture as an alternative to Khat farming.

- iii. The government through community based organizations and NGO's should come up with seminars to educate the community that Khat is a drug whose abuse results into harmful physiological, psychological, and sociological effects. This is because people have taken pride in khat production as a measure of wealth thus posing danger to sustainable development in the Siakago community. The readiness/availability of khat locally makes it harder to eradicate the habit among the people.
- iv. All professionals should rise up against Khat abuse which is a drawback to human health and therefore to sustainable development. The family as an institution should play the biggest role in the control of drug abuse. To achieve, this much more sensitization is needed on the family and the community at large. This can be done through a variety of channels such as mass media, religious intuitions, and the local administration to mention a few.

7.6 Suggestions for Further Research

Based on the research findings, the study suggests further research be carried out on the following areas;

- i. The study suggests a research on the history of khat in other producing zones to compare the results from other producing zones.
- ii. The study revealed that land adjudication process, market liberalization and globalization were the main drivers of agricultural diversification in the study area through khat production. An in-depth study of the effects of the above drivers in Siakago is therefore suggested.
- iii. The study also indicated that land was and still is a vital factor of production among the Siakago people and influenced agricultural production in the area hence food security. However, the form of land ownership has changed over time in the study area. The study therefore suggests a study on the effects of the form of land ownership on production in Siakago.
- iv. The study further established that khat production in Siakago has impacted negatively the education sector in the area as well as the social roles. A detailed study is therefore encouraged to establish the role played by the education sector stakeholders in addressing the impacts of khat in the area.

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APPENDIX 1
PRIMARY SOURCES

(A) List of Informants

| Name | Gender | Approx. Age | Date of Interview | Education level |
|-------------------|---------------|--------------------|--------------------------|------------------------|
| Patrisio Njiru | M | 54 | 17-11-2018 | Secondary |
| Nyaki Ngure | M | 48 | 24-11-2018 | Secondary |
| Dominic Ndovo | M | 69 | 8-12-2018 | Primary |
| Kathanju Mugo | M | 35 | 15-12-2018 | Tertiary |
| Avinja Ita Njeru | F | 60 | 24-11-2018 | Secondary |
| Joshua Wambari | M | 86 | 17-11-2018 | None |
| Charity Igoki | F | 70 | 15-12-2018 | Primary |
| Njue Nthambiri | M | 40 | 8-12-2018 | Secondary |
| Domiano Ngari | M | 39 | 15-12-2018 | Secondary |
| Francis Muchiri | M | 50 | 17-11-2018 | Primary |
| Ndwiga Josiah | M | 48 | 17-11-2018 | Primary |
| Muriuki Joses | M | 29 | 15-12-2018 | Secondary |
| David Njiru | M | 31 | 24-11-2018 | Tertiary |
| Simon Njiru | M | 49 | 17-11-2018 | Primary |
| Joseph Munyiri | M | 37 | 17-11-2018 | Secondary |
| Njeru Ngarari | M | 66 | 8-12-2018 | Primary |
| Jerusa Wagugu | F | 81 | 17-11-2018 | None |
| Macharia Ndaru | M | 63 | 24-11-2018 | Primary |
| Jessica Nguru | F | 34 | 24-11-2018 | Tertiary |
| Wanyaga Janga | F | 56 | 24-11-2018 | Secondary |
| Nyaki Ngure | M | 64 | 17-11-2018 | Primary |
| Kinyua Njue | M | 30 | 8-12-2018 | Tertiary |
| Machard Kangenji | M | 60 | 24-11-2018 | Primary |
| Eunice wanjuki | F | 39 | 24-11-2018 | Secondary |
| Name | Gender | Approx. Age | Date of Interview | Education Level |
| Maria Wambeti | F | 62 | 15-12-2018 | Primary |
| Mbogo Kiura | M | 77 | 17-11-2018 | None |
| Igandu Mbengi | M | 85 | 15-12-2018 | None |
| Monica Rwamba | F | 50 | 8-12-2018 | Primary |
| David Muriuki | M | 48 | 24-11-2018 | Secondary |
| Elija Kariuki | M | 32 | 15-12-2018 | Secondary |
| Dionisios Njiru | M | 65 | 15-12-2018 | Primary |
| Angelica Muthoni | F | 59 | 17-11-2018 | Secondary |
| Mayrian Muthoni | F | 29 | 24-11-2018 | Tertiary |
| Josphine Njiru | F | 62 | 8-12-2018 | Primary |
| Charles Gitonga | M | 33 | 15-12-2018 | Tertiary |
| Ndwiga Wa Nyaga | M | 60 | 24-11-2018 | Primary |
| Johana Wakarigica | M | 70 | 24-11-2018 | None |
| Elizabeth Waturi | F | 58 | 15-12-2018 | Primary |
| Esther Kavyayu | F | 54 | 24-11-2018 | Secondary |
| Mary Mukami | F | 25 | 17-11-2018 | Secondary |

APPENDIX 11
ARCHIVAL SOURCES

KNA/DC/EMBU/SIAKAGO/1/14/1980 Embu Annual Report

(KNA/DC/EMBU/1/2:17-18)Secretariat Circulars-Embu

(KNA/DC/EMBU/1/2/1931:18)Political Record Book-Embu

(KNA/DC/EMBU/5/5/1909)Embu Public Record Book

(KNA/PC/CP/1/5/129-130)African Land Development General

KNA/VQ/10/7/16 Land Consolidation Complaints, 1958-60

KNA/DC/EMBU/SIAKAGO/1/2/1938 Embu Annual Report

KNA/DC/EMBU/1/2/1931 Embu Annual Report

KNA/DC/EMBU/SIAKAGO/1/14/1980Land Utilization in Embu Reserve

KNA/PC/CP/1/1/1/69/1907-14 Consolidated Tax-Embu

KNA DC/ISO/3/7/26: reports numerous arrests during the Second World War for importing khat into the NFD

KNA VQ/11/4Minute 28/48: 'Control of Miraa ordinance', PCs Meeting, 28 April 1948; PC/Central Province to PC/Northern Province, 2 June 1948,

KNA BB/PC/EST/6/12: Minute 2, 'Meeting on miraa ordinance', 1 March 1956,

Reece to DC/Isiolo, 7 November 1941, KNA DC/ISO/3/7/26

APPENDIX 111

LETTER OF INTRODUCTION

Dear Respondent,

My name is Mary Anne Wanja Kithinji. I am a Master student of Chuka University and currently carrying out a study on **A History of Khat Production and its Socio Economic Impacts on Rural Households in Siakago Sub-County, Embu County-Kenya (1950-2017)**. You have been purposively selected as a respondent in this study to facilitate this exercise. The information obtained will only be used for the purpose of this study.

Yours Faithfully,

Mary Anne Wanja Kithinji

(Researcher)

APPENDIX 1V

TRANSLATION OF VERNACULAR WORDS USED

| | |
|---|-------------------------------|
| <i>Athii</i> | Hunters |
| <i>Gutuguta</i> | Tilling |
| <i>Kuuna</i> | Clear land |
| <i>Marima</i> | Holes |
| <i>Matatu</i> | Public Transport Vehicles |
| <i>Migunda</i> | Farming Land |
| <i>Mucii</i> | Family |
| <i>Muguka/Mukurukuru/Mutimutiri/Gitune/Gugs</i> | Khat Variety |
| <i>Mukei</i> | Harvester |
| <i>Mumenyereri</i> | Guardian |
| <i>Mutego</i> | Trap |
| <i>Muthamaki</i> | Elder |
| <i>Muviriga wa Ng'aragu</i> | Clan of Famine |
| <i>Ngamba</i> | Settled village |
| <i>Ni Mti Ya Arume</i> | It is Men's Crop |
| <i>Nvaraganu</i> | A type of famine |
| <i>Nyomba or Mbari</i> | Clan |
| <i>Ruriyi</i> | Grazing Land |
| <i>Ruvuu Rwa Mengere</i> | Double Edged Knife |
| <i>Weru</i> | Large sparsely populated land |

APPENDIX V
INTERVIEW SCHEDULE ON SOCIO-ECONOMIC ORGANIZATION OF
THE PEOPLE OF SIAKAGO

Section A: Background Characteristics of Respondents

1. Name of respondent
2. Gender
3. Marital status
4. Age
5. Location
6. Occupation
7. Religion
8. Level of education

Section B: Tracing the history of Khat production in Siakago between 1980 and 2017

- (a) When and how was Khat introduced to the Siakago people, explain in relation to:-
 - (i) Historical Knowledge
 - (ii) Oral history
 - (iii) Personal Knowledge of Khat in Siakago
- (b) When was Khat adopted and commodified by the community of Siakago?
- (c) What were the drivers of diversification to Khat farming in Siakago?
 - (i) To what extent did land adjudication influenced diversification to Khat farming in Siakago?
 - (ii) To what extent did market liberalization of 1980s influenced diversification to Khat farming in Siakago?
 - (iii) To what extent did globalization influenced diversification to Khat farming in Siakago?
- (d) When did the people of Siakago adopt Khat as a Cash Crop?
- (e) When did the people of Siakago start Commercialization of Khat?

- (f) How did the people of Siakago cultivate Khat in comparison to other producing areas of Kenya?
- (g) Explain the process of Khat farming and land management in Siakago from 1980s to 2017.
- (h) Explain the Trend and impact of Khat farming as an economic activity from 1980s to 2017

APPENDIX VI

INTERVIEW SCHEDULE ON SOCIO-ECONOMIC IMPACTS OF KHAT

Section A: Background Characteristics of Respondents

1. Name of respondent
2. Gender
3. Marital status
4. Age
5. Location
6. Occupation
7. Religion
8. Level of education

1. Section B: To examine the economic activities of Siakago before the introduction of Khat in 1980s

- (a) Who are the people of Siakago?
- (b) Explain the social organization of Siakago people before the introduction of Khat as an economic activity in 1980.
- (c) Give a historical explanation of the peasant economy of Siakago people before the introduction of Khat as an economic activity
- (d) How was the farming systems among the Siakago people before the introduction of Khat as an economic activity in relation to:-
 - (i) Subsistence farming before introduction of Khat
 - (ii) Food crops farming in Siakago before 1980s

- (a) Which cash crop were produced before the introduction of Khat in 1980s in relation to :-

- (i) Cotton Farming in Siakago before the introduction of Khat in 1980s
- (ii) Tobacco Farming in Siakago before the introduction of Khat in 1980s

2. Section C: Examine the social and economic impact of Khat production between 1980 and 2017

- (a) Explain the current trend of Khat production in the producing regions of Siakago.
- (b) Is Khat intercropped with other food crops and to what extent?

- (c) Briefly explain the economic lifestyle of people of Siakago after introduction of Khat
- (d) Explain the perception of the community in regard to Khat Farming in Siakago
- (e) What is the impact of Khat farming on the households of Siakago from 1980s to 2017?
- (f) What are the gender issues in relation to Khat production among the households of Siakago from 1980s to 2017?
- (g) In your view, what are the social consequences of Khat from 1980s in Siakago?
- (h) In your view, what are the effects of Khat production in relation to education attainment in the producing areas?

APPENDIX VII

FOCUS GROUP DISCUSSION FOR KHAT PRODUCERS

1. When was Khat introduced in Siakago as a way of agricultural diversification?
2. When did people start selling Khat in the area?
3. How do people use the money they get from Khat sale? Is the money of any benefit to the community? Explain.
4. What are some of the impacts of Khat, both positive and negative to the households?
5. Are people well up in terms of food than before? Give reasons.
6. Are there policies or things that were introduced by the government to help solve the food problem in the area? Name them.
7. Are there negative impacts of Khat? If yes explain.
8. How would you like to see the negatives being addressed?
9. Do you think that Khat has impacted the households of Siakago in any way? If yes, how?
10. Do you think the county government should direct its resources in improving the food situation in Siakago? Give reasons.

APPENDIX VIII
OBSERVATION SCHEDULE ON SOCIO ECONOMIC IMPACTS OF KHAT
PRODUCTION

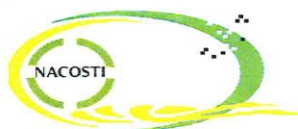
Dear Respondent,

The observation schedule is intended to generate data on socio-economic impacts of Khat production of the Siakago community between 1980 and 2017. Information given will assist in establishing socio economic impacts of Khat on rural households of Siakago in order to inform the county government on the need to address the issue of impacts of Khat production.

To what extent would you say that the people of Siakago have been by Khat socially guided by the following

- a) Family stability
- b) Schooling (education)
- c) Changing roles men and women.
- d) Social amenities like schools, hospitals

**APPENDIX IX
NACOSTI AUTHORIZATION**



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

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NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/54921/27398**

Date: **17th January, 2019**

Mary Anne Wanja Kithinji
Chuka University,
P. O. Box 109-60400
CHUKA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “*Socio-economic impacts of khat production on rural households in Siakago Division Mbeere Sub-County, Embu County-Kenya (1980-2017)*” I am pleased to inform you that you have been authorized to undertake research in **Embu County** for the period ending **17th January, 2020.**

You are advised to report to **the County Commissioner and the County Director of Education, Embu County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

**GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner
Embu County.

The County Director of Education
Embu County.