

**DECLINING SUGAR INDUSTRY AND IMPLICATIONS ON LIVELIHOODS
IN WESTERN KENYA**

BY

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DECLARATION

Declaration by the Candidate

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DEDICATION

This study is dedicated to two important people in my life, my late dear mother Truphosa Anami Stephen and my auntie Mrs. Anne Oyiela Kidweye.

I thank my mother for her hard work and support to see me through my entire education process. Her constant reminders on whether I have implemented my supervisors instructions and recommendations, her tireless efforts to wake me up very early in the morning as she prepares breakfast for me before I set off to Eldoret to consult with my supervisors are still fresh in my mind.

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ABSTRACT

The sugar industry was in the 80' 90's and early 2000's a major economic backbone that informed livelihoods and gender roles at household level in Western Kenya. However, the declining status of the industry has affected living standards and gender roles in the region. The main objectives of his study was to analyse qualitative economic impacts on livelihoods at household level in Western Kenya; to assess the reconstruction of gender roles in the context of the declining sugar industry in Western Kenya and to evaluate the emerging livelihood coping strategies at household level in Western Kenya. The study was informed by Sustainable Livelihoods Approach and Social Role Theory of Sex Differences and Similarities by (Eagly and Wood, 2012). It adopted phenomenological study design. The target population consisted of men and women in households that depended on sugarcane farming as their major source of income and livelihood. The sample size consisted of 36 households where 15 households were purposely selected from Mumias sugar belt zone and 7 households from each sugar belt zone in Nzoia, West Kenya and Busia. Methods of data collection included in-depth interviews at household level; focus group discussions; key interviews; observation and field notes to attain data triangulation hence a rich description of the findings. Data analysis was done by using themes and presented in verbatim. The findings of the 1st objective revealed that the establishment of the sugar industry in Western Kenya led to urbanization, industrialization and structural adjustment programs in the region. The declining status of the industry has led to poverty; unemployment; crime and insecurity; inter-household conflicts and theft, stress depression and death; land sub-division; food shortage; cane-cutters migration; women engagement in microenterprise activities and renaming of business premises. The findings further revealed that women have taken over bread winning role; men do not recognize women as household providers; women still respect and hold dignity for their men; men are involuntarily performing household chores. The findings of the 3rd objective revealed households have adopted table banking; microenterprise activities; income generating activities; community initiatives; social network and livelihood groups; leadership roles in community initiatives; casual labour; extra marital relations, mischief and harshness, drunkenness and alcoholism and investment in rental houses and business premises among the upper class in the region. The study concluded that the declining status of the sugar industry in Western Kenya has led to men's inability to adequately provide for their household needs and livelihoods; changing gender roles and adoption of diversified coping strategies to manage risks and shocks at household level. The study recommends that the Kenyan policy on livelihoods and rural poverty reduction should consider allocating more financial resources for intensive agricultural services in Western Kenya and investment in human capital at community level for improved life skills. Kenyan gender policy should be reviewed to include women contribution to livelihoods welfare and wellbeing and consider allocating more financial resources in human capital to train more women in micro finance and business skills for improved and rewarding income at household level hence improved standards of living at household level.

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CIDA	Canadian International Development Agency
COMESA	Common Markets for Eastern and Southern Africa
DFID	Department for International Development
FAO	Food and Agriculture Organization
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FGD	Focus Group Discussion
G B V	Gender Based Violence
GDP	Gross Domestic Product
GoK	Government of Kenya
HIV	Human Immune Virus
IFAD	International Fund for Agricultural Development
KACC	Kenya Anti-Corruption Commission
KIPPRA	Kenya institute for Public Policy Research & Analysis
KNBS	Kenya National Bureau of Statistics
K-REP	Kenya Rural Enterprise Program
KSB	Kenya Sugar Board
KSI	Kenya Sugar Industry
KSREF	Kenya Sugar Research Foundation
KWIFT	Kenya Women Finance Trust
MSC	Mumias Sugar Company
MT	Metric Ton
NACOSTI	National Commission for Science, Technology and Innovation
NGEC	National Gender Equality Commission

NZUCO	Nzoia Sugar Company
SLF	Sustainable Livelihood Framework
SSA	Sub-Saharan Africa
SSG	Small-scale Sugarcane Growers
TCD	Tons Crushed Daily
UK	United Kingdom
WB	World Bank
WEKSCO	West Kenya Sugar Company

OPERATIONAL DEFINITION OF TERMS AND CONCEPTS

Gender Roles: This study defines gender roles based on the Luhya traditional norms, values and culture which are closely related to gender stereotypes. In Western Kenya men are socialized as household heads, bread winners and protectors' whereas women are socialized to be household managers and caretakers. This means that men's' roles are mainly based in the public sphere while women's' roles are based in the domestic sphere.

Household: This research defines household as a basic unit of society where individuals cooperate and compete for resources. It will also serve as primary place in which individuals confront and reproduce societal norms, values, power, and privilege. The household will constitute an important institutional where livelihoods, gender roles and coping strategies at household level will be assessed. The terms "household" and "family" will be used interchangeably in this research.

Household head: Household head will be used interchangeably with man/men in this research study

Livelihood Strategies: livelihood strategies refer to the range and combination of activities and choices that people make to meet basic needs.

- Livelihood:** This study defines livelihood as activities and means through which men and women in Western Kenya apply to sustain and meet their daily basic needs such as food, kerosene and soap at household level.
- Wife/Wives:** wife/wives will be used interchangeably with woman/women in this research study.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter provides the background overview of the rationale behind the study, the research problem, research objectives and questions, justification of the study and definition of key concepts of the study

1.1 Background to the Study

Originally, sugarcane farming was done in tropical climate for Asian countries but due to evolution and agriculture advancements it is now grown in over 100 countries all over the world (FAOSTAT, 2017). Globally sugarcane production has been on rise from 448 million tonnes per 9 million hectares of land to approximately 2.1 billion tonnes per 29 million tonnes from 1961-2016. Brazil leads in global sugarcane production 39% of world production in 2017. India accounts for 15.7% sugarcane production globally and hence is the second largest producer. Peru and Guatemala are leading in sugarcane productivity with over 121 tons of cane/ha (FAOSTAT, 2018). Sugarcane cultivation and processing currently provide livelihoods for 100 million people across the world, (FairAgora Asia, 2017). Looking at the country level, the sugarcane industry employs over 1 million people in Brazil, nearly 25 per cent of its rural workforce, (Ivanov, 2017). The Thai sugarcane supply chain employs 1.5 million people, including 107,000 smallholders, (FAO, 1997); and around 0.5 million people depend on the sugarcane industry for their livelihoods in South Africa; (South African Sugar Association, 2020).

Africa accounts for 6% of the world's sugarcane production and it is produced in 28 countries. Out of the 28 countries, South Africa is the largest producer. It accounts for

about 35% of the total continental production (FAO, 2016). The sugar industry in South Africa has been reported as an industry with a high socio-economic developmental focus in rural areas by organising resources, creating job opportunities, providing a source of income and developing transport and communication networks (Sibiya and Hurly, 2011). However, (Garside and Bell, 2007) state that although there are benefits obtainable from sugarcane production, the sugar industry has experienced various challenges, which are encountered mainly by SSGs. Dubb (2013) reveals that in South Africa, the sugar industry has been facing a problem of declining sugarcane production, particularly by SSGs. According to Garside and Bell (2007) the decline of sugarcane production yield by SSGs causes distress to the South African sugar industry. These challenges facing SSGs have affected their productivity, and as a result, the industry's earnings have dropped over the years.

According to the Kenya Sugar Strategic Plan (2010-2014), the sugar industry supports directly or indirectly six million Kenyans which represent about 16% of the entire national population; the sector is also a major employer and contributor to the national economy. The industry contributes about 75% of the country's gross domestic product (GDP) and has a major impact on the economies of Western Kenya and Nyanza region and to a lesser extent Rift valley. However, Kenya's manufacturing industry, in which the sugar sector belongs, has remained stagnant in its contribution to the GDP. The contribution has remained at an average of 10% for more than ten years, (Kenya Economic Survey, 2015).

The sugar industry is also a significant agricultural sector in Western Kenya. In 1995, it offered employment to more than 35000 people and has been an economic activity for more than 100,000 small-scale farmers supporting about 2 million people. By the

year 2000, the people employed in the sugar sub-sector had reduced to 10,552. Sugarcane yields declined from approximately 70 tons/ha to 50 tons/ha over a period of 5 years from 2009-2014 whereas the global sugarcane production increased by 17.68% between the year 2004 to 2008 (GoK, 2008).

However, the status of sugarcane as a major income earner for the majority of the rural population is under threat due to various setbacks in the sugar sub-sector. FAO (2019) identifies the marketing problem as a critical challenge related to the factories inability to market local sugar in the face of dumped imports. Economic liberalization presents challenges to the Kenyan sugar industry. Multi-lateral trade treaties, especially Common Markets for Eastern and Southern Africa (COMESA), have facilitated the importation of sugar into Kenya at minimal tariffs from member states (FAOSTAT, 2018). This has negatively affected the marketability of local sugar, which has high production costs (Kenya National Assembly, 2019).

The Kenya National Assembly (2015) points out that poor sugarcane farming practices lead to low yields and low sugar content. The rising costs of farm inputs and field operations contribute to decreasing cane output. In addition, factory inefficiencies and factory capacity under-utilization lead to low income for cane farmers (Kenya National Assembly, 2015). The factory inefficiencies contribute to the high cost of locally produced sugar. These in turn negatively affect sugarcane farm operations and practices (The Republic of Kenya, 2020).

The farm-level productivity in Mumias Sugar Belt (MSB) has been on the decline for a couple of years. Sugarcane cane yield rate is approximately at 60 tonnes/ha as per the Kenya Sugar Authority data. The sugarcane production rate has decreased by approximately 30% (Dindi, 2013). The rising costs of farm inputs and field

management, and lack of credit have contributed to declining cane output within the belt. Cane production is further hampered by transport costs and poor infrastructure. The low sugarcane prices and delay in payment by the company for cane delivery are major challenges faced by small-scale sugarcane farmers. Many of these farmers had turned to other crops to sustain their livelihoods (Waswa and Netondo, 2014).

MSC has recorded losses running to billions in recent years. This has been caused by the inability of the factory to market local sugar due to the dumped imports (Agricultural Information Network, 2016). There have been poor farm management practices leading to low cane output and low sucrose content. In addition, factory inefficiencies and capacity under-utilization has led to reduced income for farmers (Dindi, 2013). These have resulted in the frequent stoppage of crushing sugarcane by the miller due to cane shortages. The government's financial interventions in 2015 and 2017 have not stabilized the miller's operations. The miller ground to halt in April 2018, necessitating Kenya Commercial Bank to place it under receivership for defaulting on loans amounting to Ksh. 12.5 billion.

It has been observed by (Ambetsa, 2020), that nearly 60,000 farmers who supply sugarcane to MSC are struggling after their only source of livelihood started crumbling. A number of these desperate farmers in Kakamega, Siaya, Busia, and Bungoma counties have been reported to be uprooting the crop. They have switched to other economic activities, hoping for better livelihood (Kweyu, 2013). Their morale' to engage in cane farming is low, and thus many of them have declined participation in cane farming and abandoned the cultivation (Kweyu, 2013).

According to Nzoia sugar company annual report and financial statements for the period ended June 30, 2019, total turnover for the period under review was Ksh. 1.8

billion (2018-2.4 billion) against a budget of 4.7 billion net of taxes. The sales were below target due to low production caused by lack of raw materials and frequent factory breakdown due to non- maintenance.

In the period under review the company milled 362,999.66 tons of cane against a target of 500,000 tons resulting to a negative variance of 137,000 tons of cane and produced 23,536.7 tons of sugar against a target of 37,821 tons giving a negative variance of 14,284 tons. A review of the company's human resource records revealed that the company had not paid its employees' salaries from the month of March 2019 to October, 2019 resulting into salary arrears of Ksh 356,847,031 and wages of 45,682,130 payables to permanent employees and casuals respectively.

However, West Kenya and Busia sugar factories have survived some of these challenges. Since inception in 1979, West Kenya sugar factory has grown from 500 tons crushed daily (TCD) to its current crushing capacity of 5000 TCD and employs 2000 workers apart from indirect employment to harvesters, loaders and transporters. Although, by 2012 the company had faced a lot of challenges especially cane shortages, the company has put up weigh bridges in various areas within Western sugar belt in order to ensure constant supply of sugarcane. (West Kenya Company, Profile). Busia Sugar factory has a crushing capacity of 3000 TCD and employs over 1100 people, drawn from all regions of Kenya with a further 1200 seasonal workers also employed. The Company is also accredited by the National Industrial Training Authority, (NITA) and offers internship, management training programs as well as attachment to students in various courses available thus offering indirect employment of upto 3000 individuals. The Company has also maintained a high standard of Corporate Social Responsibility by engaging in the following activities: Offering

relief food for schools around the Company; Tree planting initiatives in different areas and schools; repairing roads that feed the company; remitting National Health Insurance Fund payments for needy families; Construction of classrooms for schools and borehole Construction for the Communities. (Busia Sugar Company, Profile).

This shows that the sugar industry has direct implications on household livelihoods; however, no known research has been done to examine the impact of the declining sugar industry on households' livelihoods in Western Kenya. Moreover most studies that have been carried out in the sector such as Ambetsa 2013, Dindi 2013, Kweyu 2013 and Waswa & Netondo 2014 in Western Kenya have mainly focused on production issues and managerial problems affecting the sugar industry; missing out on issues that affect families at household level as a result of these factories. This study will therefore help to generate new knowledge on the implications of the declining sugar industry on livelihoods in Western Kenya

1.2 Statement of the Problem

Despite the fact that Kenya's sugar industry was once a vibrant and lucrative economy to famers, millers and the government in terms of income and livelihoods support, the sector is facing challenges and eminent collapse. The Kenya National Assembly, points out that poor sugarcane farming practices has led to low yields and low sugar content. The rising costs of farm inputs and field operations contributed to decreasing cane output. In addition, factory inefficiencies and factory capacity under-utilization has led to low income for cane farmers. Studies indicate that the farm level production has reduced to 60 tonnes/ha which is lower compared to the average potential yield per hectare. Several policy options have been put in place by the government of Kenya to revive the industry; however no fruit has been born. The

state of sugar industry in Western Kenya is further confirmed by public complaints among the farming communities and millers about poor performance of the industry. This has led to poor living standards and changing gender roles at households' level. Poor remuneration occasioned by the state of sugar industry in Western Kenya has also led farmers to uproot their sugar cane plantations for alternative livelihood strategies.

This study therefore aims to analyse the implications of the declining sugar industry on livelihoods; reconstruction of gender roles and coping strategies at household level in the context of the declining sugar industry in Western Kenya, hence filling a major knowledge gap.

1.3 Purpose of the Study

The study explored the impact of the declining sugar industry on livelihoods and examined how both men and women are coping with the economic changes that are taking place in Western Kenya.

1.4 Study Objectives

The overall aim of the study is to investigate the implications of the declining sugar industry on livelihoods at household level in Western Kenya. The specific objectives of the study are:

- i) To analyze economic impacts on livelihoods at household level in the context of the declining sugar industry in Western Kenya.
- ii) To assess the reconstruction of gender roles at household level in the context of the declining sugar industry in Western Kenya.
- iii) To evaluate the emerging livelihood coping strategies at household level in the context of the declining sugar industry in Western Kenya.

1.5 Study Questions

This study attempted to answer the following questions:

- i) How are livelihoods influenced by economic changes at household level in Western Kenya?
- ii) How are gender-roles reconstructed at household level in the context of the declining sugar industry in Western Kenya?
- iii) What are the emerging livelihood coping strategies at household level in the context of the declining sugar industry in Western Kenya?

1.6 Justification of the Study

Despite the fact that the declining status of sugar industry in Western Kenya is a serious matter of concern to the nation's economy, households have been the most affected based on the fact that their livelihoods directly depend on the sugar industry. These poor living standards and conditions at family level calls for an urgent need to investigate the wider effects of the declining sugar industry on livelihoods at household level. It is hoped that the findings of this study will inform policy development on sustainable development goal (8) that aims to promote sustained, inclusive and sustainable economic growth and productive employment and decent work for all. The shared experiences and best practices in Western Kenya will serve as a basis of argument in forging towards African Union aspiration (1) that aims for a prosperous Africa based on inclusive growth and sustainable development. The findings of this study may also inform policies for Kenya's vision 2030 Agenda (4) of adding value to our products and the Big 4 agenda on manufacturing for improved livelihoods and increased annual GDP growth rate.

1.7 Significance of the Study

The findings of this research study could make valuable contributions to various institutions, non-governmental organizations and individuals at household level

- i) The findings of this study may help policy makers and formulators to address policy matters that touch on small-scale farmers concerns directly through collective and participatory approaches rather than state command approach.
- ii) These findings may also be directly applied to households experiencing a declining economy to alleviate poverty for better and improved livelihoods and positive change of gender roles.
- iii) The findings on emerging livelihood strategies' could help agricultural experts, rural development workers, community development workers, social workers and other stakeholders to design and develop programs that are diversified and gender sensitive.

1.8 Scope and Limitation of the Study

Due to the purposive nature of the sample, the findings are specific to households' experience of the declining sugar industry on livelihoods in Western Kenya as shared. Therefore the study findings cannot be generalized to other regions that are experiencing a declining single crop economy on livelihoods.

The study mainly utilized interviews for data collection which are highly subjective in nature but the effect was mitigated by use of FGDs, key interviews and Participants' observation to ensure data triangulation. As such the findings may not be generalized to all households experiencing livelihood challenges.

During FGD in Busia sugar belt zone, most participants thought that Mumias sugar company officials had come for a consultative meeting as part of the revival strategy

agenda, however the researcher clarified the main purpose and objective of the meeting.

During data collection process 1 sub-chief in charge of Malava Township declined to pick the researchers phone calls for reasons best known to him, after we had made plans ahead of the planned FGD in his area. However the researcher made consistent follow-up with the area chief who linked the researcher to a village elder and identified and organized for another FGD in the same location.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter outlines a reviewed literature from various authors based on their knowledge on livelihoods and livelihood diversification, changing gender roles and relations, decision making and power at household level and coping strategies at household level.

Historical lessons from structural transformation in Europe and North America indicate that rising agricultural productivity, together with industrialisation and urbanisation, has been the stimuli for economic development (Timmer, 2009). In Asia, agricultural transformation occurred through the Green Revolution in which productivity was raised by growing high-yielding grain varieties – a process which was driven by the state, mediated by markets and based on smallholders (Djurfeldt, Holmen, Jirstrom and Larsson, 2005). The structural transformation process at the macro level was characterised by a declining share of agriculture in GDP and employment, rural–urban migration leading to urbanisation, the development of a modern industrial and service economy, and a demographic transition (Winters, Essam, Zezza, Davis and Carletto, 2010). Although agriculture became less important relative to other sectors, it continued to grow in absolute terms (Timmer, 2009). At the micro level, rural household participation in farm activities declined relative to nonfarm activities (Winters *et al.*, 2010). In the early stages of the process, most rural households were subsistence farmers who produced most of the farm and nonfarm goods and services they required (Timmer, 2009); because agriculture was mainly for subsistence, trade and commerce remained marginal. With better functioning markets and improved transport and communications infrastructure in rural areas, farm

households diversified to include nonfarm activities as a way to increase their incomes. In the later stages, with rising incomes and higher standards of living, they either specialised in farming on larger consolidated farms or moved into high-return nonfarm sectors (Timmer, 2009).

Evidence suggests that SSA deviates in many ways from this expected path of structural transformation and economic development. Firstly, instead of farms becoming consolidated as it happened in Europe and North America, farm sizes in SSA are generally becoming smaller (Andersson, Djurfeldt and Jirström, 2013; Ayne *et al.*, 2003; Jirström, Andersson, and Djurfeldt, 2010). Recent studies on land issues in SSA (Headey and Jayne, 2014; Jayne, Chamberlin, and Headey, 2014; Muyanga and Jayne, 2014) have mainly attributed the declining farm sizes especially in land constrained areas in SSA to high population growth resulting from high fertility rates. According to these studies, while rural populations in Asia and Latin America are expected to decline by 2050, in SSA they are expected to increase further. The already declining farm sizes coupled with the high population growth could have a potentially negative impact on rural welfare and food security in SSA. The increasing population density has already encouraged more intensive use of land in high density areas of SSA, albeit in the absence of modern input use (fertiliser or irrigation), indicating unsustainable intensification. Increase in food production in SSA has so far been mainly based on the expansion of cultivated areas (Jirström *et al.*, 2010; World Bank, 2013), which is now limited by declining farm sizes and the expansion of urban areas (Andersson and Djurfeldt, 2015; Losch *et al.*, 2012). Shrinking farm sizes and growing landlessness are by default pushing unskilled farm labour into mainly low-return nonfarm sectors (Haggblade, Hazell, and Reardon, 2007; Headey and Jayne, 2014).

Secondly, urbanisation in SSA is taking place without industrialisation (Andersson Djurfeldt, 2015; Losch *et al.*, 2012), in contrast to green revolution Asia where urbanisation and emerging industries gradually allowed rural people to leave agriculture and enter nonfarm employment (Haggblade *et al.*, 2007), and rewarded investments in education and migration (Jayne *et al.*, 2014). In the absence of manufacturing industries and high-return service sectors to provide skilled nonfarm opportunities, prospects for increased employment and rising incomes in urban areas of SSA remain limited. This leaves smallholder farming as the primary option for gainful employment for SSA's growing young labour force (Losch *et al.*, 2012). However, rapid growth in nonfarm sectors fuelled by improvements in education and infrastructure can potentially alter this situation (Haggblade, Hazell and Reardon, 2010).

Thirdly, persistent low agricultural productivity coupled with chronic food insecurity and severe poverty characterises the smallholder rural economy in SSA (Reardon and Timmer, 2007). As opposed to green-revolution Asia where modern inputs such as fertiliser and irrigation were important in raising agricultural productivity (Djurfeldt *et al.*, 2005), in SSA low agricultural productivity is mainly linked to low fertiliser use, low responsiveness to fertiliser use due to overexploitation of land leading to nutrient mining and loss of organic matter, low use of irrigation, insecure land tenure, environmental degradation and underinvestment in crop research (Dethier and Effenberger, 2012; Headey and Jayne, 2014; Tittonell and Giller, 2013). Therefore, poverty gaps are increasing, with yield gaps resulting from such factors, particularly in regions with low agricultural potential (Dzanku, Jirström, and Marstorp, 2015). As a consequence of poverty and food insecurity, a large proportion of smallholders remain deeply engaged in subsistence staple crop production, but at the same time

seasonally rely on the market for their staple food needs (Jirström *et al.*, 2010; Losch *et al.*, 2012). However, panel studies following agricultural transformation in nine SSA countries between 2002 and 2010 (Djurfeldt, Aryeetey and Isinika, 2011; Djurfeldt *et al.*, 2005; Djurfeldt, Larsson, Holmquist, Jirström and Andersson, 2008), attribute increased agricultural productivity among smallholders in some regions to participation in agricultural markets and the nonfarm sector, and to the use of modern inputs and technology. Amidst the new opportunities and threats for smallholders linked to market liberalisation and globalisation (Reardon and Timmer, 2007), there is hope that with more public expenditure on infrastructure, modern technologies, promoting agricultural marketing and agribusiness, and pro-poor nonfarm growth, smallholder agriculture in SSA might be transformed (Haggblade *et al.*, 2007).

Recent studies indicate that asset, activity and income diversification characterise the livelihood strategies of rural smallholders in SSA (Barrett *et al.*, 2001; Ellis, 2000b). Incomes from nonfarm sources have grown in importance; accounting for about 35 per cent of rural household incomes in SSA and 50 per cent in Asia and Latin America (Haggblade *et al.*, 2010). Diversification at household level is viewed as an outcome of dynamic livelihood adaptation to various constraints and opportunities faced by smallholders (Ellis, 2000b). Diversification is therefore associated with both livelihood survival and distress under deteriorating conditions, as well as with livelihood security under improving economic conditions (Niehof, 2004). It is aimed at securing better living standards by reducing risk, vulnerability and poverty, increasing income, enhancing security and increasing wealth (Yaro, 2006). In order to use livelihood diversification to secure better living standards, rural households have to be able to generate cash, build assets and diversify across farm and nonfarm activities (Ellis and Freeman, 2004). It is a cumulative process that requires

investment in improved farm practices or in nonfarm assets, or a combination of both, according to the options available for risk reduction and income generation. Where there are no feasible opportunities to diversify income activities, migration and remittances between rural and urban areas may be important in sustaining rural livelihoods (World Bank, 2007). There is substantial evidence showing that some rural households are sustained by multi-spatial livelihood activities (Andersson Djurfeldt, 2014; Ellis, 2000a; Losch *et al.*, 2012) or food transfers (Andersson, 2011; Andersson Djurfeldt, 2012; Andersson Djurfeldt and Wambugu, 2011). Agricultural entrepreneurship, a vitalised rural labour market and migration are thus often complementary (World Bank, 2007). While farm income may provide capital for rural nonfarm employment and migration, nonfarm income plays a key role in strengthening the potential of smallholder farming as a pathway out of poverty.

Given the prevalence of risk in the rural SSA smallholder context, diversification may often be a strategy for survival or coping with risk, especially where agriculture fails to offer sufficient means of livelihood (Bryceson, 2002; Larsson, 2005; Reardon, 1997). In situations of high-risk agriculture and poverty, poorer smallholders without the necessary assets may be pushed to seek alternative incomes by engaging in low-return and sometimes risky nonfarm activities (Barrett, Bezuneh, Clay and Reardon, 2001). However, it is mainly among richer households or in regions with favourable agricultural conditions that livelihood diversification driven by motives to raise incomes or accumulate wealth prevails (Haggblade *et al.*, 2007). Although diversification is a common livelihood strategy, not all households enjoy equal access to high-return opportunities (Barrett *et al.*, 2001); (Lay, Mahmoud and M'Mukaria, 2008), and for many rural households there are limited possibilities for remunerative nonfarm work (Jayne, Mather and Mghenyi, 2010; Jirström *et al.*, 2010; Otsuka

and Yamano, 2006). The constraints and opportunities are unevenly distributed socially and geographically, and households with better asset endowments are more likely to access better opportunities for diversification (Barrett, Bezuneh and Aboud, 2001); (Barrett *et al.*, 2001). The usual pattern is for the range of activities that can lead to increase in incomes and wealth to rise with income level (Ellis, 1999; Oya, 2007), and for such activities to be more common in areas with favourable agro-ecology and good market access (Losch *et al.*, 2012; Reardon, 1997). Even in rural areas with favourable endowments or opportunities, some households are better off in terms of welfare, while others remain trapped in structural poverty (Losch *et al.*, 2012).

The gap identified in this literature is that Most of these studies on livelihood diversification in SSA using the above analytical approaches have been based on cross-sectional data from individual countries or from sample regions within countries. However there is need to carry out livelihood research based phenomenological approach to gain a deeper understanding of peoples experiences, views and perceptions over the livelihoods and rural economies hence the importance of this study objective.

2.1 Changing Gender Roles

Gender ideologies set the boundaries influencing how adolescent boys, girls, and adult men and women think as well as what they do. Hence, inequalities of resources and power seem natural and unchangeable. Values, beliefs and norms about who can speak out or make decisions also directly affect how power is distributed in society and this is to the disadvantage of children and girls and women in particular. Men are taught to be energetic, assertive, masterful and independent, while women are taught to be submissive and allow men to lead (Godsil *et al.*, 2016; Marcus and Harper,

2014). In addition, women are generally taught to be friendly, sociable, warm, unselfish, interdependent and emotionally expressive. These attributes serve to reinforce male superiority and female subordination (Jost and Kay, 2005; Rudman and Glick, 2001).

Adult men benefit most clearly from gender roles, but adolescent boys also have a stake in norms that makes them more privileged than girls, including factors such as more freedom, greater power, better access to resources, and a promise of more power in adulthood (Jost and Kay, 2005; Rudman and Glick, 2001). Women that are older can also have a stake in upholding discriminatory gender norms, especially if they have a daughter-in-law to share or take on the burden of domestic chores (Narayan, 2013). Most people within societies see these inequalities brought by gender roles as natural and not open to change (Schilt and Westbrook, 2009).

Social institutions such as the family, organised religion, traditional social structures, education systems and the media contribute in socialising and communicating the reproduction of some of these discriminatory gender norms. Therefore, efforts need to be intensified to change discriminatory gender roles and replace them with more equitable ones across all social institutions and structures (Ferree, 2010).

Patriarchal norms and values also influence gender roles in the household. The word patriarchy existed long before related systematic values were recreated to further analyse the conditions of oppression of women (Kamarae, 1992). Patriarchy implies that men hold the power and women are excluded from it. Additionally, patriarchy has also been used in the 1960s to refer to the system of the subordination of women (Kamarae, 1992), and has been defined as a system of male supremacy which oppresses women through political, social and economic institutions. The division of

labour by sex means that the work group becomes also a sex group (Bernard, 1981: 3). The very nature of maleness and femaleness becomes embedded in the gendered division of labour

Women across most families play a double role, including reproduction and engagement in the affairs of the community (Hertneky, 2010). Apart from bearing children, women perform other roles of providing and maintaining scarce resources for collective consumption such as water, health care and education (Boserup, 2007), and this is usually unpaid and voluntary. However, community management roles performed by men tend to be more visible and given higher social value such as the administration of local justice. Women's reproductive roles are often perceived to be natural, as they do not generate income in the household, they are often invisible at the national economic level, even though the same tasks do constitute a professional profile in other instances. (Boserup, 2007) observes that a mother taking care of children during working hours is not financially rewarded; however, professional care givers receive remuneration for the same job and are considered in economic statistics. The domestic responsibilities performed by women include child bearing, looking after and educating children, washing clothes, cooking food, growing food for home use (Hochschild and Machung, 2012).

Gender inequalities persist in the domestic sphere as shown in a study conducted in Spain by (Fernández *et al*, 2014). In this study, it was found that activities within the domestic sphere are largely still determined by gender, with women being more likely than men to do activities such as cleaning the house, washing, ironing, sewing of clothes and caring for children and adults, which requires more time and these women tend to be less valued in the society. Women perform the majority of the work in the household, and this makes them more likely to not be employed in competitive

occupations that were traditionally occupied by men (Lippa, Preston and Penner, 2014). Furthermore, (Smee and Woodroffe, 2013) assert that early marriage pushes women into greater dependency and caregiving with limited opportunities to participate in other spheres and sectors of the society.

There has long been a gendered division of labour, and this has existed both in traditional and modern societies (Wood and Eagly, 2012). A study conducted by (Milkie *et al.*, 2009) in the US found that women with young children who are fulltime working mothers work an extra five hours a week in comparison with working fathers. The study showed that almost 20 years later, fulltime working women in transitional marriages still seem to work a 'second shift' of domestic and childcare duties after working during the day.

Family gender role stereotypes are reflected in societal property arrangements and property rights, which also affects gender relations in the family. In some places, women and children are regarded as the property of men and their lives are dictated and regulated by marriage and labour practices (Musembi, 2007). The degradation of common property resources through larger institutional changes in land tenure and property rights often results in unfair gender divisions of labour within the household, in most cases increasing women's workload. Research shows that there is a need to change the deeply entrenched social institutionalisation of sexual differences (Okin, 2004).

Traditional norms of masculinity require men to be the breadwinners and the head of the household and the ultimate decision-maker. Also, being virile (freedom to have more than one sexual partner and fathering many children) and condoning physical violence against women particularly once a woman is married is prevalent in some

cases (Jones, PreslerMarshall and Tran, 2014). Researchers have found that there is a strong link between violence and polygamy; this is evidence in Papua, New Guinea. Researchers found that there is a high rate of violence by husbands, first wives are usually neglected and are often beaten for refusing sex (Jalal, 2009). The practice of polygamy violates a woman's right to gender equality and it is also inherently discriminatory. Polygamy is more of a tradition and is common in Mali. Polygamy has detrimental effects such as gender inequalities where men are the heads and use their powers to control the household and this can lead to Gender-Based Violence (GBV) occurring within the household, this has been going on for years in Mali and women and children are still affected by it (Heath, 2020).

Changes in gender roles occur as people in the community start to challenge the traditional behavioural, social and cultural characteristics that are linked to womanhood or manhood. In order to achieve gender equality, characteristics and structures that govern the relationship between men and women and the power differences that impact choices need to be assessed. These behavioural, social and cultural characteristics that are linked to womanhood or manhood are not innate but rather learned, and men and women embrace some cultural, social, and environmental norms that may encourage inequalities (Booth and Nolen, 2012). Gender roles are typically most resilient in areas that are directly affected by power or control, and therefore, those who lose power under a change in the social norm actively resist change, and those who would gain often are too weak to impose change (World Bank, 2011).

Women's participation in different societal domains, including educational attainment, economic opportunities, political empowerment, health and well-being is influenced by gender roles (Blanchfield, 2010; World Bank, 2012). While gender

equality is for the benefit of the whole nation and that the status of the nation is intimately tied to the roles of women, studies show that achieving gender equality is not only a woman's issue (Blanchfield, 2010; World Bank, 2012). Men are also need to be involved in promoting gender equality (Maksuha and Richter, 2014). According to the (World Bank, 2012:3), "gender equality matters intrinsically, because the ability to live the life of one's own choosing and be spared from absolute deprivation is a basic human right and should be equal for everyone, independent of whether one is male or female, and gender equality matters instrumentally, because greater gender equality contributes to economic efficiency and the achievement of other key development outcomes."

2.2 Livelihood Diversification and Coping Strategies in Rural Economy

Livelihood strategies and assets, together with the transforming structures and processes lie at the centre of livelihood studies. Understanding the strategies of rural people has huge implications for policy management and development (Allison and Ellis 2001). The overlap between the assets people have and the activities they pursue in making a living is the underlying concept of livelihood strategies (Ashley and Carney 1999; Ellis 2000; Carney 2002). Scoon (1998) argues that the key role in investigating livelihood is to grasp an understanding of the different combinations of strategies that the poor pursue for a living. Basically, livelihood strategies refer to the range and combination of activities and choices that people make to meet basic needs (DFID 1999; Baro 2002; Owusu 2009).

Push factors are negative factors that may force farm households to seek additional livelihood activities within or outside the farm. Push factors tend to dominate in high-risk and low-potential agricultural environments, subject to drought, flooding and environmental degradation (Haggblade *et al.*, 2007). When agricultural activities are

seasonal and environments are full of uncertainty, like in many parts of SSA, rural households tend to reduce risk by diversifying into activities with lower covariate risk in order to make consumption and incomes less volatile (Barrett *et al.*, 2001; Dercon, 2002; Ellis, 2000b; Matlon, 1991). The most common push factors are related to different forms of risk, such as seasonality and climatic uncertainty (Ellis, 1998, 2000b). Others include land constraints driven by population pressure and fragmented land holdings, missing or incomplete factor markets, and market access problems due to poor infrastructure and high transaction costs (Barrett *et al.*, 2001). Diversification may be used as a strategy for coping or risk management (Dercon, 2002); (Ellis, 1998; Matlon, 1991; Start and Johnson, 2004). Risk management is an ex-ante deliberate strategy where a household anticipates failures in their income streams and thereby maintain a range of income activities to safeguard against it, while coping is a response to disaster or unanticipated failure in major sources of survival. In SSA, the general lack of social insurance or safety nets from government transfers, NGOs, community or family members may push households into diversification for risk management (Barrett *et al.*, 2001). Regarding seasonality, many nonfarm income activities tend to peak during the dry seasons when there is a decline in farm activities (Reardon, 1997). During the dry season, especially in semi-arid regions, some rural households depend on incomes from selling farm products and from nonfarm activities, including migration remittances (Ellis, 1998; Losch *et al.*, 2012; Reardon, 1997). This is the case in the Sahelian agricultural systems, where farmers turn to nonfarm sources to supplement farm incomes when harvests fail (Bryceson, 2002; Grawert, 1998). Diversification is also driven by differences in relative returns in different agro-climatic zones (Reardon, 1997). Social factors such as social positions, networks, associations, religion and culture are important drivers of diversification

(Ellis, 1998). Labour market opportunities may be restricted by gender, class or social inequalities (Oya, 2007; Start and Johnson, 2004). In terms of gender, rural women are often constrained in accessing land and other productive assets (Gladwin, Thomson, Peterson and Anderson, 2001). Therefore, they often adopt multiple livelihood strategies (Andersson Djurfeldt, Djurfeldt and Lodin, 2013). However, nonfarm income may contribute more to inequality among female-headed households, where self-employment is important and nonfarm opportunities more constrained (Canagarajah *et al.*, 2001). Institutional factors also play a significant role in creating opportunities or constraints to the improvement of rural livelihoods. In some regions, institutional factors such as regressive tax systems at local level tend to discourage rather than foster livelihood diversification (Ellis and Freeman, 2004).

Pull Factors Pull factors are positive and these may attract farm households to pursue additional livelihood activities to improve their living standards. These factors provide incentives for people to expand their range of income activities outside farming by increasing the returns from nonfarm activities. Such factors tend to dominate in less risky, more dynamic agricultural environments (Haggblade *et al.*, 2007). Diversification becomes a deliberate strategy for an individual or household in order to generate assets for accumulation and reinvestment (Ellis, 1998, 2000b). Pull factors include the commercialisation of agriculture and the emergence of improved nonfarm labour market opportunities linked to better market access, improved infrastructure, and proximity to urban areas (Losch *et al.*, 2012; Reardon *et al.*, 2006); Winters *et al.*, 2009). Other pull drivers of diversification are supply factors, such as improved technology, expansion of education, increased demand for non-food goods and services driven by higher per capita incomes (Reardon, 1997).

Survival-led or Opportunity-led Diversification resulting from push or pull factors have been categorised as either ‘survival-led’ or ‘opportunity-led’ respectively (Ellis, 2000b; Lay *et al.*, 2008; Reardon *et al.*, 2006). Survival-led diversification, mainly driven by push factors, occurs when poorer rural households engage in low-return nonfarm activities by necessity to ensure survival, to reduce vulnerability or to avoid falling deeper into poverty. They are pushed towards diversifying their income sources to manage risks or cope with shocks, such as declines or stagnation in agriculture, differentiated labour markets, credit market imperfections, demographic pressures and land constraints (Barrett *et al.*, 2001; (Lay *et al.*, 2008; Reardon *et al.*, 2006). They are pushed into low-return nonfarm activities because they have low endowments of assets such as land, capital, livestock and credit, making them more vulnerable to seasonal and other risk factors (Barrett *et al.*, 2001; Ellis, 1998; Lay *et al.*, 2008; Reardon & Taylor, 1996). Many poor households also tend to lack formal education and skills, which act as entry barriers preventing them from engaging into high-return activities like nonfarm waged and skilled employment (Abdulai & CroleRees, 2001; Barrett *et al.*, 2001; Ellis, 1998; Reardon, 1997). The poor are confined to low-income, labour-intensive nonfarm activities that leave them trapped in structural poverty, while richer households tend to specialise in high-return farm or nonfarm activities (Haggblade, Hazell, and Reardon, 2005; (Losch *et al.*, 2012). The poor tend to be food insecure all year round, and depend on selling their labour or on safety net supports (Ellis and Freeman, 2004). Sometimes they are unable to sustain their subsistence needs and may be forced to engage in activities with returns below those in the agricultural sector (Lay *et al.*, 2008). Opportunity-led diversification is mainly driven by pull factors. It occurs when wealthier rural households engage in high-return nonfarm activities, with accumulation objectives, in order to increase

household income by maximising returns from their assets. They are able to diversify their income activities in more favourable labour markets or take advantage of off-farm opportunities created by technological advances, new market possibilities, proximity to urban centres or improved infrastructure (Lay *et al.*, 2008; Losch *et al.*, 2012). High returns to nonfarm activities may emerge from increased demand for nonfarm goods and services or off-farm opportunities created by growth motors in different rural sectors such as agriculture, mining or tourism (Reardon *et al.*, 2006). Better-off households are those with high endowments of assets such as land, livestock and buildings (Ellis and Freeman, 2004), and are more likely to engage in diverse high-return nonfarm activities, some of which have similar or higher returns than farming (Barrett *et al.*, 2001); (Lay *et al.*, 2008). In this way some better-off households are capable of accumulating capital by combining commercial farming and nonfarm activities while still relying more on commercial agriculture (Andersson Djurfeldt, 2013; Barrett *et al.*, 2001; Ellis & Freeman, 2004; Oya, 2007). The activities in the (Chambers and Conway, 1992) livelihood definition are essential in understanding the links that exist between capital assets and the choices people make to generate the income necessary for meeting their desired livelihood outcomes (Ellis 2000). The natural, economic, social and institutional environment that people operate in is a major determinant of the options people make in search for positive livelihood outcomes (Ellis 2000; Goodrich 2001; Conway *et al.*, 2002; Thomson 2003). The natural, institutional, economic and social environment can provide opportunities as well as pose considerable challenges for people to achieve their set goals (Goodrich 2001; Kolmar and Gamper 2002). An understanding of the interaction between the components of livelihoods, therefore, suggests that people's access to assets, their capabilities, the income earning activities they pursue and the institutional

environment will determine the nature of vulnerability that influence their livelihood outcomes. Here, capabilities are the ability of people to recognise their potential in terms of health status, skill development and social participation (Ellis 2000).

The literature on diversification in rural Africa generally shows a positive relationship between nonfarm income and household welfare indicators such as income, wealth (estimated through size of land holdings or livestock), consumption and nutrition (Barrett *et al.*, 2001; Ellis, 1998, 2005; FAO, 1998; Reardon, 1997). Panel and longitudinal data evidence from Ethiopia suggest that bigger nonfarm income results in a more rapid growth in income and consumption, especially among wealthier farm households (Bezu *et al.*, 2012; Block and Webb, 2001). A reason for this is that substantial entry barrier (Abdulai and CroleRees, 2001; Barrett *et al.*, 2001; Davis *et al.*, 2009) limit access to high-return rural nonfarm income to relatively better-off households, while the poor are mainly confined to low-return activities (Barrett *et al.*, 2001; Bezu *et al.*, 2012). High-return nonfarm opportunities are often found in formal sector employment and activities which are skilled, capitalised or protected from competition, while the low-return opportunities generally have little requirement for skill or capital, for example, unskilled factory or porter jobs, traditional cottage activities, and micro-enterprise like petty-trade, handicrafts, sand mining, brick making, burning charcoal or collecting firewood (Start and Johnson, 2004).

A number of studies also find that nonfarm income diversification has a positive impact on farm productivity and food security. For instance, in Burkina Faso, some households that lacked credit used nonfarm incomes to invest in farm assets such as animal traction (Savadogo, Reardon and Pietola, 1998). In Senegal, nonfarm incomes enabled some households to access farm inputs like groundnut seeds, fertilisers and livestock (Kelley, Diagana, Reardon, Gaye and Crawford, 1996). In Tanzania and

Ethiopia, (Dercon and Krishnan, 1996) found that households engaged in off-farm activities with high entry barriers such as trade or business, had higher levels of assets, income and consumption. (Ellis and Mdoe, 2003) found that in Tanzania richer households tended to diversify into high-return nonfarm activities and had higher agricultural productivity compared to the poor households. Whilst in Ethiopia, farm households with more diversified income sources had higher agricultural productivity and that off-farm income was complementary to farm income when farm households lacked credit (Woldehanna, 2000). Evidence from Kenya shows that involvement in high-return nonfarm activities such as salaried employment has positive effects on agricultural productivity (Lay *et al.*, 2008); Marenja, Oluoch-Kosura, Place, & Barrett, 2003). In Western Kenya, (Djurfeldt, 2012) finds that wealthier farm households with access to nonfarm incomes were able to profit from seasonality of agricultural markets through trade-based or barter exchanges for agricultural produce. In contrast, poorer farm households that lacked nonfarm incomes were more vulnerable and their food security was worsened by seasonal changes in food prices and in the agricultural production cycle.

While there are numerous activities rural households pursue, (Scoon, 1998) identifies that livelihood strategies may be broadly grouped into three categories: agricultural intensification/extensification, livelihood diversification and migration. The ability of rural people to pursue one or a combination of strategies is based on their access to assets (Scoon, 1998; Dolan, 2005; Freeman and Ellis 2005a). Scoon (1998) adds that the distinctions in socio-economic factors such as age, income levels, gender, religious connection and social relations are major influences on their strategy options. While the degree of livelihood strategies pursued is dependent on the availability of capital resources and socio-economic differences, the level of risk

associated with the choices that rural people make is also taken into account (Hussein and Nelson 1998; Scoon, 1998). The importance of resource accumulation, income earning activities spread over time and changes in the combination of activities are some of the alternative options that rural people employ as strategies to confront the risks they face (Scoon, 1998).

Several studies have been conducted concerning livelihood strategies grouping (Alemu 2012; Maniriho and Nilsson 2018; Mukotami 2014; Munhenga 2014; Scoones, 2016). Most of these studies have focused on migration, livelihood diversification and agricultural intensification. Some researchers explored different factors that determine the probability that farm household participates in non-agricultural income diversification activities and agriculture (Barrett, Reardon & Webb 2001; Eneyew and Bekele 2009; Geremew, Sangho and Fellizah 2017). These researchers grouped livelihood strategies into three categories, namely farming activities, nonfarming activities and agriculture, while (Alemu, 2012) grouped livelihood strategies into four categories, namely non-labour, agriculture, off farming and non-farming. Grouping livelihood strategies enables easy analysis and comparisons as there are a multitude of economic activities that households may engage in, but with classification, the options become comparable.

Hussein and Nelson (1998) point out that the nature of livelihood strategies is context specific as diversification strategies for some may be intensification strategies for others. They observe that migration and agricultural intensification strategies are normally combined with multiple income diversification activities to realise overall rural livelihood strategies.

Brown *et al*, 2006; Alemu, 2012; Leibbrandt *et al*, (2000) were interested in the factors that influence livelihood strategies. (Brown *et al*, 2006) identified these factors as geographic, demographic and finance, while (Alemu, 2012) stressed that factors that influence livelihood strategies are age, gender (demographics) and assets endowments (related to finance in Brown *et al*. case). The two studies concur on the determinants. By the same token, it is of interest to understand what factors drive households to change from one strategy to another as in the case of (Munhenga 2014). The focus of (Munhenga, 2014) was on households shifting from farm livelihood strategy to other livelihood strategies, and credit, remittances, market, distance, affiliation to cooperatives, education and house hold size were the driving factors.

Brown *et al*, 2006; Alemu, 2012 and Leibbrandt *et al*, (2000) were interested in the factors that influence livelihood strategies. On the other hand, (Leibbrandt *et al*, 2000) examined the contributions of different household livelihood strategies on total income generated by each household, which is livelihood diversification. This determines which livelihood strategy is more rewarding to the household. Because of limited capitals, in the context of the SLF reviewed above, livelihood strategies engaged on by the poor are often of low reward. In that context, (Maniriho and Nilsson, 2018) as well as (Urrehman, Jahanzeb and Rana, 2008) recommended governments to provide professional training (human capital) and Internet access through wireless, increase investment in infrastructure (physical capital) and make loan policies favourable (financial capital) to support and sustain livelihood strategies.

It is apparent that households employ different strategies for livelihood, with each strategy potentially contributing differently from the other, depending on access to different capitals by a household. Literature has acknowledged that diversification of livelihood strategies emanates from unpredictability of shocks, trends in the economy

and microeconomic logic of households depending on farming (Hussein and Nelson 1999; Ellis 2000; Warren, 2002). Carter and May (1999) assert that households whether they are poor or non-poor derive their livelihood strategies from diversified activities to reduce risks associated with shocks. The patterns of livelihood diversification depend upon activities chosen based on how labour is remunerated (majority of poor household have access to human capital and labour in terms of quantity in most instances) and on the location of the activity (Mathebula *et al.*, 2017).

According to Reardon, Delgado and Matlon, 1992; Bryceson, 1996; Chambers, 1997; Hussein and Nelson, 1999; Ellis, 2000; Warren, (2002), households derive their livelihood based on key assets available, and their ability to diversify their livelihoods also depends upon key assets availability. This implies that diversification as a strategy is good; however, it is not always possible for all households as the base assets are key.

Loison (2015) conducted a study on diversification of rural livelihood in sub-Saharan Africa. The findings showed that households with sufficient assets are able to diversify their livelihoods between farming and nonfarming activities. Guided by the sustainable livelihoods approach and survey data from farmers in the Three Gorges Reservoir area in China, (Xu *et al.*, 2015) focused on the factors that determine a household choice of livelihood strategy. The study provides a descriptive statistical analysis and ordinal logistic regression model that shows that close to 56% of households exhibit a low dependence on agriculture. The following variables had a significant influence on livelihood strategy: the maximum years of education of any household member, the age of the household head, the number of labourers in a household, household location and formal and informal social networks. Social capital

is one of the cheapest capitals in terms of financial outlays that are limited; however, it takes time to be established and developed as trust among people required interactions of time.

Ellis (1998) asserts that diversification is not only voluntary but also involuntary. Von Braun and Pandya-Lorch (1991) and Mathebula *et al.*, (2017) stated that rural households diversify their livelihood strategies to minimise risk and to respond to shocks. On the other hand, (Barrett *et al.*, 2001) stated that a household diversifies its livelihoods because of push factors such as risk reduction and also pull factors such as increase in income generated. (Khatiwada *et al.*, 2017) investigated the livelihood strategies by rural households in rural Nepal, with the results showing that the majority (61%) of the households diversified their income to non-farm sources. Land holding (natural capital), education, agriculture and skill training (human capital), access to credit (financial capital) and proximity to the road and market centre (physical capital) were the major influencing factors on the adoption of higher returning livelihood strategies. In the same vein, (Geremew *et al.*, 2017) investigated the factors that determine the probability that a farm household participates in nonagricultural income diversification activities in Ethiopia. Using logit econometric and seemingly unrelated regression (SUR) estimations, the study showed that institutional factors such as secured perception of land ownership (natural capital) and becoming membership in cooperatives (social capital) have significant influence on the probability of farm households' participation in non-agricultural activities.

Furthermore, Reardon *et al.*, (1992), Bryceson, (1996), Chambers, (1997), Hussein and Nelson, (1999), Ellis, (2000) and Warren (2002) looked at livelihood diversification as a strategy for risk management. The basic argument was that diversification requires households to choose the second best alternative strategy

source of income. The concluding remarks were that farmers consider risk reduction as more important than income given up in the process of diversification. On the other hand, (Urrehman *et al*, 2008) investigated different livelihood strategies and the factors affecting the livelihood strategies in Abbottabad district, North-West Frontier Province (NWFP), Pakistan. The study shows that only 15.8% of the poorest households were having secondary income from other sources. The average or better-off households were mostly depending on the government and private services, remittances from within the country and abroad, self-employment and farming. Majority (80.4%) of the respondents was involved in secondary source of incomes, and hence, livelihood strategies were classified in diversified group.

Alemu (2012) sought to identify dominant livelihood strategies in rural South Africa applying two approaches – stochastic dominance test and multinomial logistic regression. The study obtained the results that showed households who generate income from wage employment in non-farm and farm activities are better off than other households. The findings by Hosu and Mushunje (2013) on livelihood diversification showed that on-farm diversification can increase income and also reduce risks, whereas the study by (Carter and May, 1999) showed that even though households can derive their livelihood from different activities, wage income earners are better off than households depending on agriculture for income. In the case of Eastern Cape, South Africa, (Toyin and Mushunje, 2016) found that households do not diversify their livelihoods and that they rely upon government cash transfers.

Maniriho and Nilsson (2018) identified determinants of income diversification among Rwandan households using unique panel data obtained from the Integrated Households Living Conditions Surveys of 2011 and 2014. The study applies a binary logit panel model to a representative sample of 3839 households across Rwanda

controlling for latent household-specific factors. The results reveal that education, access to information and communications technology (ICT) and urban areas were among the most important factors that influenced livelihood diversification.

This literature has a gap in the sense that it's the poor who are mainly targeted in livelihood diversification strategies; however they lack access to key assets to diversify their livelihoods. Moreover, the findings of this study are aimed at informing different livelihood strategies and implications for policy relevant to improving rural livelihoods and reducing poverty in Western Kenya.

2.3 Theoretical Framework

2.3.1 Introduction

The research study was guided by Sustainable Livelihoods Analysis Framework and Social Role Theory by (Eagly and Wood, 2012), of sex differences and similarities.

2.3.2 Sustainable Livelihood Analysis Framework

The concept of sustainable livelihood originated from the deepening understanding of poverty of (Sen, 1993) and (Chambers and Conway, 1992). As a paradigm shift in international development thinking, sustainable livelihood analysis methods have become widely used in rural development, poverty alleviation, and livelihood selection (Sustainability, 2018). Among these frameworks, the sustainable livelihood analysis framework proposed by the DFID in the UK is the most widely recognized framework that is used in livelihood research (DFID, 1999). This framework was therefore selected for this study to examine the implications of the declining sugar industry on livelihoods in Western Kenya. According to the DFID framework (Figure 2), the livelihood systems of farmers have five components: vulnerability context, livelihood assets, transforming structures and processes, livelihood strategies, and

livelihood outcomes (DFID, 1999). Of these, livelihood assets are at the core of sustainable livelihoods, including human, natural, physical, financial, and social capital (*Land* 2021). The Vulnerability Context forms the external environment in which people exist and gain importance through direct impacts upon people's asset status (Devereux, 2001). Transforming structures and processes are fundamental in shaping the capital and outcomes of livelihoods. Livelihood strategy is important for rural households to make a living and realize sustainable livelihoods (DFID, 1999).

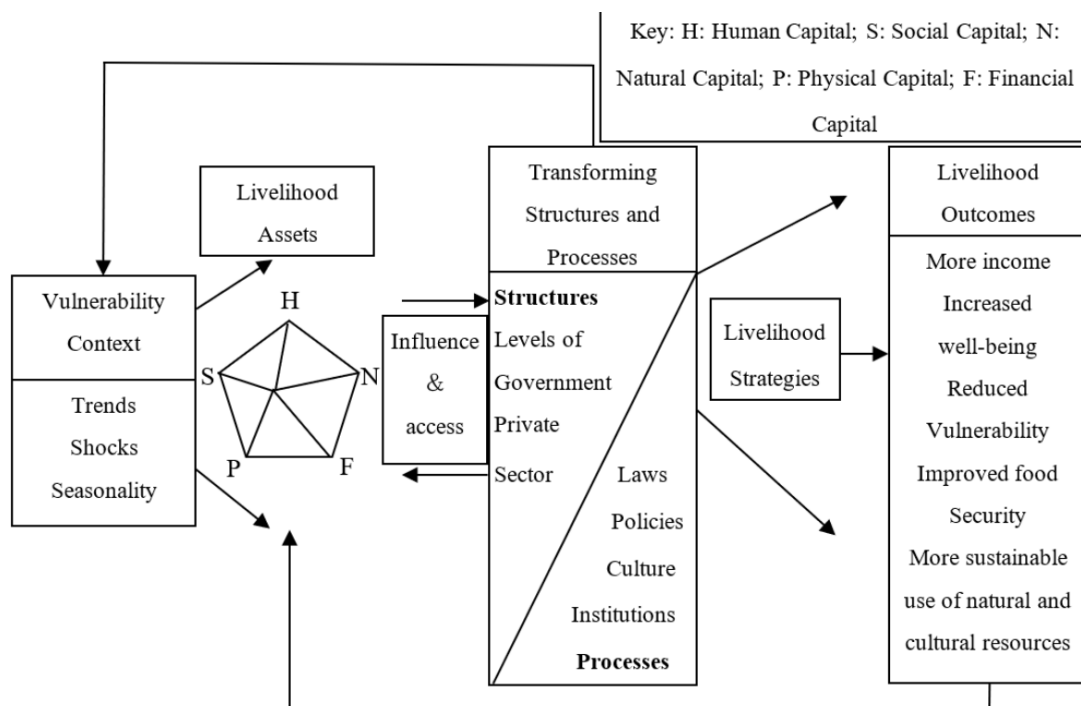


Figure 2.1: The DFID sustainable livelihoods framework

(Adapted from DFID [1999])

The DFID framework provides a standardized tool and systematic research concept for studying the livelihoods of rural households in Western Kenya. The framework informs the problem, purpose, significance and research questions and literature review of the 1st and 3rd objectives of this study. The SLF forms the core of the Sustainable Livelihoods Approach and serves as an instrument for the investigation of poor people's livelihoods, hence its applicability to this study as most households

investigated have been rendered poor due to the declining status of sugar industry in Western Kenya. SLF informs the qualitative nature and methodology of this study as it is a simplification and does not represent the full diversity and richness of livelihoods, which can only be understood through qualitative and participatory analysis at household level. The framework also informs the findings of the 1st and 3rd objectives and recommendations of this study. However the SLF cannot inform the 2nd objective of this study hence the importance of a 2nd theory.

2.3.3 Social Role Theory of Sex Differences and Similarities

This research study was also guided by social role theory of sex differences and similarities by (Eagly and Wood, 2012). The theory argues that sex differences and similarities in behavior reflect gender role beliefs that in turn represent people's perceptions of men's and women's social roles in the society in which they live. In postindustrial societies, for example, men are more likely than women to be employed, especially in authority positions, and women are more likely than men to fill caretaking roles at home as well as in employment settings. Men and women are differently distributed into social roles because of humans' evolved physical sex differences in which men are larger, faster, and have greater upper-body strength, and women gestate and nurse children. Given these physical differences, certain activities are more efficiently accomplished by one sex or the other, depending on a society's circumstances and culture. This task specialization produces an alliance between women and men as they engage in a division of labor.

Although these alliances take somewhat different forms across cultures, task specialization furthers the interests of the community as a whole. Gender role beliefs arise because people observe female and male behavior and infer that the sexes

possess corresponding dispositions. Thus, men and women are thought to possess attributes that equip them for sextypical roles. These attributes are evident in consensually-shared beliefs, or gender stereotypes. In daily life, people carry out these gender roles as they enact specific social roles such as parent or employee. Because gender roles seem to reflect innate attributes of the sexes, they appear natural and inevitable. With these beliefs, people construct gender roles that are responsive to cultural and environmental conditions yet appear, for individuals within a society, to be stable, inherent properties of men and women. To equip men and women for their usual family and employment roles, societies undertake extensive socialization to promote personality traits and skills that facilitate role performance. Additionally, gender roles influence behavior through a trio of biological and psychological processes. Biological processes include hormonal fluctuations that act as chemical signals that regulate role performance. Psychological processes include individuals' internalization of gender roles as self-standards against which they regulate their own behavior as well as their experience of other people's expectations that provide social regulatory mechanisms. Biology thus works with psychology to facilitate role performance.

This theory is therefore relevant to this study based on its broad scope which enables it to tackle various causes of female and male behavior that are of interest across the human sciences. The theory informs the 2nd objective of this study and the literature review on changing gender roles hence the ultimate origins of sex differences in behavior. For instance, the theory shows how the position of women and men in the social structure determines the particular content of the cognitions (i.e., gender role beliefs) that influence female and male behavior in in households in Western Kenya. In addition, the theory informs the findings of the 2nd objective of this study and

identifies the psychological and biological processes that act as proximal determinants of sex differences and similarities. The theory also informs the recommendations made on the Kenyan gender policy.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The study investigated the effects of the declining sugar industry on livelihoods at household level in Western Kenya. This chapter discusses the research paradigm, research design, study location, target population, sampling techniques and sample size, research instruments, pilot study, validity and reliability, data collection methods, data analysis and presentation and finally ethical considerations.

3.1 Research Paradigm

3.1.1 Social Constructivism

Social constructivism is an interpretive framework work whereby individuals seek to understand their world and develop their own particular meanings that correspond with their experience (Creswell, 2013). These meanings are not etched or innate within each individual. Rather meanings are formed through interaction with others (Creswell, 2013). Also referred to as interpretivism, social constructivism has been associated with the post-modern era in qualitative research (Andrews, 2012). Social constructivists view knowledge and truth as created by interactions of individuals within a society (Andrews, 2012). Some researchers suggest that language predates concepts and allows an individual to structure the way their world is experienced (Andrews, 2012). This interpretive framework is useful in phenomenological research studies.

This study applied interpretive framework of social constructivism by asking participants open ended questions (suggested by Creswell, pg. 25). This approach allowed the research participants to fully and freely describe their own experiences.

As the researcher, my role was to listen carefully to their views and interpret the findings based on their background and experiences (Creswell, 2013). The interpretation of their experiences revealed a significant amount of information regarding the declining sugar industry and its implications on livelihoods in Western Kenya. It also offered new insights into the overall study. Applying the social constructionism framework was the most useful approach in gaining access to the views and nuances that influence the individual worlds of these research participants.

3.2 Research Design

Based on the research problem, objectives and the nature of the research questions, this study was guided by phenomenological research design which is experiential and qualitative in nature. Phenomenology originates from the work of Edmund Husserl's phenomenological philosophy Moran (2001); Groenewald (2004) whose tenets have permeated research in psychology and sociology. It studies human experience and ways things present themselves to us through experiences and thus the meanings things have in our experiences. It also focuses on the experience as lived by a person in order to obtain comprehensive descriptions that provide the basis for a reflective structural analysis that portrays the essence of the experience (Patton, 2002; Groenewald, 2004). Based on these experiences, the researcher uncovers and interprets the inner meaning of the subject's cognitive processing of the experiences, getting the true meaning of the phenomenon.

Phenomenological inquiry focuses on the experience as lived by a person in order to obtain comprehensive descriptions that provide the basis for a reflective structural analysis that portrays the essence of the experience (Patton, 2002; Groenewald, 2004). By penetrating deeper and deeper into the reality, the researcher uncovers and interprets the inner essence of the subject's cognitive processing of the experience

thus getting into contact with the true meaning of the phenomenon. However, to arrive at the true meaning of the phenomenon, the researcher has to bracket the outer world and the personal biases in order to successfully achieve an objective view of the essences (Laverty, 2003). Bracketing involves identifying one's presuppositions about the nature of the phenomenon and then attempting to set them aside so as to see the experience as it really is.

The researcher engaged households' heads and their wife/wives in a face to face interaction in order to explore and describe their experiences in the wake of the declining sugar industry and its implications on their livelihoods. This led to sharing experiences on effects of the declining sugar industry on livelihoods, reconstruction of gender roles and coping strategies households are applying to cope with economic changes that are taking place in Western Kenya. Phenomenology approach was therefore deemed as the most appropriate design for this study because it aims to explore household experiences and meaning they derive from a declining economy and how they are coping with the implications that come along with the declining status of the sugar industry in Western Kenya.

3.3 Study Location/ Description

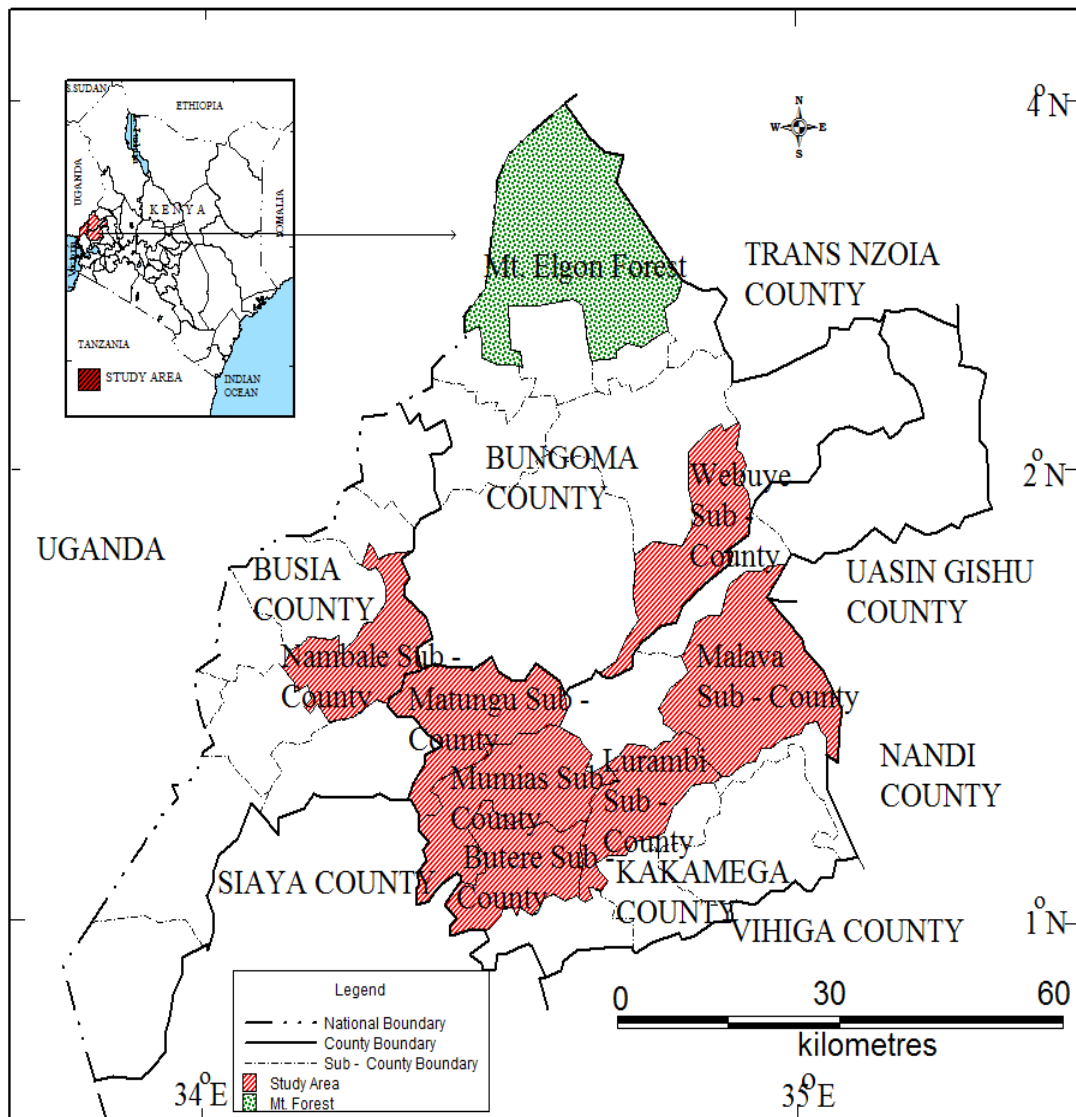


Figure 3.1: Map of Western Kenya Region showing Sugar Belt Zones

The study was located in Western Kenya, covering Kakamega, Bungoma and Busia counties. The study area is located at latitude of 0.619424 degrees North and longitude of 34.685651 degrees East. The region has a total of five sugar industries, Mumias, Nzoia, West Kenya, Butali and Busia sugar companies which also form the sugarbelt zones in Western Kenya. The zones are located on rich fertile soils which are suitable for sugarcane farming. There is no significant cash crop in the entire region apart from sugarcane; maize is largely grown for subsistence use and consumption. High levels of rainfall means in the region translate into high yields of

sugar production. The dense population of Western Kenya form important labor reservoirs for the sugar factories in the region. The region is also served by a good physical road network system, such as good farm roads and the allied transport facilities to facilitate transportation to and from the factories. The region is mainly occupied by the Luhya community of Western Kenya who practice farming as their major source of income and livelihood.

The study was carried out within Mumias, Nzoia, West Kenya and Busia sugar belt zones. 3 (three) locations were selected from Mumias sugarbelt zone; because Mumias sugar factory is the most affected in the declining sugar industry in Western Kenya. 1(one) location was selected from each sugarbelt zone in Nzoia, West Kenya, and Busia for purposes of inclusivity and representation in the region. Specific community locations included Lubinu, Ibokolo and Kholera in Mumias sugar belt zone; Milo in Nzoia sugarbelt zone; Lutayi in West Kenya sugar zone and Bukhayo in Busia sugarbelt zone because of their intensive cultivation and reliance of sugarcane production as their major source of income and livelihood. These sugar belt zones provide the most relevant households that have been directly affected by the declining sugar industry in the region. The zones also provide a good location to gain in-depth insights, experiences and full understanding on how the declining industry has affected livelihoods in Western Kenya.

3.4 Target Population

The target population consisted of households' heads and wife/wives whose livelihoods depend on sugar industry as their major source of income and livelihood in Western Kenya. Based on these households it was possible to share their views and experiences on the declining sugar industry and its effects on their livelihoods and the

region as a whole. They also shared their norms, values and perceptions on the changing gender roles at household level due to transitional economic changes in the region. They also shared their insights and coping strategies they have adopted to sustain their livelihoods at household level.

3.5 Sampling Technique and Sample Size

The study comprised 36 (thirty six) households where 15(fifteen) households were purposely selected from Mumias sugar belt zone and 7 (seven) households selected from each sugar belt of Nzoia, West Kenya and Busia. Out of that 34 (thirty four) men and 52(fifty two) women were interviewed. The sample size was assumed to be large enough as phenomenological design deals with small convenient samples as (Patton, 2002), (Creswell, 2009), argue that, in an in depth interview, a small sample provides depth by interviewing a limited number of information rich participants. Moreover choosing a small sub-set sample size reduces time cost and accessibility which often prohibits the collection of data from every member or about every item (Lewin, 2005). Conducting research among the entire population can be time-consuming and costly. According to (Spring, 2007), most research conducted among human beings, places and things focus on a small sample size, as the chances of studying the whole population are limited. Therefore, a representative sample of the population is selected, and the information gathered from the selected sample is used as data (Spring, 2007)

The study applied purposive sampling where eligible households were purposely identified based on their reliance on sugarcane farming as their major source of income and livelihood; and their knowledge, experience and understanding of the declining sugar industry in the region. Selection was done one week before the

commencing of the data collection process and reconfirmation of the households' participation through the village elders a day before. The study engaged household heads and their wife/ wives in case of polygamous families on the effects of the declining sugar industry on their livelihoods and gender roles in their homes and how they were coping with the economic changes in the region.

3.6 Pilot Study

A pilot study involves trying out a research instrument to a small number of respondents from the intended sample (Hayes, 2000). In this study, data collection methods were pre-tested by administering them to a group of men and women in Matayos Sub County in Busia sugar belt zone. The aim of the pilot study was to ascertain that the questions were clear and to establish the general attitude of the participants. Any misleading questions in the interview schedule and FGDs that were ambiguous were modified to suit the study. Pilot testing also helped the researcher to estimate how long the actual data collection process would take.

3.7 Data Collection Methods

3.7.1 Qualitative research method

This study was conducted using the qualitative research method. The qualitative research method was chosen because it provides an in-depth and interpretive understanding of the social world through learning about people and their social life, experiences, perspectives and life histories facilitated by interacting with the participants (Ritchie *et al.*, 2013). Qualitative research studies phenomena in their natural settings, attempts to make sense of, or interpreting phenomena in terms of the meanings people bring to them. The qualitative research methodology implies an emphasis on the qualities of entities and on processes and meanings that are not

experimentally examined or measured (Maxwell, 2004). The qualitative research methodology is an inductive research strategy that allows interaction between the participant and the researcher, and it is from these interactions that various themes can be identified (Guest and McQueen. 2012).

The qualitative research method gave an opportunity for participants to provide an in-depth narration of their experiences. In addition, this method made it possible to understand and identify the effects of the declining sugar industry on household livelihoods; construction of household gender roles in Western Kenya and coping strategies households were adopting. This study also made it possible to explore household heads and wife/wives views and perspective, by engaging them in in-depth interview and listening to their opinions and insights to ascertain effects on livelihoods, gender roles and relations and their coping strategies at household level, in the context of the declining sugar industry in Western Kenya. According to (Rodda, 1991), the positions women occupy in households and communities is often determined by traditional values and customs shaped by patriarchy. (Cuddy, 2015) opined that women have not been economically active and their duties are usually centred around domesticated activities such as to conceive, look after children and do household chores. The interaction with household heads and their wife/wives opened-up a space for different views, opinions on the implications of the declining sugar industry on livelihoods at household level in Western Kenya.

The benefits of using the qualitative research methodology are rooted in its emphasis on the thick description of participants' narratives, which includes obtaining rich, real and deep data which describes the everyday real life and patterns of actions and meanings from the perspective of the sample studied. Qualitative research methodology emphasizes gaining first-hand information regarding the lived

experiences of the sample studied. (Kennedy, 2014) indicates that the purpose of qualitative research methodology is to provide the researcher with the perspective of target audience members through immersion in a culture or situation that involves direct interaction with the people under study. Thus, the objective of the qualitative research methodology is to promote better understanding and increase insights into the human condition that increases understanding of human behaviour and experience. This method gives remarkable insight into the social problems.

3.7.2 In-depth interviews

Base on its study's qualitative and descriptive nature, data was collected using one-on-one in-depth interviews to allow interaction between the respondent and the researcher using specific questions of this research. (Rowley, 2012) defined in-depth interviewing as a one-on-one interaction between the researcher and the informant, directed towards achieving and understanding the participant's view and perspective of the social phenomena of interest. Additionally, the nature of the study requires participants to freely express their perceptions and views towards the topic.

Several questions were posed to the respondents on a one on one in-depth interview with regard to their knowledge on effects of the declining sugar industry on livelihoods and gender roles in the household. Interviews took an average of 25 to 40 minutes maximum. This was due to the expression of each participant, particularly women on gender roles within the household. Therefore, the in-depth interviewing research instrument helped participants to express themselves better. Both Kiswahili and Luhya language was used on which language the participant felt comfortable to express themselves.

3.7.3 Focus Group Discussions

The FGDs comprised of general questions on the effects of the declining sugar industry on livelihoods and the region as a whole. The responses were used to supplement the data that had been collected during the in-depth interviews. There were 4 FGD's in total, which were conducted in Mumias, Nzoia, and West Kenya and Busia sugar belt zones. FGDs should generate sufficient data to allow for comparisons and to generate and test theoretical ideas (Barbour 2005). A typical size of an FGD is 6 to 12 participants, however smaller groups are also fine and informative, giving all participants enough time and opportunity to share. This approach ensures sufficient homogeneity to facilitate comparison between groups and sufficient diversity within groups (Khan and Manderson, 1992; Barbour, 2005). The FGD included 23 men and 18 women; Mumias and Nzoia sugar belt zones had 12 participants each while Malava and Nambale had 8 and 9 participants respectively, making a total of 41 participants. In a FGD participants are typically selected to participate in a qualitative research based on their transparent criteria such as their knowledge, life experience, particular characteristic or role in the a group/community (Khan and Manderson 1992). The FGD's participants included both men and women; their education level ranged from Standard 2 to Form 4 and age was between 18 years to 70 years old. The discussions addressed effects of the declining sugar industry on livelihoods at household level, changing norms, values, believes and perceptions on what constitutes a man and a woman and coping strategies used by both men and women to sustain their livelihoods at household level. This method helped to generate more information which had not come out in the in-depth interviews as the participants felt more relaxed.

3.7.4 Key Interviews

Key interviews covered key questions on key issues that manifested in the early stages of the establishment of sugar industry in the region and the effects of the declining industry on livelihoods and the region's economy in general. A total of 8 key-informants were identified, Mumias belt zone (1 former MSC transport officer and 1 small scale farmer/juggery miller), Nzoia sugar belt zone, (1 NSC cane cutter and 1 large scale farmer), West Kenya sugar belt zone (2 large scale farmers), and Busia sugar belt zone (1 former MSC agricultural extension officer and 1 large scale farmer). These key informants were purposely included in this study as they are knowledgeable in matters related to the declining sugar industry in Western Kenya. Small scale farmers were included to provide data and insights that could not be obtained from large scale farmers. The informants offered confidential information that would not be revealed in other settings. They told of incidents, local happenings and conditions that have led to the declining sugar industry and its implications on livelihoods in Western Kenya.

3.7.5 Observation

Observation was an ongoing and key source of information throughout the research process. The role of the researcher was to conduct the interview and note some non-verbal cues of household heads and wife/wives on the effects of the declining sugar industry on livelihoods, gender roles and coping strategies at household level, hence rich information and clear expressions from the participants was obtained. The use of open-ended questions allowed the researcher to explore the turning points on the effects of the declining sugar industry on livelihoods, the changing gender roles and perceptions and the strategies they had adopted to cope with the situation. According to (Hayes, 2000), open-ended questions allow the participants freedom to express

their opinions and are less open to the researcher's personal biases. This method helped to enhance validity as the interviewer was able to capture even the implicit messages by carefully observing the non-verbal cues of the participants.

3.8 Data Interpretation and Analysis

Data analysis started immediately after the researcher gathered the qualitative data from the study participants. The study adopted the thematic analysis to code the qualitative data collected from the field into themes. According to (Alhojailan, 2012), thematic analysis is a procedure of analysing data according to themes and patterns aligned with the key points raised by participants during the interviews. Additionally, thematic analysis remains a qualitative analytical technique comprising of patterns or themes embedded in the data, and reporting on the emerging themes (Braun and Clarke, 2006). The emerging themes and patterns were identified and analysed. Data analysis started by listening to the interview clips and transcribing of the interviews. This procedure was carried out by the researcher in order to understand the strengths and weaknesses of the questions and the responses provided by the participant. Most of the interviews were conducted in Kiswahili and Luhya but were later transcribed into English. The translation was done by the researcher based on proficiency in both languages.

According to (Slembrouck, 2007), transcription in research involves a translation or transformation of sound or image from recording to text in a study. Transcription involves close observation of data through repeated careful listening, and this is an important step before commencing data analysis. This process helps the researcher to familiarise herself with the data. Each participant's interview audiotape was listened to repetitively in order for the researcher to become more familiar with the content and to be able to remember the content of the information provided by each

participant. This procedure was carried out several times to ensure reliability in decoding the information from the audio recording of the interviews. The valuable and rich information from the interviews resulted in the identification of essential themes and topics. Moreover, similar ideas and shared information that emerged were examined. Therefore, related ideas, patterns and themes were identified and analysed according to their significance to the objectives of the study.

3.9 Validity Reliability and Reflexibility of the Study

Validity refers to the question of whether a procedure is actually measuring what it claims to measure (Gravetter and Forzano, 2009). This study ensured content validity by deriving relevant representative questions to cover the study objectives. The questions addressed household experiences on how gender roles were being reconstructed in the event of a declining economy effects on livelihoods, gender roles and the coping strategies families have adopted to cope with the economic changes that are taking place in the region. The in-depth interview helped to generate the required data as the questions covered the objectives of the study exhaustively. The respondents were exposed to a standard list of questions derived from the objectives followed by a few other questions depending on the participants' responses. This allowed the interviewer more interactions with the participants and clarification of questions that the participants may not have understood.

The use of FGDs and participant observation ensured triangulation of the method of data collection and this boosted validity by generating more information on the study objectives. Findings were also validated through triangulation of data from the FGDs, in-depth interviews and the field notes. Validity was enhanced further as the researcher worked with experts to translate the transcripts from Kiswahili into English.

Key informants were used to generate information on key issues that have affected the livelihoods of most households and the region as a whole. They were also used to generate important information on the communities' beliefs, values and norms that govern people's views and perceptions, as they experience the changes that were taking place in the society. The informants were run through a series of questions that helped to gather data through free interactions

Validity also means the researcher checks for credibility of the findings from the participants (Coolican, 2004; Creswell, 2009). The researcher ensured credibility by getting feedback from the respondents on the themes that emerged for accuracy and confirmation of the findings.

The term reliability refers to the degree or extent to which a test or procedure or a study will yield the same results if done repeatedly under the same circumstances (Gravetter and Forzano, 2009; Forrester, 2010). The researcher ensured reliability by carrying out a pilot test to ensure the reliability of the research instruments. This test enabled the researcher understand whether the tools and questions posed were generating relevant information on the study and make corrections where necessary

During the pilot test and the actual data collection period, the researcher introduced herself in Luhya language and established a good rapport with the respondents, explained the purpose of the study and assured them of confidentiality and privacy. This helped to break the ice between the respondents and the researcher, making the participants feel free and confident in expressing themselves.

To remain objective during data collection, the researcher utilized the process of bracketing. According to (Miller and Crabtree, 1992; Moustakus, 1994; Boyd, 2001), bracketing means the researcher suspends his/her own preconceptions on the

phenomenon under investigation. In this case, the researcher applied the concept of bracketing by consciously suspending all her previously held assumptions concerning the effects of the declining sugar industry on livelihoods during the data collection and transcription stages. This helped the researcher to guard against any biases and to capture the authentic experiences of men and women regarding their views and perceptions on declining sugar industry and its effects on their livelihoods and gender roles and strategies they were applying to mitigate the challenges.

Reflexivity is often a considered integral aspect of qualitative research, and it involves the researcher's understanding of the processes of conducting research, so personal bias would not interfere with its outcomes (Hardy *et al.*, 2001). Reflexivity pertains to the analytic attention of the researcher's role in qualitative research (Dowling, 2006). As a concept, it refers to a certain level of consciousness. Reflexivity entails self-awareness which means being actively involved in the research process (Lambert, Jomeen and McSherry, 2010). As a female and resident of Mumias sugar belt zone, researching on livelihoods and gender roles construction within the households, it was important to not impose personal bias on the participants. During the process of the interview, the research ensured that the objectives of the study were achieved without compromising the validity and reliability of the findings.

3.10 Data Collection Procedures

Data was collected between August and October, 2019 taking a total of 2 months. After obtaining the research permit from the National Council of Science and Technology (NCST), the researcher attached it to the introductory letter from Moi University and visited the chiefs' office for introduction purposes and to explain the nature and purpose of the study. The researcher conducted a preliminary meeting with

participants before the commencement of the interviews. This process was to create a mutual interaction between the researcher and the participant which enabled the participants' partaking in the interview to express themselves better when the interview is held. Gluck (2002) agreed that a preliminary meeting between the interviewer and the interviewee is crucial since it helps to break the ice and create confidence. The researcher conducted all the planned activities as scheduled and assured confidentiality of information to all participants and respondents in the study. To break the ice between the researcher and the respondents, the researcher introduced herself in their native language which also enhanced clarification and understanding during the research process.

3.11 Ethical Consideration

The researcher observed all protocol during the research process. Permission and clearance of any documentation was sorted before the research commenced. The researcher obtained authorization to carry out the research from the University Graduate School and a permit from the National Commission for Science, Technology and Innovation (NACOSTI).

Great care was taken to ensure that confidentiality and individual privacy of the participants were upheld. Participants have the right to know if they are going to be implicated in any way by participating in the research (Bless, Higson-Smith and Kagee, 2006). This process was done by informing the participant that information that could be traced to an individual who participated in the research will not be used; nonetheless, 'household' and 'zone' instead of the original names will be used for the report writing.

Participants who took part in the interview were assured of their confidentiality and that their identity would be kept anonymous. This process was done by informing the participants that pseudonyms would be used instead of their original names. Participants were also assured that their participation is voluntary.

CHAPTER FOUR

DATA PRESENTATIONS AND DISCUSSION OF THE FINDINGS OF THE 1ST OBJECTIVE

4.0 Introduction

This Chapter presents and discusses the findings of the study on the analysis of the effects of the declining sugar industry on livelihoods at household level in Western Kenya

4.1 Sample Characteristics

Table 4.1 to 4.4 displays the sample characteristics of participants. A total of 86 (eighty six) participants were sampled, including 34 (thirty four) men and 52 (fifty two) women. Consent to interview the participants was sought through the respective area chiefs' office. The sample included more women than men because most households in Western Kenya are polygamous in nature. The tables' shows that participants interviewed were between 18 (eighteen) to 70(seventy) years old and married, however a few were widowed. Most men were occupied with sugarcane farming activities, while some women remained at home as housewives as others engaged in microenterprise activities/household helps in their neighbourhood.

Table 4.1: Mumias sugar belt zone

Household	No. Participants	Gender.	Age	Marital status	occupation
1 st household	4	M	68	Married	Former sugarcane farmer
		F	51	Married	Housewife
		F	40	Married	Microenterprise
2 nd household	2	M	56	Married	Sugarcane farmer
		F	51	Married	Microenterprise
3 rd household	3	M	58	Married	Former Sugarcane subsistence farmer
		F	47	Married	
		F	43	Married	Microenterprise
4 th household	1	F	57	Widow	Jugger- Miller
		F	43	Co-widow	Microenterprise
5 th household	2	M	50	Married	Former cane cutter
		F	45	Married	Micro-enterprise
6 th household	4	M	66	Married	Former Sugarcane farmer
		F	50	Married	Housewife
		F	45	Married	Househelp
7 th household	2	M	53	Married	Former sugarcane cutter
		F	46	Married	Househelp
8 th household	3	M	50	Married	Sugarcane farmer
		F	43	Married	Microenterprise
9 th household	2	M	52	Married	Sugarcane farmer
		F	39	Married	Milk Vendor
10 th household	3	M	69	Married	Retired MSC staff
		F	55	Married	Housewife
		F	47	Married	Housewife
11 th household	2	M	55	Married	Pastor
		F	50	Married	Housewife
12 th household	4	M	70	Married	Retired MSC staff
		F	56	Married	Housewife
		F	47	Married	Housewife
13 th household	2	M	44	Married	Former cane-cutter
		F	38	Married	Micro-enterprise
14 th household	3	M	50	Married	Sugarcane farmer
		F	45	Married	Housewife
		F	43	Married	Housewife
15 th household	2	M	47	Married	Sugarcane farmer
		F	35	Married	Housewife

Table 4.2: Nzoia sugar belt zone

Household	No. Participants	Gender.	Age	Marital status	Occupation
1 st household	2	M	51	Married	Cane-cutter
		F	42	Married	Housewife
2 nd household	3	M	63	Married	Sugarcane farmer
		F	48	Married	Housewife
		F	39	Married	Housewife
3 rd household	2	M	40	Married	Sugarcane farmer
		F	29	Married	Housewife
4 th household	3	M	47	Married	Cane-cutter
		F	40	Married	Housewife
		F	34	Married	Microenterprise
5 th household	2	M	54	Married	Sugarcane farmer
		F	46	Married	Housewife
6 th household	2	M	63	Married	Sugarcane farmer
		F	51	Married	Microenterprise
		F	39	Married	Housewife
7 th household	2	M	43	Married	Sugarcane Farmer
		F	37	Married	Housewife

Table 4.3: West Kenya sugar belt zone

Household	No. Participants	Gender.	Age	Marital status	occupation
1 st household	2	M	48	Married	Sugarcane farmer
		F	37	Married	Housewife
2 nd household	2	M	40	Married	Sugarcane farmer
		F	37	Married	Posho-Miller
3 rd household	3	M	52	Married	Sugarcane farmer
		F	49	Married	Agribusiness
		F	36	Married	Poultry keeping
4 th household	2	M	39	Married	Sugarcane farmer
		F	33	Married	Casual work
5 th household	3	M	57	Married	Sugarcane farmer
		F	55	Married	Agribusiness
		F	41	Married	Poultry-Keeping
6 th household	2	M	46	Married	Sugarcane farmer
		F	37	Married	Casual work
7 th household	2	M	37	Married	Sugarcane farmer
		F	32	Married	Microenterprise

Table 4.4: Busia sugar belt zone

Household	No. Participants	Gender.	Age	Marital status	occupation
1 st household	2	M	44	Married	Cane cutter
		F	36	Married	Pig-Rearing
2 nd household	3	M	52	Married	Sugarcane farmer
		F	41	Married	Housewife
		F	32	Married	Microenterprise
3 rd household	2	M	41	Married	Cane cutter
		F	34	Married	Housewife
4 th household	2	F	45	Widow	Sugarcane farmer
		F	39	Married	Pig-Rearing
5 th household	3	M	59	Married	Sugarcane farmer
		F	46	Married	Sugarcane farmer
		F	39	Married	Sugarcane farmer
6 th household	3	M	67	Married	Sugarcane farmer
		F	49	Married	Microenterprise
		F	44	Married	Housewife
7 th household	4	M	41	Married	Sugarcane farmer
		F	38	Married	Microenterprise

4.2 The Regions' Economy

The study found out that the establishment of sugar industry in Western Kenya led to growth and development of businesses, industries, urbanization and structural adjustment programs in the region.

All household interviewed in Mumias, Nzoia, West Kenya and Busia sugar belts acknowledged that Mumias Sugar factory was the major backbone of their households' livelihoods and the region's economy as a whole. Both men and women interviewed in the 4 sugar belt zones acknowledged that their livelihoods were influenced and informed by Mumias sugar factory. They all shared that Mumias town was their major centre where they traded and transacted business at maximum profits. Whereas most households in Mumias sugar belt zone reported that they owned financial wealth and resources accrued from sugarcane plantation which they sold to Mumias sugar factory, on the other hand most households in Nzoia, West Kenya and Busia reported that they owned money from the lucrative businesses they transacted in Mumias town and its environs. Most men reported that money was not a problem

hence adequate provision of household needs and livelihoods for their household members. Most men in Mumias sugar belt zone reported that they made orders to businessmen who operated in the region to supply maize to their various households. “Kenya Rundas” is the business that flourished and traded in maize supply in the region; men bought bicycles to help them transact business within the region more easily. Men transported maize on bicycles all the way from Bungoma and Mt Elgon, Kabras and Chimoi regions to households in Mumias sugar zone. Millet and sorghum came from across the border as some men cycled the product from Bukhayo to Mumias. Each bicycle ferried a minimum of 1 to a maximum of 1 ½ sacks of maize for supply in households. 1 tin of maize “gorogoro” was going for 3.50 Ksh. and that business in food stuff supply thrived. Most men recalled their experiences and shared that, people had solid money in their homes which they kept under their beds, some men carried along their money in all their pockets, borrowing and lending money to a neighbor or a friend was not an issue of discussion as sugarcane plantations served as a symbol of wealth and financial assurance. Some sold their sugarcane stalks to ready buyers for quick and emergency needs of the borrowers.

“People had money in Mumias and the town served as a market for our products, in the evening you could count a lot of money from the sales you have made on that day”. **Household (Busia sugar belt zone)**

“We used to get orders from household heads in Mumias; some order 2-3 sacks while others could even order upto 5 sacks of maize at ago” **Household (Mumias sugar belt zone)**

“I used to go to Uganda 3 times in a day to bring millet, sorghum, beans and groundnuts to sell to our customers who mainly located in Mumias” **Household (Busia sugar belt zone)**

In FGD held in Mumias, Nzoia, West Kenya and Busia sugar belt zones, participants reported that for decades Mumias Sugar factory has sustained livelihoods of thousand households in Western Kenya. Participants reported that MSC controlled the market

economy of the region and the country as whole. The factory employed its staff and workers from within the region and across the country and borders in Uganda. Participants also reported that the factory attracted business within the region and country as whole and across the border in Uganda. Transport and automotor industry flourished in the region as business men and women invested in 'matatu' business operation due to high rates of commuter movements within the region for various business transactions with the factory and other businesses. Buses operated between Mombasa and Mumias as their destination town. Most famers travelled to Mombasa for leisure and holidaying and back to Mumias to continue with business as usual. Participants reported that *Boda-Boda* industry came in as a new development in the region. Initially *boda-boda* industry was operated on bicycles within the region but as the sugar industry thrived motorbikes replaced bicycles. Those who continued to operate on bicycles lost their customers as most of them switched to motorbike operation to retain their customers. Participants also reported that motoring and auto-spare parts industry flourished in the region based on the fleet of vehicles the factory operated. Most factory staff especially managerial category ordered and owned their own cars which prompted high flow of vehicles and spare parts into the region. Mechanical workshops were established all over the region especially at Shibale and Mumias town. Banking industry also thrived. It was reported that the factory attracted international banks such as Barclays and Standard Chartered Bank, other prominent banks in Mumias town included Kenya Commercial Bank, Cooperative Bank of Kenya and Family Bank. Micro finance institutions like FAULU and Kenya Women Finance Trust also established themselves in Mumias town and had offices at village level for easy transaction and access to finances. Large super stores and supermarkets like Khetias opened doors in the factory premises where they sold commodities such

as motorbikes, television sets, music systems that circulated at high rates. Other superstores included *Mama Watoto* supermarket and Thiro's superstore and wholesalers. Most women traded in Cereals, foodstuff and vegetables from Mt Elgon and across the border in Uganda for supply to the factory's grocery market and cafeteria, others supplied to the high population and mushrooming households at Shibale and Mumias towns. Bars were busy and commercial sex workers came from all over the country and across border in Uganda. Cane cutters came as far as Kagera in Uganda while commercial sex workers came from Uganda while others came from Eastern and Central regions on Kenya.

'Prominent businessmen and women settled and established their businesses in Mumias, for instance the famous Thiong'o who owned large stores and supermarkets in town' **FGD (Mumias sugar belt zone)**

"People came from all over the region to come and do activities like weeding, some came as far as Mbale in Uganda because they heard that there is a lot of money at Shibale" **FGD (Mumias sugar belt zone)**

"Our children depended on the company as casual laborers, cane cutters to sustain their livelihoods and their immediate household members" **FGD (Mumias sugarbelt zone)**

"Cane cutters rented houses within our community and paid us a sum of 500 Ksh, which was a lot; they bought a lot of food stuffs and clothes for their families and this boosted our economy" **FGD (Busia sugar belt zone)**

"Men had money and businesses were thriving, bars operated 24 hours and women made money from their small businesses at Shibale" **FGD (Mumias sugar zone)**

"Women were here in all color tones, shape and height, others were extremely light while others were dark in colour, some were tall and others were short, men had a variety to choose from, however HIV/AIDS became rampant at Shibale", **FGD (Busia sugar belt zone)**

Key informants in Mumias, Nzoia and Busia, sugar belt zones reported that the establishment of Mumias and Nzoia sugar factories came in with structural adjustment programs in the whole region. Physical and structural adjustment

programs were witnessed throughout the region. Mumias grew up to be the major business town in all business transactions between the factory and farmers. Small centres such as Shibale in Mumias in Mumias sugar belt zone, Bukembe in Nzoia sugar belt zone and *Kambi ya Mwanza* in West Kenya sugar belt zone and Nambale in Busia grew up to large centers with vibrant multiple businesses. Road network and system in the region was upgraded for easy transportation of sugarcane from farms and communication in the whole region. The Booker family saw this transformation in Mumias sugar belt while Five Cail Babcock saw it in Nzoia sugar belt zone leading to well-planned physical road system and network in the region. The government also completed its road systems and network programmes in the region linking Mumias, Nzoia, West Kenya and Busia sugar factories to towns like Kakamega, Bungoma, Kisumu, and Eldoret and across the border in Uganda. A key respondent in West Kenya reported that the completion of European sponsored road system that passes through Kakamega town joining Busia-Malaba highway to Uganda has also increased the vibrant operations of West Kenya sugarcane factory in the region and across the border in Uganda. A Key informant in Mumias sugar belt zone, who also happens to be a former employee of Mumias sugar factory in the transport sector, pointed out that banking industry and financial institutions thrived in Mumias town to serve the factory, farmers and business men and women in the region. He reported that Mumias sugar factory led to the growth of motoring and spare-parts industry in the region. He also shared that the factory made large orders and imported many vehicles and spare-parts from foreign countries for the factory operations in its transport sector. Factory workers also contributed to the growth of the industry as many owned their own personal vehicles for their own private use and easy mobility.

*I worked in the transport sector, the factory made large orders and imported many vehicles and spare parts from Mombasa, factory staff also ordered cars for their own personal use. **Key informant (Mumias sugar belt zone)***

*'Businesses thrived; men and women were into business, some could go to Uganda three times in a day due to high demand of millet and sorghum for their customers in Mumias' **Key informant (Busia sugar belt zone)***

Based on observation, the researcher observed that the establishment of Mumias and Nzoia sugar factories in Western Kenya came along with structural and adjustment development programmes in the region. Road network systems and structures were witnessed in most remote areas of the region. Based on the non-verbal cues expressed by men and women during the research interviews the researcher observed that livelihoods were vibrant and men had a strong financial background and foundation, they owned large tracks of land under sugarcane cultivation. Men's status as household heads and sole breadwinners of the family was upheld and cherished by all household members and the society in general as most women were attracted to men with an endowed wealth and prosperity.

4.3 Poverty

The study found out the poverty as phenomenon is wide spread in the whole region; however it's experienced in different dimensions within the region.

During in-depth interviews at household level in all the 4 sugar belt zones men reported that money was a scarce commodity in their households due the declining status of Mumias and Nzoia sugar factories. Both men and women reported that a day can pass by before they get hold of a 100 Ksh. note. Most men admitted that they could not meet their household needs as expected of them by the society. They reported that paying school fees for their children was a challenge to them. Women on the other hand reported that it is worse for their girl, if parents cannot afford to buy for

them sanitary towels then they will fall prey to men around. Both men and women reported that unemployment and poverty among youth has led to high levels of insecurity in the zone. Most men and women their views that the decline status of Mumias sugar factory has deprived the youth their means of livelihoods and source of income as most of them were employed by the factory as casual labourers. However some households reported that the high insecurity levels in the zone was due to fight over scarce resources at household level. A man, who also happens to be a church leader, in Mumias sugar zone reported that church offerings have declined and the church can no longer carry out its development programs as planned by the church administration.

“Am just looking for five hundred shillings and I cannot find it anywhere, when Mumias sugar company was operational, borrowing twenty to thirty thousand from a neighbor was very easy, sugarcane served as a guarantor”. **Household (Mumias sugar belt zone)**

“Poverty is the order of the day, we have the haves and the have-nots, and there is no solid money in people’s hands” **Households (Nzoia sugar belt zone)**

I am a pastor and I used to head a church at Shibale, livelihoods thrived and my church members prospered, today there is no development in the church because the congregation depended on Mumias Sugar Company and sugarcane farming” **Household (Mumias sugar belt zone)**

“For our girls it is even more dangerous because if parents cannot buy sanitary towels, they will get it from somewhere else, hence the increasing levels of teenage pregnancies, even HIV” **Household (Mumias sugar belt zone)**

However, a few households in Mumias sugar belt zone reported that they were not poor, they still provide for their wives and children because of sheer hard work, discipline and investments they made in their youth. They shared their views that for one to prosper and gain wealth in life, one has to do a lot of investments, savings and be economical. Some men reported that apart from reaping from the thriving and

flourishing sugar cane factories, they were also employed elsewhere. Men reported that although they owned large acres of land that they had put under sugarcane cultivation, they also leased land for extra sugar cane cultivation and bought sugarcane stalks from farmers which earned them good amounts of money.

“As a man, I worked hard to provide for my family. I owned 3 acres of land which I inherited from my parents and leased 4 acres for sugarcane plantation but I did not only rely on sugarcane farming but also did business; I bought and sold maize to Kitale cereals board. Besides, I owned 42 acres of land in Trans Nzoia that I cultivated maize for sell. I used my skills to survive, through business, land leasing and rental housing. I worked hard; slept hungry did not steal but shear hard work. Even if I die now every household owns and knows its property and income”. **Household (Mumias sugar belt zone)**

“My wives get their basic and household needs from the rents, if one gets 30 thousand Kenya shillings per month, that is enough for her family needs and livelihoods, they collect the rents and utilize it based on their needs, these women get free things, mine is just to eat”. **Household (Mumias sugar belt zone)**

“I had the money to provide and cater for my household expenses adequately. Despite the fact that I was working, I also leased farms and bought stalks from farmer to amass wealth and sustain my household’s livelihoods,” **Household (Mumias sugar belt zone)**

In a FGD in Mumias sugar belt zone, participants reported that poverty was high in most households in the zone. Participants shared that the most experienced problems in their homes were lack of financial resources to meet their major household needs such as school fees, lack of jobs especially among the youth hence high rates of reported crime incidences in the zone. Participants reported that large superstore like Khetias supermarket; grocery market and cafeteria that were located in the company’s premises have closed down. ‘Kenya Rundas’, a maize business that once thrived in the region has also collapsed. Bars and food supply stores at Shibale market have closed down. Women who trade in illegal illicit brews like ‘changa’ and ‘busaa’ reported very low sales in their businesses at the end of the day. Participants also reported that most commercial sex worker from Eastern, Central and Uganda have

moved out of Mumias and Shibale. In Busia sugar zone, most participants reported that their trade links with Uganda in grain foodstuff has collapsed, hence high levels of poverty registered in the zones.

“Our children depended on the company as casual laborers, cane cutters but now they are jobless, they don’t have money” **FGD (Mumias sugarbelt zone)**

“Mama mboga, mama pima, Boda-Boda and other small business owners have all been affected. It is only that we are not dead; otherwise we would all be all dead by now” **FGD (Mumias sugar belt zone)**

“Just go to Mumias town, there is no money, services are not there, most buildings along Mayoni and Shibale that were under construction have been abandoned on the way, go to Shianda, Sabatia, Butere, all the way to Shiatsala, there is no business, there is no money” **FGD (Mumias sugar belt zone)**

Great business men and women who used to trade with this region in motor vehicle and motor bike spare parts, clothing and food items no longer come, clothing shops that belonged to foreigners closed up their doors no longer exist as large store that operated in Mumias close their doors” **FGD (Mumias sugar belt zone)**

In FGD held in Nzoia sugar belt zone, participants reported that Nzoia sugar factory is not performing any better compared to Mumias sugar factory. they reported that Nzoia sugar factory had not paid its farmers for quite some time hence high rates of poverty that are being witnessed in most households. Participants reported that joblessness was high in Nzoia sugar belt zone as the factory has laid out most of its casual workers and cane cutters due to lack of money to pay them. This has led to many reported criminal offence incidences in the zone. Most participants reported that they could not adequately provide for their household needs such as food, kerosene, soap which are basic to household livelihoods and sustainability. High rates of teenage pregnancies and dropouts were also reported in the zone due to lack of school fees as a result of delayed and unpaid farmers dues by the factory.

“Our income is low and children are not going to school, chances of our children being employed are few because they don’t go to school” **FGD (Nzoia sugar belt zone)**

“In Schools teenage pregnancies are increasing because parents cannot provide for their needs adequately, if a man on the way tricks them, they easily get lured into sex for exchange of services” **FGD (Nzoia sugar belt zone)**

In West Kenya sugar belt zone FGD participants reported that despite the fact that West Kenya Sugar factory is fully functional and operating, most households still in poverty. Hunger was reported as a manifestation of poverty in the zone. Participants reported that hunger is evident in most households as many of them own few acreage of land between ½ an acre and 1 acre, that has all been put under sugarcane plantation hence scarcity of land for subsistence production and livelihood at household level. It was reported that most families buy 1 tin of maize ‘gorogoro’ for their daily consumption. The little amount they got from the sugarcane returns is mainly to meet school fees expenses for their children, the remaining amounts is not always enough to sustain their food consumption needs and livelihoods in general. Most of them reported that sugarcane cultivation and production takes a total of 18 months to mature which is long to wait as their livelihoods deteriorate.

“Hunger is our greatest problem because most households own between ½ and 1 acre of land which has to be shared for sugarcane plantation and subsistence farming” **Household (West Kenya sugar belt zone)**

During FGD in Busia sugar belt zone, participants pointed out that poverty was rife in the region as experience in most households. They reported that Busia sugar factory is not performing and impacting on their livelihoods as Mumias sugar factory did. Most participants reported food was insufficient in the zone as most households’ have put their small land under sugarcane cultivation. Most of the participants reported that money is still a scarce commodity in many households as Busia sugar factory is still

new in its operations in the zone and they are not sure how the factory is going to impact on their livelihoods.

“Cane cutters are now jobless; most of them are here with us, helpless without much to do.” FGD (Busia sugarbelt zone)

“Today we cannot even afford to pay for a cup of porridge you were served by a vendor at the market as your breakfast sometimes you go back at home when you have not made any sales and you left your home when you had not done anything, which is a waste of time all together” FGD (Busia sugar belt zone)

4.3.1 Crime and Insecurity

The study found out that poverty has led to high levels of crime and insecurity, plotted criminal offences, theft and inter-household conflicts over scarce property.

Most households in Mumias and Nzoia sugar belt zones reported cases of criminal acts committed against other household members over property. Enmity and hate was reported to be high and severe in some households as inter-household members commit criminal offenses against other household members. Plotted crimes were reported as some household members sleep away from their homes in fear of being attacked by their fellow kinsmen who hold strong stands and views on what should be done to resolve inter-household conflict. Both men and women shared the society has lost its moral values and norms for one another and therefore survival is for the fittest. Most men and women shared such criminal offences were due to struggle over scarce resources in most homes. Most men and women reported that such criminal acts and offences committed against other household members were due to rampant poverty that was eminent in most households. It was reported that some household members steal maize which in some cases has led to food shortage. Most men and women shared that whereas others steal to meet their daily needs and expenses, others steal as a survival strategy to sustain their livelihoods

“They attacked me and demanded for the machine, a week after I decided to dismantle the machine and my 1st and 3rd co-wife teamed up to ask me why I had dismantled the machine for they claimed it was a family property”. **Household (Mumias sugar belt zone)**

“My co-wives want to slaughter me and take the old man’s property. Recently they plotted an attack against me, where I was attacked and hurt by unknown people. I don’t even sleep in this house and I have decided to dismantle the machine and have a rest” **Household (Mumias sugar belt zone)**

“I used to complain to my husband about my diminishing maize in my granary, however my husband used to argue that when maize dries up it reduces, one day my 3rd co-wife was still sleeping and overheard someone jump over the store, just to find out that it was my 1st co-wife, she run and left behind the traditional basket and an empty sack”. **Household (Mumias sugar belt zone)**

“I asked my husband why his juggery business was not doing well, I later on discovered that my co-wives used to steal from his M-pesa account for sometimes he experienced memory lapse. I came across transaction my co-wife had made from his phone to hers and she forgot to delete” **Household (Mumias sugar belt zone)**

In West Kenya sugar belt zone, some households’ men and women reported that inter-household conflicts were rife in situations where men have misappropriated family income hence the inter-household conflicts witnessed in most homes.

“My brothers’ in-law wanted to control him, whenever we got money, I had to be strict and took charge, I told my husband that I am taking over your office for our own good and if your brothers need some help from you just say so that am also aware” **Household (West Kenya sugar belt zone)**

“They found me rough, I asked them if I had ever set my foot in their homes, then why are they intruding in my household affairs. I even inquired from one of them, if my husband was him what could he do? They have brought problems in my marriage” **Household (West Kenya sugar belt zone)**

In FGD held in Mumias and Nzoia sugar zones, participants reported high levels of insecurity due to high levels of increasing poverty rates in Mumias and Nzoia sugar belt zones. Participants reported that of late Mumias has been the focus and centre of attention in matters related to security and insecurity in the region. Some participants

accounted the criminal acts to high levels of unemployment especially among the youth. In Mumias sugar belt zone, participants cited increasing insecurity cases at Shibale and Ekeru where young men have organized and mobilized themselves into gang groups that break into households and business premises at night to steal anything they come across. In most cases they steal electrical appliances, gas cookers and cylinders for quick market from households whose members have travelled to their original homes or are visiting friends elsewhere. In cases where they find the owners in their households, they demand for money or mobile phones for immediate use and quick sell. Some participants reported cases where sugarcane theft is taking place at the nuclear sugarcane plantations for sale to middlemen

“They steal nuclear cane and sell to West Kenya Brokers we are suffering; at night unknown people steal sugarcane” **FGD (Mumias sugar belt zone)**

In Mumias sugar belt zone participants also reported the presence and activities of the 42 brothers whom they believed to have its origins in Marama in Butere and Kilingili in Bunyore but worked in collaboration with indigenous unemployed youth whose aim is to terrorize and kill household members as they rob property out of already impoverished households. However, as some participants held their reservations for these criminal acts and offenses, some pointed a finger the political class for the criminal acts and offenses committed against poor and innocent souls. However in West Kenya sugar belt zone, participants reported low cases of insecurity based on availability of casual labour at West Kenya sugar factory which earns most youths some money for their livelihoods.

“Insecurity is rampant in the area due to poverty, especially among the youth”. **FGD (Mumias sugar belt zone)**

In FGD held in Nzoia sugar belt zone, participants reported cases of crime and insecurity are high among unemployed youth who take advantage of drunken late

motorist customers, where they ambush and snatch them their mobile cell phones, money and any valuables found to sustain their livelihoods. Participants shared that in some cases these jobless youth hardly harm you unless you resist to their demands, they just ask you for money to sustain their livelihoods.

‘They engage in criminal activities because most of them depended on the factory for an income, but now they have been laid off by the factory management’ FGD (Nzoia sugar belt zone)

In FGD held in West Kenya and Busia sugar belt zones, participants reported that crime is low as most of their youth have been employed as loaders and they are paid by the farmer; hence earn some income to sustain their livelihoods. However in West Kenya sugar zone some participants reported that crime sometimes manifest when household heads have been paid by the factory. Most women shared their views that that their men fake crime acts committed against them as it was reported some of their men have been found in Malava forest with minor cuts to disguise their women that they were robbed off sugarcane dues and left for death by the gangsters.

“When there was no sugarcane factory, level of insecurity was high but today they work as loaders and they are paid by the farmer, by the time they load two to three tractors, they are too tired to think of going to carry out criminal actions” FGD (West Kenya sugar belt zone)

Based on observation as a resident of Western Kenya crime has increased due to high rates of poverty in the region. Mumias sugar factory which was the main economic block in the region has declined in its operations, Webuye paper mills which was also a major industry in the region has collapsed, Nzoia sugar company is also not doing well. This has led to high rates of crime and insecurity reported in the region as youths engage in criminal offences to meet their daily needs and sustain their livelihoods.

4.3.2 Stress, Depression and Death

The study found out that high levels of poverty have led to stress, depression and death in most households in the region.

During in-depth interviews at household level in Mumias and Nzoia sugar belt zone, most households reported cases of death of their loved ones due to poor living conditions. Most household members expressed their sadness over their status as they recalled and related cases where they have supplied sugarcane to Mumias and Nzoia Sugar factory but they have not been paid to date. Some households reported cases where they supplied sugarcane to Mumias sugar factory and instead of the factory paying them, they received statements from the factory that they owe the factory some money. Most families recounted that this situation created a lot of confusion among most households, which lead to stress, depression and in worse cases to death in some households. Most household members reported that lack of financial income, resources and thoughts over their unpaid dues has rendered members vulnerable and prone to chronic illnesses and deaths. Most households in Mumias and Nzoia sugar zones reported cases of death of their loved ones due to poor living conditions. Most household members expressed their sadness over their status as they remember their loved ones who had passed on due to stress and depression over their unpaid dues by the factories. Lack of financial income and resources was reported to have rendered men vulnerable and prone to persistent chronic illnesses and deaths. However in West Kenya and Busia sugar belt zones most women reported that stress and depression hits in their households when their men misuse and drink all the money earned from sugarcane.

“There is no money to go to hospital; people die on daily basis because there is no money to take them to hospital” **Household (Nzoia sugar belt zone)**

“People are also dying out of stress and depression because they have nowhere to turn to or whom to share their problems with”
Household (Nzoia sugar belt zone)

In FGD conducted in Mumias sugar belt zone, participants reported that when the factory thrived HIV/AIDS was high among company staffs and household members in the surrounding market centers which they claimed has been replaced by cases of stress and depression that has led to many deaths in the area. It was viewed that men were prone and vulnerable to stress and depression and the held most household responsibilities. Participants’ further reported that at the moment, if one is sported crossing over to Mumias sugar factory is assumed to be stressed or depressed due to lack of money as others are referred to as suicidal cases that require a lot of care and attention.

“When the factory was fully operational and thriving, HIV/AIDS was the cause of most deaths at the factory, nowadays stress and depression are the main cause of deaths” **FGD (Mumias sugar belt zone)**

A key informant in Mumias sugar belt zone cited a case of an Asian sugarcane contractor who is in a state of depression due to heavy investments and losses in the sugar industry. It was reported that the contractor’s tractors are rotting in his compound as he experiences serious psychological effects that also affect his cognitive and mental ability and capacity. Others key respondents reported cases of hardworking farmers who have died out of stress and depression due to poor returns after heavy investments in sugarcane cultivation and production. All the key respondents in Mumias and Nzoia sugar belt zones shared their views that lack and delayed payment of farmers’ sugarcane dues was the cause of high death rates in the zones.

“I worked with the Asian contractor at Mumias Sugar factory in the harvesting section in his sound and sober state, now he is a

depression, he has gone mad, and he talks to himself” **Key Informant (Mumias sugar belt zone)**

“The late mzee Ambani who was regarded as the most hardworking farmer, was rewarded with a wheelbarrow and a bag of sugar while the sugar distributor was rewarded with a pickups, the mzee died some days after the reward” **Key informant (Mumias sugar belt zone)**

“At Mumias Sugar factory, most employees, have died, some of them who stayed at kambi Mayoni drowned in river Nzoia due to stress and depression which led to their deaths”. **Key informant (Mumias sugar belt zone)**

However based on observation the researcher observed many burial sites, where men and women reported to have lost their loved ones due to stress and depression over unpaid sugarcane dues to the departed souls.

4.4 Unemployment

The study found out that employment level among the youth is high in Western Kenya

During in-depth interviews held in Mumias and Nzoia sugar belt zones, men and women reported that most youth in the region are unemployed due to the declining status of Mumias and Nzoia sugar factories. They also reported that Mumias and Nzoia sugar factories were the major employers of household heads and youth in its various sections and departments. The factories also employed most of the youths as cane cutters and casual labourers. Both men and women reported that the declining status of Mumias and Nzoia sugar factories has led to high rates of crime and insecurity in the Mumias and Nzoia sugar belt zones. Both men and women reported that most of their sons have been laid off their jobs hence the high level of insecurity that is being witnessed in the region. Both men and women shared their views that the decline of Mumias sugar factory has deprived the youth their main source of income and livelihoods hence the high levels of unemployment in the region. However in

West Kenya and Busia sugar belt zones most households reported that although West Kenya and Busia sugar factories have employed some of their children, unemployment is still a major problem in most households. They also reported that sugar plantations provide residents access to casual jobs through weeding, cane-cutting and harvesting. Some households reported that their children are not well learned and skilled to be absorbed by the factories forcing the factories to employ their staff from other regions in the country.

“My son is now jobless, he was a cane cutter for MSC, and he now depends on casual work to sustain his livelihood” Household (Mumias sugarbelt zone)

“Youths are in more problems, standard pay of Ksh 200 that we pay casuals in this area is not enough to sustain their livelihoods especially if they have a wife and children” Household (Nzoia sugar belt zone)

In FGD led in Mumias and Nzoia sugar belt zones, participants reported that most youths have been rendered jobless; as most of them were cane cutters while others worked as casual laborers, gardeners and house helps the factory premises and staff quarters.

“Cane cutters are now jobless, Mumias Sugar Company used to bring them in trucks to work here” FGD (Mumias sugar belt zone)

‘Mos youths have been laid off as cane cutters by the factory management’ FGD (Nzoia sugar belt zone)

However in FGD held in West Kenya and Busia sugar belts, all participants reported that most of their youth have been employed as cane cutters and loads but reported that they are paid by the individual farmers.

“We get casual contracts for weeding, harvesting and loading from farmers who have leased three and above acres of sugarcane plantation”. FGD (West Kenya sugar belt zone)

“Men and young boys work as cane cutters and loaders and they are paid by the individual farmer” FGD (Busia sugar belt zone)

4.4.1 Collapse of other Industries on Livelihoods

The study revealed that the collapse of other industries in Western Kenya has led to high levels of poverty and unemployment in the region.

In FGD conducted in Namable sugar belt zones, participants expressed their views and perceptions that West Kenya was an international billionaire who has dominated the sugar industry in Kenya. They noted that the private proprietor has taken advantage of the farmers' poor conditions and set up a weigh bridge at Nambale where he has lured farmers to sell to him sugarcane that belonged to Mumias Sugar Company at very poor selling rates. Participants complained about the eviction of other sugarcane factories operating in their zone by Nambale sub-county officials, for being falsely accused for environmental destruction whereas in reality they wanted to dominate and command the market prices.

“Mumias Sugar Company is a playground of brokers and conmen who know what they are doing for their own interior motives and interests”. **FGD (Busia sugar zone)**

“Kibos Sugar factory had their weighbridge here at Nambale, but they were chased away, falsely of being accused of destroying the environment” **FGD (Busia sugar zone)**

“When West Kenya came to Nambale, they paid 2000 Ksh pre tone, which was very low, when Kibos joined the market; he increased the tonnage payment to dominate the market”. **FGD (Busia sugar zone)**

Key informants in Mumias and Nzoia sugar belt zones expressed their views that the government was responsible for the poor living standards of most households in the region. They expressed their views that the government has all the machinery and resources to revive the ailing sugar industry in Western Kenya; however, it lacks the good will to do so due to vested interior motives and interests from top government officials in the government. They shared their views that Mumias and Nzoia sugar factories are owned by the government through national treasury with a 20% and 95%

stake respectively and questioned how the government could not salvage the declining factories. A key informant in Mumias sugar belt zone questioned why private sugar factories like West Kenya, Butali and Busia were not experiencing hardships as compared to Mumias and Nzoia Sugar factories which are owned by the government through shares. He noted that 2 things are vital for the revival of the sugar industry in Western region, thus the president and the executive. The informant reported cases of his colleagues who had not vacated the factory premises and living in poor conditions, to have committed suicide in river Nzoia due to household hardships and conflicts over their inability to carry out household responsibilities.

“There is lack of political goodwill from top government leadership and a weak legal framework that has been deliberately put in place by the company’s board to destabilize the factory”. **Key Informant (Mumias sugar belt zone)**

“Even the president knows what has led to the collapse of Mumias Sugar Company; the government has failed to listen to farmers’ predicaments when farmers started complaining about incurred losses popularly known as DR” **Key Informant (Mumias sugar belt zone)**

“People know what to do for the factory, but the government is not willing because top government officials have vested interests in these factories.” **Key informant (Nzoia sugar belt zone)**

A Key informant at West Kenya sugar belt zone pointed out that the proprietor of West Kenya sugar factory is not only in sugar industry but he is a multinational cooperate investor who aim is to dominate and control the region’s economy. Rai group of companies started operating in Kenya in the 60’s and 70’s and their main business was in logging. In the 1980’s as I worked in Mt Elgon, Rai set a railway engine at Mt Elgon which is still there up to now, where he bought logs meant for Webuye pan paper mills leading to the collapse of Webuye Pan Paper mills. He has also bought Webuye paper mills as a go-down for industrial sugar which he mixes with locally produced sugarcane. Lorries ferry a lot of that sugar from Webuye to

West Kenya. He also led to the down fall of Kaptagat, Elgeyo, and Timboroa and went as far as Nakuru saw mills in the timber industry. In the sugar industry he has led to the upheavals that are befalling Mumias and Busia Sugar Company in Western Kenya and Muhoroni and Chemelil in Nyanza region. He also led to the downfall of Fafarol in Eldoret. He reported that all these has negatively affected our lives as most people lost their jobs and poverty has set in in most of this homes you see around.

“Rai uses judicial processes and petitions to frustrate other millers; he went to court the other time on several occasions to prevent Butali sugar mills from establishing its factory here. What kind of an investor is this, his aim is to control and dominate the whole market economy in Western Kenya as other industries close down their doors to business”. **Key Informant (West Kenya sugar zone)**

“One day his tractors were burnt down by irate farmers, however, he told farmers that whether they farm sugarcane or not, he will still mill sugar at his factory’ **Key Informant (West Kenya sugar zone)**

“When an Asian wants to kill or finish your business, he rents all business premises that surround his business to gain maximum market, and that is what he has done to Webuye pan paper, he has contributed to high rates of unemployment among the youth in this region as he maximizes his profits at his timber factory in Eldoret” **Key Informant (West Kenya sugar zone)**

“Even if his machine does not mill, he doesn’t care because his aim is to destroy the economy of the region, even if he is denied to mill sugarcane here, he will still set up sugar industry elsewhere even in Tanzania” **Key Informant (West Kenya sugar zone)**

Another key informant in Busia sugar zone pointed out that the proprietor of West Kenya has contributed to the downfall of Webuye pan paper mills as he directly bought logs from farmers that were meant for the paper mill factory.

He has bought Webuye pan paper to make it a store where he stores sugarcane byproducts to make cheap boards for his own profit. **Key Informant (Busia sugar belt zone)**

‘The collapse of Webuye pan paper has also led to high rates of unemployment in this region. Some people from here used to work there’ **Key Informant (Busia sugar belt zone)**

A key informant in Busia sugar zone reported that West Kenya factory has engaged into legal warfare with his counterparts to beat them over market economy and domination. The informant reported that West Kenya proprietor has money that he uses to manipulate anything he wants for his own favor and interests.

“West Kenya Sugar Company does not want any other sugar company to operate in this region. He wants to monopolize and control the market economy, last time he was in court over licensing war with Busia Sugar Company. No matter how much he fights others, we shall take our sugarcane to Busia sugar millers”. **Key Informant (Busia sugar belt zone)**

Based on observation, most households in Western Kenya derived their livelihoods from Mumias sugar factory and Webuye Pan Paper mills. However, most households have not come into reality with the declining status of MSC, NSC and the collapse of Webuye pan paper mills. Most households are bitter for they lost jobs and this has led to poverty that is witnessed in most households. The declining status of the sugar industry in Western Kenya has led to wide spread poverty in most households in the region and high rates of unemployed youths were seen dealing in nearby market centres during data collection process. Most households in the region attribute their predicaments to the establishment of private sugar factories in the region at the expense of their livelihoods.

4.5 Land Sub-Division and Land Segregation

This Study found out that land subdivision is an ongoing and mandatory process in all households for purposes of inheritance, however many households are subdividing their land for sell to sustain their livelihoods.

Through in-depth interviews held in the 4 sugar belt zones, both men and women acknowledged that Land ownership is regarded as a key and crucial matter at household level to sustain socio-economic livelihoods and that it also served as a form

of security to its members. Most men reported that land subdivision was not an easy task to undertake in most household, however the hard economic times that are prevailing in this zone have forced them to subdivide their land and sell to buyers as a source of income for their households, school fees was cited as one of the reasons that lead to subdivision and sell of land. It was noted that men collaborate with their sons in selling their land at a higher cost and buying in the interior regions at lower cost price as they shared the income to avoid household conflicts. It was reported that most young men encouraged sell of land to buy motorbikes to sustain their livelihoods. Others require funds for starting up micro-enterprise businesses in 'Juakali' open markets. In Mumias sugar belt zone women shared their views that before the decline of Mumias sugar factory, men never used to sub-divide land for inheritance. They noted difference in men's behavior over land rights and inheritance and reported that before the decline of Mumias sugar factory men could not subdivide land for inheritance purposes. Most women reported that cases of household conflicts and harshness were reported in men if asked for inheritance by their sons and it was believed that all land belong to a man as long as he is still alive. As the factory continues to decline men have changed their perceptions over land subdivision and inheritance rights. Men can now sub-divide their inherited land and pass it over to their sons for inheritance. Some women expressed a sigh of relief that they are now recognized as legal owners of their men's land. Women reported that their sons are at peace with their fathers and were free to carry out any activity on the farm, including taking care of their parents. Whereas some women reported that some men collaborate with their sons to sell inherited land as a source of livelihood most men lamented on their sons' greedy nature of selling land to more than two buyers and wrong decisions of buying motorbikes which hardly lasted before they could get

involved in an accident hence many reported deaths in the area. However, most women in the 4 sugar belt zones shared their sentiments that girls cannot be included in land inheritance at household level as it was perceived that they will inherit from their husband's side.

“Land has been sub-divided into small plots for sell in order to meet major household needs” **Household (Busia sugar belt zone)**

“Land conflicts are rampant as the resource is becoming scarcer and valuable”. **Household (Mumias sugar belt zone)**

“I have divided my land among boys because it is their right, but I cannot give land to a girl. Girls inherited land when she is married” **Household (Mumias sugar belt zone)**

“We have not allocated any piece of land to any of our girls as most of them are married” **Household (West Kenya sugar belt zone)**

“Our sons are selling their land to buy motorbikes and they die there, that is their own problem land is even being sold 2-3 times to various buyers” **Household (Mumias sugar belt zone)**

“Land subdivision makes it difficult to plant sugarcane, my father allocated me 1 acre and I also have sons whom I will also have to give” **Household (Busia sugar belt zone)**

“Most households own less than 1 acre, which they still have to subdivide to their sons”. **Household (West Kenya sugar belt zone)**

In a FGD discussion in the Mumias and Nzoia sugar belt zones participants identified land as the primary source of wealth, social status, and power which provides the basis for shelter, food, and economic activities. Most participants reported that land subdivision was mandatory in the region as it was main and only source left in the region to sustain livelihoods. It was reported that due hard economic times, high rates of unemployment among the youth and increasing conflicts over the scarce resources, men have been forced to sub-divide land among their women and sons. Most of them reported land belong to men and sons for inheritance purposes.

“Land subdivision is increasing, I had 5 acres, I have subdivided to my sons, and they will also subdivide” **FGD (Mumias sugar belt zone)**

“Land belongs to a man; I have never seen anybody here in this area allocating land to their daughters” FGD (Nzoia sugar belt zone)

In a FGD in West Kenya and Busia sugar belt zones, it was revealed that some households can no longer engage in sugarcane production due to high levels of land subdivision and fragmentation in their zones. In Mumias sugar belt zone, participants revealed that men have set apart separate land for their wives to ensure that women perform their roles without holding them accountable and responsible to provide for household needs and expenses. Women on the other hand reported that they farm their own maize to service their loan schemes, meet their own needs and carry out household responsibilities without interference from their husbands. However it was noted in most households in West Kenya sugar belt zone men separate farms for their wives as a way of empowering them as legitimate members of the household with vested powers to perform men’s roles like carrying out transactions with the sugar company. Other households expressed their views that working on separate farms and carrying out different business initiatives was indeed a motivation and encouragement to them as it stirred up spirit of hard work and competition between a man and a wife.

“My wife and I farm separately because one acre fund scheme insists on individual membership at household level for the sake of recovering their loans, so I had to set aside land for my wife who had also joined the scheme for purposes of accountability and responsibility. If you don’t work hard on your piece of land, you may not be able to recover their loan” Household (Mumias sugar belt zone)

“My wife and I work together as a family; I have registered my first plot on my name, the 2nd plot on my wife’s name and the 3rd plot on my son for different permits”. Household (West Kenya sugar belt zone)

In a FGD in Mumias and West Kenya sugar zones participants reported that some men separate farms for their wives as a way of empowering them as legitimate members of the household with vested powers to perform men’s roles like carrying out transactions with the sugar company. Other participants expressed their views that

working on separate farms and carrying out different business initiatives was indeed a motivation and encouragement to them as it steered up spirit of hard work and competition between a man and a wife.

“My husband and I were always in a competition, every one undertakes his or her own production activity, I leased my own sugarcane farms, and same applied to him. We were competitive business entrepreneurs” **FGD (West Kenya sugar belt zone)**

4.6 Food Shortage and Food Security

It was found out that food is scarce in most households and the region as a whole.

During in-depth interviews at household level in Mumias sugar belt zone, both men and women reported that food is a challenge in most homes compared to the days when Mumias Sugar Company was fully functional and operational. Men had the money and therefore food provision was not a problem to them. Household heads made orders to businessmen to supply maize to various households in the zone hence food was adequate. Men and women reported that food is scarce in most homes and it is only served twice in a day. Most households reported that lunch time meal was not taken in most households as the flour was preserved for evening ‘*Ugali*’ which is the main staple food in the region. Some women noted that they normally sub-divide *ugali* into equal parts among their children to avoid grumbling and nonverbal cues over the amount of food one is eating as it was established some are slow eaters. Most men and women in Mumias sugar belt zone reported that although most household have uprooted sugarcane plantations in replacement with the maize plantation, hunger persists in most homes. Women reported that they in most cases they feed on ‘*ugali* and *omena*’ as their men could not afford a balanced diet during these hard conditions they were going through. Some household reported cases of middlemen exploiting them in sugarcane plantation and maize crop.

“Poverty is widespread and it affects all aspects in households, even your funeral will not be well attended because there is lack of food”.
Household (Mumias sugar belt zone)

“Most household members eat only twice in a day, breakfast and supper, lunchtime is and individuals own effort” **Household (Mumias sugar belt zone)**

“We have no specific place to sell; we go where money is ready, we sell my sugarcane to any ready and willing buyer” Household (Mumias sugar belt zone)

“They came and told me a tractor is 20,000 Ksh, but after they had packed the sugarcane, they gave me 16,000 Ksh claiming that the tractor was not packed to the maximum, they even threatened to unpack and leave the cane to me; out of anger I decided to uproot sugarcane and planted maize, because when Mumias was operating, I used to get 130,000 Ksh on the same land that am now getting 16,000 Ksh. **Household (Mumias sugar zone)**

In Nzoia sugar belt zone, both men and women reported that hunger was a major concern in their households. Men cannot afford enough food for their members as their money is still held up by the factory. Participants further reported that, most of their land is still under sugarcane plantation and that most household set aside a ½-1 acre of land for subsistence use, which was not enough to sustain their households' subsistence consumption for a whole year. Some Households reported that they were reluctant to invest in maize production due to lack of markets as they always overheard over the media. Most households reported that they still hang on to sugarcane plantation with hope that the industry will improve at the expense of their family livelihoods.

‘We cannot invest in maize production because the selling rates are low, furthermore most households have planted sugarcane’ **FGD (Nzoia sugar belt zone)**

Through in-depth interviews held in West Kenya sugar belt zone, hunger is evident in most households as it was reported that on average each household owns between ½ - 1 acre of land which has all been put under sugarcane plantation, hence scarcity of

land for subsistence production in the zone. Most families reported that they 1 tin of maize ‘gorogoro’ for their daily consumption. The little amount they got from the sugarcane proceeds is mainly to meet school fees expenses for their children, the remaining amounts is not always enough to sustain their food consumption needs as they wait for the next harvesting season that takes a minimum of 18 months. In Most households interviewed in Busia sugar belt zone, both men and women reported that food was a scarce commodity in most of their households. Men reported that most land has been put under sugar plantation to meet major household needs like school fees for their children. They further reported that between ½-1 acre of land has been set aside for subsistence use, which is not enough to sustain household subsistence consumption rate.

“I buy a tin of maize (gorogoro) from the lorries for 100 Ksh which is not enough to feed a family of 4 children and 2 parents. To survive, I normally cook ugali at night and porridge at lunch time”.

Household (West Kenya sugar belt zone)

In FGD conducted in the 4 sugar zones, most participants pointed out that provision of adequate food for its household members is a challenge in most homes. In the entire 4 sugar belt zones participants reported that food was reported be scarce. Most households feed twice in a day, breakfast and supper; lunch is not regarded as mandatory in most households. In Mumias sugar belt zone, participants reported that despite the fact that most households have uprooted sugarcane plantation in replacement of maize crop cultivation, most households in the zone still experience food shortage and scarcity.in all the 4 sugar belt zones most households

Most household don’t take lunch, not that they don’t want, but the little unga that is there is preserved for supper for the whole family

FGD (West Kenya sugar belt zone)

All key informants in the 4 sugar belt zones reported that despite the fact that extension services offered in the region by One Acre Fund have led to increasing

yields of maize production on their small farms, middlemen exploit most households between the months of August-October when most households are harvesting. Key respondents in Mumias sugar belt zone shared their views that the uprooting of sugarcane plantation and replacing it with maize crop plantation has led to high yields of maize cultivation in the zone, however has not saved them any better. The presence was reported all over the region. It was reported that most of these middlemen come mainly from Trans Nzoia and Uasin Gishu counties where they buy maize from household members at a throw away price. In Mumias and Busia sugar belt zones, key informants revealed that middle men were a contributing factor to scarcity of food in the region. They reported that these middlemen have established several maize buying and collection centres at Shianda, Mayoni and Harambe in Mumias sugar belt zone and Nambale in Busia sugar belt zone. It was reported that they buy 1 tin of maize ‘gorogoro’ for as low as 20 to 50 Ksh. during ‘bumper’, harvest, and 30 to 60 Kenya shillings when harvests are low. Participants reported that in the months of May to July when hunger is at its peak in most households, the same middlemen transport the maize in Lorries to resell to them at maximum profits. They sell the maize for as high as 100 Ksh per tin “gorogoro”, which most households cannot afford on daily basis due to large number of members (6-10) at household level. The key informants in Mumias sugar belt zone also reported that these middlemen not only exploit farmers in Maize crop but also sugarcane which they sell to West Kenya, Butali and Busia sugar factories, leading to scarcity of food in most households in the region. A key responded in Mumias sugar belt zone who was also a former Mumias sugar factory employee, reported to be aware of cases where the impoverished workers of Mumias Sugar Company sell nuclear cane to West Kenya Brokers.

Most households have no choice but to sell their maize to middlemen, to meet their household expenses like cooking oil and kerosene paraffin for lighting at night” **Key informant (Busia sugar belt zone)**

“Middle men exploit most household in the region during bumper harvests” **Key informant (Mumias sugar belt zone)**

“Maize price is low; most households sell to middlemen at 50 Ksh per tin” **Key informant (Nzoia sugar belt zone)**

A key respondent in West Kenya sugar belt zone commended that food shortage in the region was going to rise, as West Kenya Sugar Company is expanding out growers’ sugarcane farms in Trans Nzoia and Lugari schemes, going as far as Matunda that serve as maize producers not only for the region but the country as a whole. The respondent reported that food would be a major problem even in Nandi region, as the company has plans to expand out growers farms to Kibiyet in Nandi County. He further reported that a former MP’s farm that was under Kenya Seed Company has been replaced with sugarcane under West Kenya management. A businessman in Kakamega county has also planted sugarcane over 200 acres of land which is a big threat to the region and the country as a whole.

‘In 2-3 years to come food will be scarce in this region because of extension of sugar cultivation and plantation in Tran-Nzoia County, which is our granary food store’ **Key informant (West Kenya sugar belt zone)**

Based on observation, the researcher observed that most households whose interview schedules colluded with lunch time hours were found feeding on cassavas, sweet-potatoes and porridge during lunch time. While in Nzoia, West Kenya and Busia sugar belt zones, most household members were found feeding on sugarcane in all the 4 sugar belt zones a few fire-lighting was observed in most households visited over lunch time.

4.7 Cane-Cutters Movements and Migration Patterns

The study revealed that cane cutters have migrated to other sugar factories such as West Kenya, Kibos and Ramisi within the country and in Kakira across the borders in Uganda for search of livelihoods.

During in-depth interviews held in Mumias sugar belt zone women reported that their men have moved to other sugar factories such as West Kenya, Butali, and Busia in search of livelihoods. Others reported that their men had gone to Kibos while other reported cases where their men had moved to Ramisi in coast region and Kakira across the border in Uganda. Some women reported that their men have migrated to urban centers such as Eldoret, Nakuru and Nairobi to work for middle class earners as casual laborer. Most women reported that although their men sent back remittances to them, they rarely come back at home; moreover they make little remittances that cannot sustain their households livelihoods back at home. In West Kenya and Busia sugar belt zones most women reported that their men work in their respective sugar factories, however in Nzoia sugar belt zone it was noted that most cane cutters who had been laid off by Nzoia sugar factory, have moved to adjacent Butali and West Kenya sugar factories in search of income to sustain their households' livelihoods.

*My husband went to Nakuru to work as a grounds man at a mosque.
He comes at home once in a year and sometimes he does not come.*
Household (Mumias sugar belt zone)

“He only sent 300 Ksh, which cannot sustain my needs, look all these children depend on me, what can 300 Ksh do, I have to wash clothes for teachers around to meet my daily needs” **Household (Mumias sugar belt zone)**

A Key informant who is also a former employee in Mumias sugar belt zone reported that he worked for Mumias Sugar Company in transport and harvesting section where he reported that cane cutters was a force to reckon with in the operations of Mumias

Sugar Company. Most of the cane cutters came from Lodwar, Butere, and as far as Uganda. They earned between 7,000 to 8,000 Ksh after every two weeks. He revealed that cane cutters contributed to the economy of this region as they commanded and influenced their own market day in market centers and were able to sustain their households' livelihoods effectively. They flooded in public bars within the zone also rented houses among indigenous communities for instance the Turkana at Lukoye and Lumino. However, he noted that most of them have moved to other sugar factories all over the country and across the border in Kagera Uganda for their livelihoods. He shared their migration patterns and movements, where he noted that some have moved to Kwale in the Coast region of Kenya as others moved across the border to Kakira in Uganda. Another group of cane cutters moved to Nyanza region at Kibos, Chemelil, Trans Mara and Soni Awendo. Others operate within Western region but have moved to Nzoia, West Kenya and Busia. He also reported that cane cutters moved out of Western region in search of employment to sustain their households' livelihoods, however, he notes that this movements have affected the men's sex role responsibility as most of them stay for long before they come to visit their wives. On the other hand their wives engage in extra marital affairs to attain sexual satisfaction; this has however, lead to increasing new HIV/AIDS and STI infections which continue to ravage most households in the zone, in worse cases he noted breakage of marriages, weakening of family ties and poor parenting at household level.

"I know where they moved to as most of them were under my management at Mumias Sugar Company, some have moved across the country in Kwale, Kibos, West Kenya, Busia, Nzoia and some have moved to Kagera in Uganda" **A key informant (Mumias sugar belt zone)**

"Cane cutters rented within our community, they used to pay us 500 Ksh per month, which was a lot, they boosted the economy of the community, and they bought a lot of food and clothes for their household members" **A key informant (Mumias sugar belt zone)**

4.8 Changing Patterns in Micro-Enterprise

The study found out that most women have moved into the public sphere commanding small and medium scale businesses as men have compromised their male ego due to their inability to provide for household needs.

Through in-depth interviews held in Mumias sugar belt zone, most women reported that in the 80's and 90's they engaged in weeding sugarcane plantation for large scale farmers in the zone, sometimes they did the weeding in exchanged for a tin of 'omena' and flour for household use depending on the acreage of the land. However, as economic changes set in the region, mode of payment changed from butter trade to money. Women reported that they won weeding contracts from Mumias Sugar Company where they were paid a good amount of money to support their livelihoods. Those who won the contracts recruited other women from the village to help in the weeding process for an income. Others weeded for individual farmers within Mumias, Butere and Matungu at a negotiated price. Currently they meet their daily needs and livelihoods by selling traditional vegetables, arrow roots, sweet potatoes, to cosmopolitan residents in Mumias, Butere, Shianda, Matungu and Harambe. In some cases they sell the commodities from door to door, especially in teacher's quarters and police lines. In West Kenya women reported that they have grouped themselves in social networks in which they carry out sugarcane weeding to most farmers in zone to substitute their men's income to sustain their livelihoods. In Nzoia and Busia sugar belt zones women have engaged in small micro enterprise activities in nearby market centre to supplement their men's income to sustain livelihoods in their homes.

Most men in all the 4 sugar belt zones reported that they have allowed their wives to carry out long range businesses outside their home locations in support of household livelihoods. In some households men reported that they have no problem if their

wives carry out business activities in the public sphere. Men also reported their wives as very enterprising and hardworking, in that they travel as far as Busia, Kisumu, Sioport and Siaya to buy both fresh and dried fish and vegetables from Mt Elgon for sale during market days and in the evening at market centers in their nearby market centres. On the other hand, women reported that sometimes they spend a night or two before they returned back to their homes due to scarcity of commodities they desired to buy. Some related their experiences in Lake Victoria as they boarded fishermen's boats to get their desired commodities from the islands to the seashores. Some women trade with wholesale business men and women at a commission especially on market days. Women reported that they trade in commodities like tomatoes, Irish potatoes, and cabbages from Mt Elgon, Uasin Gishu and Central regions of Kenya and 'omena' from the lake shores of Lake Victoria in Sio-Port. Women reported that they make returns to the owners of the businesses at the end of the day as the women receive their commission depending on the sales made for that particular day. Women also reported that these kinds of businesses have enabled them to join micro-finance schemes, 'marry go rounds' and radio salam's groups for improved livelihoods in their homes. It was reported that most motorbikes operating in small local towns belong to women and that they transact many small micro-enterprise activities in the region.

If she can, I don't want to compete with her, if she can let her do; she is also employed at a diary shop at Shianda" **Household (Mumias sugar belt zone)**

"I have no problem with her doing most of the things; she even pays for my loan out of her hard work" **Household (Mumias sugar belt zone)**

"Some women cross nearby boundaries to bring tomatoes, cabbages, onions and eggs which they sell in our local markets" **Household (Nzoia sugar belt zone)**

“Men have allowed their wives to carry out business outside their home environments” Household (Busia sugar belt zone)

“My wife does a small business as a green gross vendor at Shianda market and I remain at home herding cattle, sheep and goats.”

Household (Mumias sugar belt zone)

In FGD held in the 4 sugar belt zones it was revealed that men have allow their wives to engage in business outside their home environment against their traditional customs that women should work and produce within their home environments. Most participants in the 4 sugar belt zones acknowledged that women have diversified their activities to sustain their household’s livelihoods. Some have joined West FM and Radio Ingo Salaams clubs and livelihood group to sustain the livelihoods.

“Women have joined Radio Ingo group membership from which they buy cows, goats and sheep to help in family livelihoods” FGD (Mumias sugar belt zone)

“Women have engaged in small businesses like mama mboga, some plant on the low lands and sell at wholesale price to door to door traders” FGD (Busia sugar belt zone)

Some women even own Boda-Boda, they are employers, and they have employed our young men and boys for a living. FGD (Mumias sugar belt zone)

Based on observation, the researcher observed that men who depend on their wives to a large extent are undergoing psychological distresses as most of them were found lying on their three setter chair, sleepless in broad daylight claiming to be resting at times when both men and women should be working for the household needs and livelihoods. They pretended and consoled themselves verbally that everything was ok despite the changes but their body language and non-verbal cues expressed some sense of guilt and despair. It was also observed that women are overwhelmed and overburdened with household roles and responsibilities

4.9 Naming and Re-Naming of Places and Business Premises

The study found out that the famous “Stage Maringo” located at the endurance of Mumias Sugar Company has been renamed “Stage Mawazo”, as public bars identified to sugarcane producers have changed their enterprise names.

In a FGD held in Mumias sugar belt zone, participants reported that the main bus stage located at the entrance of Mumias sugar factory was popularly known as ‘stage Maringo’ named after the pride portrayed by the factory’s staffs’ wives as they waited for transport means to board to their various destinations. It was reported that these women were always smartly dressed in expensive attires and outfits. They never bargained fare rates with the ‘matatu’ conductors and they were choosy on the quality of the transport means they would board. Motorbikes were preferred to bicycles and yet most operators had not purchased the desired mode of transport hence the nickname ‘stage Maringo’. They further reported that, for outsiders who boarded and alighted at the stage were held and regarded with high respect and dignity as they were seen to either have gone to transact business with the factory or to collect their cheques for payment at the bank. Participants also reported that the most famous public bars like ‘Sugarland’, ‘farmers choice’, that were named after famers self-pride, esteem and ego have been renamed to funny names such as ‘valu valu’ which has no meaning to the society but to their own class of customers.

“If you have a bicycle as a boda, don’t waste your time to pack at stage Maringo”. **FGD (Mumias sugar belt zone)**

“Today no one can pay you the normal fare of 30 Ksh from there to Mumias town, they bargain to 20 Ksh.” **FGD (Mumias sugar belt zone)**

“The famous Sugarland bar popularly identified with sugarcane farmers, has changed its name over and over again, first it was called Sugarland, then it changed to Santana, today it has been renamed Valu Valu. I don’t understand what valu valu means” **FGD (Mumias sugar belt zone)**

“We also had Wakulima’ bar, which was also related to sugarcane farmers in the region, today it has been renamed as Hilton restaurant”. **FGD (Mumias sugar belt zone)**

Based on observation bus conductors always lower fare prices to either Kakamega Bungoma or Kisumu when they approach that stage as a mockery to any passenger standing at that particular stage. Public bars and businesses have also renamed their premises to disassociate themselves from a declining factory.

These findings are tied to the 1st objective of this study that aims to analyse livelihoods in the declining sugar industry in Western Kenya. The study findings reveal that there is a relationship between development and growth of an economy with livelihoods depending on the context and phenomena under study.

This study agrees to the views of (Timmer, 2009) that Historical lessons from structural transformation in Europe and North America indicate that rising agricultural productivity, together with industrialisation and urbanisation has been the stimuli for economic development. This study found out that the establishment of sugar industry in Western Kenya led to growth of industries, urban centers and businesses in the whole region. Although the structural development in Europe and North America was characterised by a declining share of agriculture in GDP and employment, rural–urban migration leading to urbanisation, the development of a modern industrial and service economy, and a demographic transition as argued by (Winters, Essam, Zezza, Davis, & Carletto, 2010). The findings of this study reveal that the establishment of sugar industry in Western Kenya led to agricultural growth and its positive contribution to GDP and employment, urban to rural migration which led to urbanization and growth of towns like Mumias where all businesses and company transactions were done. The findings also revealed that the factories activities informed gender roles at household level. Agricultural intensification and extensification increased in the region. Men did

the planting and fertilizer application to ensure maximum production of sugarcane as women did the weeding assisted by family members. Sugar industry thrived as living standards improved. Based on Timmer (2009) argument that with better functioning markets and improved transport and communications infrastructure in rural areas farm households diversified to include nonfarm activities as a way to increase their incomes. In the later stages, with rising incomes and higher standards of living, they either specialised in farming on larger consolidated farms or moved into high-return nonfarm sectors; the findings of this study also found out that with improved infrastructure evident in the whole region businesses for instance transport sector, banking sector; super stores and supermarkets and microenterprise activities thrived in the whole region.

Although this study agrees with the views of (Djurfeldt and Jirström, 2013; Jayne *et al.*, 2003; Jirström, Andersson, and Djurfeldt, 2010), that farm sizes in SSA are generally becoming smaller, as the findings of this study revealed that land sub-division is high; it disagrees with (Headey and Jayne, 2014; Jayne, Chamberlin and Headey, 2014; Muyanga and Jayne, 2014) who have mainly attributed the declining farm sizes especially in land constrained areas in SSA to high population growth resulting from high fertility rates. The findings of this study established that land sub-division in Western Kenya is due to increasing demand for inheritance rights for sons and for sell to sustain livelihoods. However this study agrees to their views that the already declining farm sizes could have a potentially negative impact on rural welfare and food security in the region; as it was found out that land sub-division in the region has led to food shortage in most households. For instance most households in West Kenya sugar zone live on $\frac{1}{2}$ -1 acre piece of land which has to be divided as an

inheritance at the same time to be used for maize production hence the crisis of food experienced in the zone.

This study also agrees to the findings of (Djurfeldt, 2015; Losch *et al.*, 2012), that urbanisation in SSA is taking place without industrialization. The findings of this study established that most industries in Western region are at the verge of collapsing. It was revealed that Nzoia sugar factory which has remained the only hope for most households in Nzoia sugar belt zone is also declining. Webuye pan paper mills in Bungoma County collapsed long ago. This has led to high rates and levels of unemployed youths in the region hence the increasing rate of poverty, crime and insecurity witnessed in the whole region. The increasing levels of poverty in most households has led to low levels of education among most household members as it was found out that parents are struggling to meet school expenses and requirements for their school going children.

This study also agrees to Reardon and Timmer (2007) argument that, persistent low agricultural productivity coupled with chronic food insecurity and severe poverty characterises the smallholder rural economy in SSA. This study found out that most households in Western Kenya are characterized by poverty and food insecurity. For instance it was revealed that most households in the region go without lunch time meals. This study further agrees to (Jirström *et al.*, 2010; Losch *et al.*, 2012) views that as a consequence of poverty and food insecurity, a large proportion of smallholders remain deeply engaged in subsistence staple crop production, but at the same time seasonally rely on the market for their staple food needs. The findings of this study reveal that most households in Western Kenya have shifted to maize cultivation and subsistence farming as a strategy to meet their household needs and sustain their livelihoods. The study also revealed that some households sell their

sugarcane and maize products to middlemen who further exploit them hence the increasing levels of poverty in the region.

The views of (Haggblade *et al.*, 2010) that, incomes from nonfarm sources have grown in importance; accounting for about 35 per cent of rural household incomes in SSA and 50 per cent in Asia and Latin America; are in agreement with the findings of this study, as it was revealed that women have ventured into microenterprise activities to meet their daily household needs and sustain their livelihoods. Others have taken up house help services to the working class in the region. Men have opted for domestic oriented businesses like sand harvesting, stone quarrying and basket weaving for sell in the nearby open markets. Although this study agrees with (Niehof 2004), views that diversification is associated with both livelihood survival and distress under deteriorating conditions, it disagrees with (Yaro, 2006); view that diversification is aimed at securing better living standards by reducing risk, vulnerability and poverty, increasing income, enhancing security and increasing wealth. The findings of this study reveal that most households are in living in poverty, with low incomes without wealth to accumulate. The finding of this study also agrees with (World Bank, 2007), views that where there are no feasible opportunities to diversify income activities, migration and remittances between rural and urban areas may be important in sustaining rural livelihoods. This study revealed that cane cutters remit back to their households to meet their needs and sustain their households' livelihoods; however the study reveals that the remittance made is not enough to sustain livelihoods. Finally this study agrees to the arguments of (Bryceson, 2002; Larsson, 2005; Reardon, 1997) that given the prevalence of risk in the rural SSA smallholder context, diversification may often be a strategy for survival or coping with risk, especially where agriculture fails to offer sufficient means of livelihood.

The findings of this study established that the effects of declining status of the sugar industry and risks associated to it the major driving factor in livelihood diversification in Western Kenya. It also agrees to Barrett, Bezuneh, Clay & Reardon, (2001), views that diversification is appropriate in situations of high-risk agriculture and poverty, poorer smallholders without the necessary assets may be pushed to seek alternative incomes by engaging in low-return and sometimes risky nonfarm activities. The findings of this study reveals that most households in Western Kenya are living in poverty, land as their major asset left is also diminishing due to land sub-division, furthermore most microenterprise activities engaged in by most households earn low returns.

Based on the researcher's perspective, the establishment of Mumias and Nzoia sugar factories in the Western Kenya had a great impact on living standards and general well-being of most households in the region. Businesses thrived as men ripped a big sum of income from the activities they interacted with the factories. Most households planted and cultivated sugarcane for sell to the factories as their major source of income and livelihood sustainability. However, the declining status of sugar industry in the region has led to wide spread poverty, increasing levels of land sub-division, high levels of unemployment among the youth, increased crime and insecurity and scarcity of food among most households. Although most households depended on sugarcane plantation and cultivation, others were skeptical about that, they strived to amass wealth by diversifying their income, such household heads utilized the money they got from the sugar plantations and invested in other types of businesses and bought assets beyond their home environments. Others invested in commercial buildings for rent as other put up rental houses as a form of inheritance for their households members. This category of households composed of the elite who form

the upper class that manages and dominates the market economy of the society in this region.

The declining status of Mumias sugar factory has led to high levels of poverty in the region due to nonpayment and delayed payments from the factories. The region is infested with high rates of unemployed youth as most of them were rendered jobless when Mumias sugar factory stopped milling, as others have been laid off by the factories due to financial constraints at the factory level. Crime and insecurity is high in most households and this is due to the increasing level of poverty in the region. This scenario is also depicted at household level where household members are fighting over scarce resource. Most deaths that occur in the household level are tied to stress and depression related to hard economic times in the region. Food is scarce in most households as middlemen exploit farmers for maximum profits. These findings portrays that the declining status of the sugar industry in the region has adverse effects on households hence the importance of this research study.

To mitigate all these risks and shocks, women have ventured into the public sphere to carry out micro enterprise activities to meet their households' daily needs and sustain their livelihoods. Men however, have remained in the domestic sphere carrying out activities such as subsistence farming, animal keeping and baby sitting as a form of their contribution to household needs and responsibilities. This means that men have lost their male ego and dignity as household heads and providers. Most cane cutters have migrated to other region in the country and across the border in Uganda in search of livelihoods. Business men and women have changed their identification names which mean that they do not want to be associated to an ailing factory as this could also have a negative impact on their businesses.

The findings of the 1st objective of this study were informed by sustainable livelihoods analysis framework, which aims to empower the most vulnerable and poor through strengthening of their capacity to achieve secure livelihoods. This framework links macrolevel economic changes and ecologic events to specific effects on the household's livelihoods at the local level. The current study makes use of the guiding concepts as a platform in organizing its argument. The most widely cited definition of livelihood in the development literature is that provided by (Chambers and Conway, 1992:7) 'A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living'. Minor modification of the definition have been attempted by other scholars such as (Scoones',1998) sustainability view that a livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future. Ellis's, (2000) contribution is on the issue of claims and access and the impact of social relations and institutions that mediate an individual or family's capacity to secure a means of living. Morris *et al.*, (2000) observe that most livelihood models focus on the household as the most appropriate social group for the investigation of livelihoods, albeit external measures to manage risk may be social or public in nature. In household livelihood studies, increased attention has been paid to survival strategies of poor people in coping with and surviving different types of crises, such as falls in prices, droughts and famine (De Haan and Zoomers, 2005). The approach developed in this study follows a similar argument in considering the household as the basic unit of social analysis. Furthermore, a household is considered a more practical and convenient unit for the collection of phenomenological data based on people's views, experiences and perceptions.

CHAPTER FIVE
DATA PRESENTATIONS AND DISCUSSION OF THE FINDINGS OF THE
2ND OBJECTIVE

5.0 Introduction

This Chapter presents and discusses the findings of the study on the assessment of the construction and reconstruction of gender roles at household level in the context of the declining sugar industry in Western Kenya

5.1 Construction of Gender Roles

To understand how gender roles were constructed in Western Kenya, it was important to assess views, perceptions and experiences of household members on how the establishment of sugar industries in Western Kenya affected their daily routine activities and responsibilities in their private and public spheres. Household members were exposed to a variety of structured interview questions that required them to describe their roles before the decline of the sugar to show how gender roles were constructed.

5.1.1 Doing Gender

The study found out that before the establishment of sugar industry in the region, traditional cultural ideologies informed gender roles at household level.

During in-depth interviews held in the 4 sugar belt zones. Most men cited gender stereotyping and perceptions of roles and activities appropriate for men and women in the wider society. Men reported that traditional cultural values, norms and beliefs informed gender roles in the region. Men also reported that they served as household heads, breadwinners, providers and protectors of their households. Men reported that women were there to be seen and not to be heard. Men related that carrying out their

traditionally ascribed roles was not a challenge to them because they possessed wealth and had money to do so. It was a man's major responsibility to ensure that he owned resources such as land, property and money that could enable him carry out his responsibilities as the head of the household. Wealth and finances were a symbol of power to manage, control, provide and protect household members. The more wealth and money a man possessed served as an indicator that he could provide for his wives and children needs adequately. Money also served as a weapon of protection because they used it in cases of illnesses and disease in the home. Men derived a lot of pleasure and satisfaction if they were able to provide and care for their family members. It was found out that gender roles at household level were based on Cultural ideology and the activities of the of the sugar millers in the region.

“During the good old days women were there to be seen and not to be heard, women were just women, they were not supposed to talk in front of men, and theirs was to bring food on the table” **Household (Mumias sugar belt zone)**

‘We posed wealth and money, so caring for them was not an issue but a responsibility’ **Household (Mumias sugar belt zone)**

“If a man has wealth and all resource he requires around him, he can do anything for his wife/wives and children”. **Household (Nzoia sugar belt zone)**

“You have to care for their needs because if you don't provide, they can go on strike and you will not have enough work force to work in the sugar plantation farm. Sugarcane involves heavy work and therefore you have to remember your family members”. **Household (Busia sugar belt zone)**

On the other hand most women reported that they maintained their submissive status by performing roles such as child bearing, baby sitting and household chores. Women were also responsible for subsistence production at household level. Before the establishment of sugar industry in the region, gender role were based on Luhya traditional customs, values and norms. In most households interviewed women describe and shared their experiences on how they spend their day. Women reported

that their day started as early as 6 am in the morning and ended as late as 9 pm in the evening. Women reported that they woke up very early in the morning to carry out household chores before engaging in farming activities in their homes. In most households, women reported that breakfast preparation was not necessary; for men had money to buy a cup of tea and ‘*mandazi*’ as they persuade their daily activities while children chewed a piece of sugarcane plucked from any farm on their way to school. Women remained at home carrying out various household chores in their homes; Washing was not frequently done but beddings were aired out in the sun on daily basis. In most cases women prepared porridge and cassava, arrow roots and sweet potatoes for lunch and ‘*ugali*’ and ‘*Omena*’ for supper. Women reported that babysitting and care was a continuous role as most of them were in their prime age of child bearing. Women also reported their role as major producers of food at household level; they planted maize, cassava, arrowroots, and sweet potatoes in the lowlands while for subsistence use. Other roles included weeding in their household sugar plantation or as casual laborers in the neighborhoods to supplement their household expenditure. Girls helped their mothers in the evening after school by fetching water and firewood for household use

In all FGD held in the 4 sugar belt zones, all participants agreed that gender stereotyping and perceptions of roles and activities appropriate for men and women in the wider society were responsible for gender differences in performing gender roles that disadvantaged women. Men related that carrying out their traditionally ascribed roles was not a challenge to them because they possessed wealth and had money to do so. Men reported that they were the overall in charge of all activities in their farms as women reported that they maintained their submissive status by performing roles such as child bearing, baby sitting and household chores. Women did the weeding of

sugarcane alongside their ascribed roles of reproduction, housekeeping and subsistence production at household level. Participants reported that, it was a man's major responsibility to ensure that he owned resources such as land, property and money that could enable him carry out his responsibilities as the head of the household. Wealth and finances were a symbol of power to manage, control, provide and protect household members. The more wealth and money a man possessed served as an indicator that he could provide for his wives and children needs adequately. Money also served as a weapon of protection because they used it in cases of illnesses and disease in the home. Men derived a lot of pleasure and satisfaction if they are able to provide and care for their family members. It was found out that gender roles at household level were based on Cultural ideology and the activities of the of the sugar factories in the region

“We are the heads of our households, breadwinners and providers while our wives take care of the children as they perform household chores. Our work is to provide for our family member, as women do the rest” **FGD (Nzoia sugar belt zone)**

‘Men are in charge and responsible of all activities in the farm, and women are in charge of all activities at home’ **FGD (Mumias sugar belt zone)**

Based on observation as a resident of Mumias sugar belt zone, men exploited women's labor force for their own good, most men bought bicycles to ease their movements even if they had no apparent reason to go to town, they roasted meat over lunch time ‘nyama choma’, and socialized in bars with a variety of women. In the evening, men peddled back to their homes with some ‘mandazi’ and ‘omena’ tied behind their bicycles as an enticement to their wives and children

5.1.2 Gender Role Division and Sub-division

It was found out that the establishment and activities of the sugar factories in Western Kenya informed gender roles at household level.

During in-depth interviews held in the 4 sugar belt zones; both men and women acknowledged that the activities of the sugar industry in the region inform gender roles at household level. In most household in Mumias sugar belt zone, men reported that they carried out supervisory roles, planting and fertilizer application at farm level as women did the weeding alongside their traditional ascribed roles. It was reported that children helped in planting and fertilizer application especially on Saturdays when they are not going to school. Most men and women reported that the thriving status of the sugar industry between 1970's and early 2000's raised men's status and self-ego and further cemented the patriarchal ideology that is deeply rooted in most societies in the region. Men owned and controlled all resources and finances accrued from the sugar proceeds, while women and children benefited through provision of their daily needs and sustenance of their livelihoods by the head of the household. Women become more subjective to their men who dominated, dictated and directed role performance among household members. Women were entrusted with the heaviest role of sugarcane weeding in conjunction with their traditionally ascribed roles of home and baby care including subsistence production.

'Men are in charge and responsible of all activities in the farm, and women are in charge of all activities at home' **Household (Mumias sugar belt zone)**

In FGD conducted in Mumias and Nzoia sugar belt zones participants reported that the sugar industry forms the basis on which gender roles are shaped and re-shaped in Western region of Kenya. The rise and establishment of Mumias Sugar Company in 1971 and Nzoia Sugar Company in 1976 came in with many changes in role performance at household level in the region. Sugar production and industrialization came along with heavy investments' and work load at household level. The companies supplemented farming activities by carrying out roles like ploughing,

harrowing, furrowing, supply of seed cane and fertilizers and finally harvesting, while planting, weeding and application of fertilizers was left for respective households. This led to division of labor in households, where men took over supervisory roles as heads of the households as women alongside their gender prescribed roles and subsistence production, invested in their physical strength and labor intensive activities like planting, weeding and application of fertilizer. Sex roles served as a very important aspect in sugar production and industrialization, whereas men married as many wives as they could for maximum utilization of labor force, women strived to have as many children as possible to help in the labor intensive sugar plantations.

“Women also did the weeding in the sugar plantations, and they used to get a lot of money” **FGD (Mumias sugar zone)**

In FGD held in West Kenya and Busia sugar belt zones, participants reported that, gender roles in their zone are shaped and reconstructed based on the activities of West Kenya and Busia sugar factories respectively.

‘In most cases we take up weeding contracts which is our main source of income’ **FGD (West Kenya sugar belt zone)**

Key informants in the 4 sugar belt zones reported that the sugar industry formed the basis on which gender roles were shaped and re-shaped in Western Kenya. The rise and establishment of Mumias Sugar Company in 1971 and Nzoia Sugar Company in 1976 came in with many changes in role performance and household relationships in the region. Sugar production and industrialization came along with heavy investments’ and work load at household level. The factories supplemented farming activities by carrying out roles like ploughing, harrowing, furrowing, supply of seed cane and fertilizers and finally harvesting, while planting, weeding and application of fertilizers was left for respective households. This led to division of labor in households, where men took over supervisory roles as heads of the households as

women alongside their gender prescribed roles and subsistence production, invested in their physical strength and labor intensive activities like planting, weeding and application of fertilizer. Sex roles served as a very important aspect in sugar production and industrialization, whereas men married as many wives as they could for maximum utilization of labor force, women strived to have as many children as possible to help in the labor intensive sugar plantations. The growth and flourishing status of sugar industry between 1970's and early 2000's raised men's status and self-ego and further cemented the patriarchal ideology that is deeply rooted in most societies in the region. Men owned and controlled all resources and finances accrued from the sugar proceeds, while women and children benefited through provision of their daily needs and sustenance of their livelihoods by the head of the household. Women become more subjective to their men who dominated, dictated and directed role performance among household members. Women were entrusted with the heaviest role of sugarcane weeding in conjunction with their traditionally ascribed roles of home and baby care including subsistence production.

*The establishment of sugarcane industry in the region led to role subdivision among household members. **Key informant (Mumias sugar belt zone)***

5.1.2.1 Land Preparation

The study found out that land preparation was mainly done by the sugarcane companies; however men had to oversee and supervise the whole process to ensure proper ploughing, harrowing and furrowing of the land.

All households interviewed in the 4 sugar belt zones reported that men were responsible for land preparation. Men reported that they had to show their land boundaries and to ensure that the ploughing, harrowing and furrowing has been properly done. Some men expressed their views that land preparation was a man's

role as women's role is to cook, bear children and take care of the household. Men expressed that women were not supposed to be seen communicating with strangers especially men. Others reported that women are not exposed to machinery cultivation and therefore had very little knowledge on what to do, however women expressed their perception that land belongs to a man and therefore it is his responsibility to ensure that land is well prepared.

“Land belongs to a man and therefore I have to be responsible of anything that is taking place on my land” Household (Nzoia sugar belt zone).

“I had to supervise the land digging, because that is a tough job, my wife cannot direct and instruct the tractor drivers who were mainly men. And again she does not understand where my land borders with my brother” Household FGD (Mumias sugar belt zone)

“My role was to direct and show the boundaries of my farm to the ploughing company staff. My wife does not understand and cannot be able to locate the land boundaries with our neighbours”.
Household (Mumias sugar belt zone)

“Both men and women participated in land preparation; however the man takes the lead as he directs his household members”.
Household (Busia sugar belt zone)

5.1.2.2 Planting and Application of Fertilizer

The study found that planting and fertilizer application was done by the man in collaboration with his male children.

During in-depth interviews in the 4 sugar belt zones reported that planting was mainly a man's role, however sons were in most cases involved in the sugarcane plantation activity more than girls because male child was regarded as the heir of land and the sugar plantations. Participants and household members argued that girls will inherit land where they will get married. In cases where the labor force was small the family engaged casual laborers' to supplement the work load. Fertilizer application was

repeated after every weeding season where the man and the children were in most cases involved.

“I have many children from my three homes; they provide enough labor force in my sugarcane farm, in most cases I engage my sons because my daughters have to help their mother in household chores” **Household (Mumias sugar belt zone)**

My sons come first, for they are my next of kin, when I die they will inherit the whole of this land, girls will get married and inherit from the husbands side. **Household (Mumias sugar belt zone)**

“I cultivated 4 acres of land, which was quite large for my household members to plant on their own, so I used to hire casual laborers’ to help me in planting, otherwise it would take over one week to plant” **Household (Mumias sugar belt zone)**

In all FGD’s held in the 4 sugar belt zones, all participants were in agreement that planting and fertilizer application was a man’s role which he performed in collaboration with his household members. The man headed the whole exercise and picked on a specific day when the planting would take place. Saturday was the most suitable and appropriate day for all household members, when the head of the household has not gone to attend to other public responsibilities and when children have not gone to school for maximum labor utilization and realization. Men reported that the exercise began as early as 6am in the morning with an interval of tea break and lunch time hour until evening depending on the acreage of the farm and the work force in place.

“It is a man’s responsibility to ensure that cane seed is planted” **FGD (Nzoi sugar belt zone)**

“Planting is an activity for the whole family, for every member of the household will benefit from the profits accrued from the farm, as boys joined their father in the planting session, girls and their mothers prepared some tea and ‘githeri’ that had been cooked overnight for breakfast” **FGD (Mumias sugar belt zone)**

A key informant in Mumias sugar zone reported that his farm served as a seed cane farm where farmers from within his location got their seed cane for planting. His farm

also served as a demonstration farm for Ibokolo location in Butere, during seminars and training sessions by Mumias Sugar Company.

My farm has served as a demonstration farm for this location for many years; before the company went underground it had introduced a new cane variety which they planted on my farm, right now it has matured and I don't even know what to do with it". **Key Informant (Mumias sugar belt zone)**

However, based on the observation, planting and fertilizer application by children was a form of child abuse and exploitation for men received high profits from the sugar proceeds that was unfairly shared based on the labor and time invested in the sugarcane production. Whereas men got the highest share which was unknown to household members, boys received some share from the sugar proceeds, as women and girl child only benefited through clothing and food.

5.1.2.3 Weeding

The study found out that weeding was a woman's role, however all family members helped in the weeding process due to its extensive nature.

During in-depth interviews held Mumias, Nzoia and West Kenya sugar belt zones, revealed that weeding was a delicate activity in sugarcane production process that require the nurturing skills of a women; however men most men reported that, based on its importance in determining sugarcane yields and its extensive nature, weeding requires the efforts of the whole family to realize maximum profits.

"1st and 2nd weeding was mainly done by my family members because it requires a lot of labour force and care; we engaged casual laborers in 3rd phase of weeding". **Household (Mumias sugar belt zone)**

It was also revealed that women multi-tasked .during the weeding season as they intercropped sugarcane plantation with beans and groundnuts for subsistence use and also sold milk to the factory workers.

‘Women planted in between beans and groundnuts, and then in the process of weeding they weeded along with sugarcane’ **Household (Mumias sugar belt zone)**

“My wife used to sell milk to factory workers in the morning and joins us later in the weeding process.”

I used to supply milk to the factory workers very early in the morning and then proceed to weed in the company’s nuclear farm that is just nearby here” **Household (Mumias sugar belt zone)**

In a FGD in Mumias, Nzoia and West Kenya sugar zones, weeding was reported as women’s role in most households. Women reported that they got weeding contracts from Mumias and Nzoia sugar companies where they earned good money to sustain their livelihoods. Women who won the contracts recruited other women from within to help in the weeding process. Other women reported that they organized themselves in small groups and networks where they profitably marketed and negotiated for their labor and manpower. These organized groups also serve as a mechanism through which women empowered themselves to meet their daily needs and livelihoods. Both men and women participate in sugarcane production processes as a family however weeding still remains a women’s activity.

“Women did the weeding in the sugar plantations, and they used to get a lot of money” **FGD (Mumias sugar belt zone)**

“The former management gave us weeding contracts and paid us well to feed our household members”. **FGD (Mumias sugarbelt zone)**

“In the village women organize themselves in groups and solicited for weeding contracts as a group”. **FGD (West Kenya sugar belt zone)**

In FGD held in West Kenya sugar belt zone, participants reported cases where women refused to weed when their husbands disappear with sugarcane proceeds after harvesting. Most women reported that men behave like that because they farm in their land.

“Men molest us because we farm on their land, they only takes leave when dues are about to be paid”. **FGD (West Kenya sugar belt zone)**

However in FGD held in Busia sugar belt zone, all participants agreed that weeding was done by both men and women without any gender discrimination. Participants reported high levels of cooperation in carrying out farming and production roles in households

“We do the weeding as a family especially when children close schools to attain maximum labor force for our sugarcane plantation **FGD (Busia sugar belt zone)**

“I have no problem when it comes to sugarcane farming because I have my two daughters whom we work together in the farm. Working as a family helps family members to get their needs like soap, clothes. We share what comes out of sugar plantation after subtracting major family needs like school fees”. **FGD (Busia sugar belt zone)**

“We help each other and combine our efforts to meet our household needs and sustain our livelihoods” **FGD (Busia sugar belt zone)**

5.1.2.4 Harvesting and Loading

It was found out that harvesting and loading were men’s roles

In most household interviewed in Mumias and Busia sugar belt zones, most men reported that it was the most critical role in sugarcane production process. Although the company hired cane cutting supervisors who were known as “*Nyamparas*”, men equally supervised cane harvesting and loading. Their role was to make sure that cane was cut from the base and that no remnants were left behind during loading. They also ensured that tying of cane on tractors was properly done to avoid falling and wastage during transportation process. Household members especially children assisted the head of the house to ensure that no stalks or pieces of cane were left behind in the farm.

“Harvesting is very hectic and crucial exercise for the household that requires total commitment by the man. If you joke around your tonnage will be lows” **Household (Mumias sugar belt zone)**

In FGD held in all the 4 sugar belt zones, all participants agreed that harvesting and loading was a man’s role as it ensured maximum profits. Participants reported that men were keen to ensure that all stalks of sugarcane in their farms has been loaded on the tractors for transportation to the respective sugar factories. They also reported that they ensured that sugarcane is well tied by strong ropes to reduce sugarcane spill off during transportation process.

‘Harvesting and loading are men’s responsibilities to ensure all the cane has been harvested and loaded to avoid wastes’. **FGD (West Kenya sugar belt zone)**

5.1.3 Subsistence Farming

The study found out that shift from sugarcane plantation to maize crop cultivation has led to change in gender role performance in Western Kenya.

During in-depth interviews in Mumias sugar belt zone it was reported that both men and women work on their farms to sustain their household livelihoods; however women leave farms quite early to venture into micro enterprise activities in nearby market centres to cater for immediate household needs like cooking oil, kerosene for lighting at night and soap. Women reported although the declining status of Mumias sugar factory has affected their livelihoods at household level, men can now find time to join them in household production. It was reported that men have taken over subsistence farming as women sell what they produce. Women shared that men have no business transactions or commitments in Mumias town and therefore spent most of their time in their farms, cultivating maize, sweet potatoes, and cassava and arrow roots on the low lands.

“To some of us, the decline of the sugar industry is a blessing; nowadays my husband helps me in all farming activities including weeding which he rarely did, when we had the sugarcane plantations” Household (Mumias sugar belt zone)

“Men nowadays take care of cattle, goats and sheep, which they sometimes sell to meet their needs”. Household (Mumias sugar belt zone)

“My husband was a butcher man at Ekeru market; since then sells went low he abandoned the business and now helps me in maize cultivation” Household (Mumias sugar belt zone)

“The declining status of Mumias Sugar Company has reduced me to a casual laborer in my own farm. I used to be a boss of my farm; today I work and toil on my farm as a pauper, I no longer supervise farming activities on my farm, but physically dig to earn a living for my household members”. Household (Mumias sugar belt zone)

However, in some households in West Kenya sugar belt zone, it was noted that some farming roles and products are specifically set aside for men while others have been set aside for women depending on the responsibilities attached to them. Men reported that keeping of animals like cows, sheep and goats are mainly for men to meet their needs while chicken and milk production is set aside for women to meet daily household needs.

“When I sell a cow, it is totally mine but chicken and milk is for my wife to meet household needs” Household (West Kenya sugar belt zone)

“My husband manages the sugar plantations while I manage the chicken, vegetable and green gross garden and the banana plantations which I sell for household needs such as clothing, beddings and other household needs” Household (West Kenya sugar belt zone)

“We normally weed 5 times as a family for good yields” Household (West Kenya sugar belt zone)

He gives us when we weed for our clothes and shoes Household (West Kenya sugar belt zone)

In a FGD held in Mumias sugar belt zone, participants reported that the shift from sugarcane plantation (Masculine crop) to maize cultivation (Feminine crop) has altered and re-shaped their gender roles and performance at household level. As men

reported that maize was just for subsistence use and that it cannot be planted on large scale as a major source of income to sustain household livelihood, women expressed their views that men have joined them in the domestic sphere to carry out subsistence household production roles that were mainly prescribed for women. Women reported that men participate fully in the farming and production process and their working time in farms was reported to have increased compared to women as men start digging as early as 6 am to meet their daily target for land preparation which is done in timing with the rain season for planting. Apart from farming men also utilize their time at home to herd and take cattle along the riverside .Women noted that that the economic changes have changed their working and production roles, men spend most of their time in the domestic arena as they utilize their physical strength in subsistence farming to sustain their household members livelihoods, as women get more exposed to the public sphere to carry out small businesses to meet household needs and expenditure. However, both men and women reported that maize crop cultivation alone cannot sustain their households' livelihoods; they shared their views that maize responsibilities.

“Maize is a major crop now but for subsistence use only” **FGD (Mumias sugar belt zone)**

“What can maize do, I cannot even get enough from its sell to pay for my wife’s dowry. It is just for children to eat” **FGD (Busia sugar belt zone)**

“Maize cannot give you a good amount of money. One sack of maize goes for 1800 Ksh. A sack, even if you were to sell 40 sacks of maize, will it take a child to school?” **FGD (Nzoia sugar belt zone)**

“Even if I planted two acres of maize, it cannot meet heavy responsibilities like paying school fees; it is just for subsistence use at home” **Household (Nzoia sugar belt zone)**

In FGD held Nzoia and West Kenya sugar belt zones, both men and women reported that although sugarcane farming is still their major cash crop for households’

livelihoods, subsistence farming and maize crop cultivation is widely practiced in the zone to sustain livelihoods. Both men and women reported that farming and production at household level is a family role. Both men and women plant vegetables for both commercial and retail sell in big towns like Eldoret and Kakamega and for supply to nearby schools.

“We help one another to farm these vegetables for sell to hotels and schools; I plant as my wife sells at the market place” FGD (West Kenya sugar belt zone)

“All family members work in the farm and when we harvest I give them part of the sugarcane proceeds for their personal needs” FGD (West Kenya sugar belt zone)

“Men plant and women sell for their family livelihoods” FGD (Nzoia Kenya sugar belt zone)

“We weed as a family because that is where we derive our livelihoods. He gives us some money when we weed for our clothes and shoes” FGD (West Kenya sugar belt zone)

In FGD's held at Busia sugar zone, participants reported that farming and production roles are carried out by all family members without any discrimination. Most women participants pointed out that although sugarcane farming was still their major source of income, it is not enough to sustain their livelihoods and meet their household needs and expenditure. Women supplemented their household's income by cultivating crops like millet, sorghum, and cassava for subsistence use. Others reported that they sell the maize and beans to nearby schools or trade with them in exchange of school fees.

“Maize and beans also help in school fees” FGD (Busia sugar belt zone)

“My husband and I cultivate arrow roots on the lowlands for sell in Busia where there is ready and quick market”. FGD (Busia sugar belt zone)

Based on observation, men have no option left out for them but to engage in maize crop cultivation to sustain household livelihoods; as it was witnessed most households have uprooted sugarcane plantation.

5.2 Gender Role Reconstruction

To understand how gender roles were being reconstructed in the context of the declining sugar industry in Western Kenya; it was important to assess views, perceptions and experiences of household members on how the declining sugar industry was affecting their daily routine activities and responsibilities in their private and public spheres. Household members were exposed to a variety of structured interview questions that required them to describe their roles after the decline of the sugar to show how gender roles were reconstructed.

5.2.1 Men as Heads of their Households

The study found out that although men have lost their financial resource and wealth, they still hold on to their dignity as heads of their households.

In in-depth interviews held in the 4 sugar belt zones, both men and women reported that sugarcane production is the major source of income and means of livelihood in most households; and that it serves as a basis on which gender roles are shaped and reconstructed in most households in the region. Men reported that the declining status of the industry has negatively affected their role performance as heads and providers of their households. Men related how they are struggling to make a living for their household members' survival from the meager income they make from casual labor. Women on the other hand related their new experiences where they have been forced to engage into micro-enterprise activities to complement their husbands' efforts. However men still hold to their perception that they are the heads of their households despite their failure to meet household needs and sustain their households' livelihoods. Men noted that although some women provide for their household needs and livelihoods, they are still the heads of their households.

“I have the responsibility to care for my households livelihoods even if my wife is in a ‘chama’; I do not follow her benefits, which are very small for me. Land belongs to man and the wife is also mine”.

Household (Nzoia sugar belt zone)

In The FGD held in the 4 sugar belt zones, most men participants reported that despite the fact that they have been deprived off their major source of income, they still struggle to sustain their household livelihoods. Men reported that women are stingy on their incomes is mainly centred on their own priorities. Most men participants shared their views that unless you provide for your household members one is likely to loose his male ego and dignity among household members. Most Men reported they are forced to take up casual labour in the community to sustain their households’ livelihoods, hence retain their dignity as household heads.

“Although, we look poor, but we still perform all our roles, our wives still depend on men, when they wake up in the morning; they have already drawn a list of items to be purchased for household use”. **Household (Mumias sugar belt zone)**

“Women still depend on us, when they realize that you have some money with you, they will make sure that they take it from you, a woman’s money is hers but a man’s money is for the whole household” **FGD (Nzoia sugar belt zone)**

5.2.2 Women as Breadwinners and Providers

It was found out that although men are still the heads of their households; women have taken over men’s roles of breadwinning and provision at household level.

In most households interviewed in Mumias sugar belt zone, it was revealed that women were the sole breadwinners and providers of the household needs and livelihoods. Women engage in microenterprise businesses as vegetable, fruit and dairy vendors, fish mongers in the nearby market centers.

“My wife is the sole provider of this home. She leaves the house every morning at 6 am in the morning as she is employed as a milk vendor in a dairy shop at Shianda market; she is very enterprising and hardworking”. **Household (Mumias sugar belt zone)**

“My wife is a vegetable vendor and she provides for this family including my mother who is over 85 yrs. old, she also pays for my loan despite the fact that I took it for my own personal use”
Household (Mumias sugar belt zone)

“Women provide men with as little as 10 Ksh to quench their thirst for changa”
Household (Busia sugar belt zone)

“I used to work as a cane-cutter for Mumias sugar company, the company paid us after every two weeks for family needs and provision, today there is no cane to cut, I depend on stone quarrying as a source of income for my family, but in most cases the stones take a long time before a customer comes by for sale”.
Household (Mumias sugar belt zone)

“She is the major provider of the family needs like food and clothing because he has a monthly income of 3000 Ksh. In fact I have just come from the school to collect some money to buy kerosene and food for evening use”.
Household (Mumias sugar belt zone)

Today my wife is the sole bread winner, we depend on her, and we share everything, whatever she does is ours”
Household (Mumias sugar belt zone)

“When am sick, I just relax because I know she will carry out all family roles and responsibilities”.
Household (Mumias sugar belt zone)

5.2.3 Women Headed Households

The study revealed that although women are providing for their households, men do not recognize and acknowledge their role as breadwinners.

During in-depth interviews carried out in the Mumias sugar belt zone, most men shared that although women are providing for household need through micro enterprise activities, they cannot regard them as household heads. Men reported that according to the Luhya traditional customs and values women are supposed to be seen and not to be heard. In Busia sugar belt zone, most women reported that most men are reluctant in their provision roles as the heads of the households and that unless they search for income then their livelihoods are at stake. Some women reported that they have husbands but they don't get any help or assistance from their husbands

“Women are taking up more roles than men; they nowadays regard themselves as heads of their households, when in real sense they are not”. **Household (Mumias sugar belt zone)**

“During the good old days women were there to be seen and not to be heard, women were just women, they were not supposed to talk in front of men, and theirs was to bring food on the table” **Household (Mumias sugar belt zone)**

He does not either support our household needs or sustain our livelihoods, he dug a stone quarry for 45,000 Ksh, but he only gave me 500 Ksh. **Household (Busia sugar belt zone)**

In a FGD held in Mumias sugar belt zone men expressed their views and perceptions that no matter how much women contribute to household needs and livelihoods, they cannot be regarded as household heads. Whereas most women participants reported that gender roles have changed as they have taken over most responsibilities as household breadwinners and providers for household needs such as foods stuffs, cooking oil, kerosene and soap. Men shared their views that most women who control and head their households have ended up losing their husbands and breaking their marriages which has led to single headed households. Men reported that women are their property and therefore their income and all they provide is also theirs.

“Now that women want to be heads, look at how the world is like, they see men as stupid and they are bright, that is what I call stress, women think that they can now stay without a man women can only care for a cow and not a bull”. **FGD (Mumias sugar belt zone)**

5.2.4 Respect, Dignity and Worthiness for Men

The study also found that although men don't regard and acknowledge women provision role, women still hold respect, dignity and worthiness for their men.

In most households interviewed in all the 4 sugar zones, women expressed their views and perceptions that respect for their men is mandatory and it is based on their obedience and observation of their traditional believes and customs which dictates

that men dominate as women submit. In West Kenya sugar belt zone some women reported that they carry out major household activities including transaction with the factory but that does not mean one should lack respect for men. Women reported to have stood up in defense for their men's poverty in order to uphold their men's status and dignity. Some women reported that they step in for their husbands' inability to avoid household conflicts and misunderstandings over household needs. Others express their views and perceptions that according to Luhya cultural norms and customs, once a woman is married and has established a home, she has to persevere and endure any negative circumstances that prevail in her marriage life, as others reported that a woman to leave her matrimonial home is viewed as a disgrace and shame to their parents, therefore women respect their husbands as part of the socialization process on how to cope with hard economic challenges in marriage. Other household members related their moral obligations and respect for their husbands to religion, where they shared that a man shall leave his father's house and join his wife and become one body, where she will be his helper.

"I deal with all factory transaction and contracts while my husband deals with the posho-mill operation and child care, but I am not on top of him, he remains the head of this house" **Household (West Kenya sugar belt zone)**

Some of her friends question her about her roles as the head and sole provider of the house, but she brushes them off," **Household (West Kenya sugar belt zone)**

If the man cannot provide at home, we don't quarrel that there is no sugar in the house, because we also have money we can buy household goods and provide for our family needs" **Household (West Kenya sugar belt zone)**

"I told my husband, he is a servant of God and as the head of the household he has to cooperate with his wife for the bible says I am his helper". **Household (West Kenya sugar belt zone)**

"I know what God demands from women, that we should be submissive to our husbands. The word of God also says that whoever

perseveres to the end will be crowned". **Household (Busia sugar belt zone)**

"The furthest I have come along with this man, for 24 years leaving under the dictatorship and cruel hands of this man, it cost the grace and mercy of God". **Household (Busia sugar belt zone)**

However, in extreme cases men reported cases where their wives do not preserve food for them especially during the day; some men reported poor health status and personal hygiene as their wives do not care for their wellbeing. As some men reported that women are only good to you when you provide for their needs and livelihoods, others related their experiences where they have been denied their conjugal rights, food and laundry services as retaliation to their failure to meet household needs and expenses, in some cases women were reported to cut communication with their husbands and wear gloomy faces as a sign of loss of dignity and worthiness for their husbands. Men further reported that this kind of attitude has been extended to their children, who also don't care for their fathers' immediate household needs.

"Nowadays she has no respect for me, am just from the mosque and I found that she did not even boil the cassava that I uprooted yesterday from the farm, she has not preserved tea for me, all utensils had been washed and she had left for the market". **Household (Mumias sugar belt zone)**

"My wife never washes my clothes; women will only love you if you have something. She forgets that when I heard we shared together, now that I don't have; she wants me to buy soap for washing, when she knows very well that I don't have any money and yet she sells tomatoes at the market". **Household (Mumias sugar belt zone)**

"Women are very funny people, they change like chameleon depending on whether you have money or not. When I had money she was good and nice to me, nowadays she looks at me like a rug, and I have no value to my wife" **Households (Mumias sugar belt zone)**

Based on observation women still do hold on to their men as the head of their households and accord them all due respect based on the socialization process that places a man as the on top in household hierarchy.

5.2.5 Housework and Babysitting Roles

It was found out that men have involuntarily found themselves performing household chore and babysitting due to lack of employment as women engage in informal employment sector as small scale entrepreneurs and house helps

In most households interviewed in Mumias sugar belt zone, it was reported that men's attitudes and perceptions of their wives as household caretakers and home keepers has changed over time. Men were reported to be polite, non-violent, understanding, cooperative and ready to perform roles that are traditionally ascribed to the female gender. In most households men reported that they carry out all roles at home for their wives are out on business to support and meet the needs of their household. Men however, expressed their views that they are not worried or bothered about these changing roles as what women do and produce automatically belongs to them. Some men expressed no regrets in their male perceived ego as they commended their wives for their hard work and entrepreneurship talents.

“My wife works as a house help for a school teacher at a nearby secondary school, where she stays most of her working days and occasionally comes to see and visit us, in most cases one in a month. When she is away I take care of the children and ensure that they get to school on time, I also prepare lunch for them during school days but in the evening and over the weekends my 12 year old girl cooks for her younger siblings”, **Household (Mumias sugar belt zone)**

“These are my children why should I not care for them. The world has really changed my sister and we need to help one another. In today's world, there are no roles for men and women. The present Mumias is not like yesterday's Mumias” **Household (Mumias sugar belt zone)**

In most household interviewed in Mumias and West Kenya sugar belt zones men were found performing female roles. Men claimed all the changes were as a result of the decline of the sugar industry in the region as most of them worked as casual laborers and cane cutters in the harvesting section. In most households men were

found carrying out roles ascribed to the female gender. In one household a man was found cooking lunch time meal for his children and in another home the man was performing traditional house-smearing of his house's floor and walls. In another home the head of the house was found removing maize from outside as his wives had gone for a prayer gathering in the neighborhood. However, in all these households men seemed comfortable and were not ashamed of what they were doing as long as their homes could be managed and sustained. Men expressed their views, and feeling about their doing gender based on the circumstances which they have found themselves in the wake of the declining sugar industry

“I do the cooking and babysitting, for my wife is normally away on duty throughout the week, she occasionally comes by to see her children, for she trust my care” **Household (Mumias sugar belt zone)**

“My husband can now do all household chores that a woman can do without complain, he takes care of cattle and attends to household matters and responsibilities when am not there” **Household (West Kenya sugar belt zone)**

‘When she finishes selling her dairy products for the day, she closes the shop and comes to attend to household roles and chores; otherwise I carry out household chores like cooking, when she is not there’. **Household (West Kenya sugar belt zone)**

Based on observation men are doing female ascribed roles because they have no option left out for them. They carry out these roles as a form of their contribution to household responsibilities and sustainability.

These findings are tied to the 2nd objective of this study that aims to assess the construction of gender roles at household level in Western Kenya. The findings reveal that there is a relationship between a declining economy and change of gender roles.

This study is in agreement with the views of (Godsil *et al.*, 2016; Marcus and Harper, 2014), that men are taught to be energetic, assertive, masterful and independent, while

women are taught to be submissive and allow men to lead as this current study reveals that traditional Luhya customs, values, norms and beliefs informed that men were taught to be strong, assertive and independent while women were taught to be obedient and submissive. As the findings of this research study reveal that men are regarded as strong, energetic, powerful and in control of resources such as land and finances while women are to be seen and not to be heard, obedient and submissive. This study also agrees with (Jost and Kay, 2005; Rudman and Glick, 2001) views that all these attributes serve to reinforce male superiority and female subordination.

This study also agrees with (Jost and Kay, 2005; Rudman and Glick, 2001) argument that adult men benefit most clearly from gender roles, but adolescent boys also have a stake in norms that makes them more privileged than girls, including factors such as more freedom, greater power, better access to resources, and a promise of more power in adulthood. The findings of this study reveal that household heads and sons are more privileged as owners and kinsmen in land ownership while women and daughters have no right to own land according to the Luhya traditional norms and values.

The views of Ferree (2010) that social institutions such as the family, organised religion, traditional social structures, education systems and the media contribute in socialising and communicating the reproduction of some of these discriminatory gender norms are in line with the findings of this study as it reveals that traditional social structures were responsible for the reproduction of different gender roles between men and women in Western Kenya. Therefore, efforts need to be intensified to change discriminatory gender roles and replace them with more equitable ones across all social institutions and structures.

This current study agrees with the argument of Kamarae (1992) that patriarchy existed long before related systematic values were recreated to further analyse the conditions of oppression of women and that it is a system of male supremacy which oppresses women through political, social and economic institutions. The findings of this current study established that based on Luhya traditional customs, values and norms women could not own land and again their contribution to household sustainability is not valued as they are regarded as men's property.

Although this current study agrees with the views of Hertneky (2010) that women across most families play a double role, including reproduction and engagement in the affairs of the community. This current study revealed other roles such as subsistence farming, sugarcane weeding, entrepreneurship, and poultry keeping are also done by women in Western Kenya. The current study however, agrees with Boserup (2007), views that apart from bearing children, women perform other roles of providing and maintaining scarce resources for collective consumption such as water, health care and education. The findings of this study reveal that apart from the triple role of production, reproduction and home care, women also engage in entrepreneurship activities, provision roles and house help service. Moreover the findings of this current study further agree with agree Boserup (2007) observations that a mother taking care of children during working hours is not financially rewarded; however, professional care givers receive remuneration for the same job and are considered in economic statistics. This current study found out that women contribution to provision role is not valued as women are perceived to be men's property; therefore everything they do belongs to a man.

Although this research study agrees with the views of Fernández *et al.* (2014) that gender inequalities persist in the domestic sphere, and that activities within the

domestic sphere are largely still determined by gender, with women being more likely than men to do activities such as cleaning the house, washing, ironing, sewing of clothes and caring for children and adults, which requires more time and these women tend to be less valued in the society. The findings of this study revealed that men are involuntarily performing household chores such as cooking, baby sitting and washing as their women venture into public sphere carrying out micro enterprise activities as other work as house helps for the working class in the region.

The views of Milkie *et al.*, (2009) comply with findings of this study in terms of working hours. This study reveals that women woke more compared to men as it was established that women join their men in subsistence farming in the morning hours and left early to carry out micro enterprise activities in the nearby market centers to sustain livelihoods.

This study is in agreement with (Jones, Presler, Marshall and Tran, 2014) views that Traditional norms of masculinity require men to be the breadwinners and the head of the household and the ultimate decision-maker; however, the findings of this study reveal that that the changing economic trends in Western Kenya has ripped off men their main source of income, hence their inability to adequately provide for their household needs and livelihoods. The study established that in most households women have taken over breadwinning roles in the public sphere as men remain in the domestic sphere carrying out taking care of the home as they carry out other domestic oriented businesses like stone quarrying, basket weaving, brick making, posho and juggery milling. Men have also engaged in subsistence farming, a practice that was mainly entrusted to women. This finding of this study disagrees with (Jalal, 2009; Heath, 2020) that there is strong link between violence and polygamy as this current study reveals that men are polite and understanding, most men have changed their

perceptions as gender based violence was reported to be low. The study reveals that lack of money and therefore power among men as a result of the declining sugar industry in the region has contributed to men's changed behavior in Western Kenya. On the other hand women were found to still accord their men due respect and dignity as household heads despite their inability to adequately provide for their household needs and livelihoods.

This study agrees with Booth and Nolen (2012) argument that Changes in gender roles occur as people in the community start to challenge the traditional behavioural, social and cultural characteristics that are linked to womanhood or manhood. In order to achieve gender equality, characteristics and structures that govern the relationship between men and women and the power differences that impact choices need to be assessed. These behavioural, social and cultural characteristics that are linked to womanhood or manhood are not innate but rather learned, and men and women embrace some cultural, social, and environmental norms that may encourage inequalities. This study aimed to assess the reconstruction of gender roles in the declining sugar industry in Western Kenya and found out that cultural norm and valued tied to what a man should do and what a woman should do are fading away. During data collection process men were found doing household chores such as cooking, baby sitting and house smearing which is normally regarded as woman's role. On the other hand it was established that most women carry out micro enterprise activities in public open markets.

This study concurs with the views of (Blanchfield, 2010; World Bank, 2012) that women's participation in different societal domains, including educational attainment, economic opportunities, political empowerment, health and well-being is influenced by gender roles and that gender equality is for the benefit of the whole nation; as

(Maksuha and Richter, 2014) argues that men should be included in the whole process of gender equality. This study recommends that men should be the main focus when addressing gender issues for positive change, as the findings of this study reveal that in this current century men still disregarded women in various ways, men still look at women as their property and not their equals.

Based on the researchers view, Luhya traditional customs values and believes informed gender roles in Western Kenya. Men owned land as a symbol of wealth, status and as a means of production and therefore they formed the ruling class at household level. Men held ultimate power and authority over land as an asset of the household, they had powers to sign, extend or terminate sugarcane farming contracts with the companies involve and supervise all activities that took place on the farm. They commanded and dictated all farming activities at household level. They supervised land preparation process to ensure high yields returns at the end of the whole process. Men's presence during that time also symbolized their ownership of land as a major source of the household income. Their presence on the farm also instilled some sense of discipline and recognition for the owner of the land by the company workers and the whole family at large.

Men's presence during planting season was mainly to ensure proper planting and effective application of fertilizer application is administered according to set up time and standards for maximum production. This meant that sugarcane planting and fertilizer application are labor extensive and intensive farm activities that required maximum labor utilization. The nature and load of the work involved explains the cherished practice of polygamy and many children as a source of labor force. Participation of the whole family in the planting exercise was an act of solidarity in carrying out household responsibilities; it also demonstrated power and authority of

the man over his household members. Men utilized easily available and cheap labor from their household members in their labor intensive fields to realize maximum profits. Men mainly engaged their sons in this particular responsibility, for unlike girls who only benefited through food and clothing, boys received some share of the sugar proceeded in form of cash. Sons were also preferred to work in the sugarcane farms to instill some sense of responsibility as next of kin and heirs of the land. Girls were involved in sugarcane farming activities for the purpose of socializing them on how to manage their future husbands' sugar plantations farms when they get married very soon

Weeding was entrusted to women based on their nurturing and caring skills. Formation of organized women groups also revealed that women have a sense of commitment and integration in group performance unlike men who are individualistic and self-centered. It also meant that most household needs have been weighed upon women who hustle and struggle for daily needs like soap, cooking oil and kerosene for night lighting, through casual laboring. Based on the researcher's perspective Weeding is a very tedious and involving activity that causes a lot of physical harm, skin-damage and body-rushes that cause a lot of discomforts while bathing, therefore men used their dominating power and authority to avoid and allocate women this stressful and labor intensive role.

The multi-tasking, meant that women had to work an extra mile to meet family needs and livelihoods. Subsistence production was mainly a female role hence the intercrop farming and dairy farming systems that are common in Mumias, Nzoia and West-Kenya sugar cane zones. This indicates that women labor force was intensive and extensive in sugar production as women performed triple roles as men reaped where they have not sown.

Men were hyper active during harvesting and loading of the sugarcane to ensure no loses occurred during harvesting session for maximum profits. This role is mainly done by men as it involves signing of delivery notifications which indicate the household member that will be paid.

According to the African cultural norms and values a man's pride and ego is derived in his ability to provide for his household needs; however men have over comprised their male ego due to their inability to provide for their household needs and livelihoods as the society perceives of them. Despite the fact that men benefit from the small microenterprise activities women engage in, men do not acknowledge or recognize their women provision and contribution role to their households live livelihoods. This attitude is also depicted in their failure to acknowledge maize cultivation as cash crop as they refer maize as feminine crop. Men think that homes that are headed by women cannot stand and therefore compare and paint women headship with the picture of corrupt world to show the magnitude of women destruction as household providers. Most men who depend on their women to a large extent are undergoing psychological distresses as most of them were found lying on their three setter chair, sleepless in broad daylight claiming to be resting at times when both men and women should be working for the household needs and livelihoods. This means that men have lost their dignity and honor as heads of the households; they have lost their male ego and power as breadwinners and providers of their households, however they carry our domestic oriented chores such as animal herding, subsistence farming and child care as a form of their contribution to household livelihoods and sustainability. Men are humiliated for their failure to meet household responsibilities as heads of their households and therefore despise women as heads of their households. Men think that women are the cause of the misfortunes

and predicaments they are going through and therefore blame women for the changes that are taking place at household level.

However, some men physically work hard on their farms to be able to carry out their breadwinning and provision roles as other offer their services as casual labourers. In some households men worked as cane cutters for the sugar factories within the region; but now that Mumias factory is not milling and Nzoia factory has laid off most of its cane cutters, most of them have been left jobless. This situation has rendered men vulnerable and men are involuntarily performing household chores as a form of their contribution to household needs and livelihoods.

Men have also set apart some land for use by their wives in disguise that women are good financial managers. This land segregation practice in the region means that men are avoiding some of their responsibilities as household heads. Men claim that women have taken loans from One Acre Fund to improved maize production and yields, which they have to be responsible for and pay, but the question is whose livelihoods, are women trying to protect against risk such as lack of food. Men's inability to provide for their household needs leaves them with no option to choose from but carry out female roles of cooking and babysitting for the survival of their household. Some men have even forfeited their conjugal rights at the expense of their households' welfare and wellbeing as they reported that their wives come to visit on Sundays and report back to their working stations on Monday.

Although women have taken over breadwinning and provision roles they still respect their men as the heads of their households. Women have stood up in defense for their men's poverty in order to uphold their men's status and dignity. To some women this is a way of maintaining peace and tranquility in their homes. To others their provision

role performance is tied to the Luhya cultural norms and customs, that once a woman is married and has established a home, she has to persevere and endure any negative circumstances that prevail in her marriage life, as others perceive that a woman to leave her matrimonial home is a disgrace and shame to their parents, therefore women respect their husbands as part of the socialization process on how to cope with hard economic challenges in marriage. While others related their moral obligations and respect for their husbands to religion, where they shared that a man shall leave his father's house and join his wife and become one body, where she will be his helper. However in extreme cases some women do not regard their self-earned money for household expenditure instead they still present their daily budget to their husband whether they have money or not, of which men abide to retain their male ego and identity.

This findings of the 2nd objective of this research study were informed by social role theory of sex differences and similarities by (Eagly and Wood, 2012), which argues that sex differences and similarities in behavior reflect gender role beliefs that in turn represent people's perceptions of men's and women's social roles in the society in which they live. This theory therefore helped to inform that gender roles in Western Kenya are based on Luhya traditional believes, values and customs. The theory attributes men as larger, faster and has greater upper body, and women gestate and nurse children. Based on these attributes men in Western Kenya are viewed and perceived as household heads, providers and protectors of their household members and women as child bearers, home keepers and subsistence and food producers of their household members. The theory informs that both men and women acquired these role differences through socialization process inherent in societies in Western Kenya. The theory informed why men are perceived as household heads while women

are regarded as caretakers; why the establishment of Mumias sugar factory influenced gender roles; why both men and women in Western Kenya engage in subsistence farming and production; why women have taken over bread winning roles in Western Kenya; why men do not acknowledge women as household providers; why women still respect and hold on to their men's dignity and worthiness despite their inability to adequately provide for their households needs and livelihoods and why men are involuntarily doing roles ascribed to female gender; as this theory addresses causation at different levels of analysis.

CHAPTER SIX
DATA PRESENTATIONS AND DISCUSSION OF THE FINDINGS
OF THE 3RD OBJECTIVE

6.0 Introduction

This Chapter presents and discusses the findings of the study on the evaluation of coping strategies at household level in the context of the declining sugar industry in Western Kenya.

To evaluate how households were coping up with the effects of the declining sugar industry in Western Kenya; household members were exposed to a variety of structured interview questions that required them to describe the strategies they were applying in their households to cope risks and shocks that have been brought up by the declining status of the sugar industry in Western Kenya.

6.1 Table Banking

It was found out that both men and women have adapted table banking as a strategy to access income and to diversify livelihoods.

In all FGD held in the 4 sugar zones, participants reported that table banking was widely preferred as an alternative to sugarcane production and industrialization activities. Men and women were reported to have joined the scheme that was fully fledged and functional in the whole region. Participants reported and shared their views on the table banking procedures and operations. They reported that table banking groups compose of a minimum of 15 and a maximum of 30 members per group and that membership was open to both men and women. The members choose their own leadership which consists of group chairman, secretary, treasurer, and bank tellers. Members also formulate their own guiding principles and regulations to guide

them in the group operations. The groups choose on a specific day and time per week to carry out their table banking operations and also deliberate on when they should break the circle and share the dividends accrued from their shares. Their loaning capital is built through their share contributions and a share is the actual amount contributed by the member and its value is decided by the group members where a member can buy 1-3 shares depending on his/her buying power. Shares are collected from each member and the same is reflected in your bank account book in form of a rubberstamp indicating how many shares one has bought. These contributions continue for a period of not less than 6 months before they start giving loans to its members. A member who wants to access a loan presents his request to the group's secretariat and is illegible to get a loan worthy 3 times of his total shares. Loans are registered in the loans ledger forms where interest rates are also calculated based on the interest rates that were agreed by the members. All loans are insured and should be paid back within the time frame stated by the group, however the interest rate is paid on monthly basis after the loan has been issued to you. Loans are issued after every 4 weeks and therefore after every loaning session, weekly share contributions continue as normal to build up loaning capital. At the end of the operation circle (1-2) years, the group secretariat calculate members shares and interests accrued based on shares, fines, insurance, loan interest and other financial gains to come up with the new value for a single share where each members share is multiplied by the new share value to get the actual amount and profits for each member. Whereas most participants acknowledged that table banking has lifted and restored their lost hope, others expressed their views that high levels of poverty could not allow them to engage in table banking micro-finance scheme. They shared their perception that and views that table banking was a game for the rich and not the poor.

In FGD held at Mumias and Nzoia sugar belt zones, participants shared their views that despite the hard economic times they were experiencing, life has to go on. They reported that table banking yields more profits in its operations, members meet twice in a month to buy shares as they accumulate the loan capital, and that rules and regulations were strictly adhered to by all members. Some groups were reported to have accumulated over 1 million Ksh. as group shares which members can acquire loans. It was noted that unlike banks whose loan requirements are hard to meet, in table banking your shares and those of your collateral group members' act as your guarantor for your loan and loan interests are determined by the group members which does not exceed 10%. Most participants who have joined the groups reported improved living standards and livelihoods in their households and encouraged those who have not joined to do so. The groups also offer emergency loans for schools fees, death, and sickness at no interest.

“As I speak I have harvested a lot of maize through a loan I acquired from the group, if you need some maize please come to my home, I am selling a tin for a 100 Ksh as others are selling for 120 Ksh. my maize is fresh and well taken care of, and it is free from weevils. These maize sells will pay for the loan and I will also not lack food and other needs in my household”. **FGD (Nzoia sugar belt zone)**

“Table banking has assisted me to buy two dairy cows, from which I sell 10-14 liters of milk every day, my household members also benefit from the milk tea they take every morning. I also own and operate a shop nearby my household”. **FGD (Nzoia sugar belt zone)**

“This hall hosts a lot of table banking meeting per day, some members come as far as Bungoma to buy their shares” **FGD (Mumias sugar belt zone)**

I am also a member of malava table banking group, which is composed of 15 members, each member buys shares worth 500 Ksh every month, as we contribute 1000 Ksh from each member which is given to 1 member based on the number a member voted for” **FGD (West Kenya sugar belt zone)**

“At the end of the year we share the benefits accrued during the banking operations, a member can also choose to take his/her shares for that year and start a fresh the following year. This program gives as loans 1000 Ksh. for an interest of 100 Ksh.” FGD (West Kenya sugar belt zone)

Based on observation, table banking has well been received by most households in Western Kenya, however risks involved in investing in agricultural produce could pose a major challenge in repaying back the loans in case of a catastrophe.

6.2 Women Groups and Merry go Rounds

The study found out that most women have joined women groups and merry go rounds as their strategy for improved livelihoods at household level.

Through in-depth interviews held in the 4 zones, most household shared their views that women groups and merry go rounds is regarded as a women affair as members are mainly women who share same kind of problems and views. However most women reported that men have also joined them in the merry go rounds due to income circumstances they are going through. Most women related that marry go rounds help them to meet critical households needs like provision of food, clothing and beddings which most men overlook. Some women reported that they belong to more than one group and merry go round as a strategy to meet major household needs like school fees for their children.

“Women operate all types of marry go rounds on this market, others have registered in over three groups. Some merry go rounds are on weekly basis while others are on monthly basis” Household (West Kenya sugar belt zone)

‘My husband has also joined me in our merry go round group to earn more income for our household livelihood and sustainability’ Household (Mumias sugar belt zone)

“I am in three merry go rounds, which operate in this village, in one group I have 20,000 Ksh. another one 6,000 Ksh. and another 3,000 Ksh” Household (West Kenya sugar belt zone)

“These merry go rounds, help me to buy household needs such as clothing, beddings and inner wears for my children and other needs like books, pens and pencils” Household (West Kenya sugar belt zone)

In FGD held in Mumias sugar belt zone, participants revealed that even men engage in small merry-go round initiatives to meet household needs and expenses. It was reported that both men and women who carry out informal businesses in town have joined merry go rounds for household provision and food sustenance. Members contribute food items to the member on roll call based on your voted number, whatever item you bought a particular member is what you will receive in return from that particular member. The groups are categorized based on your level of conduct and relationship in your working environment. These groups include bus drivers and conductors, boda-boda riders, vegetable and fruit vendors, salonists and shop operators. Participants also noted that this kind of groups operate on daily basis as food is deemed to be a basic and critical requirement for most households. However participants shared that some members default to pay back food stuffs received to other members hence a major drawback to their food security livelihood strategy.

“Some merry go rounds are specifically for food items, where members contribute food items to each member based on your voted number”. FGD (Mumias sugar belt zone)

“This group is good, however you should at least be able to get 100 Ksh per day to enable you buy some food item for the member on call, otherwise you may find yourself in problems with other members” FGD (Mumias sugar belt zone)

“Some members default after they have received their food, for instance party the ‘bodaboda’ was good before after his turn he refused to cooperate with us, up to now he owes as food that we bought for him and his household” FGD (Mumias sugar belt zone)

“I never miss basic necessities in my home; I have baking flour, sugar, cooking oil, washing soap salt and tea leave. I only buy vegetables and sometimes meat for supper” FGD (Mumias sugar belt zone)

6.3 Community Initiatives

It was found out that the county government of Kakamega has initiated One Cow Initiative in most household in Kakamega County.

In FGD held in Mumias and West Kenya sugar belt zones, participants reported that the county government of Kakamega has introduced a One Cow initiative project. Participants reported that 10 cows were allocated to every administrative ward to be distributed to households based on levels of poverty and willingness of an individual household to undertake the project. It was reported that chiefs and sub chiefs plan and organize for village meetings where experts are dispatched to sensitize the community on improved methods of dairy farming and production. Participants noted that this program is aimed at diversifying livelihoods in the region and that willing members have started to attend training sessions to plant the new grass variety for sell.

“The governor has good plans for this region; he has even set up a banana industry at Bukura which may uplift households’ livelihoods, a demonstration farm has been set up at Ingabira” **FGD (Mumias sugar belt zone)**

“The county has supplied draught resistant seedlings for the grass and according to experts it is planted in deeply dug holes” **FGD (West Kenya sugat belt zone)**

“The grass matures within 3-4 months and that a bell goes for 250-300 Ksh at market price and as high as 500 Ksh during dry season. A ¼ an acre can produce 25 to 30 bells and that a member can harvest 3 times in a year, it also stays for a period of 5 years before it is uprooted” **FGD (West Kenya sugat belt zone)**

6.4 Micro-Enterprise Activities and Small Businesses

It was found out that men have allowed women to engaged in micro-enterprise activities beyond their local environments as a strategy to meet daily household needs and sustain their livelihoods

In FGD held in Mumias sugar belt zone, it was reported that both men and women engage in micro-enterprise and small business in nearby market centers as a means of livelihood. Men operated small businesses as shop vendors, butchery attendants and house ware hawkers as women sold vegetables and tomatoes to help them meet small household expenses like cooking oil and paraffin, soap and salt. Some women were reported to engage in small micro-enterprise activities outside their homesteads along the roadside, where they have set up temporary kiosks or table structures to place on their products. Whereas others specialized in small hotel businesses others sold an assorted combination of products in small quantities that are basic for household use. Some women who sell in nearby towns reported that they record high sells between 5.30-8.00 pm when the working class leave their offices for home. Some women reported that to realize more sells and profits, vegetable has to be washed and cut into pieces ready for the customer to cook.

“Women carry out small businesses like vegetable vending and small hotel businesses for children’s’ survival” **FGD (Mumias sugar belt zone)**

“As women engage in small businesses at market centers, men buy blue gum trees and split them into firewood for sell. Some sell to their wives who fry fish for sell in the evening” **FGD (Mumias sugar belt zone)**

“Men also engage in sand drilling on the riverbanks and stone quarrying for supply to building contractors and individuals who need them for building” **FGD (Mumias sugar belt zone)**

6.5 Income Generating Activities at Household level

6.5.1 Fish ponds and green house farming

It was found out that both men and women engage in fish pond and green house farming as a survival strategy to their livelihoods and sustainability.

During in-depth interviews in the 4 sugar belt zones, men reported that they engage in income generating activities like planting of blue gum trees which mature fast and the market is ready; to sustain their livelihoods. Some men reported that they have invested in pond fishing which provides daily income once the fish has matured. Most households reported that they own some dairy cattle where they have acquired tender to supply milk to the working class within their zones. Some men reported that they split firewood for sell to fish and chips vendors in the nearby market centers as others reported that they pick firewood Nzoia factory for sell in the neighbourhood.

“I have fish ponds which we manage as a family, as we sell the fish to repay the loans, some is used to substitute our daily meals and food requirements”. **Household (West Kenya sugar belt zone)**

I also have a green house, I plant tomatoes and pepper, and I have managed it for over 10 years. Although it has been attacked by the white fly, it helped me to pay school fees for my daughter in Uganda”. **Household (West Kenya sugar belt zone)**

“My husband manages the sugar plantation which takes long for its benefits to materialize, while I take care of chicken, vegetables, maize and banana plantations which we sell for household expenditure”. **Household (West Kenya sugar belt zone)**

In FGD held in West Kenya sugar belt zone, participants reported that both men and women engage in agribusiness as a copying strategy for their livelihoods. They supply vegetables to local boarding schools, hotels and sell to business men and women who transport to towns such as Eldoret, Kakamega and Bungoma. Whereas dairy farming was reported in most households as a source of income for women to meet daily household needs, most household members reported that both men and women engaged in a diversity of activities that they operate at home to sustain their livelihoods.

“We plant vegetables to sustain our livelihoods as we wait sugarcane proceeds, we pluck twice in a week and sell 600 Ksh. per sack. During dry season we even sell for 1000 Ksh per sack”. **FGD (West Kenya sugar belt zone)**

6.5.2 Jaggery, Maize Crushing and Milling

The study found out that a few households have invested in jaggery, maize crushing and milling as a strategy to meet and sustain their livelihoods.

During in-depth interviews, held Mumias, Nzoia and West Kenya sugar belt zones it was revealed that a few households have invested in jaggery milling businesses at household level to sustain their livelihoods. Few members reported that they bought the jaggery machines and maize millers and crushers from the sugar proceeds to help them sustain their livelihoods when their sugarcane is not ready for harvest. They shared that sugarcane takes a period of 2 year to mature for harvest and during that time they needed some income generating project to sustain their household needs and livelihoods. Some households that carry out Jaggery business reported that the decline in sugar production has also affected their business hence poor return and low income which has negatively impacted on their livelihoods. However, the maize millers and crushers reported good business especially during maize harvesting season.

“I was the 1st to own a jaggery machine in this area, I still have the machines but sugarcane is scarce, so I have temporarily left the business as I struggle with other means of survival” **Household (Mumias sugar belt zone)**

“We bought maize milling machine from the sugar proceeds to supplement our source of livelihood; we have also rented that building over there to an ECD teacher for 1,500 Ksh. per month”. **Household (West Kenya sugar belt zone)**

This is the fourth machine I have bought with my husband as they slept; we first owned the small manual one which we sold and bought this one, I also have a maize shell machine and a posho mill”. **Household (Mumias sugar belt zone)**

6.5.3 Dairy and Livestock Farming

It was found out that dairy and livestock farming has been adopted as an alternative livelihood strategy in most households.

During in-depth interviews in the 4 sugar belt zones, most households reported that they sell milk and livestock to meet their daily needs and sustain their livelihoods. Members reported that they practice dairy and livestock farming to supplement their incomes to meet their daily needs. In West Kenya sugar zone men reported that buy young bulls at lower prices which they breed and fatten for sell at a high cost to sustain their own needs as dairy farming products have been left for women to supplement daily household needs. The breeding and fattening of the bulls is done in timing with major household needs and responsibilities such as payment of schools, for others it serves in times of an emergency such as sickness or death.

“Besides I also have cattle for dairy, which we manage as a family, I keep chicken and ducks which we use as food and as a source for quick income”. **Household (Mumias sugar belt zone)**

‘My husband buys young bulls from the market then fattens them for a period of about 3-8 months depending on the size he bought, this earns us quite a good amount of money to meet our major needs like school fees for our children’ **Household (West Kenya sugar belt zone)**

6.5.4 Blue gum Farming and Firewood Sell

The study found out that blue gum farming and firewood selling has also been adapted by men as a livelihood strategy in the region.

During in-depth interviews held in Mumias and West Kenya sugar belt zones, men reported that they have started planting blue-gum trees which take a short period to mature for sell, others buy the trees which they split into firewood for sell to schools and hotels as others sell to fish mongers and chips den vendors.

‘I have three forests, indigenous, blue gum and palm tree forests. Herbalists harvest medicine from here at a fee, I sell blue gum to small timber business men and palm oil to my neighbors’ for my livelihood’. **Household (West Kenya sugar belt zone)**

I buy blue gum trees which I split into firewood for sale to fish monger and chips vendors in nearby market centers. **Household (Mumias sugar belt zone)**

However in FGD held in Nzoia sugar belt zone, most men reported that they pick firewood from Nzoia sugar factory forest for sell to meet their daily needs and sustain their livelihoods as they wait for the miller to pay them their dues

“We pick firewood in the company forest section for sale to illegal brewers and individual users for an income in order to sustain our household” FGD (Nzoia sugar belt zone)

6.6 Subsistence, Horticultural Farming and Chicken/Pig Raring

It was found out that women engage in horticulture, chicken and pig rearing to earn quick money for household survival

During in-depth interviews in the Mumias and West Kenya sugar belt zones, all households reported that they practice subsistence farming as a strategy for survival. They reported that the most planted crops include Maize, millet, sorghum, cassava, sweet potatoes and arrow roots for sell and food security, On the other hand women reported that they practice horticultural farming and chicken raring, for quick sell to meet household needs and daily expenses, as others survive as vegetable and fruit vendors.

“Chicken and pigs are very marketable’ we rare them for quick income” Household (West Kenya sugar belt zone)

“We also farm sweet potatoes, cassava and arrowroots for sell and eating as well” Household (Mumias sugar belt zone)

In Busia sugar zone most households reported that alongside subsistence farming, they also rare pigs for quick income at household level. Most of them noted that sugarcane farming is not reliable and stable in the area and therefore have opted to invest in other pig production to sustain their livelihoods. They shared their experiences in pig farming and noted that pigs are easy to manage and maintain and that they grow very fast, they also shared that there was ready market for the product.

'My wife and I have invested in pig rearing because its meat is widely consumed in this zone' **Household (Busia sugar belt zone)**

6.7 Social Networks

The study found out that both men and women have joined Radio Ingo, West and Nyota FM radio Salam clubs and livelihood groups as a coping mechanism to improve their livelihoods at household level.

In FGD in Mumias, participants reported that they have joined Radio Ingo, West and Nyota FM Salam clubs and livelihood groups to maintain and sustain their livelihoods. Participants reported that Luhya community cherishes and adores greetings and therefore the main objective of establishing the 'salaam' clubs was to maintain and keep healthy relationships among community members. Participants also reported that on realization that most of their households were prone and vulnerable to poverty based on the decline of Mumias Sugar Company, they added the livelihood component to its objectives, to salvage their deteriorating livelihood status. Participants praised Radio Ingo for its driving force and will power to steer up and encourage the Luhya community not to give up in their efforts towards improved and sustainable livelihoods despite the declining economy in the region. Men carry their radios to their place of work where they derive inspirational talks and encouragement from the radio commentators and invited guests as they continue working hard for their households' needs and livelihoods.

They also reported that as members of the clubs, they have formed livelihood groups to assist each other in the fight over poverty. The groups consist of members from all over the region (Kakamega, Bungoma and Busia) where members contribute an agreed amount of money for a particular member on roll call depending on the date of enrollment into the group. The host members can use the money to improve and

sustain livelihoods in their households. Members also contribute for each other in times of joy and misery, in case of marriage ceremonies and terminal and chronic illnesses in the household.

However based on observation, men have taken over the leadership, especially the treasury of these salaam clubs and livelihood groups as a strategy to maintain their male ego and headship at community level and as a source of income. Men have found an opportunity through which they exploit women as they form the majority of members and contributions to the group out of the sells they make from their businesses, they also take advantage of the women's illiteracy levels and deprive them their investments in the group. It was also observed that the groups are too large for the officials to maintain accurate and transparent accounts record; furthermore most of the officials are semi-illiterate and lack basic accounts skills to keep records and manage large sums of money. During a member's visit, group officials who are mainly men, draw large and huge budgets for meals and drinks which the host member has to implement without fail, in some cases they literally do the shopping which they deduct at the end of the whole business which most people are not aware. At the end of whole event the host is left with little amount of money that cannot meet debts. incurred before the event and sustain household livelihoods.

6.8 Community and Religious Interventions

It was found out that men have taken over leadership roles in community initiatives and religious institutions as a voluntary strategy for survival.

During in-depth interviews, it was revealed that most men have decided to take up leadership roles in community based initiative programs and religious interventions as a survival strategy. Men shared their views that since they are easily found in the

domestic sphere they have set aside special days to attend to church responsibilities and community services and issues. Community based programs and initiatives such as One Acre Fund and One Cow Initiative in West Kenya and Mumias sugar zones were cited as some of the programs that men engaged in. Some men have become strong church leaders and acquired titles such as Bishops, Reverends, and ‘Mzee wa Kanisa’

“Now he has come back and a very strong leader of our church”
Household (West Kenya sugar belt zone)

“He has grown up and he regrets what he used to do, he has even provided land for our church construction” **Household (Mumias sugar belt zone)**

“Nowadays he has no issue with me, his work is to take a cup of tea; attend to One Acre Fund meetings; attend to church matters and come back home” **Household (Mumias sugar belt zone)**

“To herd and grace is not an easy task to perform, I have given out some of livestock to my friends and relatives who care for me at an interest from the calves that will be born. Am also a man of God, so I have to work for God” **Household (West Kenya sugar belt zone)**

In a FGD held in Mumias sugar belt zone, participants reported that men have taken up roles in community based programs as chairmen and treasurers of the groups. Men expressed their views that they take up these roles because most of the times they are at home and therefore they have enough time to engage in extra activities. Others expresses their perceptions that women cannot manage and run community programs, therefore they take up the responsibility to ensure that their communities prosper. Women however, responded that men have no money and nothing to do in most of the time and some have engaged themselves in One Acre Fund scheme to utilize their farming skills and time.

“I am the chairman, of One Acre Fund in this location, and I feel good when I see members with food in their homes” **FGD (West Kenya sugar belt zone)**

In FGD at Busia sugar zone, most women reported change in men's behavior due to lack of moneys and delayed payments from Mumias Sugar Company. It was further reported that some men have either stopped drinking while others have resorted to cheaper illicit brew which they consume in small quantities; hence respect for one another has been restored in most households. Some women shared their perceptions that religion has played a great role in changing their husbands' behavior. Whereas some households reported that their husbands have become church leaders, others shared their views that their husbands rarely date, for they have no money.

"I know God, and what the word of God says, whoever perseveres to the end, will be crowned. When I go to my co-wife, I eat freely because I trust in God. Recently my co-wife together with my husband joined our church, and made a commitment that they will be worshipping there" **FGD (Busia sugar belt zone)**

6.9 Casual Labor

It was found out that both men and women engage in casual labor as a means of survival to meet their own needs and household expenditure

Most households interviewed in the 4 sugar zones regions reported that sugar industry is not stable and promising as before and therefore household members could not depend on it fully. Both men and women reported that they sometimes work as casual laborers on people's farm to sustain their livelihoods. Men mainly engage in land preparation before the rains as women take up weeding roles based on their caring nature.

"People don't attend meetings because they are engaged elsewhere as casual laborers seeking for their families' survival" **Household (Nzoia sugar belt zone)**

"Men also work as casual laborers in sugarcane plantations to sustain their households members needs"

6.10 Men's Survival Strategies

6.10.1 Monogamy/Temporary Marital Relationships

The study found out that men have impressed monogamy and temporary marital relationships as a mechanism to avoid household expenses and responsibilities.

As some men reported they can no longer manage and sustain several households due to lack of money and resources, others expressed their views that an African man cannot survive with one wife, they shared their views and perceptions as to why they cannot maintain one wife. Most of them argued that one wife cannot meet the husband's sexual needs appropriately and others reported cases where their wives are absent from their homes for long period of time (2 weeks) due to family issues such as death, weeding and cultural practices that deny them their sexual right. As some men reported that they prefer temporary engagement with their late brothers wives for sexual satisfaction but not bound to household responsibilities, others reported instead of getting into conflict with household members over perceived norms and values over inheritance practices, they would rather engage in temporary external relationships that are not tied to any customs or bound to any responsibilities. Men cited cases where some women ask for permission to attend funerals, only to discover that they temporarily get married to their former boyfriends or men friends whom they dated before they got married.

“When she visits her parents, she can even take a period of 2 weeks which annoys me very much, I have tried on several occasions to go after her but she keeps on repeating the same actions, so I decided to keep a wife at Ekeru and am happy” Household (Mumias sugar belt zone)

“My wife is fond of going to their home in Marama, for various family functions and occasions, what can I do for such a case? Am forced to have an extra marital affair to satisfy my sexual needs and desires” Household (West Kenya sugar belt zone)

“She likes attending to funerals back at her home. A month can hardly pass on before she seeks permission to attend to a funeral, even for distant neighbors, am fed up with that kind of behavior, but I cannot chase her away because she is the mother of this household” **Household (West Kenya sugar belt zone)**

“When I discovered that my wife was cheating on me, I decide to engage in a permanent relationship with another woman whom I have rented a house at Sabatia’ **Household (Mumias sugar belt zone)**

6.10.2 Mischief and Harshness among Men

It was found out that men have become mischievous as a cover up for their mistakes.

Some households in West Kenya sugar zone cited cases of mischief and harshness among men as a strategy of avoiding questions from their wives on how they have spent household income. Women reported cases where men have been found in Malaba forest with tied on bandages as an indication that they have been robbed, only to discover that there men had minor scratches as a cover up misuse of household financial resources. Gender based violence cases were also reported in most household especially after sugarcane harvesting.

However in Mumias sugar zones most households reported reduced cases of gender based violence. Women expressed their views and perceptions that violence cannot exist where there is no money.

6.10.3 Drunkenness and Alcoholism in Men

The study found out that some men have resorted to drunkenness and alcoholism as a strategy to cover up their mistakes

In FGD in West Kenya sugar zone women reported that some men resort to excessive drunkenness and alcoholism to avoid questions from their wives on where they have been and how they spend money.

If I realize that my wife has discovered that I faked the robbery committed against me, I will just resort to drinking to avoid many questions from her. FGD (West Kenya sugar zone)

6.10.4 Men Doing Household Chores

The study found out that men do household chores as a strategy to win their wives sympathy and favor.

In a FGD held in West Kenya sugar zone women reported that after their mischievous behavior, in most cases men don't have money and therefore get back to their normal daily working routine. Women noted that some men are not even able to ask for their conjugal rights but opt for silence; others carry out household chores to cover up their mistakes and win their wives sympathy and favor.

“At such time, men can even cook in the kitchen, because they have nothing and are back to their normal life, who will cook for them, let those who enjoyed with them come and cook for them, as we continue to hustle for our daily needs”

6.11 Rental Houses and Premises

This study found out that a few households who form the upper class of this region have invested in rental houses and business premises as a coping strategy to livelihoods and sustainability

During in-depth interviews in all the 4 sugar belt zones, some men reported their engagement in rental business as their means of survival and livelihoods for their family members. As other men reported that as polygamists, they cannot depend on one means of livelihood. They shared their views that and perceptions that if a man wants to manage and maintain his wives, then he should be ready to invest for each one of them without discrimination. Others reported that they have invested in business premises for social security purposes and also as a means of livelihood in case other survival means do not materialize.

'I have rental houses here at harambee which I have shared equally among my wives. Each wife collects her own rent for her household use and expenditure' **Household (Mumias sugar belt zone)**

I have put up a building here for business. I get some money from there to sustain my family **Household (Nzoia sugar belt zone)**

These findings are tied to the 3rd objective of this study that aims to evaluate the coping strategies at household in Western Kenya. The findings reveal that diversification is the most adopted livelihood strategy in Western Kenya.

Based on the context that livelihoods strategies engaged by the poor are of low return, this study agrees with the recommendations made by Maniriho and Nilsson (2018) as well as Urrehman, Jahanzeb and Rana (2008) that governments to provide professional training (human capital) and Internet access through wireless, increase investment in infrastructure (physical capital) and make loan policies favourable (financial capital) to support and sustain livelihood strategies. Based on the findings of this study, recommends that the government of Kenya should review its budget on livelihood and rural poverty reduction policy implementation; and allocate more funds to empower both men and women in non-farm activities for a rewarding income and improved living standards.

This study agrees with (Hussein and Nelson 1999; Ellis 2000; Warren 2002). Carter and May (1999) assert that households whether they are poor or non-poor derive their livelihood strategies from diversified activities to reduce risks associated with shocks. This study established that the declining status of sugar industry in Western Kenya has exposed most households to poverty, however most households have diversified their livelihoods by engaging in both on-farm and non-farm activities to reduce risks as a result of the declining sugar industry. This current study also agrees with (Mathebula *et al.*, 2017) argument that patterns of livelihood diversification depend

upon activities chosen based on how labour is remunerated (majority of poor household have access to human capital and labour in terms of quantity in most instances) and on the location of the activity; as this current study reveals that cane cutters have moved to other regions such as Kibos in Nyanza, Ramisi in Coast region and Kakira in Uganda based on the quantity of labour and remuneration in those regions. While some women have chosen to engage in microenterprise to meet household daily needs; others have chosen to trade across the border for a rewarding income as other engage in agribusiness and poultry keeping for quick money to sustain their household's livelihoods.

The findings of this study agree with the views of Reardon, Delgado and Matlon 1992; Bryceson 1996; Chambers, 1997; Hussein and Nelson, 1999; Ellis, 2000; Warren, 2002) that, households derive their livelihood based on key assets available, and their ability to diversify their livelihoods also depends upon key assets availability. This implies that diversification as a strategy is good; however, it is not always possible for all households as the base assets are key; the findings of this study reveal that most youths are not able to diversify their livelihoods due to lack of financial resources, hence high rates of crime and insecurity in the region were reported. However the findings of this study reveal that some youths diversify their livelihoods by investing in their physical strength and ability to derive their livelihood.

This study agrees with the views of Hussein and Nelson (1998) who argue that the nature of livelihood strategies are context specific as diversification strategies for some may be intensification strategies for others. This current study was specifically to Western Kenya as it aims to investigate diversification strategies that have been adopted by most household in the wake of the declining sugar industry in the region.

This study also agrees with their observation that migration and agriculture intensification strategies are normally combined to realize multiple income diversification activities. This current research established that most household have combined activities to sustain livelihoods in Western Kenya. It was revealed that whereas women have engaged in micro enterprise activities, men have engage in domestic oriented businesses like posho and juggery milling, casual labour, stone quarrying as others have migrated to other regions in search of livelihoods.

Brown et al., (2006); Alemu (2012) and Leibbrandt *et al.*, (2000) were interested in the factors that influence livelihood strategies. Brown *et al.*, (2006) identified these factors as geographic, demographic and finance, while Alemu (2012) stressed that factors that influence livelihood strategies are age, gender (demographics) and assets endowments (related to finance in Brown et al., case). However this current study found out that the factors that influence livelihood strategies are lack of income, poverty, land division and sub-division, unemployment and food shortage that are widespread in Western Kenya.

Whereas the focus of Munhenga (2014) was on households shifting from farm livelihood strategy to other livelihood strategies, and credit, remittances, market, distance, affiliation to cooperatives, education and house hold size were the driving factors; this study found out that the driving factor on household shift from farm livelihood to other livelihood strategies were lack of income due to delayed payments for farmers by the sugar factories; in extreme cases default of payment by these factories, increasing levels of poverty at household level, high rates of unemployment especially among the youth and land division. Land sub-division in most households is due to inheritance rights for sons and for sell to sustain livelihoods and shortage of food in most households.

However this study disagrees with the findings of Loison (2015) which showed that households' with sufficient assets are able to diversify their livelihoods between farming and nonfarming activities. Unlike his study, this study reveals that despite the fact that most households in Western Kenya don't have adequate income and livelihoods assets, most household have diversified their livelihoods through a combined strategy of both on farm and non-farming activities such as small scale microenterprise activities, income generating activities like sand harvesting, stone quarrying, weaving, poultry keeping and pig rearing and subsistence farming.

This study agrees with the views of Ellis (1998) assertion that diversification is not only voluntary but also involuntary as the findings of this study reveal that men are involuntarily performing household chores as a form of their contribution to their household needs and livelihoods. On the other hand women have quickly adjusted to the economic changes in region and have ventured into microenterprise activities, as others offer their services as house helps to the working class to meet their daily needs and sustain their households' livelihoods. The views of Von Braun and Pandya-Lorch (1991) and Mathebula *et al.* (2017) that rural households diversify their livelihood strategies to minimise risk and to respond to shocks; also concur with the findings of this study which reveal that most households in Western Kenya are prone to risks such as lack of income, jobs and food insecurity due to changing economic trends, this has prompted livelihood diversification strategies in the region through subsistence farming, microenterprise activities, poultry farming, agribusiness and tree planting. However this study differs with Khatiwada *et al.* (2017) who investigated the livelihood strategies by rural households in rural Nepal; whereas his study found out that majority (61%) of the households diversified their income to non-farm sources. Land holding (natural capital), education, agriculture and skill training

(human capital), access to credit (financial capital) and proximity to the road and market centre (physical capital) were the major influencing factors on the adoption of higher returning livelihood strategies. This current study found out that factors that influence non-farm sources are increasing levels of poverty, changing economic trends and unemployment in most household, food shortage and land sub-division.

This study however, disagrees with Geremew *et al.* (2017) study that investigated the factors that determine the probability that a farm household participates in nonagricultural income diversification activities in Ethiopia. Whereas their study used logit econometric and seemingly unrelated regression (SUR) estimations, that showed that institutional factors such as secured perception of land ownership (natural capital) and becoming membership in cooperatives (social capital) have significant influence on the probability of farm households' participation in non-agricultural activities; this current study use qualitative methods and the findings revealed that factors influencing household participation in non-farm activities are diminishing land, poverty and high rates of unemployment in Western Kenya.

On the other hand, Barrett *et al.* (2001) stated that a household diversifies its livelihoods because of push factors such as risk reduction and also pull factors such as increase in income generated. The findings of this current study reveal that most households in Western region diversify their livelihoods due to the push factor such as poverty, unemployment, diminishing land and food shortage which is widely experienced in most homes. However pull factors do not manifest in Western Kenya as most household engage in small microenterprise activities whose returns are low. Their income is mainly to meet their daily needs such as food, cooking oil, salt and soap to sustain livelihoods.

This study however contradicts the views of Urrehman *et al.* (2008) in their investigation of different livelihood strategies and the factors affecting the livelihood strategies in Abbottabad district, North-West Frontier Province (NWFP), Pakistan. This study differs with their study based on the context in which it was carried. Their study was carried out in Abbottabad district, North-West Frontier Province (NWFP), Pakistan whereas this study was carried out in Western Kenya. Their study shows that only 15.8% of the poorest households were having secondary income from other sources. The average or better-off households were mostly depending on the government and private services, remittances from within the country and abroad, self-employment and farming. Majority (80.4%) of the respondents was involved in secondary source of incomes, and hence, livelihood strategies were classified in diversified group; this current study reveal that most households in Western Kenya get secondary income from other sources apart from sugarcane cultivation. This study also reveals that a few households depend on remittances as it was established most households depend on micro enterprise activities, agribusiness, casual labour, and as house helps to the working class in the region.

This study also differs with Alemu (2012) who sought to identify dominant livelihood strategies in rural South Africa applying two approaches – stochastic dominance test and multinomial logistic regression. The study obtained the results that showed households who generate income from wage employment in non-farm and farm activities are better off than other households. Whereas his study applied two approaches – stochastic dominance test and multinomial logistic regression this study applied phenomenological approach where data was gathered through in-depth interviews, FGD, key informants and observation. The findings revealed that most

household members are unemployed and most households experience the same risks in Western Kenya.

Although this study agrees with the findings by Hosu and Mushunje (2013) on livelihood diversification that on-farm diversification can increase income and also reduce risks; this study reveals that on farm activities have to be supplemented by off-farm activities to sustain livelihoods in Western Kenya. Moreover the findings of this study revealed that major livelihood needs such as school fee to college and school going children is a challenge to most household therefore non-farm activities compliment farm activities to increase income and sustain livelihoods among households in Western Kenya.

Based on the researcher's perspective, the declining status of sugar industry in Western Kenya came in as a shock to many especially farmers who also happen to be the major stakeholders in the industry. Men have not come to terms with manifestations that have come along with it. This is depicted in their reluctance to accept maize crop cultivation with a hope that sugarcane industry will soon revive. Most households have been exposed to risks such as increased poverty, joblessness, crime and insecurity, shortage of food, fights over scarce resources and lack of money. However both men and women have thought of alternative means and strategies through which they can meet their daily household needs and sustain their livelihoods. Women have quickly adjusted to the economic trend in the region by carrying out micro enterprise activities in the nearby market centres, while others work as house helps to the working class around. Men are slowly adjusting to the change for they are still optimistic that things may change for better in the near future. However, most men have adopted various strategies to diversify their livelihoods. Men are trying to fill the financial constraint that has befallen them as result of the

declining sugar industry in the region by diversifying their livelihood strategies. Men are investing in planting blue gum trees which mature faster to meet household expenses like school fees for their children. Others are investing in long term strategies like rental houses as they have learned from the experiences of their counterparts in Mumias sugar belt zone. This means that although women have taken over the provision role still remains a man's responsibility as perceived by the society hence their vested efforts on coping strategies. Women on the other hand have engaged in agribusiness and poultry keeping to gain quick money to sustain their immediate household needs and sustainability. Most women have joined table banking, women groups and merry go rounds to meet their immediate and major needs to sustain their livelihoods. Others have joined '*bamba jikoni*' where they specifically exchange food stuffs among households to curb the risk of food shortage. This means food shortage among households in Western Kenya is real.

The county governments in the region have also come up with some initiatives and strategies to diversify and sustain livelihoods in the region. Some initiatives that operating in the region include One Cow Initiative and One Acre Fund which helping most households to diversify their livelihoods. Television stations like West FM are also contributing to livelihood diversification in the region by forming livelihood groups for its member to sustain them in major household needs such as house building, school fees and times of bereavement. Some men invest in their physical strength as casual labours to those who need their services. However some men have adopted mischievous behavior where they fake criminal offences committed against them as a strategy to sustain their livelihoods as other engage in drunkenness and alcoholism to avoid question from their wives on how they spend household income. All the above discussed livelihood strategies adopted by most households is an

indication that most families have fallen short of income as such diversification has been adopted as a means to survive and sustain livelihoods in the wake of the declining sugar industry in the region.

The findings of the 3rd objective of this research study were informed by sustainable livelihoods framework, which aims to empower the most vulnerable and poor through strengthening of their capacity to achieve secure livelihoods. (Chambers and Conway, 1992) assert that: Livelihood is sustainable if it is able to cope with and recover from shocks and stresses and be able to sustain its capabilities or assets now as well as in future. (p. 6). Most households in Western Kenya are struggling to cope and recover from the shock of the declining sugar industry in the region. Household members have adapted to their coping strategies through social, human, financial, natural and physical capitals as informed by sustainable livelihoods approach. Both men and women have joined financial schemes such table banking to acquire capital for investment into their small micro enterprise activities as others acquire high breed loans from One Acre Fund to diversify their livelihoods through improved yields hence improved income. Others have joined social networks such as West FM, women groups and merry go rounds as strategy to sustain their livelihoods in major household needs like house construction, school fees for their children and in case of bereavement among members and their immediate family members. Some households have adopted tree planting as their natural resource coping strategy as other invest in their physical labour to cope with risks such as shortage of food, poverty and unemployment which are rife in Western Kenya. This framework helped to understand how most vulnerable households who have been exposed to poverty as result of the declining sugar industry are coping to sustain their livelihoods. Despite the fact that most households don't have financial resources; men invest into their

physical strength as casual labourers and house helps to meet their daily needs and sustain their livelihoods. Farming organizations in the region such as One Acre Fund have come into the region with improved seed and fertilizer to help most vulnerable households that mainly depended on sugarcane planting and cultivation; to diversify their livelihoods through maize crop farming hence manage the risk of food shortage and improved livelihoods. Programs that have been initiated in the region such as One Cow Initiative, One Acre Fund are responsive and participatory, and they favour multidisciplinary and multilevel development interactions; they are also aimed at alleviating poverty among most households in the region. These programs are people centered and they involve members at household level to participate in identifying and prioritizing their livelihood strategies. These programs are also holistic in nature as they address households' constraints by addressing problems that most households face to improve and sustain their livelihoods hence their multiple intervention strategies. Based on the dynamic nature of this framework, it helped to understand how the poor households have incorporated their human capital and material assets such as land and utilized their opportunities and assets around them such as stones for quarrying and reeds for weaving to cope with daily challenges in their homes as a result of the economic trend in the region.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

The summary covers the study objectives which were analysis of the effects of the declining sugar industry on livelihoods at household level in Western Kenya; reconstruction of gender roles at household level in the context of the declining sugar industry in Western Kenya and evaluation of coping strategies at household level in the context of the declining sugar industry in Western Kenya.

7.2 Summary

7.2.1 Effects on Livelihoods

The declining status of sugar industry in Western Kenya has led to a myriad of problems and negative economic implications at household level. Poverty has set in most households as food insecurity threatens household livelihoods. Businesses and service provision have declined as women hang on to small businesses and income generating activities as a strategy for their households' survival. Cane cutters have migrated to other sugarcane zones to sustain their left behind household members' livelihoods. Land sub-division for sale is a common phenomenon that has led to many land disputes in the region. Women have been forced to join micro finance institutions to access loans for their children schools fees. Unemployment levels are high in the region as most students drop out of college or defer due to lack of fees, which deprives young men and women the right qualification required for employment. Lack of employment has also lead to high levels of Insecurity, whereby many young men are engaging in criminal acts in order to sustain their households' livelihoods. Most households cannot afford medical bills and psycho-therapy medication for their

member who are undergoing psychological problems due to lack of their payments from the sugar factories hence poor living standards in the region as a whole.

7.2.2 Construction and Re-construction of Gender Roles

The findings of this current study reveal that before the decline of sugar industry in the 70's 80's and 90's gender roles were constructed based on the factories' activities alongside traditional cultural ideologies. However after the decline of the sugar industry in the early 2000's gender roles were re-defined based on economic changes that are taking place in the region. The declining status of Mumias and Nzoia sugar factories has rendered men jobless and vulnerable as they have been deprived their major source of income for their households' livelihoods, as they lose their status and dignity as household providers.

However women have quickly adapted and responded to the changes by venturing into the public sphere as they carry out micro micro-enterprise activities in local market centers to meet immediate household needs as they sustain household livelihoods. Women engage in businesses such as vegetable and fruit vendors, fish mongers as other take up informal jobs as house helps to public staff employed in this region. Although women have taken over breadwinning and provision roles, women still respect their husbands as heads of their households' .Men on the other hand have remained in the domestic sphere, where they have taken over subsistence farming as their major role, alongside other roles like cattle herding and household chores. Despite the fact that men still do not value women as household heads, their perception and views about women as household breadwinners and providers has changed. Men have allowed their wives to carry out businesses in the public sphere as a means to sustain household livelihoods as they as they carry out household chores as their contribution to household responsibilities.

7.2.3 Coping Strategies

To cope up with these livelihood risks and shocks both men and women have adapted various strategies to earn a living for their livelihoods. Men and women have joined table banking schemes and microfinance initiatives to sustain their households' livelihoods. Men have also joined women in merry go rounds initiatives to protect their provision role and ego as heads of households. The county government of Kakamega has also come up with various income generating initiatives to diversify rural household income. This includes programs like One Cow Initiative and One Acre Fund that are operating in the region. Women are engaging in micro-finance activities as men run jaggery and posho mill businesses, blue gum farming and firewood selling. Women also engage in dairy production, chicken rearing, pig and poultry farming for quick money to meet immediate household needs and expenses as men invest in their physical strength as casual laborers to meet their household needs. However the rich class in the region continues to reap from the numerous investments they made out of the sugar returns. They own rental houses and business premises which they have rented out to potential businessmen as they run their own non-farm activities.

Men and women have also employed various strategies to cope with gender disruptions at household level. Men have resorted to monogamy as a strategy to reduce household responsibilities and expenses tied to them, as others opt for unbinding extra marital relationships that do not bind a man to household responsibilities. In cases where gender based violence is prone to occur, men apply mischief and harshness as a strategy to avoid many questions from their wives as others resort to alcoholism to keep off their wives. However other men engage in household chores to win their wives sympathy and favor. Religious intervention has

also been applied as copying strategy to livelihood challenges and genders disruptions at household level.

7.3 Conclusions

The declining status of sugar industry in Western Kenya has not only affected households livelihoods but also the region as a whole. Gender roles have changed as most household diversify their livelihoods strategies to meet their needs and sustain their livelihoods.

This study therefore concludes that before the decline of the sugar industry in the Western Kenya, living standards of most households were good, gender roles were constructed based on the factories activities alongside culturally ascribed roles; however the declining status of the sugar industry in the region has led to poor living standards among many households, gender roles have been reconstructed where women have taken over breadwinning and provision roles as men engage in domestic oriented businesses as they utilize their physical strength in subsistence farming and casual labor. To cope with livelihood and gender role reconstruction challenges, both men and women have adapted various strategies to meet their needs and sustain their livelihoods. Livelihood diversification has been adopted as the major strategy to sustain livelihoods

7.4 Recommendations

Based on the context of the current study findings and discussion, the study has generated the following recommendations for policy makers, stakeholders and practitioners and researchers

7.4.1 Policy Makers

- i) This study found out that the declining status of the sugar industry in Western Kenya has led to high rates of poverty in the region. This study therefore recommends that the Kenyan policy on livelihoods and Rural Poverty Reduction should consider hiring and allocating more budgets for intensive services in Western Kenya for diversified strategies and livelihoods and investment in human capital at community level for improved life skills.
- ii) The findings established that most women in most households have ventured into micro enterprise activities in the public sphere to sustain their households' livelihoods; however men do not acknowledge their contribution to household livelihoods. This study recommends that the Kenyan gender policy should be reviewed to include women contribution to livelihoods welfare and wellbeing and consider allocating more budget in human capital to train more women in micro finance and business skills for improved and rewarding income at household level hence improved standards of living in Western Kenya

7.4.2 Stakeholders and Practitioners

- i) The findings of this study reveal that management of sugar companies is the major drawback to the industry. Therefore this study recommends that chapter 6 of Kenyan constitution should be implemented.
- ii) The findings of this study also reveal that women are overburdened and overwhelmed as major sole providers of household needs and livelihoods, however most of the women in the region still engage in

non-farm related activities that only serves as a strategy for household survival but does not improve total household welfare and wellbeing. Therefore the county governments through their service providers should organize and mobilize small scale business community and carry out micro-enterprise trainings for both men and women on business planning and interventions for improved and sustainable household livelihoods.

- iii) The findings also reveal that men are psychologically affected due to their inability to provide and sustain their household needs and livelihoods as expected by the society. Therefore stakeholders and practitioners in the NGO sector should sensitize men to join available financial institutions to access loans and invest in non-farm activities not only for household welfare and wellbeing but also for wealth accumulation. The sector should also design and come up with gender programs that target men as their major category for social change. They should also take an initiative to provide psycho-therapy interventions and offer guiding and counseling services to the affected.
- iv) To reduce insecurity in the region, the county governments in collaboration with NGO's should initiate youth based programs at sub county level to engage and train the youth in life skills and income generating activities. The practitioners should also link the youths to financing institutions to access financial services for their businesses.

7.4.3 Researchers

- i) Comparative studies need to be carried out to investigate the similarities and differences between variables such as effects on livelihoods, change of roles, and coping strategies.
- ii) A study should be done on changing gender roles and how it affects households, using quantifiable variables.

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APPENDICES

Appendix I: In-Depth Interviews at Household Level

1. Before the establishment of sugar factories in Western Kenya, what were the means of livelihoods at household level
 - i) Men
 - ii) women
2. what kind of activities were carried out at household level before the establishment of sugarcane factories in the region:
 - i) Men
 - ii) Women
3. How did the establishment of sugarcane factories in the region, affect/change your activities at household level for:
 - i) Men
 - ii) Women
4. How did the establishment of the sugar factories in the region change your life styles at household level
 - i) Men
 - ii) Women
5. How has the declining status of the sugar industry in Western Kenya affected your livelihoods
 - i) Men
 - ii) Women

6. How has the declining status of the sugar industry in Western Kenya affected your activities at household level
 - i) Men
 - ii) Women
7. What do you think is the cause of all these changes in gender performance?
 - i) Men
 - ii) Women
8. What are your views and perceptions about these new changes in role performance at household level
 - i) Men
 - ii) Women
9. What challenges are you facing at household level
 - i) Men
 - ii) Women
10. What strategies have been employed to cope with these challenges at household level
 - i) Men
 - ii) Women

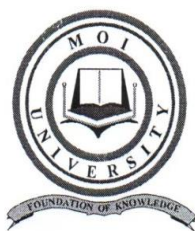
Appendix II: Focus Group Discussion for Men and Women

1. How did the establishment of the sugar industry in Western Kenya affect the region as whole
2. How did the establishment of sugar factories in Western Kenya influence your activities at household level
3. How did the establishment of the sugar factories in this region affect your livelihoods at household level and the region as whole
4. How has the declining status of the sugar industry affected your livelihoods and the region's economy in general
5. How has the declining status of the sugar industry affected your activities at household level
6. How has the declining status of the sugar industry in the region affected your income at household level
7. What are your views and perceptions for the declining sugar industry in western Kenya
8. what alternative economic activities do both men and women engage in to sustain livelihoods in the wake of the declining sugar industry in Western Kenya
9. Apart from the declining sugar industry, what other factors have changes in social roles performance at household level.

Appendix III: Key Informants

1. How did the establishment of sugarcane factories affect the region's economy in general?
2. How has the decline of the sugar industry affected people's livelihoods and the region as a whole?
3. To what extent has the declining status of the sugar industry in Kenya affected businesses and the region's economy in general?
4. What recommendations can you offer to revive the economy of this region?

Appendix IV: Research Permit



MOI UNIVERSITY

Tel. Eldoret (053) 43620
Fax No. (0321) 43047
MOIVARSITY 35047

P.O. Box 3900
Eldoret Telex..No.
KENYA

SCHOOL OF ARTS & SOCIAL SCIENCES

DEPARTMENT OF SOCIOLOGY & PSYCHOLOGY

1st July, 2019

THE SECRETARY/CEO
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION
P.O. BOX 30623 – 00100, NAIROBI, KENYA

Dear Sir/Madam,

RE: RESEARCH PERMIT- DORICE MOLLY AMBASA- SASS/DPHIL/01/17

This is to confirm that the above mentioned is a bonafide postgraduate student currently pursuing Doctor Philosophy of Arts in Sociology in the Department of Sociology and Psychology, School of Arts and Social Science, Moi University. She is currently scheduled to conduct research on the area outlined below in the next three months. Her research topic is *“Declining Sugar Industry and Implications on Livelihoods and Gender Relations in Western Kenya”*.

This is to request you to issue her with research permit to enable her collect data for the respective research.

Thank you.

HEAD
SOCIOLOGY & PSYCHOLOGY DEPARTMENT
MOI UNIVERSITY



DR. FRANCIS BARASA PhD
HEAD, SOCIOLOGY & PSYCHOLOGY DEPARTMENT

Appendix V: Research Authorization



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/60943/31817**

Date: **25th July, 2019**

Dorice Molly Ambasa
Moi University
P.O Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Declining sugar industry and implications on livelihoods and gender relations in Western Kenya.”* I am pleased to inform you that you have been authorized to undertake research in **Bungoma, Busia and Kakamega Counties** for the period ending **24th July, 2020.**

You are advised to report to **the County Commissioners, and the County Directors of Education, Bungoma, Busia and Kakamega Counties** 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
Bungoma County.

The County Director of Education
Bungoma County.

The County Commissioner
Busia County.

The County Director of Education
Busia County.

The County Commissioner
Kakamega County.

The County Director of Education
Kakamega County.

Appendix VI: Consent Document

From: Dorice M. Ambasa

To: Area Chief

- Lubinu Location in Mumias East Sub-County
- Maraama Central Location in Butere Sub-County
- Kholera Location in Matungu Sub County
- Sitikho Location in Bungoma East Sub-County
- Nambale Township Location in Nambale Sub-County

RE: REQUEST TO CARRY OUT HOUSEHOLD INTERVIEWS IN YOUR LOCATION.

I wish to formally request your office to grant me permission to carry out an academic research in your area of administration. I am a student undertaking a PhD degree in Sociology at Moi University, School of Arts and Social Sciences, department of Sociology, Anthropology and Psychology. The main purpose of the study is to explore the impact of the declining sugar industry on livelihoods and examine how both men and women are coping with the economic changes taking place in Western Kenya.

One of the major requirements of the degree is to carry out interviews with both men and women at household level in relation to the study subject. The interviews are voluntary and will take a period of 1(one) to 2(two) days to complete, depending on the number of participants selected and level of information shared. Confidentiality of the participants information is assured as no individual names will be quoted in the research study.

The findings of this study may be useful to your administrative location and community at large in terms of policy formulation and implementation hence improved livelihoods at household level

Thanks in Advance

Yours Faithfully



Dorice M. Ambasa

Appendix VII: Area Chiefs Authorisation Letters

REPUBLIC OF KENYA



MINISTRY OF INTERIOR & NATIONAL ADMINISTRATION
State Department for Internal Security and National Administration

TELEGRAM "DISTRICT"
TELEGRAM
WHEN REPLYING PLEASE QUOTE:

OFFICE OF THE CHIEF
LUBINU LOCATION
P.O BOX 53-50106
SHIANDA
0726268359
DATE: 25/07/2019

REF NO: 2019/1/2019/VOL.3

DORICE MOLLY AMBASA
P.O. BOX
KAKAMEGA

RE: AUTHORITY TO CARRYOUT IN-DEPTH INTERVIEW AT HOUSEHOLD LEVEL

I confirm to have authorized Dorice Molly Ambasa of identity number 10918104 to carryout in-depth interview at household level on the declining sugar industry and its implication on livelihoods in Western Kenya, Lubinu Location has been enlightened as one of the study areas.

I therefore authorize her without any reservations

Any assistance shall be appreciated

Yours Faithfully,
Bernard A. Rapando



REPUBLIC OF KENYA



OFFICE OF THE PRESIDENT
 MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
 STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION

Telephone : 056-620011

BUTERE SUB-COUNTY.

D/23590316.

When replying please quote

Our Ref:

OFFICE OF THE CHIEF
 MARAMA CENTRAL LOCATION
 P.O Box 50-50101
 BUTERE

Date: 15/07/2019.TO WHOM IT MAY CONCERN:

RE: AUTHORITY TO CARRY OUT FARMING RESEARCH.
DORICE MOLLY AMBASA - ID/10918104.

The above named researcher reported to my office at Ilmorog on 15/07/2019 requesting to carry out research on sugar cane farming in the area.

She was given the authority to carry out the exercise under guideline of the Assistant Chiefs and their village elders.

Kindly accord her the needful assistance.

Yours faithfully

SENIOR CHIEF *Patrick D. Andabwa*
 MARAMA CENTRAL LOC.
 DATE... 15/07/2019.

PATRICK D. ANDABWA

REPUBLIC OF KENYA.



OFFICE OF THE PRESIDENT.

Telegrams: "DISTRICTER"

Bungoma East

Telephone: 05541141

WEBUYE

When replying please quote.

Ref: No. 9510/ADM 56/23/UDLI/198

CHIEF OFFICE,

SITIKHO-LOCATION,

P.O BOX 70-50205,

DATE 26th JULY 2019

M/S DORICE MOLLY AMBASA
 c/o MOI UNIVERSITY
 BOX 3900
 ELDORET

RE: AUTHORITY TO CARRY OUT RESEARCH IN
 MILO SUB LOCATION OF SITIKHO LOCATION

Following your request as above referred we allow you to carry out your scientific research on declining sugar industry and its impact on livelihoods at household level in western Kenya as from 30th July 2019.

While on your work we expect you to observe ethical issues and professionalism. I wish you all the best in your assignment.

Thank you.



EMMANUEL M. WANGALA



THE PRESIDENCY

MINISTRY OF THE INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

"DISTRICTER", _____

OFFICE OF THE CHIEF

LOCATION NAMBALE TOWNSHIP

P.O BOX 179-50409

DATE 27th JULY 2019

When replying please quote

ADM / NBLT / VOL 804

SNR CHIEF
NAMBALE TOWNSHIP LOC

Date: 27-7-2019

TO WHOM IT MAY CONCERN

Dear sir / madam

RE: DORICE MOLLY AMBASA ID NO: 10918104

The above named person who is a PhD student doing research on declining Sugar Industry and its impacts on livelihoods at household level in Western Kenya, has reported to my office requesting to be allowed to carry out the exercise in my area of jurisdiction. I therefore write to inform you that I have authorized her to go on with the research to carry out household interviews and group discussions.

Wishing her all the best.

yours faithfully

SNR CHIEF
NAMBALE TOWNSHIP LOC

Date: _____
Marilyn Oundo



THE PRESIDENCY

MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
State Department For Internal Security And National Administration

Telegrams: "DISTRICTER" ,
Telephone:
E-mail:
When replying please quote
Ref No:
And date

OFFICE OF THE CHIEF
KHOLERA LOCATION
P.O. BOX 901
MUMIAS
281 071 20.19.

To Whom it may concern;

RE: DORICE MALLY AMBASA ID# 10918104;

The above mentioned person came to my office on the above mentioned date and for the purpose of carrying a research study on the declining sugar industry and its impact on the livelihood of household heads in Kholera location which was identified as one of her study areas. I therefore authorize her to carry out the said study and collect data as intended.

Thank you in advance

Yours faithfully
Simon M. Mwangi

CHIEF
KHOLERA LOCATION
P.O. BOX 901
MUMIAS

28/07/2019

Appendix VIII: NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MISS. DORICE MOLLY AMBASA
of MOI UNIVERSITY, 3900-30100
ELDORET, has been permitted to conduct
research in Bungoma, Busia,
Kakamega Counties
on the topic: DECLINING SUGAR
INDUSTRY AND IMPLICATIONS ON
LIVELIHOODS AND GENDER RELATIONS
IN WESTERN KENYA.
for the period ending:
24th July, 2020

Permit No : NACOSTI/P/19/60943/31817
Date Of Issue : 25th July, 2019
Fee Received :Ksh 2000






Applicant's Signature
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013
The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.



REPUBLIC OF KENYA



National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 26000
CONDITIONS: see back page

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke