ANALYSIS OF THE IMPACT OF CATTLE RUSTLING ON RURAL LIVELIHOOD IN ZAMFARA STATE, NIGERIA

BY

Mansur Sulaiman ALIYU

P16PSGS8318

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN RURAL DEVELOPMENT

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT FACULTY OF PHYSICAL SCIENCES, AHMADU BELLO UNIVERSITY, ZARIA-NIGERIA

DECEMBER, 2021

DECLARATION

I hereby declare that the work in this dissertation entitled: "Analysis of the Impact of Cattle Rustling in Rural Livelihood in Zamfara State, Nigeria" was carried out by me in the Department of Geography and Environmental Management. The information derived from the literature has been duly acknowledged in the text and the list of references provided. No part of this Dissertation was previously presented for another Degree or Diploma at this or any other institution.

Aliyu Mansur Sulaiman   _____   _____

                       (Signature)   Date

CERTIFICATION

This Dissertation entitled: "Analysis of the impact of cattle rustling on rural livelihood in Zamfara State Nigeria" by Aliyu Mansur Sulaiman meets the regulation governing the award of M.Sc in Rural Development in Department of Geography and Environmental Management, Faculty of Physical Sciences, Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

Prof. J.O. Adefila
Chairman, Supervisory Committee   (Signature)   Date

Prof. R.O. Yusuf
Member, Supervisory Committee   (Signature)   Date

Dr. S. Abbas
Head of Department   (Signature)   Date

Prof. S.A. Abdullahi
Dean, School of Postgraduate Studies   (Signature)   Date

DEDICATION

This work is dedicated to Almighty Allah and the most important people in my life, my Late father Alh. Aliyu Sulaiman Harande, Late Malam Usman Dalibi and my mother Haj. Aisha Umar. As well as my lovely children Aliyu (Hanif), Fatima (Zahra), Aisha (Humaira), Hajara (Nene), I said a big thank you for your support.

ACKNOWLEDGEMENTS

Above all. I thank Almighty Allah for sparing my life and seeing me through the period of my study. I am most grateful to the chairman of my supervisory committee Prof. J.O Adefila and the member of my supervisory committee Prof. R.O. Yusuf for their positive criticisms, support, tolerance, patience and commitment to this work despite their tight schedule. The contribution of all my Lecturers in the Department of Geography and Environmental Management are highly appreciated, I also want to thank specially Dr. I. Mukhtar, and Dr. Usman Isyaku for their assistance. I wish to specially thank my brother Dr. Yusuf Aliyu Harande for his financial assistance and word of advice. I also want to acknowledge all my classmates who assisted me on this dissertation especially, Austine, Malam Mahmud,and Dr Bambale. I do appreciate Abu Hanifa for helping me with the data analysis.

I also wish to extend my appreciation to all my colleagues in my place of work (Nigerian Institute of Leather and Science Technology (NILEST) for their encouragement and support. In furtherance deeply thank my friends and family members such as Hajia. Aisha Umar (Shatu), Hajia. Hauwa'u (Baba), Hajia. Hafsat, Hajia. Halima, Hajia. Hauwa, Hajia. Fatima (Aliya), Hajia. Balaraba and late Alh. Garba Idris (Jakadan Zazzau), Engr. Shehu Roro, Hamza Harande, Bashir Harande, Abubakar Harande, Aminu Harande, Nura Usman, Jamilu Usman and Muhammadu Usman for their moral support to my education.

I wish to appreciate my wives Hauwau Garba Idris and Fatima Shehu Roro for their patience and endurance during the course of study. I appreciate their perseverance taking care of the home while I was in away on the field work. I wish to pay special tribute to my late father Alh. Aliyu Sulaiman Harande, I wish he was here to witness the completion of this dissertation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Cattle rustling has become a problem of major concerned in northern region of Nigeria with quite alarming casualty figures in Zamfara State. The government of Zamfara State reported that nearly 500 villages and 13,000 hectares of land were devastated and 2,835 people killed between 2011 and 2018. Despite this unsettling scenario the impact of cattle rustling on specific rural livelihood options is markedly unclear which calls for this study. This study aimed at analyzing the impact of cattle rustling on rural livelihood in Zamfara State. A total of 390 copies of questionnaire were administered to the respondents using multi-stage sampling. Data was analyzed using descriptive statistics such as frequency count, percentages and mean scores. Also, inferential statistics such as Relative Importance Index (RII), and Z-test were used to examine the consequences of cattle rustling and the extent of cattle rustling effect on rural livelihood. The study reveals that cattle rustling occurred on a monthly basis (55.7%) rustling occur mostly in the midnight and usually last for more than two hours (37.5%). As claimed 38.5% of respondents by the estimated number of cattle rustling between 2014 - 2020 exceeded 50 persons. It was found that about 57% of the respondents reported that farming activities are affected by cattle rustling followed by 24% who reported that cattle rearing was affected. It was ascertained that there is significant difference between all the variables observed before and during cattle rustling at P-value of less than 0.05. The most adopted cattle rustling management strategies are reporting of suspected of cattle rustler is to the village head and people run to safer places for refuge during cattle rustling attack with mean scores of 4.10 and 3.90 respectively. The study recommends that there should be effective deployment of security personnel to the affected community to intensify the security of the affected communities. There should be regular surveillance around the affected communities, which will enable a track of the location of the rustlers.

CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

Security concerns have become one of the disturbing issues in Nigeria, as people and their livelihood have become exposed to violence and other forms of insecurity. In many cases, threats to peace and incessant conflict, subject rural livelihoods to shocks which increase vulnerability. Indeed, armed banditry and cattle rustling particularly in Nigeria have become a key internal security concern in the country (Virginie & Lara, 2014). Their transformation into a huge socioeconomic and security threat has been unprecedented, and northern Nigeria is the epicenter of the menace (Abdulrashid, Saifullahi & Amiret, 2018). The poor households particularly in rural Nigeria, faces pervasive insecurity and other risk that overstretch their subsistence thresholds (Gautam & Andersen, 2016), and the emergent raiding of pastoral livelihood assets, has weakened their adaptive capabilities (Olaniyan &Yahaya, 2016). Consequently, the customary mix of crop and livestock production was completely disrupted and left households with no option rather than to explore other alternative means of livelihoods (Ibrahim, Ozdeser & Cavusoglu, 2018), which often negatively affect their wellbeing. Cattle rustling is an insecurity menace that has plagued Zamfara State in recent times.

Cattle rustling is a planned and organized crime involving the stealing of livestock forcefully from another person or from the grazing field by a group of individuals, and for the purpose of commercial gain (Behnke, 2008). Journalists, academics and security practitioners increasingly refer to it as a form of organized crime. Further, with the involvement of actors such as Boko Haram and the movement of cattle across national boundaries, cattle rustling is also being recognized as a form of transnational organized crime (Okoli & Okpaleke, 2014). Isabel,

(2014) viewed cattle rustling as involving the use of arms to steal households' entire livestock possession. Contemporary cattle rustlers operate with modern weaponry and their operations are marked by trans-locational and trans-national syndication.

The causative factors of cattle rustling in Nigeria, even though there is minimal evidence, is tagged all on subjective marginalization and deprivation (that led to increase in the rate of poverty, absence of gainful employment, poor nutrition, lack of access to finance, low human capital, and so on) among some groups of people (Olaniyan &Yahaya, 2016). Manyok (2017) categorized the factors into: ecological and climate change and consistent shift in the human and livestock population; expansion in non-agricultural use of land; weak capacity of government on provision of security; proliferation of small arms and light weapons; rise of criminality and insecurity in rural areas; as well as weakening or collapse of informal conflict resolution mechanisms.

However, the basic understanding regarding contemporary cattle rustling is that, it is a form of livelihood crime, motivated by both the criminal intent to steal grazing cattle for meat or sale (Manyok, 2017). And in some cases, the quest for primitive accumulation of capital and untaxed wealth. In another dimension, it is a form of substantial village raids, whereby pastoralist's communities are attacked, people are raped and attackers steal any useful assets and properties beyond livestock theft. All these may surely threaten their very existence (Okoli & Okpaleke, 2014).

Livelihood is viewed as a set of activities essential to everyday life that are needed to sustain one's live. Such activities could include securing water, food, fodder, medicine, shelter and clothing (Philip, 2010). An individual's livelihood involves the capacity to acquire these necessities in order to satisfy the basic needs of themselves and their household. Conceptually,

livelihood goes beyond poverty eradication. Livelihood recognized that, various factors and processes come together to either constrain or enhance people's ability to make a living in an economically, ecologically, and socially sustainable manner (Behnke, 2008). In this regard, livelihood may also entail pastoral livestock husbandry and as such security threats especially cattle rustling may impact on such rural livelihood activities and opportunities.

Livelihood in rural communities could be agro-pastoralist in nature. Some could also be focusing only on livestock husbandry and crop farming. In similar vein, livestock represents a fundamental form of pastoral capital, and at the same time, it was regarded as the means through which wealth is stored for a "rainy day" (Behnke, 2008). Philip (2010) is of the view that, livestock rearing is one of the major components of agricultural activities performed by more than two thirds of the world's rural populace due to its benefit as a pathway out of poverty. It has multiple socioeconomic and religious effects in pastoral livelihoods and regarded as symbol of prosperity and prestige and store of wealth. All these positive effects are now threatened by cattle rustling.

The incidence of cattle rusting is most pronounced in villages lying between the four Northern states of: Kaduna, Katsina, Zamfara, and Niger, where it has led to loss of many lives, human injury and population displacements, as well as loss of cattle in their numbers and farm outputs (Yusuf, 2015). Murtala (2018) documented that, between October 2013 and March 2014 approximately 7,000 cattle were rustled from commercial livestock farms and traditional herders in Northern Nigeria. This situation goes with repercussions that do not portend well for the collective wellbeing of the herding communities. It creates a sense of insecurity which has the capacity to hamper the productivity of the herding enterprise as well as farming activities (Vincent, 2015). Olaniyan and Yahaya (2016) worried that, the loss of cattle to rustlers means

depletion of household income and communal resource. The implications of this for sustainable productivity of the herding venture are easy to decipher. This could ultimately lead to not only drop in the aggregate supply of organic protein and dairy, but also agricultural products.

In Zamfara State, pastoral communities have been involved in conflicts. As pastoralism revolves around livestock, the conflicts are predominantly about cattle and its related productive assets - water, land and pasture (Anas, 2017). These previous resource based conflicts have been taken to criminal dimensions by individuals who attack rural dwellers to rustle livestock and perpetrate heinous crimes. The Rugu, Kamara, Kunduma, and Sububu forests have become major hideouts for criminals as Zamfara State is mostly surrounded by forests (Murtala, 2018). Worse still, with a fragile security system, the public confidence in police and State security institutions, to defend rural communities is gradually shifting toward informal, armed groups and local vigilantes. Consequently, the inhabitants have to live under siege from cattle rustlers who freely unleash terror on hapless herders and cow farmers (Anas, 2017; Murtala, 2018; Ibrahim *et al.,* 2018). The foregoing constitutes focus of this study in Zamfara State.

1.2 Statement of the Research Problem

Factors influencing cattle rustling in Zamfara State may not be limited to resource scarcity alone. The reduced well-being due to impact of cattle rustling, as well as the choice of livelihood strategies limited to households prone to dual shocks of climate change and insecurity (Ibrahim et al., 2018) is another likely factor. The indiscriminate raiding of vulnerable and disadvantaged groups, seems to be evidence of the breakdown of the entire socioeconomic order and governance in the State. The way in which cattle are raided for selfish purposes is unprecedented, as against the fact that pastoral communities have a lot of attachments to cattle due to their economic and cultural importance (Segun, 2017).

4

The problem of cattle rustling at its inception arises about a decade ago in Zamfara state. Most of the security operatives showed little concern about the potential threat of this challenge until it became a serious nightmare in 2014 (Hof & Rischkowsky 2018). Casualty figures are quite alarming, the Government of Zamfara State reported that nearly 500 villages and 13,000 hectares of land were devastated, and 2,835 people killed between 2011 and 2018. It was also estimated that there were at least 10,000 armed bandits and cattle rustlers operating out of eight major camps in Zamfara state who brazenly notify villages ahead of attacks, and impose illegal tolls on farmers seeking to gain access to their farms. Therefore, the irony is that despite enormous financial commitment to strengthen military and other security operatives, in the State, the security situation seems to be deteriorating and many inhabitants are forced to migrate (Anas, 2017; Segun, 2017; Murtala, 2018).

Communities suffering the most are those situated within Dansadau, Zurmi, Shinkafi, Tsafe, Bakura and Maradun Local Government Areas (LGAs). From 2011 to 2017, not fewer than thirty-six settlements among these LGAs whose some settlements were burnt to the ground and 15,000 cattle rustled by armed bandits (Anas, 2017; Segun, 2017; Murtala, 2018). As a management strategy for addressing the devastated effects, there was an active involvement of vigilante groups in the area. Some of the vigilante members seized the opportunity of the conflict to 'witch-hunt their old foes. So a peace deal and amnesty was introduced between the State government and the leadership of the rustlers, which was now reported to fail (Segun, 2017; Murtala, 2018), especially with the regard to the resurgence of fresh killings, accompanied by sexual intimidation among women and children in some communities along Shinkafi, Tsafe and Maradun LGAs (Hof and Rischkowsky 2018). The disturbances and migration of the rural

communities in those study locations have no doubt affected their livelihoods, but these impacts are not usually adequately determined. This is a gap in knowledge that needs to be filled.

The literature on cattle rustling and the violent linked to it, has consistently been growing. The year 2018 recorded several studies on the subject matter. For instance, Anas (2017) examined major critical reasons responsible for the resurgence of fresh killings in Zamfara State. It also makes appraisal of the factors that led to the collapse of the peace deal entered in to between Zamfara State government and armed bandits. The studies applied mixed methodology and provides a historical background to the crises and efforts put in place by the government to addressing the crises since 2011. Finding revealed that, Zamfara State government and alleged armed bandits collapsed as a result of combination of several factors which are directly connected to non-fulfillment of the commitment by both sides of the party. The fresh violence and killings and destruction of properties can be avoided if the government and the bandits fulfilled both sides of their agreement. The study also established the weakness of the government in adopting strict measures that help end the crises in Zamfara especially by adopting socio-economic policies that would lead to the rehabilitation and reconstruction of the victims' communities. Cattle rustling has become a subject of research in recent time and a few studies are examined to property situate this study.

Abdulrashid et al., (2018) examined the impact of cattle theft on socioeconomic wellbeing of rural farmers in Katsina State. A cross-sectional data of 1488 respondents selected from six purposively sampled LGAs (Batsari, Danmusa, Faskari, Kankara, Sabuwa and Safana) was obtained via a well-structured questionnaire and focus group discussions. The survey data were analyzed with inferential statistics using classical independent t-test in which the socioeconomic variables of the respondents before the cattle rustling were compared with the

socioeconomic variables during the cattle rustling period. It was found that, despite the fact that cattle rustling has led to loss of life and displacement of people to other safe places, there is no significant reduction of cattle ownership by the people before and during the cattle rustling. However, it has been found that a significant difference in income level of the respondent exists. Therefore, cattle rustling could further deepen the vicious cycle of poverty in rural areas of Katsina state. Some innovative ways of combating cattle theft in form of community cattle ranch and radio frequency identifier were recommended.

Abubakar, Talib and Rohana (2018) assessed the existing preventive approaches on cattle rustling in the rural communities of Kaduna State. The study is empirical in nature, qualitative data were purposively collected from selected security agents, vigilante members, heads of herdsmen, community leaders via in-depth interviews. Nnvivo 11 was used for data analysis. Findings show that the state government uses police, civil defense, vigilante groups in preventing cattle rustling. Furthermore, it was also discovered that security agents (police and civil defense) are the most effective in the prevention of the menace, however, the whole preventive approaches are confined to some problems. The study recommends that government responsiveness and community policing will go a long way in solving the lingering problem in the study area.

Murtala (2018) assessed the role of vigilante groups in the fight against rural banditry in Zamfara State and also trace the genesis of the division amongst the vigilante and how it further worsened the conflict between the vigilante groups on one hand and the bandits on the other. The major findings of the study are that rural banditry and cattle rustling in Zamfara state is quite different from other states. This is because of the active involvement of the vigilante groups in the conflict. That the militant vigilante group (MVG) were partly responsible for the

prolongation of the incidence in Zamfara State and no meaningful peace talk and lasting solution would be achieved without disbanding of both Vigilante Group of Nigeria (VGN) and MVG groups in the state.

From the emerging literature, many of the basically centered on trying to understand factors responsible for cattle rustling, preventive approaches and its negative consequences both in general terms and specific case studies. However, the nature of the contemporary cattle rustling and the degree of impact on rural livelihoods such as farming, transportation, cattle rearing in both Shinkafi, Tsafe and Maradun LGAs have not been given prominence in any research accessible and available to the researcher. The question of investigating the impact of cattle rustling on rural livelihood is multidimensional. Rural socioeconomic system is complex mix and there is inflow and outflow of resources between and among livelihoods. In Zamfara state farming and livestock rearing are no doubt key livelihood opportunities but there are other associated livelihoods (animal tending, rope making, hay and silage making, transportation just to mention a few). All these are affected by the key livelihood activities too. Given the understanding that impact of events on people differ owing to varied susceptibility and coping capacities, it is appropriate to examine these major and associate livelihoods and how cattle rustling has impacted on them as well as management strategies. This is a gap in knowledge this study intends to fill.

The following research questions are devised to guide the study:

1. What is the nature of cattle rustling in Zamfara State?

2. What are the consequences of cattle rustling on rural livelihood in the study area?

3. To what extent are rural livelihoods impacted by cattle rustling in the study area?

4. What are the management strategies adopted for addressing cattle rustling in the study area?

1.3 Aim and Objectives of the Study

The aim of this study is to analyze the impact of cattle rustling on rural livelihood in Zamfara State. The specific objectives are to:

i. analyze the nature of cattle rustling in Zamfara State;

ii. examine the consequences of cattle rustling on rural livelihood in the study area;

iii. examine the extent of cattle rustling on rural livelihoods in the study area;

iv. assess the management strategies adopted by the rural dwellers in addressing the effects of cattle rustling in the study area.

1.4 Scope of the Study

The study is concerned with the analysis of the impact of cattle rustling on the rural livelihoods in Zamfara State. More importantly, the spatial scope of the study is limited to Shinkafi, Tsafe and Maradun LGAs. These are frontline Local Government Areas (LGAs) where cattle rustling has been intense since it became out of control in 2011. Also apart from being at the fringes of forest areas which are known to be the hideout for rustlers (Anas, 2017; Kiruwa, 2017), the resurgence of the ongoing fresh killings was only limited to communities within the LGAs of interest (Shehu, 2017). Therefore, this study beams its searchlight on them. The content scope of the study covered the nature of cattle rustling; the degree of rural livelihood impacted by cattle rustling and its effect on the affected livelihood options as well as management strategies employed towards ameliorating menace of cattle rustling in the study area. The temporal scope of the study covered the period between 2014 -2020 when incidence of cattle rustling become a serious threat to livelihood.

1.5   Significance of the Study

There have been isolated cases and less pronounced existence of cattle theft across many parts of sub-Saharan Africa decade ago. However, its transformation into a huge socio-economic and security threat, particularly in North Western Nigeria has been unprecedented (Olaniyan & Yahaya, 2016; Hof & Rischkowsky 2018). The Zamfara's experience seems to be amongst the worst incidences, with rural dwellers at the receiving end (Murtala, 2018). The phenomenon has increased since 2010 leading to violent conflict between the Fulani ethnic group and their supporters from the Republic of Niger on one side and the farmers on the other. The outcome of this conflict has claimed many lives and properties (Adeniyi, 2016; Anas, 2017).

While consensus exists, that cattle rustling as a form of violence crime has severe and adverse effects on pastoralists and rural communities, Murtala (2018) argued that there is no village in Zamfara State that has not witnessed impact of cattle rustling and rural armed banditry. Unfortunately, there is still a dearth of accurate documentation of the precise nature of cattle rustling, and degree of rural livelihood impacted as well as its effect on the affected livelihood options particularly in the study area. Likewise, the management mechanisms employed which may provide an insight for the redesigning and reimplementation of action plan strategies begged for serious attention and collectively the problem should be empirically examined. Hence, there is need for this study.

It is hoped that the findings of this study will offer solutions of the cattle rustling in the study area as well as bringing further insight on the social, economic and cultural effects of cattle rustling on livelihoods of the communities living in this areas. It is also anticipated that, the study will aid decision-making processes and assist policy formulators in the selection of evidenced-based priority interventions where possible, and allowing for adequate intervention by

government at both State and local level within the study area. Thereby serve as the basis for comprehensive and sustainable results to violent conflict and cattle rustling nexus. It will also provide documented material that can be used for academics, and at the same time contribute to the body of existing knowledge.

CHAPTER TWO

CONCEPTUAL/THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1   Introduction

This chapter looks at previous studies done by researchers that are related to the topic of study. It also discusses various concept and theories related to the title. The literature review was done based on objectives of the study.

2.2   Conceptual Framework

2.2.1   Cattle rustling

Cattle rustling refers to the stealing of grazing cattle. The term is of the historical United States colloquial etymology in which context pioneer farmers lost cattle while grazing on huge ranges that were difficult to patrol for policing. Traditionally, cattle rustling has been driven by the criminal intent to expropriate cow for meat or for sale. Pertinently, it must have served as a means of primitive accumulation of cow-herd in the contexts of subsistence and commercial pastoralism (Blench, 2004).

Conflicts are complex and take different forms including some of the following: conflict over land and water; conflict over cattle/commercialized raids; conflict over the district boundary; road thuggery and banditry. Cattle rustling is an old practice among the cattle rearing communities. However, in post-modern era, cattle rustling has transformed from being a customary means of cattle restocking where traditional weapon such as bows, arrows and spears were used to a commercial practice where sophisticated weaponry is used. Modernity has brought with it a more deadly form of cattle-rustling, and has raised concern because of its

sophistication. Raids are well planned and executed with military precision characterized by the use of modern and destructive weapons. Cattle raiders are known to use small arms and light weapons such as Mark4, German Riffle 3, Alexander Klashikov 47 (AK47), grenades and mortars.

2.2.2 Perspective of cattle rustling

The phenomenon of cattle rustling has been variously interrogated by scholars and analysts. This has given rise to a variety of scholarly perspectives on the subject matter. Some of these perspectives are considered in this section. Conceptually, the term 'cattle rustling' appears to have evolved into a more or less standardized, specialist nomenclature. Hence, the concept is almost universally applied to designate the act of stealing cattle from a grazing herd notwithstanding the motivation or contextual specifics. Some recent studies have, however, used the notion of 'cattle raid' to denote the same reality (Greiner, 2013).

The basic understanding regarding contemporary cattle rustling in the existing literature is that it is a form of livelihood crime, motivated by both 'subsistence' and 'commercial' imperatives (Gueye, 2013). In this regard, cattle rustlers are principally motivated by the criminal intent to expropriate grazing cattle for meat or for sale (Gueye, 2013). As a corollary, cattle rustling has also been largely motivated by the quest for primitive accumulation of capital and untaxed wealth (Alemika, 2013). In this sense, cattle rustling passes for a typical instance of organized crime (Okoli and Okpaleke, 2014). An organized crime is a criminal enterprise involving discernible hierarchical social networking and syndication (Alemika, 2013). The conception of cattle rustling as an organized crime, among other things, presupposes the level of sophistication and criminal efficiency that characterizes its contemporary manifestations. In this

regard, it has been observed that cattle rustling has evolved into 'a serious crime with far-reaching implications' (Daily Trust Editorial, February 5, 2014).

In its apparent global dynamics of sophistication and degeneration, cattle rustling has been associated with spiral violence in different parts of the world today. As observed by Gueye:

Cattle rustling are [sic] a major problem in rural areas and the groups involved in the crime are often armed and pose a threat to the state as their activities may lead to violent conflicts between communities or support for rebel groups that may emerge within the countries (2013:55-56).

The significance of the preceding citation is that cattle rustling has metamorphosed from ordinary subsistence or livelihood crime into an organized crime with glaring correlations to politics, power and organized violence. With reference to the contemporary trends and dynamics of cattle rustling in Kenya, Greiner (2013) opines: [Cattle] raiding among northern Kenya's pastoralists has changed profoundly in the last decades. Fought with modern weaponry and often extreme violence, raiding is increasingly enmeshed in politicized claims over administrative boundaries, struggles for exclusive access to land and attempts to establish or safeguard ethnically homogenous election base. The association of cattle rustling with political struggles has been evident in some parts of Africa. For instance, in 2013, many people were killed or wounded in series of massive cattle raids perpetrated by rebels in Jonglei region of South Sudan (News 24, 2013: para.1). Similarly, in Nigeria, the spate of cattle rustling in the northern part of the country in the recent years has sometimes been associated with the activities of the Boko Haram Islamic sect (Okoli, 2014). The argument in this regard is that rebel or terrorist groups resort to cattle rustling as a means of raising fund in support of their group agenda (Okoli and Iortyer, 2014).

Conventionally, cattle rustling is, more or less, a nomadic phenomenon. This observation is predicated on two principal assumptions, namely:

i.   It takes a nomad to effectively 'drive' a stolen cow or a cow-herd from the graze.

ii.   It also takes a nomad to efficiently navigate the 'forest routes', escaping with the stolen cattle.

Without any prejudice to possible exceptions, it would take an active involvement, or at least connivance, of a nomad to plan and prosecute a 'good' cattle rustling deal. In this connection, it has been alleged that the bulk of the cases of cattle rustling in northern Nigeria has been perpetrated by the 'transnational syndicate of renegade Fulani-nomads who know the forest well' (Irin, 2013). Irin (2013), continues to note that most of the culprits of cattle rustling are nomads themselves who must have lost their cattle as a result of the incessant 'resource-conflict' with the settled farmers (Okoli and Atelhe, 2014), or any other mishaps. The point being emphasized by Irin is that cattle rustling is largely a nomadic phenomenon. It is mainly perpetrated by 'disgruntled Fulanis who have lost cattle' and has thus taken to 'highway robbery and raiding of herds of their kinsmen who they begrudge for not coming to their aid in their predicament' (Irin, 2013). Overall, the prevalence of cattle rustling in Africa today has been associated with a number of predisposing and causative factors, among which are:

i. The worsening material/livelihood conditions of the herders arising from the repercussions of climate change and the attendant resource conflicts tend to be compelling criminal tendencies among the herders.

ii. Proliferation of arms and ammunition in Africa has placed enormous weaponry in the arms of criminal elements some of whom perpetrate cattle rustling.

iii. Terrorism and armed rebellion in the sub-Saharan Africa have promoted cattle rustling as a franchise dedicated to funding of group struggles.

iv. The remoteness of grazing fields makes effective surveillance and policing of cattle herd problematic.

v. The itinerant pattern of grazing in Africa predisposes cattle rustling.

vi. Absence of effective legal framework for mandatory cattle identification and/or registration has obstructed the fight against cattle rustling.

vii. The porous nature of inter-state border-lines in Africa makes trans-border cattle rustling conducive and thriving.

viii. The criminal impunity of the people, arising from the apparent lethargy of the government to determine crime through drastic penalty (Irin, 2013; News 24, 2013; Gueye, 2013).

2.2.3   Rural Areas

Nearly half of the world's population, approximately 3.3 billion people, lives in rural areas, and 90% of those people live in developing countries (Ellis, 2000). Rural areas in developing countries are characterized by a dependence on agriculture and natural resources; high prevalence of poverty, isolation, and marginality; neglect by policymakers; and lower human development. These features are also present to a lesser degree in rural areas of developed countries, where there are also closer interdependencies between rural and urban areas (such as commuting), and where there are also newer forms of land use such as tourism and recreational activities (although these also generally depend on natural resources).

Delivery of quality education and training in a variety of skills in rural areas is therefore needed to attain sustainable rural livelihoods. In order for a rural population to strive there is need for livelihoods that would sustain and support their households and communities. In most rural areas of the world, approximately 90% of the population is involved in farming as a way of earning a living (Yahaya,2016). Small-scale farming, fishing, raising livestock and non-farm activities are some of the common livelihoods that these populations survive on. Rural livelihood poses a great challenge as these populations are often in a state of poverty where they lack the basic necessities for survival.

2.2.4   Livelihood in Rural Areas

A Livelihood can be defined as the activities, the assets and the access that jointly determine the living gained by an individual or household (Ellis, 1998). When it comes to an individual, a livelihood is the ability of that individual to obtain the basic necessities in life, which are food, water, shelter and clothing. Therefore, all activities involved in finding food, searching for water, shelter, clothing and all necessities required for human survival at individual and household level are referred to as a livelihood. Approximately 90% of rural households are involved in farming activities (Davis et al. 2010a, b). In Africa, 70% of the household income in rural areas is from farming activities, while in Asia and Latin America 50% of the income is from farming activities (Davis et al., 2010a, b). In these rural populations small-scale farming, fishing, raising livestock and non-farm activities are some of the common livelihoods that these populations survive on as a source of income.

In most rural areas of the world, approximately 90% of the population is involved in farming as a way of earning a living. Small-scale farming, fishing, raising livestock and non-farm activities are some of the common livelihoods that these populations survive on. Rural

livelihood poses a great challenge as these populations are often in a state of poverty where they lack the basic necessities for survival. A rural household with diverse sources of income earning activities has better chances of survival financially than a household which has only one source. Delivery of quality education and training in a variety of skills in rural areas is therefore needed to attain sustainable rural livelihoods. In order for a rural population to strive there is need for livelihoods that would sustain and support their households and communities.

2.2.5   Wellbeing

The seeking of a definition for wellbeing is a complex pursuit, as increasingly it is utilized in conversations, on the community and global media, and within the literature, in many different ways, with wellbeing seemingly taking shape as a chameleon (Carter, 2016). Originally there appeared two specific schools of thought where wellbeing was seen either as hedonic or eudemonic. From a hedonic view, focusing on happiness can be seen as the totality of pleasurable moments. Philosophers such as Hobbes viewed wellbeing as "a pursuit of human appetites", DeSade held that it was the "pursuit of sensations and pleasure" and Bentham claimed that "through maximizing pleasure and self-interest that the good society is built" (cited in Husain, 2008). Other philosophers held a somewhat different view, deeming that people experience happiness in the expression of their virtues, engaged in what they believe is worth doing (Carter, 2016). This notion of eudemonia being true to one's inner self can be equated with an eudemonic perspective of wellbeing. Building upon the eudemonic view of wellbeing is Maslow's (1970) concept of self- actualization and Deci and Ryan's (2000) self-determination theory. An individual's or community's quality of life is a direct function of the conditions that arise in life, and how an individual or community utilizes the conditions that life presents. How an individual or community perceives the condition, thinks and feels about those conditions,

what is done and, ultimately, what consequences follow from all these inputs in turn becomes a function of how the conditions are perceived. People's perceptions, their feelings, their thoughts, and their actions, then, have a direct impact on their own and others' living conditions (Michalos, 2007).

McCallum and Price (2016) argued that wellbeing has emerged as "something everyone seemingly aims for, and arguably has a right to" (McCallum & Price, 2016). While wellbeing is not a new concept, it has become an important concept within contemporary community contexts. However, identifying an agreed definition of wellbeing, in addition to establishing a consensus on how quality wellbeing can be achieved and sustained, is far more problematic with the term wellbeing often poorly defined and under-theorized (Camfield, Streuli & Wood head, 2009). To compound the issue of definition inconsistency, wellbeing is often used interchangeably with other terms such as 'happiness', 'flourishing', 'enjoying a good life' and 'life satisfaction', all which have very different interpretations and underlying meanings.

Bradburn (1969) (as cited in Dodge, Daly, Huyton & Saunders, 2012) defined wellbeing as being present when an individual is high in psychological wellbeing, where an excess of positivity (positive affect) predominates over negative affect. In contrast, Shah and Marks (2004) argued that wellbeing is more than just positive affect (happiness, feeling satisfied), with feeling fulfilled and developing as a person an equally important aspect in defining wellbeing. Diener et al. (1999) extend the definition of wellbeing even further by defining wellbeing as subjective (thus the term subjective wellbeing, {SWB}) more specifically as consisting of three essential interrelated components: life satisfaction, pleasant affect, and unpleasant affect.

The characteristic intensity with which people perceive their affective states, has no bearing on overall subjective well-being (Larsen, Diener & Emmons, 1985). It seems that the

predominant predictor of overall SWB is the rate of positive compared to negative states in a person's life, throughout time (Larsen, Diener, & Emmons, 1985). "Because subjective well-being refers to affective experiences and cognitive judgments, self-report measures of subjective wellbeing are indispensable" (Larsen & Eid, 2008). Together with his associates Ed Diener designed the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), which developed into the standard measure of life satisfaction in the wellbeing field. The implications concerning the measurement of SWB are that:

1. SWB can be assessed by self-report with significant consistency and authority (Larsen & Eid, 2008).
2. Each measurement method has drawbacks and benefits (Larsen & Eid, 2008).
3. Comprehensive assessment of SWB necessitates a multimethod assessment tool (Diener, 2009; Diener & Eid, 2006).

Diener (2006) suggested that people over emphasize their emotional intensity and underestimate and underrate the frequency of their positive affect when recollecting emotional moments. This research signifies that there is no single cause of SWB. It seems apparent then, that certain conditions appear to be essential for high SWB {mental health, positive social relationships}, but are not singularly sufficient to cause happiness (Diener, 2006). Diener's work has detected a number of circumstances that seem to be required for, or correlated with happiness, however no one condition or characteristic is adequate to ensure happiness in itself (Larsen & Eid, 2008).

It should be noted that there is evidence that diverse circumstances and outcomes make people happy. Diener and colleagues have shown that the links to happiness alter between young

versus old people (Diener, 2000). So what makes a younger person happy may not make an older person happy. Likewise, Diener, Suh, Smith, and Shao (1995) reported that there are different connections to happiness in differing cultures. Diener (2000) has suggested that that there are likely universals, such as experiencing close positive social relationships that are associated with happiness by almost everyone. Larsen and Eid (2008) cleverly suggest a cooking analogy explaining that when cooking some ingredients are essential, many just enhance flavour or texture but no singular ingredient, produces the desired outcome, rather all ingredients need to come together in the right way for success to be achieved.

SWB appears to contribute to beneficial outcomes in life. Diener (2000), along with his colleagues has determined that happy people are more creative and sociable; have increased likelihood of longevity; display generally sturdier immune systems; earn more money; are good leaders; and display generally better citizenship in their workplace. Furthermore, numerous positive outcomes were linked to happiness, such as marital satisfaction, job satisfaction, and improved coping. Therefore, high SWB is particularly desirable at individual, at educational system levels, and at societal levels. It therefore makes sense to invest in promoting a culture in educational contexts where wellbeing is important. This text will aim to explore, how educational contexts can create a culture where SWB is valued, and high levels of SWB are desired as outcomes, planned for and hopefully achieved.

McCallum and Price (2016) propose an even more encompassing definition of wellbeing outlining it as diverse and fluid, respecting the beliefs and values of individual, family, and community; and experiences, culture, opportunities, and contexts across time and change. They aver that it encompasses interwoven environmental, collective, and individual elements that

interact across a lifespan (McCallum & Price, 2016). Despite a range of notions encompassed in wellbeing definitions, wellbeing can then be described in very broad terms as a holistic, balanced life experience where wellbeing needs to be considered in relation to how an individual feels and functions across several areas, including cognitive, emotional, social, physical, and spiritual wellbeing.

2.3   Theoretical framework

2.3.1   Cattle Complex Theory

This study is also underpinned by the Cattle Complex Theory to study livestock rustling. The origin of the Cattle Complex theory is traced to Herskovits, who coined the term while pioneering culture area studies within Africa in 1926.   Kings (2009), found many East African pastoralists to be adhering to what he called "The Cattle Complex", in which a strong attachment to cattle to the point of irrationality is maintained (Kempf, 2007). Keeping a large number of herds is not a sign of greediness, rather, an insurance against drought, diseases, bushfires, livestock rustlings and wildlife attacks. With socio economic and environmental change, keeping a lot of livestock has significant impact on socio-economic development of pastoralist communities as shown by this study.

2.4   Review of Related Literature

2.4.1   History of Cattle-rustling: Recent Developments and New Trends

The act of cattle-rustling has evolved over a period of time from being an accepted traditional practice sanctioned by the village elders into being a commercialized and criminal venture, with attendant grave human rights violations. Some of the causal factors that have contributed to the recent development and new trends in cattle-rustling in Nigeria and her

neighboring countries are discussed next. New Administrative Units as an Impediment to the Pastoral Way of Life The establishment of the colonial administration, which introduced the imposition of permanent tribal boundaries, had major ramifications on the pastoral communities as these boundaries were set up without due regard to the seasonal variations and demands of the nomadic lifestyles of the pastoralists. Although the new administrative units were meant to provide distinct and exclusive units of governance along ethnic lines, pastoral communities were oftentimes forced to ignore these colonial boundaries during times of drought. This has inevitably led to tensions between them and the agricultural communities over allegations of trespass. In the past, such conflicts have led to the loss of lives and damage to crops and property. An example of a conflict attributable to exclusive units of ethnic governance is the 13 attack between the Samburu pastoralists and the Laikipia farmers in February 1998 where the conflict ended with the fatalities of 70 people, Weiss, (2004).

According to Osamba, (2006) Pastoral systems are by and large products of climatic and environmental factors. Hence, apart from the Government's failure to take proactive and corrective policy measures to improve the socio-economic conditions of the pastoralists, the problem of underdevelopment in the arid and semi-arid lands (ASALs) has been realized. This condition can be attributed to that fact that people living in these regions are prisoners of geography. Due to the prevalence of harsh climes in these regions, the livelihoods of pastoralists are often times seriously threatened by famine and drought. Environmental factor have therefore contributed largely to the practice of cattle-rustling. Every year, the effects of drought and famine lead to the death of hundreds of livestock since the community's fight in search of the meager resources available after harsh drought as stated by, Hendrickson et al., (1996). The long spells of drought experienced in most parts of the pastoralist communities, mainly the North

Eastern, and North rift parts of the country including Masol in West Pokot County, has led to undue suffering of these communities, which has in turn led to a competition over pasture and water for livestock. This has led to the pastoralists crossing borders and trespassing to other communities' land in search of pasture and water. In the process, the pastoralists engage in inter-ethnic conflict mainly because of two reasons. Hendrickson et al., (1996) argue that the effects of drought and famine leads to the death of hundreds of stock, and for this reason, the pastoralists desire to engage in rustling to restock and compensate for their lost cattle.

Secondly, some of the pastoralists engage in rustling as a way of increasing their wealth or as conduits for unscrupulous businessmen out to make a quick kill from the miseries and hardships of the pastoralist, Paula, (2010). The increasing commercialization of livestock theft has led to further tension and conflict amongst the pastoralist communities. The sad reality of the commercialization of cattle-rustling is that while the pastoralists go for each other's necks (in order to satisfy the demand of the livestock buying middlemen), the meat-loving urbanite Kenyans are the unsuspecting collaborators of these crooked businessmen. Most urbanite Kenyans offer a ready market for conflict Nyamachomaas they go about ordering the choicest cuts of meat in their fun filled weekend engagements in Nairobi, Nanyuki, Isiolo, Nyeri and other major towns unaware of the fact that they could be feasting on meat for which some other Kenyan living in the ASALs has paid for dearly (Satya &Ali,2010)

2.4.2   Nature of Cattle Rustling

The current state of militarized cattle rustling represents a transformation from the erstwhile traditional practice of cattle raiding (Osamba, 2000). Fulani have practiced cattle raiding for many years as a cultural pattern of showing prowess and of restocking depleted stock.

It is generally non- militarized. However, the current spate of rustling is heavily militarized and deadly. A number of factors are attributable to this transformation. Contemporary cattle-rustling activities operate as a form of organized crime, motivated by wealth accumulation given that proceeds are never subject to state taxation (Alemika, 2013, Okoli and Okpaleke, 2014). A major impetus for the syndicated criminality is the presence of what Chris (2014) captured as the "underground economy," which is linked to the political economy of some agrarian societies. An underground economy thrives on secrecy and the accumulation of untaxed wealth. In essence, the shadow economy in this case acts as an outlet for stolen cows and brings in a lot of cash.

Cattle rustling has recently become a major internal security concern in Nigeria, with the country's northern region as the epicenter. Reports of bandits with automatic weapons storming herders' settlements and farms with the mission of killing people and pillaging cows proliferate. According to Ahmadu Suleiman, chairman of the Kaduna State chapter of the Miyetti Allah Cattle Breeders Association of Nigeria, between October 2013 and March 2014 approximately 7,000 cattle were rustled from commercial livestock farms and traditional herders in Northern Nigeria (Bashir 2014). In most cases, the rustlers kill and maim their herders and rape the women before dispossessing them of their cows in some instances, they also kidnap girls or women in the process (Yusuf, 2015).

Virtually all of the states in the northern region of Nigeria are affected by cattle rustling. Manu et al., (2014) reported that several villages in the areas lying between the four northern states of Kaduna, Katsina, Zamfara, and Niger have been under siege from cattle rustlers who freely unleash terror on hapless herders and cow farmers. The Special Task Force (STF) set up by the Nigerian security forces in response to the security challenges affected State, confirmed that within a period of six months 160 attacks by gunmen resulted in 2,501 cows being rustled

and 260 people losing their lives in each state. In most cases, the rustlers wore military style camouflaged uniforms and showed considerable experience in herding; in some in- stances, cattle were "kidnapped," with the rustlers asking for money afterwards (Adeniyi, 2016). Although cattle rustling has been rampant in the rural areas of Northern Nigeria, it not only poses serious security challenges at the specific sites of conflict but also threatens to engulf places outside of the rural sector and Northern Nigeria.

2.4.3   Effect of cattle rustling on the rural livelihood

Cattle rustling has caused a lot of problems in human societies globally. This problem has affected the socio-economic, security, and psychological nature of the people living in the rural communities. For instance, Anas, (2017) have discovered that the menace has affected rural populace psychologically, as well as their well-being. The victims could not sleep as some fled their homes. Relationships between different villages were also affected. The worst part was that lives were lost during stock raids. Cattle rustling has also led to trauma among the victims. For instance, a research conducted in Zamfara State, Nigeria, discovered that the victims were traumatized on account of attacks suffered by them. The trauma was found to be higher among farmers compared to traders and herdsmen. These effects drastically affected their occupational status (Manu et al., 2014). The differences are because of the attachment of the farmers to their farmlands and the crops destroyed. This shows that the cattle owners and farmers were affected psychologically, economically, and socially.

Furthermore, Olaniyan & Yahaya (2016) have also discovered that cattle rustling has the following major consequences on the socio-economic, political and psychological aspects of the society. First, in the economic aspect, the activities of cattle rustlers establish a major danger to

the living standard of the pastoralists and those who rely on livestock for survival. At the political level, the raiders have made government to appear irresponsible as she could not stop the killings and the destruction of properties of innocent souls that are supposed to be protected by the state. Psychologically, a massive number of people have been dispossessed of their possessions, and family members traumatized because of the reported cases of kidnapping and rape.

Cattle rustling has also led to the migration or more appropriately displacement of victims to urban centers, which made them to change their livelihood activities, thereby affecting farming as the major means of survival in rural communities. The menace has also led to conflicts between nomadic pastoralists and sedentary farmers resulting to loss of lives and properties (Olaniyan & Yahaya,2016). Another disturbing effect of cattle rustling is on herdsmen transhumance. Also, cattle rustling and rural banditry were often accompanied by kidnapping, rape, organised attacks on rural communities and looting of available properties. All these affected the well- being of the rural communities.

Cattle rustling has negatively affected inhabitants of the places where it occurred. For instance, research on a cross-border cattle rustling and its economic impacts on rural Swaziland between 1990 and 2004, conducted by Shehu (2017), shows that families in the affected places could not feed themselves, pay their children's school fees, leading to their youngsters to drop out of school. Furthermore, because of the problem, it was found that there was serious suspicion that even made a police officer to commit suicide in Swaziland. This has, therefore, affected the community in both the social and the economic spheres.

In a related development Shehu (2017) conducted a research in some rural communities of Colombia. The study found that cattle served as their source of income. But cattle owners

were forced to sell their stock because of the fear of raid. The cattle owners were made to accept poverty for securities' sake. Another study conducted by Kaimba et al. (2011) shows that the level of livestock rustling and the threats caused by the cumulative number of human deaths and livestock losses determine the size and migration of cattle owners from a volatile environment to a more secured area. This, therefore, undermined rural communities and destabilized their livelihood strategies as a result, increase the level of poverty among the rural populace.

Cattle raid has led to the reduction of income of the cattle owners which has adversely affected their socio-economic well-being. This is so because herdsmen were forced to either sell or have their cattle forcefully confiscated by bandits. Furthermore, another research in the influence of cattle rustling in livestock marketing decision among pastoral communities in Boringo district, Kenya was also conducted. Findings of the study show that cattle rustling, particularly in its negative state, pointedly denotes to precipitate the sale of the stolen livestock even underneath tiny amount that could be described as raiding (Manu et al., 2014). Cattle rustling generated insecurity, together with the deprived marketing infrastructure made market unreachable by both consumers and vendors thereby precipitating poverty and dependence amongst the herdsmen (Okoli & Okpaleke, 2014). This problem brands pastoralism to become a source of unhappiness rather than that of income, as a result affects the well-being of the rural populace. Markets were deserted in some parts of Taraba and Kaduna states because of the fear of attacks from cattle rustlers. The low patronage of the weekly markets began between 2010 and 2014. However, less lucrative and busy markets were not affected by the rustlers (Murtala, 2018). This shows that the rustling had a negative impact on the economy of the affected communities.

The entire well-being of the rural population was found to be affected because of cattle rustling. For instance, children and women were found to be most affected. In some of the communities has been linked with the kidnapping of young girls, rape, and destruction of victims" properties (Manyok, 2017). The menace has instituted insecurity which results in unproductive resource use, food insecurity, loss of human life and properties, reduction in stock number, limited access to water and pasture resources and compulsory migration, and closure of markets (Philip, 2010). The continued violence and vulnerability of the largely agro-pastoralist in Awash valley of Ethiopia is caused by cattle rustling, political relegation, and pastoralist cultural focus on cattle rearing as their sole economic activity (Kiruwa, 2017).

Furthermore, human rights violation and poverty were also discovered as some other effects of cattle rustling in rural communities. For instance, Alani (2014) conducted a research in the eastern and northern parts of Uganda and found that cattle rustling led to a never-ending economic uncertainty in term of dismal or abject poverty. Cattle raid has deprived the victims of nourishing resources from the animals and denied them of the incomes from agricultural production. The study found cattle raid as a breach of the rights of the victims in term of their right to food, life, and properties by the rustlers. Another research conducted at Karamoja, Uganda found that victims of livestock rustling who rely primarily on cattle for their well-being were always left looming in life-threatening poverty and found it difficult to indulge in other economic activities like farming because of the harsh conditions (Hopwood, Porter, & Saum, 2018). This has also seriously affected the well-being of the rural dwellers because it denied them the enjoyment of life and their fundamental human rights.

Schools as one of the most important institutions for disseminating knowledge were not spared during the violent cattle rustling. For example, a research conducted in northern Nigeria

shows that cattle rustling had led to the closure of schools which affects the school calendar in Kaduna and Taraba states. It was discovered that primary schools were more affected compared to secondary schools. Children were also found to be used during the attacks (Kyari, & Alimba, 2016). Primary schools are most affected because they were more in number. In a related development, a research conducted on the menace of cattle rustling in the seven local governments of Katsina State found that it has resulted to a high rate of school absenteeism, hunger, poverty, death and forced migration of the victims to other places (Abdullahi, Victor, & Binta, 2017). This has led the rural populace to migrated or refused to farm for fear of attack and consequently, resulting in poverty.

Cattle rustling was also found to have affected education. For instance, it was observed that the violence in the cattle rustling areas has affected the teachers" attitudes towards their work, reduced their performance which is being mirrored by the poor performance of the students in national examinations (Abubakari et al., 2014). In a related study, cattle rustling is reported to have led to hatred, civil unrests, mistrusts, and wish for vengeance among rural communities in some states of north central Nigeria where ethnic and religious diversity is high (Idowu, 2017). Also, the incidence rate of cattle rustling and poverty in Northern Uganda was partly responsible for poor quality of education because of the inability of the parents to provide school materials for their children (Kandel, 2016). This shows that education has experience a set back because of cattle rustling.

Research conducted has established the linkage between herdsmen and farmers conflict and cattle rustling. For instance, in states like Nasarawa, Kaduna, Plateau, and Benue states, cattle rustling was established to have caused herdsmen and farmers conflict. In Zamfara and parts of Kaduna states, it was the conflict that resulted to cattle rustling (Momale, 2016). Also,

cattle rustling has caused mistrust, tension and suspicion between farmers and pastoralists in Plateau State of north central, Nigeria. Thus, resulting to herdsmen and farmers conflict (Kwaja, & Abdul, 2016).

2.4.4 Consequences of Cattle Rustling on the Wellbeing of Rural People

Wellbeing represents a state of fulfillment, abundance in health and wealth which indicates a positive change in the quality of life of a person or group of persons. It is that material, psychological/meta-physical wellness that indicates an improvement in the quality and longevity of one's life or of a population, resulting from upward improvement in income, access to community assets and social services which create a material condition for good standard of living and general human development (Popova, 2017). In a similar view, wellbeing is conceived as a state in which wealth is created, thus giving birth to the attainment of the good life, secured livelihoods as well as socio-economic empowerment (Yusuf, 2019). Accordingly, wellbeing is associated with a state of being happy which may either be occasioned by ties, a social relation or economic pathways that produce the condition of wellbeing (Seferiadis et al., 2015). Wellbeing represents a socio-economic condition that guarantees an increase in income, food security material health, savings and easy access to community capitals which, by and large, are fundamental to human development.

Empirical studies established the linkage between access to livelihood assets and human wellbeing, and particularly, human asset and financial asset which are the concern of the present study for instance increase in households' or individual income which enhance more consumption and savings (Adunga, 2013) standard of living, quality of life, income level and access to market (Popova, 2017), education and capabilities (Ahmad et al., 2016). These important elements of livelihood assets are considered to be effective towards improving the

standard of living and quality of life of an individual or household which largely influences wellbeing status.

There is a significant body of empirical literature on cattle rustling and banditry and its impact on pastoral wellbeing, particularly in developing countries. In one such study, Glenn & Joseph (1995) surveyed 319 households in Khartoum in an attempt to estimate the factors responsible for household decisions to rear cattle. The study applied a logit model and found that demographic factors, such as education, family size, rural or urban roots and income level, significantly influenced decisions to rear cattle.

Similarly, Schultze & Rischkowsky, (2001) identified the socio-economic characteristics that influence the decision of households to take up livestock farming in West Africa. In this study, primary data from 130 households were collected through interviews. Logistic regression was employed, and the study revealed that the probability of keeping cattle increases with the size of the household and illiteracy rates. Cross-border cattle rustling was reported to have a negative effect on the economic fortunes of homesteads in southern Swaziland. At almost all levels, poverty has deepened among rural households because of the adverse effects of raids on agricultural production (Hamilton, 2005).

Along these lines; Holmann et al., (2005) used cross-sectional data from 143 rural dwellers to examine the role of livestock production on poverty alleviation in Colombia. The study found that cattle ownership by household serves as a pathway out of poverty, while cattle owners mainly sold their cattle when the probability of rustling was high. Similarly, in an examination of the socio-economic determinants of urban livestock production in a semi-arid environment, documented that theft (cattle rustling), animal health problems, feed supply and manure management constrain livestock farming.

The impact of cattle theft on household migration decisions in Baringo District of Kenya was investigated by Kaimba et al., (2011). Interviews conducted with 110 people, and the binary probit model was used to explain the probability of pastoralist migration from volatile areas to safer areas, while ordinary least squares were used to explain its effects on herd size. The study found that the gender and age of the head of household were significant determinants of migration and significantly influenced herd size. Moreover, the intensity of cattle rustling, banditry and loss of livestock to drought and or disease also significantly influenced decisions to migrate from one place to another. Another paper work examined by the socio-economic effects of cattle theft on pastoralism in the north-west region of Cameroon. Manu et al., (2014). They documented that cattle rustling have often led to a reduction in the income levels of livestock producers and, by extension, adversely affects the livelihood of pastorals in affected areas.

One media report pointed to land and water sources disputes as the main cause of the conflict between the Fulani people and the Atoka Community in Southern Kaduna. According to the report, shortly after a district head was assassinated by gunmen, a Fulani militia attacked 16 villages, killing about 180 people and forced about 10,000 others to flee their homes, becoming Internally Displaced Persons or IDPs (Angerbrandt, 2015). A correspondent who visited Ladduga grazing reserve which was earmarked for grazing in the 1960s reported a total neglect of the area, by both local and state authorities. However, the reserve has benefitted from the efforts of some NGOs and programs under the Millennium Development Goals, which on the whole, have not very much helped pastoral activities (Oluyemi et al., 2010). Misbahu Bashir, also a correspondent of the Sunday Trust, reported that rustlers killed Kaduna herder and drove away 300 cattle. In Sabon Gaya, Chikun LGA, Kaduna, armed thieves went during the night to a village called Unguwar Fulani, they fired guns, frightened the villagers, and stole, within thirty

minutes, between two hundred sixty (260) and three hundred (300) cows, from 3 herds of cattle. (Misbahu, 2015).

In another research work cattle rustling is regarded as a form of armed banditry (which is wider in scope and including different forms of crimes such as highway robbery and gang-like invasion of settlements to confiscate wealth and properties) (Cheserek et al., 2012). The researchers stated two forms of cattle rustling: Rustling of cattle by opposing ethnic groups or clans. This form of rustling often involves large number of people from a defined ethnic or family background. The purpose of this form of rustling is to build-up the stock of cattle wealth for the ethnic group or clans. The rustled cows are shared among the family or group members for breeding. In some situations, part of the cows may be given back to families or groups whose animals were previously rustled by the opposing parties. Examples of these forms of rustling are common in the Greater Horn of Africa, particularly in countries including Somalia, Kenya and Uganda. While the other involves rustling of cattle by criminal gangs or thieves who sell-off the stolen cows. The purpose of this form of rustling is purely criminal; it is to steal the cows and sell them off for monetary gains. For this form of rustling to exist, there must be ready markets which are built around powerful cartels with wide networks and support from state institutions, particularly security agencies.

A report stated that the problems of cattle rustling are most prevalent in the Middle Belt and North-western parts of Nigeria. In the Middle Belt, ethno-religious conflicts provided fertile grounds for the criminal activity to thrive, particularly in the States of Plateau, Nasarawa and Benue. In States like Kaduna, Katsina and Zamfara in North-western Nigeria, as well as in parts of Niger and Kogi States and the Federal Capital Territory, Abuja, cattle rustling is carried out by armed bandits, mostly residing in remote rural areas and forests, with active collaborators in

urban markets. Therefore, in order to analyze cattle rustling in Zamfara State, theoretical framework of conflict theory will be utilized to relate it with the present situation in the State.

2.4.5   Strategies employed in managing cattle rustling

Certain strategies are employed in managing cattle rustling in Nigeria. Some of these are community sensitization; meetings and community dialogue and granting amnesty; Different inclusive community peace initiatives to deal with the issue; the conflict resolution mechanism adopted by the community. All these measures are mainly to reduce number of raids in the area and some cattle were recovered. Though time to time conflicts occur becomes it is seen as a vicious cycle (Habibu, 2016).

Programmes are put in place to sensitize residents of various rural communities about the dangers and threats to which bandits pose on the lives of indigenes. Traditional rulers, non-governmental organizations, and state government create some sort of awareness program to sensitize and educate residents of various communities on how to prevent attacks by cattle rustlers, and also encourage them to alert authorities by passing necessary information to the right bodies whenever they notice any suspicious movements by these bandits (Olaniyan, & Aliyu, 2016).

Peace dialogues have been moved to the lowest administrative units of the local government structure (local village grouping) levels, to ensure impact at scale. Confidence building initiatives were established by selecting respected traditional and religious leaders to participate in a state tour – a trust and confidence building visit to all the conflict-prone areas in State. Efforts were initiated with law enforcement agents on issues such as stopping civilians from carrying arms in public places (Habibu, 2016).

Government has issued a communiqué after security and reconciliation meeting with security agents, vigilante, volunteer groups, herdsmen and farmers in Zamfara that no vigilante group member or volunteers should attack or kill any herdsman, as sacrifice must be made by both sides to ensure that peace reign. It was agreed that herdsmen and their families should be allowed to go about their normal businesses, attend markets and worship places without molestation provided they do not carry arms (Daily Trust, 2014). Those bandits who rustled animals from communities were immediately returned them to the government or Miyetti Allah Cattle Breeders Association.

CHAPTER THREE

STUDY AREA AND RESEARCH METHODOLOGY

3.1   Introduction

This chapter presents the physical and socio-economic characteristics of the study area, such as location and size, climate, relief and drainage, vegetation, soil, population and economic activities. It also discusses the methodology used in conducting this research.

3.2   The Study Area

3.2.1   Location and size

Zamfara state is located between Latitudes 10° 49'N - 13° 7'N of the Equator and Longitudes 5° 00'E - 7° 50' E of Greenwich Meridian. The state covers the area of 38,418 Square Kilometers. It is bounded to the north by Sokoto State, to the north-east by Niger Republic, Kebbi, and Niger states, to the south-west by Katsina and Kaduna states to the east and south respectively (See Figure 3.1).

3.2.2   Climate

The climate condition of Zamfara state is tropically warm with temperature rising up to 38°C (100.4 °F) and above between March to May. Daily temperature in Zamfara is high ranging between 24^0C and 27^0C with the highest temperature in April and lowest in January (Murtala, 2018). Two persistent seasons of dry and wet are established. The former last for seven months (October-April), while the latter has a duration of five months (May-September). Average annual total rainfall ranges between 600mm in the South part to 400mm in the West and 250mm in the North and East respectively. The rainy season starts in late May to September while the cold season known as Harmattan lasts from December to February (Hof and Rischkowsky, 2018).
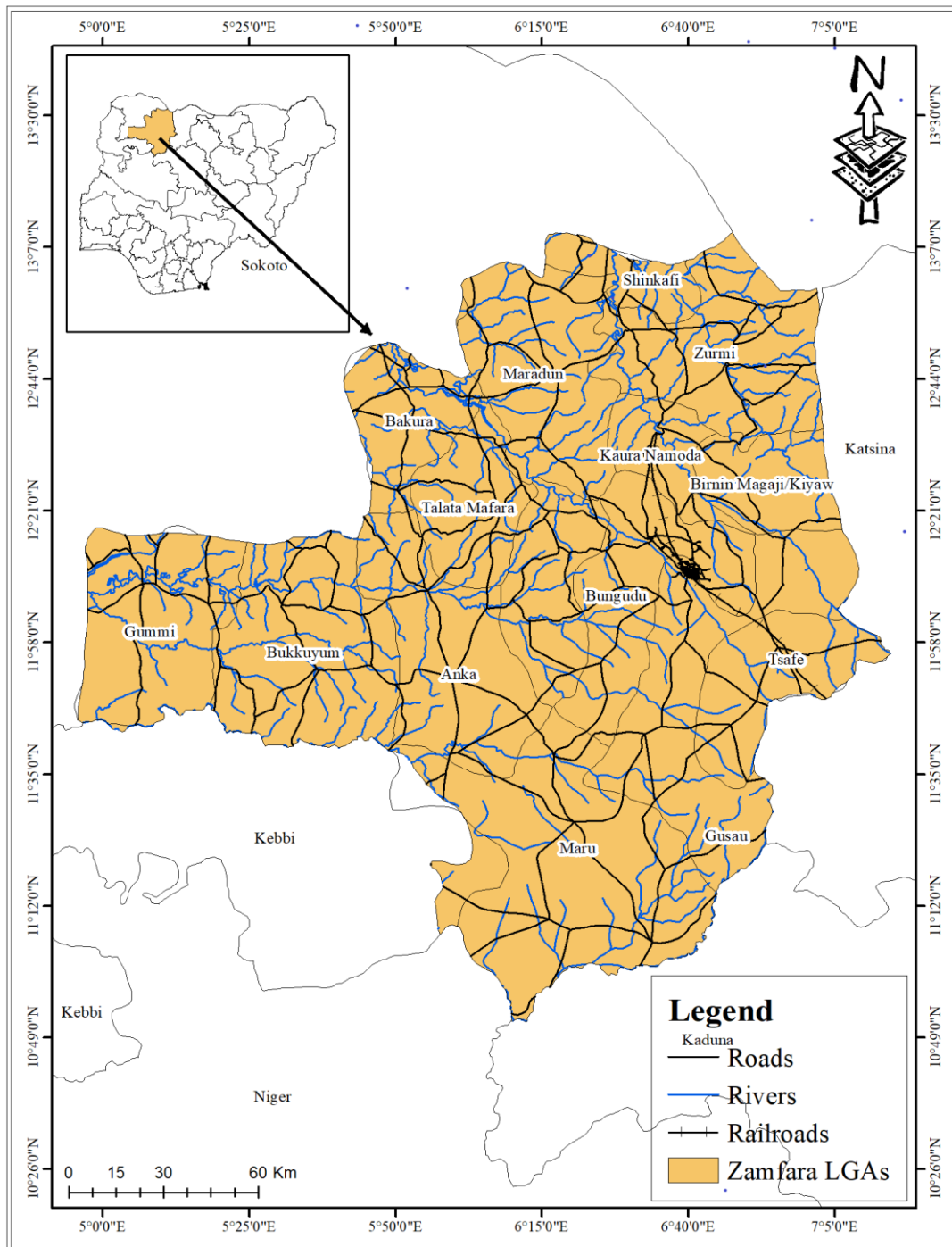
Figure 3 1: The Map of Zamfara State Showing the Study Area
Source: Adapted from Administrative Map of Nigeria

However, the two distinctive dry and wet seasons marked the overall prevalence of cattle

rustling in Zamfara State. This has been associated with the worsening material/livelihood

38

conditions of the herders arising from the repercussions of climate change and the attendant resource conflicts tend to be compelling criminal tendencies among the herders. Unpredictable climate has adversely affected the pastoral livelihood. The study area has experienced negative impact of climate variability, the different climatic conditions and dynamics in the study area cannot be defined as favorable at any time of the years. Extreme climate which lead to drought has been causing death of cattle because of lack of pasture and water this in turn makes the communities engage in cattle rustling and raids in order to replenish their herds (Okoli and Okpaleke, 2014).

3.2.3 Soil

The two main soils types found in Zamfara state are ferruginous tropical and lithosols dominate. The ferruginous tropical soil can be found in the northern and central parts of the state, particularly around Gumi, Bukuyyum, Anka (which include Bagega) and Bakura. Other areas in which such soil occur include Talatan-Mafara, Zurmi, Birnin-Magaji, Shinkafi and Kauran-Namoda. The soils are characterized by a sandy surface horizon, with clayey subsoil, both of which are fertile for agricultural production. They are susceptible to erosion, since the top soil is easily washed off by rain water, especially if the vegetation cover is removed (Salisu, Yusuf, Ahmed, Mohammed and Umar, 2016). Therefore, in addition to the nutritious grassland, the fertility of soils in the study area might perhaps contributed to high migration flow from neighbouring states for farming as well as pastoral livestock husbandry by the moving Fulani herders.

3.2.4 Vegetation

The study area traverses two ecological zones namely; Sudan Savanna to the North and North-East and Northern Guinea Savanna to the South. The latter is fairly dense with space trees,

shrubs and herbs. The Zamfara and Runka forests form the larger part of an ecosystem extending into the Maradi of the Republic of Niger (Anas, 2017). Both the establishment of the Zamfara Forest Reserve in 1919 by the British colonial regime and the conversion into a grazing reserve preserved the communal range resources and enabled the seasonal migration of pastoral Fulani from north to south and vice versa. However, the reserve also contains four legal encapsulated farming enclaves and is surrounded by farming communities. The rural Zamfara Forest Reserve is an important grazing area for the livestock of nomadic and transhumant pastoralists and the sedentary population living in the four designated farming enclaves and in bordering villages. Both farm sizes and the farmers' livestock holdings are larger than in intensified densely populated areas where diminution of common rangeland and cropland are drive by urban land use intensification (Hof and Rischkowsky 2018; Muratala, 2018).

3.2.5   Population and people

The population of the study area according to 2006 census stands at 3,278,873 with a population density of 93.2 persons per square kilometer (National Population Commission [NPC], 2009). Zamfara state population was projected to 2020 using the exponential method with 3.20% inter-census growth, and it stood at 5,132,022. The study area is mainly populated by Hausa and Fulani people, with some members of Gwari, Kamuku, Kambari, Dukawa, Bussawa and Zabarma ethnic communities. Others include the Igbo, Yoruba, Kanuri, Nupe and Tiv. The state capital is an important commercial center with a heterogeneous population of people from all over Nigeria.

3.2.6   Economic activities

The economy of Zamfara state is very much dependent on agriculture for both food and raw materials provision. Nearly, 90% of the population is engaged in agriculture. About 3.5

million hectares land is cultivated in the State. Crop produced include Cotton, Rice, Wheat, Millet, Maize and so on. Also, cattle, sheep, goats, and Camels are reared. Large hectares of land have been left as grazing lands. For instance, there are 5,850 hectares of grazing lands at Gwaram district in Talatan Mafara LGA. The individual Hausa/Fulani family livestock owners, and the moving Fulani herders from Niger Republic passing through Sokoto make use of the nutritious grassland. The types of livestock reared in both the ranch and grazing lands as owned by individuals and government are mixture of Hausa/Fulani and foreign brands of the neighboring Niger Republic (Emma et al., 2018; Murtala, 2018).

Industries in the state are purely agro-allied which among include; Gusau oil mills, Zamfara Textile mills Gusau, cotton ginneries, and tobacco processing situated at Shinkafi. Similarly, the informal sector of the States' economy comprises of petty craft producers but, in 2009, gold mining became a greater source of income in Zamfara state. High concentrations of lead in the ore from which gold was being extracted led to a lead poisoning epidemic in the state, requiring national and international intervention to remediate affected areas and provide medical care to children with severe lead poisoning. Furthermore, the commercial activities in the state comprises of commercial banks, insurance companies and both periodic and daily markets (Emma et al., 2018; Hof and Rischkowsky 2018).

3.3   Methodology

3.3.1   Reconnaissance survey

A reconnaissance survey was done between 7th and 11th September, 2019 by the researcher to familiarize with the study area as it relates to the subject matter. The survey assisted the researcher to identify the relevant stakeholders such as leaders of herdsmen, district heads and vigilante groups which discussions with them helped in the design of the survey

research instrument. Also, with the guide of a key informant, the researcher carried out an on the spot non-participatory observation to identify areas with relatively no security threat in the study area. This helped in the selection of the wards for questionnaire survey.

3.3.2 Types of data utilized

The data utilized for this study included:

i. socio-demographic characteristics of participants in rural livelihood activities

ii. number of people affected by cattle rustling

iii. the nature of cattle rustling; such as time, intensity, associated nature and so on

iv. degree of rural livelihoods impacted by cattle rustling;

v. the effect of cattle rustling on the affected livelihood options; especially at individual, households and community levels

vi. the management strategies adopted in addressing the effects of cattle rustling;

3.3.3 Sources of Data

The study relied on data from both primary and secondary sources.

3.3.3.1 Primary source of data

The primary source of data involved the use of questionnaire designed for the livelihood actors in the selected LGAs of Zamfara State. The questionnaire contained both open and close ended questions (Appendix I). The questions were structured based on the objectives of the study

3.3.3.2 Secondary source of data

Extensive desk or literature reviews (from both published and unpublished sources) on the subject matter was used to provide understanding of the global and domestic dynamics of the problem based on existing research knowledge, and from policy-oriented conferences and

workshops. Also, media tracking and records of cattle rustling was gathered to provide a further secondary source of information.

3.3.4   Sample size and sampling techniques

All the herdsmen and those people affected by cattle rustling in Zamfara state constitute the targeted population from which the sample size of the study is drawn. However, due to unavailability of record on the targeted population, the 1991 population census of the wards in each LGA was projected to year 2020. The projected figure of the three (3) LGAs stood at 469,535 and this was considered as the study population. To determine the sample size for this research, Yamane (1967) formula was used with 95% confidence level and 5% sampling error assumption:

$$n = \frac{N}{1 + N(e)^2}$$

Where,
n = Sample size
N= Population size
e = Margin of error (0.05)

The study used the above formula to obtain a total of 390 respondents (Table 3.1). To determine the proportion of the respondents, simple arithmetic was used.

Where:

Sample size per ward = $\frac{\text{Ward Population x Sample Size}}{\text{Total Selected Ward Population}}$

Table 3:1 Population and Distribution of Sample Size

LGA	Ward	1991 Population	2020 Projected Population	Sample Proportion
Maradun	Birnin Kaya/Dosara	17698	41706	
	Damaga/Damagiwa*	8446	19904	17
	Faru/Magami	8971	21141	
	Gidan Goga	8252	19446	
	Gora*	17190	40509	34
	Janbako	14932	35188	
	Kaya*	12173	28686	24
	Maradun North	8631	20340	
	Maradun South*	18419	43406	35
	Tsibiri	16711	39381	
Shinkafi	Badarawa	15897	37462	
	Chiki	6232	14686	
	Galadi*	13727	32349	27
	Jangeru*	9553	22512	19
	Katuru	11047	26033	
	Kurya*	6487	15287	13
	Kware	7840	18475	
	Shanawa	6988	16468	
	Shinkafi North*	13666	32205	27
	Shinkafi South	6938	16350	
Tsafe	Bilbis*	14609	34427	29
	Chediya*	10071	23733	20
	Danjibga/Kunchin-Kalgo	19139	45102	
	Dauki*	9609	22644	19
	Keta/Kizara	8949	21089	
	Kwaren Ganuwa*	15756	37130	30
	Tsafe*	29216	68849	56
	Yandoton Daji	22464	52938	
	Yan Kuzo "A"*	9775	23035	19
	Yan Kuzo "B",	13375	31519	
	Yan Waren Daji*	10549	24859	21
	Total Selected	199,246	469,535	390

Source: Author's computation, 2020.   *Selected LGA

Multi-stage sampling technique was used in this study. First stage involved the purposive selection of three LGAs affected most with cattle rustling in the study area with relative low security threat based on the researcher knowledge from the key informant during the reconnaissance survey. The selected LGAs are Maradun, Shinkafi and Tasfe. The next stage was the purposive sampling of the political wards in each of the selected LGA where there was frequent incident of cattle rustling as identified by the key informant. This resulted into the selection of fifteen (15) political wards in the study area. In each of the selected political ward, the third stage involved the administration of the questionnaire to the respondents (herdsmen and those that have been victims of cattle rustling) using snowball sampling technique. Snowball sampling or chain-referral sampling is defined as a non-probability sampling technique in which existing subjects provide referrals to recruit samples required for a research study. In doing this, the researcher identified a potential respondent with the assist of the key informant who then led to the other respondents that have been victims of cattle rustling. This was done till the required sample size in each of the selected political ward was met.

3.3.5 Validity of the Instrument

The research instrument was validated by the supervisors and experts in the Department and Faculty of Agriculture, Ahmadu Bello University, Zaria. They were requested to validate the items in the research instruments known as content and construct validation. Their views were incorporated in the design of the final researcher instruments.

3.3.6 Data analysis

Both descriptive and inferential statistics test were used in the analyzing the data for this study. All statistical analysis was carried out using SPSS version 20 statistical programme and

Microsoft Excel 2007. The statistics used in achieving the objectives of the study were as follows:

Objective i: To analyze the nature of cattle rustling

Descriptive statistics was used to analyze the data. Frequency counts, and percentages was computed and presented using tables.

Objective ii: To examine the consequences of cattle rustling on rural wellbeing.

This objective was achieved using Relative Importance Index (RII) to examine the consequences of cattle rustling in the study area. This was calculated using the following formula:

Relative importance index (RII) = Sum of weights (W1 + W2 + W3 + ……+ Wn) / A x N, where W = weights given to each factor by the respondents and ranged from 1 to 5 A = highest weight (i.e. 5 in this case), and N = total number of respondents. The RII ranges from zero to one. The RII was converted into percentages and Kassem, Khoiry and Hamzah (2020) range was adopted for the rating of the consequences. The rating is as follows;

Less than 20%   Very low (VL)

20 – 40%   Low (L)

40 – 60%   Moderate (M)

60 – 80%   High (H)

80 – 100%   Very high (VH)

Objective iii: To assess the extent of rural livelihoods impacted by cattle rustling

Z-test was used to evaluate the difference between two quantitative variables that is impact of cattle rustling before and during. If positive value is observed it means the quantity of variable before cattle rustling is higher than during and vice-versa. Z-test was considered because the data is a continuous and not a categorical.

Objective iv: To examine the management strategies employed in addressing effects of cattle rustling

Management strategies adopted was collected on 5-point Likert scale ranging from strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1). The mean level of the factors will be obtained by adding together $1 + 2 + 3 + 4 + 5 = 15$ which later will be divided by 5 to get a mean score. This was ranked to get the most adopted cattle rustling management strategy in the study area and presented using tables.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1   Introduction

This chapter presents the results and discussion on the analysis of the impact of cattle rustling on rural livelihood in Zamfara state, Nigeria. The presentation of the results and discussion after the socio-economic characteristics was according to the set objectives of the study.

4.2   Socio-economic and demographic characteristics of respondents

Socio-demographic characteristics includes gender, age, and marital status, economic characteristics investigated are education, occupation and income of the respondents. Table 4.1 and Table 4.2 present the results.

Table 4.1 Socio-demographic Characteristics of Respondents

Sex	Frequency	Percent
Male	245	62.7
Female	145	37.3
Total	390	100
Age	Frequency	Percent
15-24	59	15.3
25-34	166	43
35-44	90	23.4
45-54	36	9.4
55 and above	39	10.1
Total	390	100
Marital Status	Frequency	Percent
Single	124	31.7
Married	208	53.2
Divorced	33	8.4
Widowed	26	6.6
Total	390	100

Source: Author's survey (2020).

Table 4.1 shows the sex, age distribution and the marital status of the respondent in the study area. About 63% of the respondents were males while 37% were females. This is an

indication both men and women are affected by livestock rustling. However, cultural and religious restriction which made more males available during the survey explains the sex distribution of those affected by cattle rustling. The finding is in line with that of Abdullahi, (2017) who conducted a research on socio-economic repercussions of cattle rustling in Gusau Local Government Zamfara state. Regarding the age distribution, 43% of the respondents were aged between 25 - 34 years, followed 23.4% accounting for those 35 – 44 years. This is clearly depicting the involvement of the youthful population in cattle rearing activities. The result revealed that more than of the respondents are married with 31.7% being single.

Table 4 2: Socio-economic Characteristics of the Respondents

Educational level	Frequency	Percent
Primary	114	29.2
Secondary	98	25.1
Tertiary	126	32.2
No formal education	148	38.2
Total	390	100
Occupation	Frequency	Percent
Farming	88	22.5
Livestock rearing	22	5.6
Artisanal mining	52	13.3
Fishing	16	4.1
Trading	84	21.5
Transportation	5	1.3
Retail	15	3.8
Civil service	41	10.7
Unemployed	67	17.1
Total	390	100
Monthly Income	Frequency	Percent
Less than ₦10,000	89	27.5
₦11,000 - ₦15,000	46	14.2
₦16,000 - ₦20,000	51	15.8
₦21,000 - ₦25,000	62	19.2
₦26,000 and above	75	23.3
Total	323	100

Source: Author's survey, 2020

Table 4.2 showed the highest educational level, occupation, and monthly income of the respondents in the study area. It was found that most of the respondents had at least one form of formal education with tertiary level (32.2%) accounting for the highest. This distribution implies that the population used in this study is literate and should be able to respond well and provide the study with adequate information. A quite number of the respondents did not have no formal education representing 38.2%. Table 4.2 revealed that farming (22.5%) and trading (21.5%) are the predominant occupation types among the respondents in the study area. The monthly earning of respondents varies as only 27.4% had a monthly income of less than ₦10,000, followed by 23.3% that earn ₦26,000 and above. The variation in income is no doubt unconnected with the unstable nature of income associated with the informal income generating activities such as farming and trading which was predominantly engaged among the respondents. The finding is in line with that of Usman, (2016) in Zamfara state which revealed that majority of the respondents average monthly income was less than ₦30,000.

4.3   Nature of Cattle Rustling in the Study Area

4.3.1   Regularity of Cattle Rustling Attack

In describing the nature of cattle rustling in the study area, regularity of cattle rustling attack as perceived by the respondents is as presented in Figure 4.1.
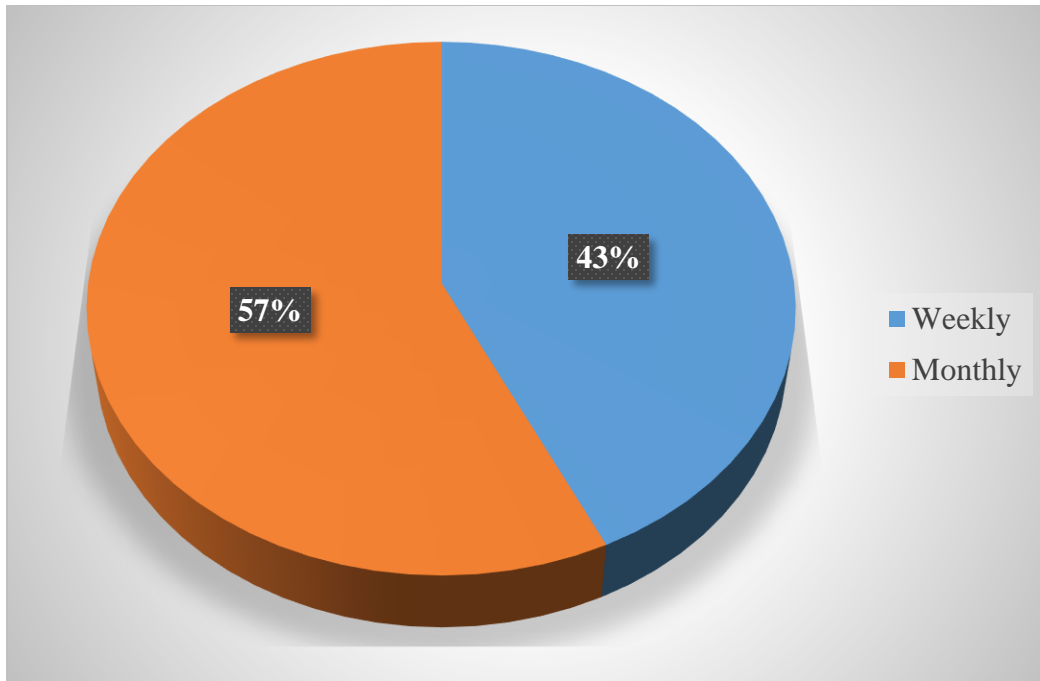
Figure 4.1: Regularity of Cattle Rustling Attack
Source: Author's survey, 2020.

Figure 4.1 indicate that 57% of the respondents agreed that cattle rustling attack occurs monthly while 43% agreed that cattle rustling is carried out regularly on weekly basis. This implies that in every ten persons 6 people have an experience that most of the cattle rustling occur on monthly basis. This may be a strategy by the cattle rustlers to prepare for the next target and mislead the security personnel for necessary operation preparedness. The findings agree well with that of the New Humanitarian newspaper, (2018) which says cattle rustling is carried out monthly in Zamfara state. This is perhaps because cattle rustling has become an established trend such that there is no difference between the regularity of rustling in 2018 and 2021. When cattle rustling occurs on monthly basis it indicates an average time the rustlers expected the people to have accumulate sufficient stocks to raid them. It is also a signal to the fact that markets where rustled cattle are sold operate at such intervals for them to be able to dispose them.

4.3.2   Period of Cattle Rustling Attack

Figure 4.2 shows the period of cattle rustling attack in the study area.
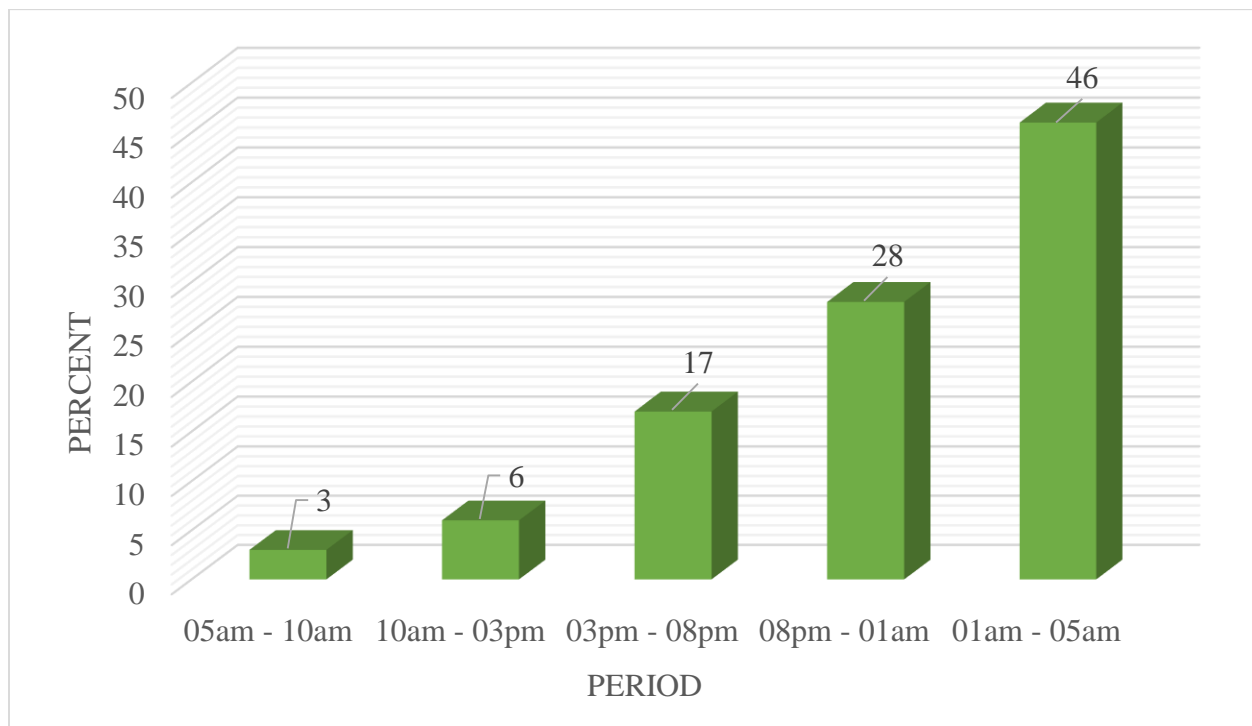
Figure 4.2: Period of Cattle Rustling Attack
Source: Author's survey, 2020

Figure 4.2 shows that 46% of the respondents reported that cattle rustling occurred between 01am-05am in the study area. This may be as a result all the herders have come back from the rearing with the all cattle are in one place, the operation carried out when people are tired from their daily activities but criminals are alert to perpetrate their notorious activities, while 3% occurred between 05am-10am respectively. Bandits attack communities around 01am-05am mostly when residents are out for trade and other business in the market, more so, the population of the respondents in most town during the day time because of one activity and the other. The findings agree well with the assertion of Murtala, (2018) that cattle rustling occurred in the night as a result of weakness of the respondents.

4.3.3 Duration of Cattle Rustling Attack

The duration of cattle rustling attack based on the respondents is presented in Table 4.3.

Table 4.3: Duration of Cattle Rustling Attack

Duration	Frequency	Percent
20 - 40 minutes	8	2.1
40 - 01 hour	15	3.8
01 - 02 hours	203	52.1
Above 02 hours	164	42.0
Total	390	100

Source: Author's survey (2020)

As indicated in Table 4.3, more than half of the respondents agreed that the duration of cattle rustling attack often last between 01 - 02 hours, closely followed by 42% who said the attack usually takes above 2 hours in the study area. This is because of time the operation usually takes place, little or no enforcement of security personal is expected in the time, and this will give the bandits enough time to operate. Cattle rustling has multiple consequences. Rustlers sometimes lay siege on our community for more than more than three hours. The findings are in line with that of Murtala, (2018) who reported that cattle rustling occurred in the night for more than an hour.

4.3.4 Estimated Number of Victims of Cattle Rustling Attack

Table 4.4 shows the estimated number of cattle rustling victims between year 2014 and 2020 by the respondents in the study area.

Table 4.4: Estimated Number of Cattle Rustling Victims between 2014 and 2020

No. of Person(s)	Frequency	Percent
Less than 10	12	3.1
11 – 19	16	4.1
20 – 29	22	5.6
30 – 39	48	12.3
40 – 49	50	12.8
50 and above	242	62.1
Total	**390**	**100**

Source: Author's survey, 2020

Table 4.4 shows that about 62% of the respondents were of the view that between 2014 and 2020 they know 50 and above persons who have were victims of cattle rustling attack. This is an indication the large number of people who have become victims of cattle rustlings. The finding agrees with Anas, (2017) study who found that a lot of people are cattle were killed as a result of cattle rustling in Nigeria.

4.4 Consequences of Cattle Rustling on Rural Wellbeing

4.4.1 Consequence of Cattle Rustling at Individual Household Level

Several consequences at individual household level is always associated with cattle rustling in the study area and these are presented in Table 4.5.

Table 4.5: Consequence of Cattle Rustling at Individual Household Level

Consequent	RII	% RII	Degree of Consequent
Death of family member	0.974	97.4	Very high
Decreased income	0.917	91.7	Very high
Asset loss	0.897	89.7	Very high
Livestock loss	0.882	88.2	Very high
Injury and stress	0.873	87.3	Very high
Cattle kept stationary	0.855	85.5	Very high
Hunger and starvation	0.831	83.1	Very high
Mental distress	0.773	77.3	High

Source: Authors survey, 2020

As indicated in Table 4.5, death of family member and decreased income ranked the highest consequences of cattle rustling at individual household level with RII of 0.974 and 0.917 respectively. Also, among other consequences of cattle rustling with high RII are asset and animal loss, injury and stress. However, classification of the degree of the consequences indicated that seven (7) out of the eight cattle rustling consequences considered in this study rated very high with only mental distress rating high.

4.4.2 Consequence of Cattle Rustling at Community Level

Table 4.6 show the cattle rustling consequences felt at the community level in the study area.

Table 4.6: Consequence of Cattle Rustling at Community Level

Consequent	RII	% RII	Degree of Consequent
Forced relocation	0.849	84.9	Very high
Destruction/loss of farm produce	0.836	83.6	Very high
Destruction of properties	0.812	81.2	Very high
Unfriendly market day	0.760	76.0	High
Disruption of children education	0.750	75.0	High
Disruption of public transport	0.710	71.0	High
Heighten insecurity	0.663	66.3	High

Source: Authors survey, 2020

The forced relocation and destruction/loss of farm produce with RII index of 0.849 and 0.836 respectively are the main consequences of cattle rustling at community level as perceived by the respondents (Table 4.6). Destruction of properties and unfriendly market day were among the cattle rustling consequences at community level with high RII. The least consequent of cattle rustling at community level was found to be heighten insecurity. However, in measuring the degree of cattle rustling consequence at the community level, it was observed that forced

relocation, destruction/loss of farm produce and destruction of properties ranked very high out of the seven (7) consequences identified in this study.

4.4.3 Livelihood Activity Affected by Cattle Rustling

Figure 4.3 shows the distribution of the respondents according to the livelihood option affected most by cattle rustling in the study area.
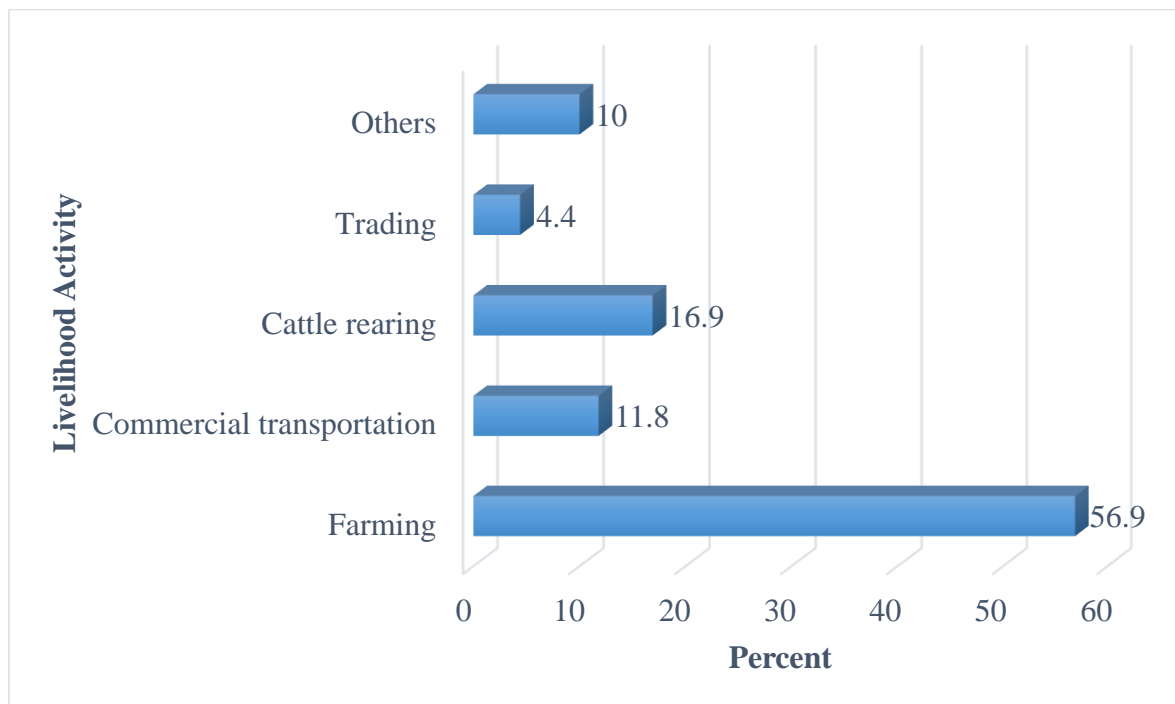
Figure 4.3: Effect of Cattle Rustling on Livelihood Options
Source: Author survey, 2020

Figure 4.3 reveals that about 57% of the respondents identified farming as the most affected livelihood option, followed by cattle rearing with 16.9%. Trading was observed to be the least livelihood option affected by cattle rustling in the study area.

4.5   Extent of Cattle Rustling Impact on Rural Livelihood

Extent of cattle rustling is examined to establish the degree of cattle rustling on some indicators of rural livelihood. The selected indicators according to existing literature and experiential knowledge about Zamfara state included; number of farmlands cultivated, quantity

of farm produce, cattle ownership, cost of transportation and ability to meet basic needs among the people. These indicators were measured before and during cattle rustling and Table 4.7 presents the results.

Table 4.7: Extent of Cattle Rustling Before and During Cattle Rustling

Indicator	Mean	Z	df	Sig. (2-tailed)
Number of farmlands cultivated before and during cattle rustling	41.940	2.598	238	0.001
Quantity of farm produce (in bags) before and during cattle rustling	15.040	9.624	238	0.001
Estimated amount spent on commercial transportation within a month before and during cattle rustling (in naira)	26423.72	5.09	228	0.010
Number of cattle owned before and during cattle rustling	3.470	2.034	179	0.030
Number of other sources of income before and during cattle rustling	16.200	8.325	182	0.017
Availability of money for basic needs before and during cattle rustling	36298.18	2.120	160	0.036
Access to three square meal before and during cattle rustling	1.030	14.908	211	0.002

Source: Author survey, 2021

Table 4.7 show the difference between effect of cattle rustling before and during cattle rustling, the difference between number of farmland cultivated before and during cattle rustling, quantity of farm produce before and during cattle rustling, number of cattle owned before and cattle rustling, number of other source of income before and during cattle, availability of money for basic needs before and during cattle rustling and access to three square meals before and during cattle rustling using. The result reveal that the difference between number of farmlands

cultivated before and during cattle rustling is 41.94, quantity of farm produce before and during cattle rustling, number of cattle owned before and cattle rustling, number of other sources of income before and during cattle, availability of money for basic needs before and during cattle rustling and access to three square meals before and during cattle rustling is 15.04, 26423.72, 3.47, 16.2, 36298.91 and 1.03 respectively.

It also ascertained that there is significant difference between number of farmlands cultivated before and during cattle rustling, quantity of farm produce before and during cattle rustling, number of cattle owned before and cattle rustling, number of other sources of income before and during cattle, availability of money for basic needs before and during cattle rustling and access to three square meal before and during cattle rustling. It means that the number of farmlands cultivated before is higher than during cattle rustling, quantity of farm produces before and during cattle rustling, number of cattle owned before and cattle rustling, number of other sources of income is more before and diversified during cattle, availability of money for basic needs before and during cattle rustling and access to three square meals before and during cattle rustling. For instance, many people who are primarily farmers engage in trading and other artisanal activities before cattle rustling. The insecurity association with cattle rustling makes people to abandon these activities. Similarly, since number of farmlands has reduced automatically the volume (and quantity) of produce will reduce. This is because farmers could not cultivate fields that are further away from their settlements for fear of being attacked by bandits.

There was also significant reduction in the number of cattle owned. This is very obvious since it is actually the direct consequence of cattle rustling. For instance, elsewhere in this report, an estimated about 5000 cattle are claimed to have been rustled during the period under review.

Invariably all the associated benefits from cattle such as using them as work bull to fill farm land, means of transportation, sales of milk, sales of cow during which are sources of income for cattle owners are no more. This among other reasons is the significant reduction in the income as presented in the table. Since income has reduced, it is obvious that other income dependent necessities such as three-square meals, health needs, education needs of children cannot be achieved. The results indeed but this fact many people rely on three square meals (breakfast, lunch and dinner/supper) for calorie and nutrition energy. As long as income has reduced, food quantity produced on the farm has declined, other food-related benefits from cattle have been deprived then three-square meals of many people are compromised. For instance a respondent in Gidan Bawuri (Maradun LGA) buttressed his inability to meet the basic food needs that the cattle rustling cum banditry has unleashed untold livelihood difficulties on his household that apart from not having the capacity to afford nutritious food for the family, it has become a practice to skip meals especially lunch by members of the household; only breakfast of square meal from sorghum (or millet) and supper of "Tuwo" and Urans soup from Okra are usually regularly eaten. This harrowing scenario have become a common practice for many rural dwellers in other settlements. Also, in Galadi, a Fulani widow claimed that all the cattle left for her late husband and the ones she inherited from her father has been rustled. In fact, she finds it difficult to survive from day to day without assistance from friends of her family. According to her in a tearful voice cattle rustling has turned me from a richer woman to a beggar woman.

4.6 Strategies Adopted in Managing the Effect of Cattle Rustling

As presented in Table 4.8 is the management strategies adopted which include reporting, suspected cattle rustlers, adopting a counter attack posture, surrendering money and other valuables to rustlers and running to safe place among others as considered in this study.

Table 4.8: Strategies Adopted in Managing the Effects of Cattle Rustling

Strategy	Mean Score	Rank
Reporting of suspected of cattle rustler to the village head	4.10	1
People run to safer places for refuge during cattle rustling attack	3.90	2
Trading one's money and personal belongings with rustlers for safety	3.80	3
Victims of cattle rustling are helped by the community and family friends	3.70	4
Suspected incidences are reported directly to security personnel	3.60	5
Forced migration of herdsmen	3.60	6
Herdsmen abandoning cattle rearing for another livelihood option	3.50	7
Counter attacks are coordinated and made by the community	3.30	8
Security personnel counter attacks at any attack of cattle rustling	3.20	9
Victims are usually being taking care of by government	3.00	10
Those whose cattle are rustled are compensated by government	2.80	11

Source: Author survey, 2020

Table 4.26 show that reporting of suspected of cattle rustler is to the village head and people run to safer places for refuge during cattle rustling attack were the most adopted strategies in managing the effects of cattle rustling with mean scores of 4.10 and 3.90 respectively. Closely followed were trading one's money and personal belongings with rustlers for safety and victims of cattle rustling are helped by the community and family friends cattle rustling effects management strategies in the study area. Government compensating victims of cattle rustling was the least management strategy adopted by the respondents as it accounts for 2.80 mean score and ranked eleven.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This chapter present the summary of findings, the recommendation and the conclusion based on the findings from the study.

5.2   Summary

This study aimed at examining the impact of cattle rustling on rural livelihood in Zamfara state. The socio-economic and demographic characteristics showed that about 63% of the respondents were males which 43% were aged between 25 - 34 years, and more than being married. It was found that most of the respondents had at least one form of formal education with tertiary level (32.2%) accounting for the highest. Farming (22.5%) and trading (21.5%) are the predominant occupation types among the respondents. The monthly shows that only 27.4% had a monthly income of less than ₦10,000.

It was found that 57% of the respondents agreed that cattle rustling attack occurs monthly while 43% agreed that cattle rustling is carried out regularly on weekly basis and mostly occurred between 01am-05am. The duration of cattle rustling attack usually last between 01 - 02 hours. About 62% were of the view that between 2014 and 2020 they know 50 and above persons who have were victims of cattle rustling attack.

The findings revealed death of family member and decreased income ranked the highest consequences of cattle rustling at individual household level with RII of 0.974 and 0.917 respectively of which the degree of the consequences indicated that seven (7) out of the eight cattle rustling consequences considered in this study rated very high with only mental distress rating high. At community level, forced relocation and destruction/loss of farm produce with RII

index of 0.849 and 0.836 respectively are the main consequences of cattle rustling. Forced relocation, destruction/loss of farm produce and destruction of properties ranked very high out of the seven (7) consequences identified in this study. About 57% of the respondents identified farming as the most affected livelihood option.

The findings revealed that farmland cultivated before and during cattle rustling, quantity of farm produce before and during cattle rustling, number of cattle owned before and during cattle rustling, number of other sources of income before and during cattle rustling, availability of money for basic needs before and during cattle rustling and access to three square meal before and during cattle rustling respectively are significant since the P-value (T-value) is less 0.05.

Finally, the findings showed that reporting of suspected of cattle rustler to the village head and people run to safer places for refuge during cattle rustling attack were the most adopted strategies in managing the effects of cattle rustling with mean scores of 4.10 and 3.90 respectively.

5.3   Conclusion

Cattle rustling was established to occur on a monthly basis in the midnight for more than two hours. Its Consequences include causing injury to people, burning homes, destroying properties, stealing assets and kidnaping. The estimated number of cattle rustling between 2014 - 2020 are uncountable in the study area. Cattle rustling has a severe impact on economic, social and cultural, security aspect of life. Cattle rustling has affected the number of farmlands cultivated and the output of the farm. The number of live stocks has reduced drastically in the study area with increase in transportation. The effect of cattle rustling on the affected livelihood options was explained by livestock's loss, mental distress, and unfriendly market day, and

crippled child education, loss of farm produce and destruction of properties. More so, the most effective management strategies in addressing the effect of cattle rustling was explained by People who got injured or lost their lives, their families are offered help by the community and family friends and In the case of ongoing cattle rustling, people runs to safer places for refuge.

5.4 Recommendations

Based on the outcome of this research the following recommendation were made:

i.   Further research should look at the mechanize in which people depend themselves from the rustlers

ii. Further research should look at the root cause of cattle rustling

iii. There should be effective deployment of security personals in the affected community to intensify the security of the affected communities

iv. There should be regular surveillance around the affected communities that will enable a track of the location of the rustlers.

v.   GPS should be used on cattle for easy tracking cattle when stolen

REFERENCES

Abbass, I. (2014). No retreat no surrender conflict for survival between Fulani pastoralists and farmers in Northern Nigeria. *European Scientific Journal (ESJ):* 8(1), 10-22

Abdullahi, S., Victor, E., & Binta, M. (2017). The menace of cattle rustling and banditry in north-west Nigeria: A Case Study of Katsina State. *Journal of Research and Method in Education*, *7*(6), 40–47

Abdulrashid, I. Saifullahi, S.I. and Amir, A. (2018). The Incidence and Impact of Cattle Rustling In Some Rural Communities of Katsina State, Nigeria. Federal University Dutsin-ma (*FUDMA) Journal of Sciences (FJS)* 2(2), 20 - 29

Abraham, M. (1982). Modern sociological theory: an introduction. Delhi: Oxford university press.

Abraham. M. Modern sociological theory: an introduction. Oxford University Press, 1982.

Abubakar M.B., (2014). The Causes and Effects of Conflicts between Nomadic Pastoralists and Sedentary Farmers in Katsina State, Nigeria. *Lapai Journal of Sociology*; 5(1): 86–103.

Abubakar, M.B., Talib, A. and Rohana, Y. (2018). Cattle Rustling In Kaduna State, Nigeria: An Assessment of the Existing Preventive Approaches. *International Journal of Management Research and Review*. 8(9), 288 – 296

Adeniyi O. (2016). *The Zamfara State Killing Fields*. This day Newspaper, published on 22nd September, 2016

Akilu, I., Gidado, l., Lawan, & Amina, R. (2018). Influnce of posttraumatic stress reactions on economic activities of victims of cattle rustling in Zamfara State. ATBU, *Journal of science, technology and education, 6(4).*

Anas, S.A. (2017). Emerging Issues in Zamfara Armed Banditry and Cattle Rustling: Collapse of the Peace Deal and Resurgence of Fresh Violence. *International journal of innovative research and development*. 6(12), 161 – 199

Angerbrandt. H. (1995). Religion, ethnicity and citizenship: demands for territorial self-determination animal keeping. *Human ecology* 4(23), 455-475.

Azeez, O., & Aliyu, Y. (2016). Cow, bandits and violent conflicts: understanding cattle rustling in northern Nigeria. German Institute of Global and Area Studies.

Bashir H. M. (2017). The Impact of Cattle Rustling and Banditry on Livelihoods of Pastoral

Behnke, R.H. (2008). The economic contribution of pastoralism: case studies from the horn of Africa and Southern Africa. *Nomadic Peoples, 12*(1), 45–79.

Bello, A. (2013). Herdsmen and farmers conflicts in North-Eastern Nigeria: Causes,

Blench, R. (2003). Natural resource conflicts in North-Central Nigeria: A handbook and case studies. Cambridge: Mallam Dendo Ltd.

Branaman. A. (2010). Interaction and hierarchy in everyday life. Goffman and Beyond in Goffman's *British journal of sociology* 61(1), 253-260.

Cheserek G.J (2012). Nature and causes of cattle rustling among some pastoral communities in Kenya

Ciara, A., & Omar, S. (2017). Organized crime in Africa/ cattle rustling on the rise across Africa. Enact.

Daily Trust (2014 February). Arresting the menace of cattle rustling. Editorial, February 05,

Daily Trust (2014 February). Investigation: 322 herders killed, 60,000 cattle rustled in 2013.

Daily Trust online at http://dailytrust.info/likked-60,000-cattle-rustled-in-2013

Emma, E.O.C., Aduma, A. and Maximus, I.E. (2018). The Logic of Open Grazing in Nigeria: Interrogating the Effect on Sustainable Development. *International Journal of Family Business and Management Studies*. 2 (1)*,* 1-17.

Gadzama, I., Saddiq, N., & Oduehie, T. (2018). Appraisal of rural banditry in Kamuku forest in Birnin Gwari local government area of Kaduna State,Nigeria. *Nigerian journal of rural sociology*, 18(1), 42-49.

Gautam, Y. and Andersen, P. (2016). Rural livelihood diversification and household well-being: Insights from Humla, Nepal. *Journal of Rural Studies,* 44(2), 239–249.

George, K., Bernard, K., & Abdi, Y. (2011). Effects of cattle rustling and household characteristics on migration decisions and herd size amongst pastoralists in Baringo district, Kenya. *Springer*, 18.

Gidado L. (2018). Influence of Posttraumatic Stress Reactions on Economic Activities of Victims of Cattle Rustling in Zamfara state – Nigeria. *International Journal of Scientific Engineering and Research (IJSER)* 2018; 9(3), 612–629.

Goldman, M. J. and Riosmena, F. (2013). Adapting to variability and drought: the shifting relationship between institutions and landscapes in East Africa Savanna lands. *Global Environmental Change* 23(3), 588–597.

Greiner, C. and Sakdapolrak, P. (2013). Rural–urban migration, agrarian change, and the environment in Kenya: a critical review of the literature. *Population and Environment*; 34(4), 524–553.

Gueye, A. (2013). Organized crime in the Gambia, Guinea-Bissau and Senegal. Friedrich-Ebert-Stiftung.

Habibu U. A. (2016). Taming cattle rustling in Katsina Publish Date: Mar 9 2016 9:40AM

Hendrickson, D., J Armon, & R. Mearns. (1996). Livestock raiding among the pastoral Turkana of Kenya. Bulletin (3), 17-30.

Hof, A and Rischkowsky B. (2018). Degradation of Natural Resources or Necessary Intensification of Land Use to Sustain a Growing Number of Users? - The case of the Zamfara Reserve, Northwest Nigeria - Scientific Figure on Research Gate. Retrieved from:https://www.researchgate.net/figure/The-Zamfara-Forest-Reserve-in-the-SaheloSudanian-Zone-of-NW- Nigeria_fig1_242180706 on 19th September, 2019

Ibrahim, S.S., Ozdeser, H. and Cavusoglu, B. (2018). Financial inclusion as a pathway to welfare enhancement and income equality: Micro-level evidence from Nigeria. *Development Southern Africa,* 21(3) 1–18.

Idoma, K., & Elisha, I. (2018) Climate Change Education and Awareness among pastoralists in Zamfara State, Nigeria *Savanna* 24, 2 263-276

Idowu, A. O. (2017). Urban Violence Dimension in Nigeria: Farmers and Herders Onslaught. *Agathos International Reviews*, *8*(1), 187–206.

IRIN. (2013). Bandits attacks displace northern Nigeria herders.

Isabel. W. (2014). *The effects of livestock rustling on livelihoods of pastoral communities in the Turkwell River belt along the Turkana/Pokot border*. PhD dissertation submitted to the University of Nairobi, 2014

Kaimba G.K., Njehia, B.K. and Guliye, A.Y. (2011). Effects of cattle rustling and household Characteristics on migration decisions and herd size amongst pastoralists in Baringo District, Kenya. *Pastoralism: Research, Policy and Practice;* 1(1), 18 - 26.

Kelley, J. and Evans, M.D.R. (2017). Societal Inequality and individual subjective well-being: Results from 68 societies and over 200,000 individuals, 1981-2008. *Social Science Research, 62*, 1-23.

Kempf, W., 2007. Peace journalism: A tightrope walk between advocacy journalism and

Ken, B. (2004), *Business Statistics for Contemporary Decision Making.* (Fourth Eds.) Wiley, India. ISBN 9788126508099 .Kenya." Journal of Emerging Trends in Economics and Management Sciences 3, no. 2 (2012): 173.

King. A. "The odd couple: Margaret Archer, Anthony Giddens and British social theory." The

Kiruwa M (2017), *National President Miyetti Allah Cattle Breeders Association of Nigeria, Aged 50*. Interview result sheet conducted at Fulbe Villa Hotel Gusau, on 12th October 2017. In Anas, S.A. (2017). Emerging Issues in Zamfara Armed Banditry and Cattle Rustling: Collapse of the Peace Deal and Resurgence of Fresh Violence Legacy (2003): 86-126.

Kwaja, C.M.A., and Abdul, H. (2016). Rural Banditry and Social Conflicts in Plateau State. In M.J. Kuna and J. Ibrahim (Ed.), *Rural banditry and Conflict in Northern Nigeria* (pp. 320–353). Abuja Nigeria: Centre for Democracy & Development.

Maconachie, R. (2018). Farming miners' or 'mining farmers'? Diamond mining and rural development in post-conflict Sierra Leone. *Journal of Rural Studies, 23*(3), 367–380.

Mallory, S. (2007). Theories on the continued existences of organised crime. Sadbury: Jones and Bartlet. Management strategies." *European journal of social sciences* 13, no. 3 (2010): 345-353.

Manu, I.N., Andu, W.N., Tarla, D.N. and Agharih, W.N (2014). Socio-economic Effect of Cattle Theft on the Pastoralists of the North-west Region of Cameroon. *Scholarly Journal of Agricultural Science*, 4(6):299 -305.

Manyok, P.T. (2017). *Cattle Rustling and Its Effects among Three Communities (Dinka, Murle and Nuer) in Jonglei State, South Sudan.* Unpublished PhD dissertation, Submitted to Nova Southeastern University.March 20, 2014).

Misbahu Bashir "Kaduna Rustlers Kill Kaduna Herder", Sunday Trust, February 15, 2015,

Momale, S. B. (2016). Changing Methods of Animal Husbandry, Cattle Rustling & Rural Banditry in Nigeria. In M. J. K. & J. Mohammed (Ed.), *Rural banditry and Conflict in Northern Nigeria* (pp. 80–110). Abuja Nigeria.

Murtala, A.F. (2018). Vigilante Groups and Rural Banditry in Zamfara State: Excesses and Contradictions *International Journal of Humanities and Social Science Invention (IJHSSI);* 7(6), 65-73

Muhammed M.A. (2017). The socio-economic repercussions of cattle rustling in Gasau Local Government Zamfara State. Dissertation Submitted to Lovely Prefessional University, Phagwara, PUNJAB.

News 24. (2013). Rebel kill 44 in South Sudan cattle radid. Retrieved from http://www.news24.com.ng/Africa/Newa/Rabels-kill-41-south-sudan-cattle-raid-20131021-2

NPC (2009). *2006 Population and Housing Census of the Federal Republic of Nigeria Priority Tables (Volume I):* National and State Population and Housing Tables. Abuja, Nigeria. January, 2009.

Nwoye, K. (2000). Corruption Leadership and Dialectics of Development in Africa. Enugu: Associated printers and Litho.

Okoli A. and Atelhe, G. (2014). Nomads against Natives: A Political Ecology of Herder/Farmer Conflicts in Nasarawa State, Nigeria. *American International Journal of Contemporary Research;* 4(2), 76–88.

Okoli, A. and Okpaleke, F.N. (2014). Cattle Rustling and Dialectics of Security in Northern Nigeria. *International Journal of Liberal Arts and Social Science* Vol. 2 No. 3 Pp. 109 – 117.

Hamman and Haruna (2018). The role of group solidarity in conflict between farmers and Fulani pastoralists: A case study of Northern Nigeria. African *Journal of Political Science and International Relations*; 12(3), 33-41.

Okoli, A., & Orinya, S. (2013). Oil pipeline vandalism and Nigeria national security. *Global Journal of Human Social Science*, 13, 65-75.

Olaniyan A, Yahaya A (2016). Cows, Bandits and Violent Conflicts: Understanding Cattle Rustling in Northern Nigeria. *African Spectrum*. 51(3), 93-105.

Olaniyon A.F. and Okeke-Uzodike, U. (2015). The Cattle are Ghanaians but the Herders are Strangers: Farmer-Herder Conflicts, Expulsion Policy and Pastoralist Question in Agogo, Ghana. *African Studies Quarterly;* 15(2), 53-67.

Osamba, J. (2006). The sociology of insecurity: *Cattle rustling and Banditry in North-Western Kenya. Nairobi.*

Paden. J. Postelection conflict management in Nigeria: the challenges of national unity. School

Paula. (2010). *When the Police are the Perpetrators, Cultural Survival*. Retrieved from www.culturalsurvival.org/publications Perspectives in the Social Sciences 2, no. 1

Philip K.T. (2010). Livestock production: recent trends, future prospects. Philosophical Transactions of the Royal Society *B: Biological Sciences* 365(1554), 2853-2867.

Salisu, K., Yusuf, M.A., Ahmed, M. Mohammed, M.U. and Umar, I.A. (2016). Analysis of the Distribution of Heavy Metals in the Soils of Bagega Mining Area Zamfara State, Nigeria. *Bayero Journal of Pure and Applied Sciences*, 9(1): 150 - 159

Satya, A., & Chemisto. (2010). *Understanding Inter-pastoralists Conflict in Uganda*: The cattle Raiding.

Schultze, & Rischkowsky. (2001). Relating household characterstics to urban sheep keeping in west Africa. *ResearchGate* (3), 139-152.

Segun, A. (2017), *Reps Probe Zamfara Killings*: (Online Version), The Sun Newspaper, retrieved from: www.sunnewsonline.com 27th September, 2019

Sewando, P.T., Mutabazi, K.D., and Mdoe, N.Y.S. (2016). *Vulnerability of agro-pastoral farmers to climate risks in northern and central Tanzania, Development Studies Research,* 3(1), 11-24.

Shehu, U.G. (2017). The Return of Terro Bandits to Zamfara, Others, (Online Version) Daily Trust. Retrieved from: www.dailytrust.com on 19th September, 2019

Simatwa, B. (2019). *Effect of cattle rustling on access and participation in primary education in Alale Division* (Disertation), University of Kenyatta. Social Science, 2(2). pp. 77-85.

Sofia V., Laura, H. and Mari N. (2019). Assessment of Welfare Problems in Finnish Cattle and Pig Farms Based on Official Inspection Reports. *Animals*, 9 (263) 1-19 southern Swaziland, 1990–2004." Journal of Contemporary African Studies 23, no. 2 strategics. European Scientific Journal, 10 (4) pp. 350-362.

Virginie L. M. and Lara L. (2014). *How should the new international disaster risk framework address gender equality*? Overseas Development Institute. Available on:http://cdkn.org/wpcontent/uploads/2014/03/CDKN_Gender_DRR_PolicyBrief_FinalWEB.pdf. Retrieved September 17th, 2019.

Weiss, T. (2004). Guns in the Borderland: Reducing the Demand for Small Arms. Western Africa." Journal of Arid Environments 63, no. 2 (2005): 475-496.

Western Kenya." Pastoralism: Research, Policy and Practice 2, no. 1 (2012): 1.

Wikipedia (2014 March). Cattle rustling.http://en.wikipedi a.org/wiki/cattlerustling/ (accessed

World Bank. (2018). *Understanding Poverty:* Agriculture and Food. World Bank Report 2017 and 2018: Washington, D.C.: World Bank.

Yamane, T. (1967). *Statistics: An Introductory Analysis* (2nded.). New York, Harper and Row.

Yusuf, V. (2015). *Deadly Persistence of Cattle Rustling*. In: Daily Trust, 16 May, online: Retrieved from: www.dailytrust.com.ng/weekly/index.php/fe atures/20488-deadly-persistence-of- cattle-rustling on 20th September, 2019

QUESTIONNAIRE SURVEY
Department of Geography and Environmental Management,
Faculty of Physical Sciences,
Ahmadu Bello University, Zaria

Dear respondent,

I am a Post graduate student of the above mentioned Department and Institution, carrying out a research on the topic: "Analysis of the Impact of Cattle Rustling on Rural Livelihood in some selected Local Government Areas of Zamfara State, Nigeria". Kindly answer the questions below as all information given would be treated with utmost confidentiality and strictly used for academic purposes. Please check or fill in the boxes below as appropriate.

Thank you.

Aliyu Mansur **Sulaiman**

Instruction: Please tick as appropriate

Ward Name_____   Community_____

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

1. Sex :

    Male [ ]   Female [ ]

2. Age (years):

    15-24 [ ]   25-34 [ ]   35-44 [ ]   45-54 [ ]   55 and above [ ]

3. Marital Status:

    Single [ ]   Married [ ]   Divorced [ ]   Widowed [ ]

4. Highest educational qualification:

    Primary [ ]   Secondary [ ]   Tertiary [ ] Informal Education [ ] No Education [ ]

5. Occupation:

    Farming [ ]   Livestock rearing [ ]   Artisanal mining [   ] Fishing [ ] Trading [ ]

    Transportation [ ] Retail [ ] Manufacturing [ ] Civil service [ ] Unemployment [ ]

6. Other sources of income (Part time/Secondary activities)

Animal tending [   ] Rope making [   ] Silage making [   ] others specify_____

7. What is the average monthly Income?

10,000 (   ) 11000-15000 (   ) 16000-20000 (   ) 21000-25000 (   ) 30000 and above (   )

7. How long have you earned the income in 7 above

Less than a year [ ] 1 – 2 years [ ] 3 – 5 years [ ] 6 – 10 years [ ] More than 10 years [ ]

Irregular income [ ]

SECTION B: NATURE OF CATTLE RUSTLING

8. Regularity of cattle rustling: By-weekly (   )   By-Monthly (   )

9. Are cattle rustler and bandits similar in your community Yes (   ) No (   )

10. By what time of the day does cattle rustling usually takes place?

05-10am [ ] 10am-03pm [ ] 03-08pm [ ] 08pm-01am [ ] 01-05am [ ]

11. What is the usual duration for cattle rustling activities to take place?

05 - 20 minutes [ ] 20 - 40 minutes [ ] 40 minutes - 01 hour [ ] 01 - 01 hour 20 minutes [ ]

01 hour 20 minutes - 01 hour 40 minutes [ ] 01 hour 40 minutes -02 hours [ ] > 02 hours [ ]

12. How do you determine the intensity of cattle rustling in your area? Length of period beyond

1hr (   ) Number of cattle head lost (   ) Number of people injured   (   )

Any other specify_____

13. What are the associated consequences or disturbance of cattle rustling in your area?

Violence [   ] Killing of people [   ] Causing Injury to people [   ] Burning homes [   ]

Destroying properties [ ] Stealing assets [ ] Imposing illegal tolls [ ] Destruction of standing

crops [   ] Kidnapping [   ] others [   ] (Specify) _____, _____,

_____, _____, _____,

14. Between 2014 and 2020 how many incidence of cattle rustling has occurred in your area?

_____

15. What is the estimated number of people affected by cattle rustling between 2014 and 2020

per incidence?

01-9 [ ] 10- 19[ ] 20-29 [ ] 30-39 [ ] 40-49 [ ] 50 and above [ ]

SECTION C: EXAMINE THE CONSEQUENCES OF CATTLE RUSTLING ON WELBEING IN THE STUDY AREA

Instruction: **Please tick appropriately as it applies to you**

16. How does cattle rustling affected livelihood options in your area?

Level	Affected Livelihoods	Severe Impact	Medium Impact	Minimal Impact	No Impact	Don't Know
Individual Household	Decreased income					
	Assets loss					
	Livestock loss					
	Cattles kept in stationary					
	Hunger and starvation					
	Mental distress					
	Death of family member					
	Injury and stress					
Community	Forced relocation of people					
	Unfriendly market day					
	Crippled child education					
	Commercial transportation					
	Loss of farm produce					
	Destruction of properties					
	General insecurity					

SECTION D: EXAMINE EXTENT OF CATTLE RUSTLING ON RURAL LIVELIHOODS OPTION IN THE STUDY AREA
Instruction: **Please use the Table below to answer question 18**

17. Tick the various livelihood options which you are engaging in

   Farming ( )   Livestock rearing ( )   Artisanal mining ( )   Fishing ( )

   Trading ( )   Transportation ( )   Rope making (   )

   Silage making (   ) Animal tending (   ) others specify_____

18. Does cattle rustling ever impacted on your livelihood options?

   Yes [ ] No [ ]

19. If yes to 19 above, which among your means of livelihood is most affected?

Farming [ ] Commercial transportation [ ] Cattle rearing [ ] Trading [ ] other cattle related income (like: animal tending, rope, hay and silage making etc.) [ ] Any other specify_____

20. To what extent does cattle rustling impacted on the identified livelihood?

	Before cattle rustling	During cattle rustling
Number of farmlands cultivated		
Quantity of farm produce (in bags)		
Estimated amount spend on commercial transportation within a month (in Naira)		
Number of cattle owned		
Number of cattle in a herd		
Number of other source of income		
Availability of money for basic needs		
Access to 3 square meal per day		

SECTION E: MANAGEMENT STRATEGIES

Instruction: Please tick appropriately as it applies to you

21. Rate the management strategies employed in addressing the effects of cattle rustling

SA=Strongly Agreed, A= Agreed, U=Undecided, D=Disagreed and SD=Strongly Disagreed

	SA	A	U	D	SD
Suspected of cattle rustling is quickly reported to village/ward heads					
Suspected incidences are anticipated through reporting directly to security personnel (such as Police and Vigilante group)					
Counter attacks are coordinated and made by the community alone					
Security personnel counter attacks at any event of cattle rustling					
Money and other personal belongings are traded with rustlers for safety					
In the case of ongoing cattle rustling, people runs to safer places for refuge					
People who got injured or lost their lives, their families are offered help by the community and family friends					
Victims are usually being taking care of by government free of charge					
Those whose cattle are rustled are compensated by government					
Many herdsmen are forced to migrate on account of cattle rustling					
Some herdsmen are abandoning cattle rearing for another livelihood option due to cattle rustling					

22. How effective are the local management strategies employed in addressing the effects of cattle rustling in your community?

	Very Effective	Fairly Effective	Ineffective
Those whose houses are burnt are accommodate by friends and families			
Those farmland/input destroyed are given food by neighbors and community			
Those whose shops or other source of income are affected are given financial assistance by friends and families			

23. Which of the local management strategies employed is most affected of cattle rustling in your community? Prayers (   ) Local vigilante (   ) Sensitization by community/heads (   )
Community self-protection and vigilante activities (   )