

**STATE AND RURAL DEVELOPMENT: A CASE STUDY OF RURAL
ELECTRIFICATION IN MASINGA DIVISION, 1973 - 2019.**

BY

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DECLARATION

This is my original work and to the best of my knowledge has not been presented for a degree in any other university



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This project paper is submitted for examination with our approval as university supervisors

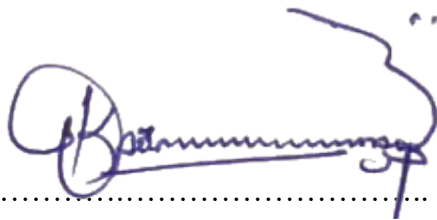
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DEDICATION

I dedicate this work to my parents Mr Peter Makali Muia and Mrs Ruth Nzisa for your support throughout my life, and to my wife Francisca Mumbua and my son Ian Makali for your love and patience.

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I wish to convey special thanks to my supervisors, Dr. Kenneth Ombongi and Dr. Hebert Misigo for the support they accorded me along the journey that was writing this project paper. Many of my ideas have evolved with them over the period, and some of their thoughts have probably become my own. I am also grateful to my lecturers at the University of Nairobi; Dr. Gachihi, Dr. Gona and Dr. Mwiandi for introducing and nurturing me in the world of academics. Special thanks also go to my classmates, who took time to read and critique this project paper. Kefa Odembo and Lillian Kantai, your inputs were invaluable. Many thanks to my parents; Mr Peter Makali Muia, and Mrs Ruth Nzisa Makali: for summoning finances to support my masters' education. Lastly I wish to extend my gratitude to my brother Kennedy for accommodating me when I was very new in the Nairobi city, during my masters studies.

ABSTRACT

This project paper contributes to the understanding of state-centered development in post-colonial Africa. The existing literature offers an intriguing discourse on the state interventionist policies in planning and implementation of development schemes in the independence era. The underlying theme is that weak state institutions in post-colonial Africa contributed to the government's failure to engender significant development in the continent. The argument is that hegemonic planning and implementation of the development process is the principal reason for the failure of the post-colonial state in its attempt to provide tangible social and economic development in the independence era. Nevertheless, the existing literature does not highlight how rural residents appropriate state mediated development in ways that brings success to them, despite the aforementioned inadequacies. Taking a case study of the rural electrification process in Masinga Sub- County, from 1973 to 2019, this project paper offers a critical focus on the role of subalterns, as agents and architects of rural development. The study deliberately eschews conventional narratives on the rural population as lumpen elements in the development process. Arguably, this perspective lends credence to the bottom-up approach, which in essence provides bedrock to the ideas of people's agency in the development process. The research relied on the bottom- up development theory, as the philosophical and analytical tool for the study. The utility of the model lies in its emphasis on the provision of social amenities as the most important end and principal means to social development. The study utilized both primary and secondary data. The research used purposive sampling technique and snowballing methods to identify respondents who were interviewed using a research interview guide. The data collected from the field was thematically analyzed. Thematic analysis enabled the researcher to establish the parameters of social change which were attributed to appropriation of electricity by the rural population in Masinga Sub-county. The research findings knit evidence on how rural population utilized electricity in ingenious ways which changed the social and economic trajectory of the area in the Twenty- First Century. The findings therefore contradict the arguments by the scholars on the non-viability of the state funded projects in Africa. The argument is that rural population is capable of appropriating social utilities provided by the state in ways that work for their benefit despite their deficiencies.

ACRONYM

EAPLCo	-	East Africa Power and Lighting Company
ESRP	-	Energy Sector Recovery Project
GDP	-	Gross Domestic Product
HEP	-	Hydro Electric Power
HR	-	Human Resource
I.C.T	-	Information & Communication Technology
J.K.M.L	-	Jomo Kenyatta Memorial Library
JKML	-	Jomo Kenyatta Memorial Library
K.A.N.U	-	Kenya Africa National Union
K.B.C	-	Kenya Broadcasting Corporation
KENGEN	-	Kenya Electricity Generation Company
KETRACO	-	Kenya Electricity Transmission Company
KPC	-	Kenya Power Company
KPLC	-	Kenya Power and Lighting Company
N.A.R.C	-	National Rainbow Coalition
NORAD	-	Norwegian Agency for International Development
REA	-	Rural Electrification Authority
REREC	-	Rural Electrification and Renewable Energy Corporation
REREC	-	Rural Electrification and Renewable Energy Corporation
SAPs	-	Structural Adjustment Programmes
TANESO	-	Tanganyika Electricity Supply Company
V.O.K	-	Voice of Kenya

DEFINITION OF TERMS

Rural Electrification- refers to the process of connecting rural communities to electricity.

Rural Development - refers to the process of bringing social and economic resources to rural communities.

Localized Opportunism- refers to the ingenious ways which rural people appropriated electricity to accrue maximum benefits.

Lastmile Connectivity- refers to the Government of Kenya's electricity project. It was launched in 2015, with aim of achieving universal access to electricity in the country.

Energy Reforms- refers to the structural changes in Kenya's energy sector in the late 1990s.

Off-grid areas- refer to areas in Kenya, which are not connected to electricity from the national grid system.

Bottom-Up Theory- refers to theoretical framework that focuses on the role of the people at the lower stratum in the society, in the creation of wealth of nations.

State-centred Development- refers to state intervention in the provision of social and economic infrastructure.

Post-colonial Kenya- refers to the era after Kenya's political independence from 1963 onwards.

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	v
ACRONYM	vi
DEFINITION OF TERMS	vii
TABLE OF CONTENTS	viii
LIST OF TABLES AND FIGURES	x
CHAPTER ONE	1
1.1 Introduction	1
1.2 Historical Background	2
1.3 Statement of Problem	5
1.4 Research Objectives	6
1.5 Justification of the Study	6
1.6 Scope and Limitation of the Study	8
1.7 Literature Review	9
1.8 Theoretical Framework	14
1.9 Research Hypothesis	17
1.10 Methodology	17
CHAPTER TWO: LIGHTING UP KENYA’S COUNTRYSIDE: DEVELOPMENT OF RURAL ELECTRIFICATION, 1905- 1973	20
2.1 Introduction	20
2.2 Enclave Electrification, 1905- 1963	20
2.3 Discontinuities in Rural Electrification Process in Kenya, 1963- 1973	24
2.4 Conclusion	27
CHAPTER THREE: THE HISTORY OF THE ELECTRIFICATION IN MASINGA DIVISION, 1973- 2019	29
3.1 Introduction	29

3.2	Moments of Disappointment in the Rural Electrification Process in Kenya, 1980- 1990	29
3.3	The Penetration of the Electricity in Masinga Division, 1990- 2019.....	34
3.4	Conclusion.....	41
CHAPTER FOUR: ELECTRICITY AND SOCIAL CHANGE IN MASINGA SUB-COUNTY, 1990-2019		43
4.1	Introduction	43
4.2	Electricity and Social Change in Masinga Sub- County	44
4.3	Economic Restructuring in Masinga Sub-County.....	57
4.4	Conclusion.....	61
CHAPTER FIVE: CONCLUSION		62
REFERENCES.....		64
	Primary Sources	64
	Secondary Sources	66

LIST OF TABLES AND FIGURES

TABLE 1: KPLC Access Rate in Masinga Sub-county as at 2017	38
TABLE 2: KPLC Projected Access Rate in Masinga Sub-County by 2022.....	39
FIGURE 1: <i>Electricity Consumption: Annual: Rural Electrification, 2005- 2017</i>	39

CHAPTER ONE

1.1 Introduction

Rural residents have the ability to appropriate state- provided social and economic resources, however limited, in ingenious ways that defies failures that are often associated with state projects. This is in contrast to high modernist approach to development that views rural communities as passive recipients of social and economic development mediated by the state.¹ The elitist perspectives on rural development hold negative stereotypes against the rural poor people: that they are improvident, and hence are responsible for their poor conditions.² Consequently, this paradigm perceives elites as an entrepreneurial class that ought to save and invest to provide employment opportunities to the underprivileged.

Nevertheless, the wealth of a nation is created out of nature: from tilling the land, felling trees, mining minerals and through exchange of goods and services. These activities are carried out by the majority peasants who live in the rural areas in Africa.³ In this setting, availability of social and economic resources places the subalterns at the center of production of goods and services. Consequently, state development schemes provide opportunities for the rural communities to participate in income generating activities that can generate profits, savings and investment from below.

The objective of this project paper is to present a critical inquiry on the rural peoples' response to state mediated social and economic development. The argument is that the efficiency of state development schemes depends on the response and cooperation of the target human subjects. Rural residents are not passive recipients of development projects. Rather, they appropriate social and economic amenities in ways that bespeak of ingenuity and some localized opportunism that defies the oft-quoted non- viability of the state sponsored development projects. This is the kernel of this research paper.

The second chapter begins by examining the origins and development of rural electrification in Kenya, from 1905 to 1973. The third chapter discusses the intrigues behind the electrification of Masinga Sub- County, from 1973 to 2019. Concentrating on this historical issues, the two chapters offer a strong background to the ultimate objective of the research paper, which investigated ways through which residents in the Masinga Sub-county

¹James C. Scott, *Seeing like a State: How Certain Schemes to Improve Human conditions Have Failed*, Yale University Press, New Haven and London, pp. 83 – 105.

²Robert Chambers, *Rural Development: Putting Last First*, Prentice Publishers, 1983, Pg. 2.

³Walter Rodney, *How Europe Underdeveloped Africa*, Tanzania Publishing House, 1972.

appropriated electricity in ways that bespoke of ingenuity and some localized levels of opportunism, which contributed to the social and economic reorganization of the area in the 21st Century, in ways that have not been appreciated in the extant literature on the statecraft in the post-colonial Africa.

1.2 Historical Background

Electrification in the country traces its origins to the beginning of the Twentieth Century, after the colonial state finalized its conquest over African communities, through a strategic blend of force and diplomacy. After 1905, the colonial state initiated unprecedented efforts to achieve effective occupation of the colony through infrastructural development, in attempt to achieve imperial economic goals.⁴ Consequently, this period was marked by development of wide range of social and economic infrastructure such as water supply, road works, and health care among others. Provision of these amenities certainly improved standards of living for the Europeans in the colonial Kenya. Nevertheless, the colonial state sidelined the African population in the colonial infrastructural development. In this context, the origins and development of electrification in the colony was driven by imperial prejudice against the Africans, by the colonial economic policies of colonial self- sufficiency and non-industrialization policy for the local communities. Consequently, the colonial state adopted electrification policies which relegated vast rural areas in Kenya.⁵

In 1946, the state played a role in impressing the East African Power and Lighting Company, on the desirability of extending its facilities to only rural areas of potential development.⁶ In this context, the sole aim of power development was to serve ensure industrial development in the economy. According to the colonial government, adoption of mass rural electrification in the economy was uneconomical: the program would diminish the national income rather than increase it. With such a verdict, electricity was exclusively earmarked to few rural districts schemes, which the state perceived to have the potential of entrenching the export- oriented economy. As a result, during the colonial period rural African communities remained without electricity, as the colonial state focused on the

⁴Douglas Kiereini, *The Origin of the Kenya Power and Lighting Company Monopoly*, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

⁵Ute Hasenohrl, Rural Electrification in the British Empire, *History of Retailing and Consumption*, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960, pg. 1

⁶Colony and Protectorate of Kenya: *Report of the Development Committee*, Vol. 1, 1946, pg. 74, pg. 76.

provision of basic infrastructure to the European settlements, and maintenance of law and order in the colony.

However, at independence the post- colonial state embarked on ambitious efforts to expand electricity access to the rural areas in Kenya. Arguably, it was a temporary break from the colonial electrification policies. This was a period when a wave of nationalist euphoria swept across the African continent. During this time, the nationalist leaders attempted to fulfill the pledges they made at the eve of the 1963 election campaign.⁷ In a context of high commodity prices for coffee and tea, the post- colonial state launched the first rural electrification programme in 1973. Under this first initiative, a few district headquarters in the country were connected to electricity. Finally, the much vaunted commodity began to penetrate to majority of rural areas in Kenya. Arguably, this marked the initial success in rural electrification process in Kenya in the first decade of the 21st Century.

Nevertheless, over the next two decades the process of connecting vast rural communities to electricity stalled. Against the background of both local and global challenges, rural electrification process in Kenya stagnated in the 1980s. For instance, during this time, Kenya like many other African countries experienced unprecedented demographic growth. As a result, the cost of providing recurrent social services such as food, healthcare, and primary education among others usurped capital expenditure. Added to this, the long post- war cash crop boom came to an end in the late 1970s, when oil producing countries began to increase hitherto very low prices.⁸ Consequently, global oil crisis plunged Kenya into a huge public debt. Thus, the burden of rural electrification proved to be unsustainable. Arguably, this was a period of disappointment in rural electrification in the country. As a result, colonial tendencies emerged in 1980s, which perceived electricity as an elusive commodity, for majority of rural African population.

However, the late 1990s witnessed major diversification of the energy generation sector. In 1997, KPC demerged from KPLC and was renamed KenGen. Under the Energy Act of 1997 KenGen became in charge of all the public power generation plants while KPLC took charge of only transmission and supply of electricity in the country.⁹ The energy reforms at the time facilitated the participation of the independent power producers in the energy generation to increase competition and efficiency in the sector. The assertion is that the

⁷Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118.

⁸John Illife, *Africans: The History of a Continent*, Cambridge University Press, 2007, pp. 260 – 267.

⁹Charles Hornsby, *Kenya: A History since Independence*, I.B Tauris, London 2012, pg. 188.

beginning of the 21st Century was a watershed period for The Kenya Power Sector. It was the start of amplified attempts by the state to increase the access to electricity for the rural communities, through increased public and private cooperation in the exploration of diversified sources of renewable energy.

The second significant reform in Kenya's energy sector was the enactment of the Energy Act 2006. This act established the Rural Electrification Authority. Primarily, REA was instituted to speed up the rural electrification initiative in the country.¹⁰ It was mandated to ensure that the populations in the countryside have access to electricity. Since its inception, REA has been working towards increasing rural population access to electricity, which has provided an invaluable opportunity to the local population for unprecedented social and economic development. REA's strategy was to connect public utilities such as markets, public schools, and clinics to both national grid and solar power systems to the off- grid areas. By 2013, almost ninety percent of public schools had been connected to electricity.¹¹

In 2015 the State initiated The Last Mile connectivity project that aimed at addressing the challenge of low electricity consumption at the household level. Under this initiative, the government lowered the cost of household connection from Ksh.35, 000 to Ksh.15, 000. The primary goal was to reach out to the groups in the society that did not benefit from previous power development in Kenya. In 2018, three years after the roll out of the 'Last Mile Connectivity' Project, seventy three percent of the public facilities had access to electricity.¹² This was a remarkable improvement in the rural communities' access to electricity. The project had aimed at reaching over seventy per cent connectivity by 2017 and universal access by 2020. Under this initiative, the homes within six hundred metre radius from a transformer were to be connected to electricity.

However, the Last Mile electrification project was marred with institutional inefficiencies and reported corruption from the onset.¹³ It was a case of patron - client relation in the post - independent political system in Kenya. For example, the incumbent regime attempted to retain state power in the 2017 general elections, by providing visible electricity

¹⁰Tom & Morton, The Impact of Energy Sector Reforms on Clean Development Mechanism Renewable Energy Projects in Kenya, Carbon, and Climate Law Review, Vol. 4, No. 4, 2010, pg. 3, <https://www.jstor.org/stable/24324251>, Accessed: 29-08-2018.

¹¹ Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering*, 2016

¹²*Kenya leads East Africa Peers in Access to Electricity*; Kenya Power, 2018, May 8.

¹³Moses Michira, *Last Mile: Costly Project that Ruined Kenya Power*, The Standard, November 26th, 2019, www.standardmedia.co.ke

services to political constituencies, in a bid to win support from rural communities. It was a case of continuation of colonial tendencies, in which patron-client relations kept the colonial state running. Despite the aforementioned constraints, an increased pace of rural electrification of public facilities such as schools, markets and health institutions in the countryside, access to electricity opened a new dawn for communities in the formerly isolated rural areas. The research study was an inquiry on how access to electricity contributed to rural reorganization with a stringent focus on social and economic changes over time, as a consequence of local residents' appropriation of this commodity.

1.3 Statement of Problem

The extant literature on the electrification of the rural areas in Africa provides interesting discourse on development of electricity services in both Twentieth and Twenty First Centuries. Authors concede that a number of factors coalesced to bring significant impediments to the rural electrification process in the post- colonial Africa. For example, Kenneth Lee argues that low electricity connectivity rates were attributable to unaffordability of electricity connection for the majority poor households in Africa.¹⁴ Mbugu G.K.N argues that the main challenge of rural electrification in Africa is the designing of electricity distribution grid in a context of dispersed population.¹⁵ According to Jordy et al, rural electrification in Sub- Saharan Africa is costly venture in countries where the gross national income is very low. As a result, the cost of rural electrification usurps the perceived benefits.¹⁶ On the same note, George et al, argue that financing rural electrification in the Sub- Saharan Africa is the most significant challenge, which contributed to energy poverty in rural areas in the Twentieth Century.¹⁷

Moreover, scholars on the post- colonial state institutions in Africa add important insights in the discourse on rural electrification process in the continent. The state in the post-colonial Africa emerged as an important actor in rural electrification process through support schemes and regulatory frameworks. Scholars mainly focus on the ineffective post- colonial state institutions as the most important impediment in rural electrification process in Africa.

¹⁴Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering*, 2016

¹⁵Mbugu, G.K.N, The Challenge of Rural Electrification in Sub- Saharan Africa, *18th International Conference and Exhibition on Electricity Distribution*, Turin Italy, 6-9 June Volume 5, No. 12.

¹⁶Jorg Peters & M. Sievert, 'Impacts of Rural Electrification Revisited: The African Context', *AFD Research Paper Series*, No. 2016- 22, 2015

¹⁷George & Dionysius et al, Proposing a Paradigm Shift in Rural Electrification Investment in Sub- Saharan Africa through Agriculture, *Sustainability*, 2020, 12, 3096; doi:10.3390/sui2083096

For instance, Frederick Cooper argues that the post- colonial African state was held together by both local and foreign patronage. In this context, politicians and bureaucrats used state institutions to enrich themselves while pushing the interest of the majority poor to periphery.¹⁸ Similarly, John Iliffe argues that in post- colonial Africa leaders seized state power for their own development instead of providing social and economic resources to the majority poor citizens.¹⁹ On the same note, Goran Hyden argues that weak state institutions in post- colonial Africa created weak political and economic structure that were hostile to the needs of the majority poor population.²⁰

The above studies present intriguing discourse on the impediments on rural electrification process in Africa. Nevertheless, the existent literature does not highlight how rural residents appropriated electricity in ways that benefitted them despite the aforementioned obstacles. This gap was filled by the study on impacts of rural electrification in Masinga Sub- County. In essence, the study investigated on how rural residents in Masinga Sub- county utilized electricity in ways that bespoke of ingenuity and some level of localized opportunism, which led to social and economic reorganization of the area.

1.4 Research Objectives

1. □ To examine the origins and development of rural electrification in Kenya, 1905-1973.
2. □ To examine the history of the electrification of Masinga Division, 1973- 2019.
3. □ To examine how rural residents in Masinga Sub-county appropriated electricity services in ways that changed social and economic trajectory of the area, 1990- 2019.

1.5 Justification of the Study

Impetuses for countryside electrification initiatives in Kenya have progressed considerably over the years, as a result of changes in development patterns. Studies on rural electrification have overwhelmingly emphasized on the cost – benefit analysis and the contribution of the energy infrastructure to the national income.²¹ The assertion is that despite the spirited expansion of the access to the electricity in rural areas, there have been very

¹⁸Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118.

¹⁹John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, 2007, pp. 260 – 267.

²⁰Goran Hyden, *Institutions, Power, and Policy Outcomes in Africa*, Discussion Paper No. 2, June 2008.

²¹L. Kenneth, M. Edward et al, *The Economics of Rural Electrification, Evidence from Kenya, Ideas for Growth*.

limited positive changes in the countryside. From the economic perspective, the minimal benefits of the grid extension are attributable to the extremely low electricity demand, supply and consumption of the modern energy in the rural areas.²² Nevertheless, appraising the rural electrification process by focusing stringently on the cost incurred and direct benefits is perilous. Such an approach runs a risk of becoming reductionist, if researchers pick our economic elements as being self – explanatory of peoples’ choices and behaviors. This study deliberately eschewed from the conventional economic approaches, to social developmental perspective, in the study of rural electrification process in Kenya. The study examined how the local population in Kenya appropriated access to electricity in ways that transformed the countryside despite the aforementioned constraints in state provision of social services in Kenya. The argument is that the knowledge embedded in the local experiences is most valuable in creating new knowledge in mutable settings; some facts are unknown and particular. In this situation, local conditions become paramount to the technical constructions of cost and benefit analysis. The study repudiates arguments by scholars who perceive rural people as indolent. The conviction is that when presented with viable resources, local people appropriate such utilities in ways that work for their interests, despite of their inadequacies. This study contributes to the extant literature on the state and rural development in the 21st Century in two important ways. First, the study highlighted on how patron-client relations that had beginnings in the colonial era continue to hinder provision of social services in Kenya. There is apparent continuation of populist development projects in the 21st Century that are akin to the one discussed in the classical literature on the state-centered development in the immediate independence era. Consequently, patron-client relations in the state institutions are present, and continue to hinder state development projects which aim at engendering significant social and economic development in rural areas in Kenya. Secondly, the study went beyond to explore on how rural communities appropriated state provided social services despite the aforementioned limitations. The study wove evidence on how local people appropriated electricity in ways that suggest resourcefulness and some level of localized opportunism that defied the oft-quoted non-viability of government projects in Africa.

²²Kenneth Lee, *Essays On the Economics of Rural Electrification in Western Kenya*, 2016, pg. 4.

1.6 Scope and Limitation of the Study

The Study focused on the state and rural development, by taking a case study of rural electrification of Masinga Sub-County in Machakos, from 1973 to 2020. The study took cognizance of this period because it was in the early 1990s when electricity first reached this rural division. Hitherto, electricity had not reached the area, despite of hosting the Masinga dam, the major source of Hydro-Electric power in the country. Nevertheless, in 1990, the incumbent legislator of the area engaged the government through the Ministry of Energy, to put in place measures that would ensure the area is connected to the national grid, owing to the fact that the area housed the Masinga Dam energy infrastructure.²³ Rtd. Col Kiluta asked the then Assistant Minister for Energy why the Kenya Power by passed centres such as Kaewa, Kikumini and Ekalakala, without due provision for supplying power to the residents and asked when ministry intended to supply electricity to the areas which were by – passed in a fierce debate in the national assembly.²⁴ Consequently the government adopted an electrification pattern in the area that started by connecting the major trading centres in the division to the national grid. Masinga Township, the headquarters of the divisional offices and Kivaa, a township adjacent to the Masinga Dam were the first to be connected to the grid.²⁵

Normally, several constraints beset the path of any venture which seeks to write history, so it was with this study. The challenges revolved around the cooperation of the respondents and paucity of finance. First, choosing and accessing the key informants presented some challenges. This was because of the busy schedule of the key respondents. Secondly, on finance, the study was undertaken at a time when the country was experiencing an economic recession. As such, prices of the necessary equipment such as; record cards, tape – recorders, and transport and communication were high.

The researcher redressed the above challenges. First, the researcher exploited the digital space to reach the target respondents who could not be accessed physically. These included school heads and health officers who were reached via social platforms such as WhatsApp live chat and even on messenger. The researcher explained precisely the aims and

²³The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

²⁴The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

²⁵ The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

the objectives of the study before the scheduled online interviews, and planned for the time of the interviews, at the respondents' own appointed time. This enabled the researcher to avoid excessively intruding on the respondents' time. Financial constraints were circumvented by prudent use of the available finances during the research.

1.7 Literature Review

The study was a historical inquiry on state and rural electrification in an African setting. Two strands of literature were reviewed for this study; one strand touched on studies on rural electrification in Africa. The second strand emphasized the role of state institutions in Africa in the process of providing social and economic infrastructure in post-colonial Africa. This section begins with the first strand, and then it reverts to the second one.

Jorg Peters and M. Sievert emphasize on the evaluation of the rural electrification process at the design stage. In this strategy, selected control group ought to be part of rural electrification programme design. According to the authors early stage evaluation improved the likelihood of having high quality design. The author argues that when the impact evaluation is done at the beginning of the mass electrification process, the design provides a context that the policy makers use to determine the electrification pattern. For example, to gauge whether to prioritize health welfares or the potential to transmit information campaigns to the countryside.²⁶ This paper provided an intriguing discourse on the policy formulation in the rural electrification process. Nevertheless, the emphasis on selected control groups in evaluating social and economic impact of rural electrification is untenable. For logical reasons, it is impossible to predict the wider social and economic implications of electricity access in rural settings. The fundamental argument here is that there can be no prediction of course of human history by scientific or any other rational method. In order to come up with effective policies in rural electrification process, empirical study on impacts of access to electricity in an area where people have lived in energy poverty for a long period is imperative. This was the objective of the research study.

Mbugu G.K.N highlights pertinent challenges which hinder rural electrification process in Africa. The author argues that the main technical challenge faced in a bid to connect vast rural areas to electricity is the designing of an electrical distribution grid system for a

²⁶Jorg Peters & M. Sievert, 'Impacts of Rural Electrification Revisited: The African Context', *AFD Research Paper Series*, No. 2016- 22, 2015

dispersed population. According to the author, rural areas are mostly sparsely populated. Consequently, there are limited straight lines through which power can pass. In this context, it is difficult for the architects to construct cheap voltage networks, especially when it is impossible to connect neighbouring households at the same time.²⁷ This paper provided important insights on the analysis of the impediments of rural electrification in Kenya since 1973. The discussion is however mute on how rural residents appropriated electricity in ways that benefitted them despite the aforementioned obstacles. This gap was filled by the study on the rural electrification process in Masinga Sub- County.

Ute Hasenohrl presents an interesting discourse on the rural electrification trajectory in the British colonies in the Twentieth Century. The author argues that the electrification pattern in the British colonies was an uneven process that excluded many rural areas. According to the author, the colonial state ignored the needs of Africans' need for modern sources of electricity. Consequently, in the British colonies the government's prioritized European settlements and administrative centres in electrification process. In his analysis, Hasenohrl derives from the work of Daniel Headrick, *The Tools of Empire (1981)*, which understood the introduction of western medicine as precondition to the subservience and exploitation of the Africans and nature. Viewed from this perspective, the colonial state used electricity to police the colonial subjects by erecting lighting in 'natives' residences to monitor their activities at night.²⁸ This paper provided important insights in the analysis of rural electrification pattern in colonial Kenya from 1902 to 1963. The paper provides critical nuances on the colonial extractive tendencies in the power sector, which persisted in the independent era: on distressing environmental and social costs of the erection of large Hydroelectric dams in the British colonies. This scholarly work offered important evidence on the mechanism of unsuccessful rural electrification in both colonial and post- colonial period.

Jordy Charly, M. Harimisa et al, argue that the barriers in the electrification process in the post- colonial Africa are threefold: First is the low household affordability and income while the second one is low population density in rural areas in Africa. The perceived low returns on capital of rural electrification energy investment in a context of low productive

²⁷Mbugu, G.K.N, The Challenge of Rural Electrification in Sub- Saharan Africa, *18th International Conference and Exhibition on Electricity Distribution*, Turin Italy, 6-9 June Volume 5, No. 12.

²⁸Ute Hasenohrl, Rural Electrification in the British Empire, *History of Retailing and Consumption*, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960, pg. 1

uses of electricity in the rural areas in Africa.²⁹ The paper provided important insights on the obstacles that were met in the rural electrification process in Kenya since 1973. Moreover, this paper highlights the role of solar power system in the rural electrification process especially in the off- grid areas, particularly on the ability of solar lights to reach the low income households because of their affordability in the short term, and did not depend on the government infrastructure plans.

George, Dionysius et al, argue that the most significant challenge in the rural electrification process in Sub- Saharan Africa is the high cost of financing the investment. The paper contends for a new approach in financing rural electrification process in Africa. The underlying theme is that agro- business ought to be given priority in the electrification process in a bid to circumvent the high cost in extending electricity services to the rural communities. According to the authors this strategy has a capacity of increasing agricultural output in rural areas. Arguably, this strategy engenders increased shift from subsistence agriculture to commercialized agriculture which entrench enterprising culture among rural farmers.³⁰ This paper draws important lessons from a case study in Rwanda, through which emergence of local agricultural cooperatives after electrification process is demonstrated. The authors' arguments were pertinent to the current study. It provided important yardstick in the analysis of the economic impacts of rural electrification in Masinga Sub-County.

Ramachandra, Vittorio et al, juxtapose collaborative consumption and ownership of photovoltaic systems with individual ownership, in a bid to navigate high cost of rural electrification in Niger.³¹ The paper draws important lessons from a survey on a village in Niger to evaluate the willingness to pay for electricity facilities when solar power systems were owned communally. The authors argue that collaborative ownership and consumption of solar power systems were viable in contrast to individual ownership schemes. The study highlights that this strategy is important in increasing electricity consumption in rural areas in Africa. Essentially, authors argue that when rural areas under take to maintain the Off- Grid solar power systems, there is an unprecedented increase in electricity consumption. This paper provides important insights on how rural residents in Africa circumvented high cost of

²⁹Jordy Charly, Harimisa M. et al, 'PV- Hybrid Off- Grid and Mini- Grid Systems for Rural Electrification in Sub- Saharan Africa', *Smart Grid and Renewable Energy*, Vol. 09, No. 10 (2018), Article ID:87888

³⁰George & Dionysius et al, Proposing a Paradigm Shift in Rural Electrification Investment in Sub- Saharan Africa through Agriculture, *Sustainability*, 2020, 12, 3096; doi:10.3390/sui2083096

³¹Ramchandra B., Vittorio S. et al, ' Rural Electrification in Africa- A Willingness to Pay Assessment in Niger' *Renewable Energy* 161(2020) pp. 20- 29.

grid electricity connection, in a context where household electrification in Kenya occurred in a regressive manner.

Kenneth Lee, Eric Brewer, argues that despite efforts of the post-colonial state and donors to invest in rural electrification, the electricity consumption rate remains significantly low in the Sub-Saharan Africa. The authors attribute this situation to the fact that the decisions on how to increase provision of electricity were arrived at in the absence of sufficient evidence on the social and economic impact on the rural communities in Africa. The authors used data set of 20,000 household respondents in rural Western Kenya.³² The paper provides vivid evidence on electrification rates which were low in spite of the substantial investment in the electricity infrastructure. The paper argues that the state ought to provide subsidies for household electricity connections as a prerequisite to leveraging the existing infrastructure and economies of scale. This piece of literature was important in highlighting the challenges that the state face in the rural electrification process in Kenya in the Twenty-First Century. However, the discussion is mute on the social and economic impact of rural electrification on rural communities in Kenya.

Analysis on the scholarly work on state intervention in the provision of social and economic infrastructure in the post-colonial Africa was also vital for this study. These literatures emphasize on weak post-colonial African state institutions as the most important factor that inhibited the provision of adequate social resources to the poor people in Africa.

Frederick Cooper presents an interesting discourse on the development trajectory in post-colonial Africa. In his analysis, Cooper describes the post-colonial African State as the 'gate keeper': Where holders of state power focus on making money from guarding the gate by collecting most of the taxes from imports and exports and from fees of issuing licenses rather than engage in production and inactivity with potential for catalyzing the structural transformation of economies of their country.³³ This book provided vital insight on the impediments in rural electrification in Kenya since 1973.

Norman Miller focuses on the consequences of the capitalist path that Kenya's independent regime opted for. Miller argues that new patron – client relations emerged between the ruling elites and the metropolitan capital, and local elites. Miller avers that Kenya's executive leaders continued to do what Europeans had done; finding wealth and

³²Kenneth, Eric, et al, Electrification for "Under – Grid Households in Rural Kenya, *Development Engineering* Vol. 1, 2006, pp. 26 – 35, www.elsevier.com/locate/deveng.

³³Frederick Cooper, *Africa since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118.

status via material attainments. As in the colonial times, bureaucrats and politicians control of resources was achieved through access to the top echelons of power. With the formal state institutions usurped, through centralisation of state, alternative channels were established based on patron – client relationship in the independence epoch.³⁴ In this context, the state paid little attention to the welfare of the majority population in Kenya.

John Iliffe asserts that the first two decades of independence in Africa were a period of triumph. However, in the 1970s the price of progress became apparent as the continent witnessed an unprecedented population growth. State leaders facing unforgiving social, economic and political realities, toughened into aging despots, as economic recession exposed the weakness of the post – colonial African state. The author argues that it was in this context, when state institutions in post – colonial Africa, were to a varying extent patrimonial, in the logic that a public bureau was offered in return for individual trustworthiness and loyalty to the head of state. In the context of elites ‘‘hegemonic project’’ to dictate the people, the welfares of the majority poor citizens were pushed to edge, as leaders seized state wealth for their own development, at the expense of providing social services, in their unbridled quest to attain and sustain a discrete lifestyle – ‘platinum life’.³⁵

James C. Scott presents thought-provoking argument, on the logic behind failures of state policies meant to uplift the welfare of the poor people. Scott contends that state schemes represent the interests of the bureaucrats. According to the author, high modernism ideologies that earmark development policy neglect the local knowledge and experiences in the planning and implementation of development schemes. The inherent hegemonic planning mentality that excludes the local values sow seeds of resistance from the people whom the schemes are meant for.³⁶ The significance of Scott’s ideas lies in his dismissal of the top – bottom approach and lends credence to the bottom – up approach, which in essence provides bedrock to the ideas of peoples’ agency in social development.

Goran Hyden argues that the development project trajectory in Africa is dependent on the historical institutional context. Hyden asserts that the legacies of colonialism and dominance of external forces in the post – colonial Africa, have created a peculiar mixture of informal values, in which the former is dominant in power relations. In this context, patronage offered a competing, informal structure for the execution of power, acquisition of

³⁴Norman Miller, *Kenya: Quest for Prosperity*, Westview Press, London, 1984, Pg. 38.

³⁵John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, Cambridge, 2007, pp. 251 – 273.

³⁶James C. Scott, *Seeing like a State: How Certain Schemes to Improve Human conditions Have Failed*, Yale University Press, New Haven and London, pp. 83 – 105.

status, and allocation of resources beneath the nominally bureaucratic - rational state, which Goran Hyden calls the 'economy of affection'.³⁷ Such approaches proved to be expensive, because they undermined economic decision making and encouraged corruption. Goran asserts that weak state institutions in the post – colonial Africa have created weak political and economic structure that is hostile to the needs of the majority poor.

Similarly, Charles Hornsby argues that state institutions in the post – independent Kenya work for the ruling class rather than the delivering social services to the poor people. In this context, state institutions served the government rather more openly than was envisioned in the Westminster model. At every level, there were cases of unconstitutional disbursement, diversion of funds, personal engagements and abuse of procedures, with administrators looking for ways to evade the system.³⁸ Consequently, the inefficient state institutions left the majority people deprived but persons in the government and their clienteles better off. Hornsby asserts that the corruption in the state institutions has contributed to the limited provision of social services, in a patrimonial state.

1.8 Theoretical Framework

The Bottom-up economic theory was an invaluable analytical and philosophical foundation for this study. It is a paradigm that emphasized on development from below which emerged in the late 1970s, and early 1980s. The theory emerged as a reaction against the dominant theory known as top- down economic model. The proponents of bottom-up economic theory criticized the underlying assumptions of the trickle- down economics which emphasized on the state intervention in the development process. The central thesis in this approach as laid out by Sir Arthur Lewis in 1954 was the proposition that strong state institutions provided necessary and sufficient conditions for economic growth to take place.³⁹

The trickle- down economics emphasized on the need to accentuate the existing disparities in three sets of relationships: Firstly development that prioritized industrialization to agriculture, secondly urbanization to rural development- where investments in metropolitan areas accrued economies of scale and accumulation of incomes. Thirdly, the

³⁷Goran Hyden, *Institutions, Power, and Policy Outcomes in Africa*, Discussion Paper No. 2, June 2008.

³⁸Charles Hornsby, *Kenya: A History since Independence*, Tauris Publishers, London 2012, pp. 260 – 268.

³⁹Sanyal B., ' The Myth of Development from Below', Department of Urban Studies and Planning, *Massachusetts Institute of Technology*

trickle down approach perceived elites as an entrepreneurial class.⁴⁰ In this context the rich were encouraged to save and invest so that they could provide employment opportunities to the poor.⁴¹ According to the critics of the trickle- down economic model, the bodies that were formed to nurture rural development were the significant impediment to progress. The state institutions for instance were appropriated by the politicians and bureaucrats in controlling and repressing rather than representing the poor. For instance, Robert Chambers in his book, *Rural Development: Putting Last First* argues that rural poverty is unperceived by outsiders, who are concerned with the planning and implementation of the rural development schemes. Chambers assert that the stakeholders in the rural development hold negative stereotypes against the poor – which they are improvident, and hence are responsible for their poor conditions.⁴² Nevertheless, Chambers calls for rethinking of rural development. He asserts that the rural population is hard working, but have been trapped in deprivation, which has rendered them powerless and vulnerable.⁴³

Similarly, Sen refutes the widely held convention of measuring development by economic growth- that increased incomes, Gross Domestic Product and industrialization should precede social development inform of improved literacy, health care etc. According to Sen, these notions are a show of implicit prejudice of elites, whose focus is on the top- bottom path, with the conviction that provision of social opportunities is a kind of luxury that only the rich countries can afford. Sen avers that social development should precede economic growth. Drawing lessons from Japan, Sen asserts that Asian economies went comparatively early for massive expansion of social opportunities to the peasantry, inform of education and health care, and they have reaped as they have sown.⁴⁴ Lastly, in the capability approach to development, when opportunities are made available, local peoples’ agency emerges as a major engine of development. When social utilities are availed, local people have the capability to appropriate these resources in ways that work to benefit them.⁴⁵

⁴⁰ Chambers, Robert (1993). *Challenging the professions: frontiers for rural development*, London: IT Publications.

⁴¹Robert Chambers, *Rural Development: Putting Last First*, Prentice Publishers, 1983, Pg. 2.

⁴²Robert Chambers, *Rural Development: Putting Last First*, Prentice Publishers, 1983, Pg. 2.

⁴³Chambers, Robert (1993). *Challenging the professions: frontiers for rural development*, London: IT Publications.

⁴⁴A. Sen, *Development as Freedom*, Oxford University Press, Oxford, 1999, pg. 41.

⁴⁵P. Evans, *Collective Capabilities, Culture, and Amartya Sen’s Development as Freedom*, *Studies in Comparative International Development*, Vol. 37, No. 2, 2002, pp. 54 – 60.

In contrast to the trickle- down economics proponents, who argue that large- scale infrastructure projects that aimed at entrenching employment- generation, the bottom- up economic theory argued a case for development from below that directly involved the subalterns in creation of wealth in the economy.⁴⁶ In this respect, the target for the bottom- up model is the majority population at the lower echelons of the society. In this paradigm the ultimate aim of the development process is to open opportunities for the people in rural areas to be able to participate in income- generating activities that are expected to generate profits, savings and investments at the bottom.⁴⁷ Arguably, this would eliminate the need for income to trickle- down through market mechanism. Viewed from this perspective, development entails entrenching human capacity through expansion social and economic opportunities for the rural masses.

Bottom-up economic theory made a prolific contribution to the rural development paradigm. The theory focused on the role of people at the bottom in the creation of wealth of a nation. The most effective way of alleviating poverty in rural areas in Kenya is through provision of opportunities to the people; inform of healthcare, education and enhanced entrepreneurial capabilities. The local people have the ability to appropriate social resources provided, however limited, in ingenious ways that contribute to improved standards of living. Availability of opportunities in rural areas place peasants at the center in production of goods and services in the country. Wealth of nation is created from the nature: from hoeing the land, excavating metals, felling trees, or in trading activities which provide goods and services.⁴⁸ These activities are done by the peasants who occupy the lower strata of the society. The national wealth ought to be directed to this arena if there is any hope for significant development in the country.

The bottom-up economic theory attracted criticism from several scholars. For example, Pissourious argued that the adoption of this theory encounters problems, firstly if a programme is not covered in the central legislation.⁴⁹ Secondly, problem of full participation and control of the project in larger communities might arise. The argument is that it might be a protracted process to for the larger communities to reach consensus on fundamental aspects

⁴⁶Sanyal B., ' The Myth of Development from Below', Department of Urban Studies and Planning, *Massachusetts Institute of Technology*

⁴⁷A. Sen, *Development as Freedom*, Oxford University Press, Oxford, 1999, pg. 36.

⁴⁸Walter Rodney, *How Europe Underdeveloped Africa*, Tanzania Publishing House, 1972

⁴⁹Mohammad Shatar, Evaluating the Top-Bottom and Bottom- up Community Development Approaches: Mixed Method Approach as an Alternative for Rural Un-Educated Communities in Developing Countries, *Mediterranean Journal of Sciences*, Volume 7, No. 4, July 2016, ISSN 2039 Online.

of development projects such as operational modalities of the project. This is because the communities involved would want to have a preferential and greater influence in location and sharing of the programme. This may lead to serious conflict among the communities involved. Thirdly, the technicalities of some bottom-up projects that involve big infrastructure like roads, water, airports and electricity among others may be difficult for local communities to internalize, because they involve technicalities and external support.⁵⁰

However, despite the aforementioned criticism of the bottom-up development theory, the utility of this model lies on its emphasis on the provision of social amenities as the most important end, and principal means to social development. When discussing social development through this lens, it will be rational to argue for projects that entrench social opportunities for the rural population, even when the rate of return on investments turns out to be zero. It is in this light that the bottom-up development model is perceived to be appropriate for the study on the State and Rural Development: A Case of Rural Electrification in Masinga Sub – County from 1990 to 2020.

1.9 Research Hypothesis

1. □ The origins and development of rural electrification were driven by the colonial economic needs
2. □ Electrification process in Masinga Sub- County was characterized by numerous continuities and discontinuities of the colonial electrification tendencies.
3. □ Electrification of Masinga Sub- County profoundly changed social and economic organization of the residents in the 21st Century.

1.10 Methodology

The research utilized primary and secondary data. The research was carried out in three steps. The first stage encompassed referring to the accessible literatures in the libraries. The secondary sources that were analyzed at this stage included books, academic journals, articles, and dissertations and masters projects on the state and social development. The relevant secondary sources which were selected provided a qualitative yardstick with which I

⁵⁰Pissourios, Ioannis A. (2014). Top-Down and Bottom-Up Urban and Regional Planning: Towards A Framework For The Use of Planning Standards. *European Spatial Research and Policy*, Volume 21, Number 1, Pp. 83 – 99.

examined the topic on hand. The Jomo Kenyatta Memorial Library (J.K.L.M) was important in retrieving secondary data. The library provided classical literature on the state and social development in Africa in the post – colonial era. For example, works done by prolific authors such as Frederick Cooper, Colin Leys, Goran Hyden, among others were accessed from the Afrikana section of the library.

The second level of the research involved the analysis of the primary sources of data. The Afrikaner section of the JKML was important in accessing the primary data on the energy sector in both the colonial and post-colonial period. For instance, Reports such as; The Colony and protectorate of Kenya: Report of the Development Committee, Volume one and two highlighted on the state policies on electricity distribution in the colonial Kenya. Similarly, the Sessional Paper No. 10 of 1965 depicted the state interventionist development planning which the post-colonial state adopted at independence. On the same note, the Sessional Paper No.4 of Energy presented evidence on energy policies that the state adopted in the Twenty First Century. All these documents helped the researcher write an historical discourse of the electricity supply in Kenya. The researcher also obtained important data on electricity connectivity of various public institutions in the sub-county from the sub-county head offices. Primary sources enriched the study by complementing the secondary data.

The third phase of the study involved interviews of the key informants. The researcher conducted a total of twenty in-depth interviews with the nurses, teachers, entrepreneurs, and members of households. Interviews lasted from thirty minutes to a maximum of one hour. The researcher considered the fact that the respondents had vital information relevant for the study. The interviews helped the researcher to understand and explore respondents' opinions and experiences, and such detailed information was gathered. Research interviews were guided by a research guide. The researcher directed the dialogue in to focus the conversation to the main themes of the study. This aided to keep the conversation remain focused on the main themes of the study.

Moreover, in gathering evidence on the field, participant observation was indispensable strategy, the researcher observed how the residents used various electric devices available, and the way they were utilized in various daily activities. This strategy helped the researcher to observe how local residents utilized access to electricity in ways which enhanced social and economic changes in the area under study. Lastly, focus group discussions of between ten to fifteen people were used to collect information from women and rural traders. The ultimate objective of the discussion was to highlight the experiences of

rural women and entrepreneurs with increased access to electricity in the area. Focus group discussions lasted between one to two hours.

The key informants of the study who included district education officers, medical officers and school heads were purposively sampled. These respondents were the custodians of important data on electricity connectivity in different public institutions in the area. On the other hand, electricity beneficiaries were randomly sampled, because they had much experience on how electricity access or lack of it affected their daily lives. During data collection, field notes were taken to help achieve consistency in the discussion. Moreover, audio and video recording and taking photographs was invaluable in gathering data in the field. After collecting substantial information from the field, reduction of the data followed through the art of abridgement.

The data collected was thematically analyzed. This involved analyzing repeating concepts in the data collected. The process of data analysis was driven by the research questions. Consequently, the data selected focused on key aspects that related to the research questions. Thematic analysis enabled the researcher to establish the parameters of social change which were attributable to appropriation of electricity by the rural population in Masinga Sub-county. Moreover, this approach was particularly useful in providing a complex data description of how people experienced rural electrification. This strategy elicited information about the human side of the research problem; highlighted biases, contradictory opinions, and relationships of individuals, among other issues.

CHAPTER TWO

LIGHTING UP KENYA'S COUNTRYSIDE: DEVELOPMENT OF RURAL ELECTRIFICATION, 1905- 1973

2.1 Introduction

The objective of this chapter is to examine the process of rural electrification in Kenya from the beginning of the Twentieth Century up to 1973. The discussion takes cognizance of this period because in the last decade of the nineteenth century the colonial state existed primarily as the engine of conquest in the protectorate.⁵¹ However, in the beginning of the Twentieth Century, the colonial state began unprecedented efforts to lay modern infrastructure in the colony, in its pursuit of colonial social, economic and political goals.⁵² It was in this context that colonial electricity grids acquired a significant momentum in the protectorate from 1905 going forward. The chapter argues that origins and development of electrification process in the colonial era was driven by the imperial policy of self-sufficiency and colonial economic goals of cost- minimization. Consequently, electrification pattern in the colonial epoch was an uneven process, which excluded vast rural areas in the colonial Kenya. The second part of this chapter argues that the first decade of Kenya's independence was a moment of hope in the rural electrification process. It was a period of renewed optimism, radicalization and ambitious state expansion of electricity access for the rural residents in Kenya. This was embodied by populist policies in electricity supply by the modernist state. Arguably, this marked radical discontinuity from the colonial power policies, as nationalist leaders attempted to transform Kenya, into an independent nation state, which was marked by delivery of social and economic services to the masses, which were deprived under the colonial regime.⁵³

2.2 Enclave Electrification, 1905- 1963

The infrastructural legacy in colonial Kenya was an uneven affair. While the introduction of social and economic infrastructure such as hygiene, water supply, education, and health care among others improved the standards of living among the Europeans in the colony, most

⁵¹Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, Nairobi, 1992, Pg. 52

⁵²Ute Hasenohrl, Rural Electrification in the British Empire, *History of Retailing and Consumption*, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960, pg. 1

⁵³Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118.

of these services did not reach African communities.⁵⁴ The beginning of the Twentieth Century marked the genesis of 'high modernism' in the colonial development policies. This was the time when the colonial state began to lay modern infrastructure in the colony, as the colonial state made efforts to achieve the imperial social and economic goals.⁵⁵

The Electrification process in Kenya traces its origins to the early years of the Twentieth Century. In the period between 1890 and 1905, the colonial state existed primarily as the engine of conquest over the African communities through a blend of force and diplomacy. As a result, a third of the protectorate budget went to military expenditure.⁵⁶ Nevertheless, after the pacification of African communities, the colonial state achieved effective control of the territory and moved fast to work towards achieving self-sufficiency, in line with the British imperial policy.⁵⁷

The rural electrification process in the colonial era was driven by the colonial economic needs for self-sufficiency. The colonial grid acquired significant impetus influencing choices on who was to benefit and who were to be exempted. The colonial state adopted uneven development policies, and electrification pattern that excluded many rural areas in the colony.⁵⁸ As a result, looking at colonial Kenya at night, some parts of urban areas were highlighted in sparkling nets of light, while the majority of rural areas were shrouded in darkness.

In 1905, Clement who was a Nairobi based merchant obtained a franchise from Governor Sir Charles Eliot to supply Nairobi with electricity under the Nairobi Power and Lighting Syndicate. The following year, the company settled on Ruiru Falls as the first source of the Hydro-Electric Power.⁵⁹ Within a period of two years, the power station started to supply electricity first to the commercial areas, and later to residential and other areas in the city. However, the electricity supply was unstable in the pioneering years, forcing residents to use paraffin lamps and candles as alternative sources of light.

⁵⁴Ute Hasenohrl, Rural Electrification in the British Empire, History of Retailing and Consumption, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960, pg. 1

⁵⁵Norman Miller, *Kenya: Quest for Prosperity*, Westview Press, London, 1984

⁵⁶Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, Nairobi, 1992, Pg. 52

⁵⁷Douglas Kiereini, The Origin of the Kenya Power and Lighting Company Monopoly, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

⁵⁸Colony and Protectorate of Kenya: *Report of the Development Committee*, Vol. 1, 1946, pg. 74, pg. 76.

⁵⁹Douglas Kiereini, *The Origin of the Kenya Power and Lighting Company Monopoly*, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

Electricity demand continued to grow in the protectorate in the second decade of the Twentieth Century. Consequently, East Africa Power and Lighting Company (EAP& L) was formed. It was a merger between the two power companies in the colony, the Nairobi Power and Lighting Syndicate and Mombasa Electricity and Lighting Company, an enterprise owned by Haralli Jevanjee who was based in Mombasa. Upon its inception, the EAP&L company undertook to entrench power generation to meet the burgeoning demand. In 1924, the company commissioned the Ndula Power Station, while the Mesco Power Station was commissioned in 1930. Two years later, EAP&L extended its grip on Tanzania, after it attained a controlling share interest in the Tanganyika Electricity Supply Company (TANESCO). Later in 1936, the power company entrenched its activities in the East Africa once it obtained a generating and supply license in Uganda.⁶⁰ However, operations of EAP&L Company in Uganda lasted for twelve years. The company exited Uganda following the formation of The Uganda Electricity Board, after the construction of the breathtaking Owen Falls Dam in that country.

In 1954, the power sector established The Kenya Power Company, which was appointed to build the power line between Tororo and Nairobi. KPC was placed under the EAP&L. In 1955, Kenya's power sector commenced geothermal power exploration, albeit unsuccessful by 1959.⁶¹ The argument here is that the colonial state made enormous efforts in enhancing the development of power in the colony. In contrast to other social infrastructure, electricity was not viewed as a critical public work to be provided by the colonial authorities; rather it was considered a profit-driven industry. In this sense electricity was a luxurious commodity to be enjoyed by the European community. The British strategy of discouraging the expansion of industries in its colonies further entrenched electricity as a rare commodity. Electricity was almost non-existent except in few agricultural districts schemes in the rural areas. Throughout the colonial period in Kenya, the state did not give priority to rural electrification. The ultimate goal of power development at the time was to support sectors that entrenched the national income and hence stabilized the colony. Consequently, the colonial state impressed the EAP&L to extend power to areas of potential development.⁶² In this context of racial discrimination, the provision of electricity to rural communities in the colonial official mind was untenable. The conviction was that the massive connection of rural

⁶⁰ Charles Hornsby, *Kenya: A History since Independence*, I.B Tauris, London 2012, pg. 188.

⁶¹ Douglas Kiereini, *The Origin of the Kenya Power and Lighting Company Monopoly*, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

⁶² Colony and Protectorate of Kenya: *Report of the Development Committee*, Vol. 1, 1946, pg. 74, pg. 76.

areas to the grid could diminish the national income, instead of contributing to the economic growth. With such a verdict, rural electrification was exclusively earmarked for the various colonial administrative centres, which were established in various districts in the colony after the pacification of the African communities.

The colonial administrative centres formed foundation of early urbanization in colonial Kenya. The newly emerging towns housed the government buildings, and Indian Bazaars, which made them important commercial centres, which acted as outlets of the local produce from the African peasants, and also as in lets of imported goods to African villages. In 1950s, the government initiated a scheme for electrification of Machakos Township: The electrification relied on bulk supply of power from EAP&Lco. at Athi River, which was the transmitted to Machakos. The targeted premises for power connectivity were the government buildings, and the Asian owned saw mills, posho mills and sisal factories in the area.⁶³ Similarly during this period, EAP&Lco undertook to connect Meru: just like in Machakos, the electricity company connected government houses and other factories that were located in Meru Township.⁶⁴ In the European-centered electrification process, Gatundu and Githunguri locations were connected to electricity in 1950s. Gatundu was a very compact little boma, which comprised six European houses, three government African houses, a small health centre, and a maternity ward. In addition, there was a police station, government offices and a small trading centre. On the other hand, Githunguri was far more scattered, but appeared to be more prosperous. There was a very large trading centre comprising some 70 market plots including a bank. In addition, there were six European quarters, some nine government African quarters and a health centre, a police station and a projected high school. At this time, there were 382 plots allocated for housing and building had already started in the area at this time.⁶⁵

Explanations for the neglect of mass rural electrification in the colonial era are twofold. First, it was a part of colonial state's quest to make profits, away from the imperial jingoism. The policy of colonial self-sufficiency required the colonial state to be able to finance its recurrent expenditure from local produce without depending on the British exchequer. In this context, the colonial state retained much of the revenue from local produce rather than

⁶³KNA 5/5439- Machakos Electricity Supply Report, 1956

⁶⁴KNA EP/15/2/VOL. 1- Meru Electricity Supply, 1948

⁶⁵KNA EP.15/25- Ministry of Works, 3rd June, 1959.

transferring it to the metropole.⁶⁶ For its own survival the state forged policies that were pro-settlers, and detrimental to the rural peasants in Kenya.⁶⁷ Under this context, connecting rural areas to the grid, that could entrench rural economy and hence buttress peasant production, was in conflict with colonial state's policy to appease the European settlers. Secondly, colonial economic policies were based on policies of non-industrialization. Colonialism was prejudiced against establishment of entrepreneurial activities for Africans in rural areas and expansion of industries outside extractive production level.⁶⁸ Consequently, throughout the colonial era, state provision of electricity to rural masses was not a priority, and as a result rural communities wallowed in darkness during this period, as the colonial regime focused on the provision of basic infrastructure, and maintenance of law and order in the colony. For most Africans in rural areas, electricity remained an elusive commodity throughout the colonial era.

2.3 Discontinuities in Rural Electrification Process in Kenya, 1963- 1973.

At independence the Kenya African National Union (KANU) represented itself as a party of redistribution.⁶⁹ Its leaders aimed at capturing state power to bring unprecedented social and economic changes in the post-colonial society. The nationalists believed that colonialism had retarded the country's progress. These leaders drew their confidence from their previous astonishing success in the liberation struggle.⁷⁰ Consequently, the post-colonial state embarked on spirited efforts to develop rural areas through enormous expenditure on social and economic infrastructure. For instance, in the context of the nationalist euphoria of the 1960s the state embarked to expand and Africanize the health sector in the country. In the first decade, medical services absorbed significant national resources. The initial success in the health sector enabled the state to provide remedies for parts of enormous backlogs of untreated sickness in the country. Whereas the colonial government had introduced fees at medical facilities, Kenya National African Union made free basic treatment, a campaign

⁶⁶Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, 1992, Nairobi, pg. 79.

⁶⁷Norman Leys, *Kenya, Quest for Prosperity*, Westview Press, London, 1984, pg. 16.

⁶⁸Walter Rodney, *How Europe Underdeveloped Africa*, Tanzania Publishing House, 1972, pp. 162 – 222

⁶⁹Daniel Brunch, *Kenya: Between Hoped and Despair, 1963- 2011*, Yale University Press, New Haven & London, 2011.

⁷⁰John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, Cambridge, 2007, Pg. 251 – 273.

promise in 1963 elections. Consequently, KANU introduced free outpatient treatment for all and free in-patient treatment for children in July 1965.⁷¹

The nationalist euphoria at independence played out well too in the rural electrification process in Kenya. The post-colonial state initiated the first rural electrification program in 1973.⁷² It was a project that epitomized populist policies by the post-colonial modernist state. It was an attempt by the new leaders to expand the provision of electricity services to the rural communities, which hitherto had been sidelined by the colonial state in electricity consumption. Arguably, the initial electrification programme was driven by a patronizing visualization of hurried transformation and almost immediate success. Under this first rural electricity distribution initiative, a few rural headquarters were connected to the grid.⁷³

During this period, the government started the electrification scheme of Kitui rural areas. The EAP&Lco substantially mapped the routes or streets along which electricity supply lines were to be installed for purposes of electricity connections. The government prioritized electrical energy supply to domestic, business, agricultural and all other purposes of consumer within the area of supply.⁷⁴ Similarly, in 1970s the electrification scheme in Homa Bay district. The identified premises spread across the district included; the R.C Mission, New Farmers Training Centre, hospital of 200 beds, two petrol service stations, twenty-five new shops, vegetable oil factory, ginnery factory, sisal factory, ghee factory and garment factory.⁷⁵ During this time, the interior divisions of in Kakamega were also lit up. Facilities spread across various locations such as Isukha, Kisa, and Idakho location among others were electrified.⁷⁶ Arguably, this marked a significant departure from the colonial electrification policies that neglected Africans need for modern sources of power. Nevertheless, in the subsequent two decades, the electrification process in Kenya stagnated. This discussion is reserved for the next chapter.

Explanations of the post-colonial regime's enthusiasm in the provision of electricity to the rural communities at independence can be drawn from political and economic developments in Kenya in the post-war period. On the latter, the Post- World War II period

⁷¹John Illife, *East African Doctors, A History of Modern Profession*, Cambridge University Press, pp. 169 – 200.

⁷²Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering*, 2016.

⁷³Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering* , 2016.

⁷⁴KNA EP. 15/37- Kitui Boma Electricity Supply.

⁷⁵KNA EP.15/32- Homa Bay Electricity Supply.

⁷⁶ KNA DC/KMG2/20/9- Electricity Supply and General Correspondence, 1965.

marked a significant influx of the metropolitan capital in the colony. After the Second World War, there was a growing need to meet the British post-war commodity needs through increased exports in the colonies. Consequently, the British government set the Development and Reconstruction Authority (DARA) to handle and coordinate development in the colonies.⁷⁷ In this context, the Metropole government abandoned its earlier policy of colonial self-sufficiency. As a result, Kenya's product assumed direct and immediate importance for the Metropole. This was not so much initially for British consumption, but rather for the supply of allied forces in the Middle East and Indian Ocean Basin.⁷⁸ The ultimate objective was to encourage export commodities through incentives in form of bulk purchases and provision of loans and grants for the development of the colonies. The argument here is that the paradigm shift in the metropole's colonial policy in Africa laid the foundation for unprecedented economic growth, in the post-war period, which lasted until the first decade of Kenya's independence.

Added to economic reforms in the post-war period, the colonial state initiated political reforms that further contributed to later success in the first decade of Kenya's independence. The political reforms of the 1950s took the form of land reforms and agricultural development initiatives. The land reforms were integrated as an indispensable component of the Swynnerton Plan for the expansion of African agriculture embraced as the official government policy in 1954. Essentially this plan represented a shift from restricting the development of African farming of the most lucrative cash crops such as coffee, sisal, and pyrethrum.⁷⁹ Arguably, the Swynnerton Plan was a strategy in countering the Mau Mau insurrection. In this sense, the reforms aimed at regaining the loyalty of the peasantry and to reforge local collaborative linkages. Nonetheless, these reforms provided a strong foundation for high commodity prices in the post-war period that persisted until the late 1970s. For instance, the removal of the ban on African farming cash crops in 1951 led to an unprecedented growth, which expanded peasant output in Kenya.⁸⁰ The smallholders became the mainstay of the economy that was once controlled by the European settlers. Between 1954 and 1964 the economy proved dynamic: The per capita income rose by almost thirty percent in this decade. Kenya's situation was not unique. In Cote d'Ivoire, African farmers

⁷⁷Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, 1992, Nairobi, Pg. 256.

⁷⁸Norman Leys, *Kenya, Quest for Prosperity*, Westview Press, London, 1984.

⁷⁹ Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, 1992, Nairobi, Pg. 369.

⁸⁰Norman Miller, *Kenya: Quest for Prosperity*, Westview Press, London, 1984.

usurped European farmers in the coffee and cocoa production, making the country the economic star of French West Africa.⁸¹

According to John Iliffe, the initial success in the first decade of Kenya's independence was a result of the persistence of the post-war cash-crop successful. The small-scale production increased in Kenya. Between 1959 and 1980s the removal of imperial constraints empowered Africans to expand their planting from one thousand to fifty thousand hectares of the best tea in the world, with a parallel increase in coffee production.⁸² The bone of contention here is that the first decade of independence was a period of renewed optimism in the rural electrification process in Kenya which was enabled by the post-war cash crop boom and low public debts. Arguably, this was a radical discontinuity from colonial electrification policies that neglected rural access to electricity. This is because post-colonial state-recognized access to electricity as an important strategy, in the social and economic reorganization of rural areas in Kenya. It was an effort by nationalist leaders to transform Kenya into an independent nation-state that was characterized by the delivery of effective social and economic services to rural masses hitherto the deprived rural masses hitherto deprived under the colonial regime.

Nevertheless, the efforts in the provision of electricity to the rural communities in Kenya by the state in the immediate post-colonial period stalled in the 1980s, as the burden of rural electrification became apparent. The 1980s was a period of disappointment in most African countries, as the burden of populist development policies proved to be unsustainable. Consequently, an era that seemed to be a "golden age" in rural electrification process in Kenya transited in institutional degeneration that was earmarked by policy failures in Kenya's power sector.⁸³ The next chapter focuses on the rural electrification process in Kenya since 1973. The analysis delves into the contradictions in the Kenya energy sector in the 1980s, and the eventual penetration of electricity in Masinga Division in the last decade of the 20th Century.

2.4 Conclusion

The chapter presents a discussion the historical evolution electrification pattern in the country both the colonial and immediate post - colonial periods. The chapter argued that the

⁸¹John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, Cambridge, 2007, Pg. 251 – 273.

⁸² John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, Cambridge, 2007, Pg. 251 – 273.

⁸³Crawford Young, *The Post – Colonial State in Africa: Fifty Years Of Independence, 1960 – 2010*, University of Wisconsin Press, 2012, pp. 3 – 31.

colonial era was epitomized by enclave electrification: The colonial state adopted an urban - centered trajectory in electrification, where only European settlements and rural schemes, which the colonial state deemed important to the export - oriented economy were earmarked for electrification. In this context, the colonial state prioritized maintenance of law and order, and financed basic infrastructure, pushing rural electrification to periphery. Nevertheless, at independence, electrification process experienced temporary break from the colonial tendencies. This was a period marked by nationalist euphoria, in a quest to provide social services to masses, that the colonial regime had denied them for long. The post - colonial state initiated populist electrification projects immediately after independence, which marked a radical, break from colonial mentality on rural electrification process. The chapter argued that the initial success in rural electrification was enabled by high commodity prices in Kenya that provided sufficient resources to finance the populist energy infrastructure. The next chapter presents an analysis on rural electrification process in Kenya since 1973: when Kenya, just like many other African countries was hit by both local and global challenges, the most significant ones being an unprecedented demographic explosion and global increase in oil prices.⁸⁴

⁸⁴John Iliffe, *Africans: The History of a Continent*, Cambridge University Press, Cambridge, 2007, Pg. 251 – 273.

CHAPTER THREE

THE HISTORY OF THE ELECTRIFICATION IN MASINGA DIVISION, 1973- 2019

3.1 Introduction

This chapter is discusses the history of the electrification process in Masinga Division since 1973. The discourse presents the intrigues in the energy development in the 1980s, which arguably explains the circumstances behind the stagnation of rural electrification process during this period. The first section will provide an analysis of energy development trajectories in all its moments of failures in the last two decades of the Twentieth Century. The argument is that the 1980s was a period of disappointment in the rural electrification process in Kenya. During this period, colonial tendencies on power which regarded electricity to be an elusive commodity resurfaced. Consequently, the state prioritized urban- centered path in electrification pattern in the country. The post- colonial state seemed as indifferent, extractive and imposing, as it exploited energy resources in Masinga Division without benefitting the residents. The second part of the discussion provides a discourse on moments of hope in the rural electrification process in Masinga Division in the late 1990s and in the turn of the Twenty First Century. Specifically, the discussion will indulge on the intrigues behind the penetration of electricity in Masinga Division in the early 1990s.

3.2 Moments of Disappointment in the Rural Electrification Process in Kenya, 1980-1990

Despite the initial success in the rural electrification process in the previous decade, the nationalist euphoria in provision of electricity to the rural masses withered away in 1980s. The burden of rural electrification in Kenya proved unsustainable in the midst of unique global and domestic challenges. This was a period of great disappointment in Kenya's energy sector that lasted until the late 1990s. During this period, colonial tendencies on power which regarded electricity to be an elusive commodity to reach only few areas resurfaced. Consequently, the post- colonial state appeared as aloof, extractive and imposing. For instance, the hydro- electric power development projects that the state initiated contributed to

impoverishment of the rural communities where they were undertaken.⁸⁵ I shall revert to this discussion shortly.

Among a myriad of reasons for the stagnation of rural electrification process in Kenya in 1980s, some were beyond political control. For instance, like many countries in Africa, Kenya experienced an unprecedented demographic growth. Arguably, this was driven by medical progress in the independence era and increased fertility. The widespread use of synthetic drugs in Africa brought a spectacular success in the medical realm, against diseases such as tuberculosis, syphilis, pneumonia among others. Besides progress in medical care, cultural desire for large families survived in the independence epoch, with a disregard of family planning methods. Parents continued to perceive children as economic assets and as a source of support in the old age. These cultural beliefs coalesced with medical progress to produce the most sudden demographic explosion in Kenya.⁸⁶ On the basis of census statistics, Kenya's population increased from 5.4 million in 1948 to 16.1 million in 1979.⁸⁷ Consequently, the unprecedented population growth in the country halted state driven capital investment in the rural electrification process. The cost of recurrent expenditure in the provision for basic needs to the burgeoning young population usurped the capital expenditure on development projects. In this context, the national budget was redirected to finance basic social services, such as food, healthcare and primary education.⁸⁸

Arguably, the second impediment to rural electrification process in Kenya in 1980s was changes in the global economy at the time. The long post-war boom in Kenya's export of tea and coffee came to an end in 1970s, when oil producing countries began to increase hitherto very low prices.⁸⁹ Kenya's dependence on oil for transport and industrial production left her vulnerable. Oil crises left the country trapped in public debt that made circumstances more problematic. Kenya, like most post-colonial states in Africa attempted to cut outlays, while still maintaining the politically essential projects, of servicing the patron-client relationships, and financing productive investments in the country. This was untenable, and by the late 1980s Kenya faced enormous and escalating indebtedness to

⁸⁵Andreas Nandaenga, *Water Resource Conflict in Kenya: The Case of Turkwel Dam and Pokot – Turkana Relations*, 1984 – 2015, 2019, pp. 36 – 46.

⁸⁶John Illife, *Africans: The History of a Continent*, Cambridge University Press, 2007, pp. 260 – 267.

⁸⁷Government of Kenya, *Demographic and Health Survey*

⁸⁸Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91- 118

⁸⁹A. Bernard, Energy, and Africa: Some Pointers, *African Affairs*, Vol. 82, No. 328, 1983, pp.345 – 349.

foreign benefactors.⁹⁰ As a result, the government devoted an increasingly proportion of cash crop incomes to servicing foreign debt, leaving little for essential import, let alone development. Kenya's debt repayment went from sixteen percent of export revenues to thirty four percent. Between 1965 and 1980, Kenya's national income grew at three percent per annum, but during the 1980s recession the rate fell to 0.4 percent. Debt repayment enlarged to take away one - third of export revenues.⁹¹ Consequently, the 1980s crisis plunged the country in economic and political distress.

Equally, the colonial tendencies in Kenya's power sector resurfaced in 1980s in two dominant ways: First, there was a significant influx of foreign capital in country, as it was the case especially in the post - war period, when the British imperial policy initiated policies to entrench rural economies, through provision of loans and grants for development colonies. Secondly, the post - colonial state appeared predatory and insensitive to rural peasantry, a situation that rekindled memories of the colonial era. The post - colonial state continued to be essentially parasitic on the peasants in the country.⁹² Such inclinations played out well in Kenya's power development in the 1980s. On the former, the post-colonial state took over colonial project to build huge dams in the country in order to entrench supply of electricity, in a bid to transform Kenya's economy. It was an interface between foreign aid and development, similar to that of the post - war period: Foreign countries and financial institutions were the principal benefactors of the hydro - electric power development projects in Kenya in 1980s.⁹³ For instance, the French government financed the construction of Turkwel Dam, With FAO, and Norwegian Agency for International Development (NORAD).⁹⁴ At the same time, a large hydro - electric plant, funded by the World Bank was being constructed at Kiambere. Similarly, The United Kingdom and West Germany funded the Masinga Dam which was completed in 1982.⁹⁵

The government commissioned the Masinga Dam in 1982. Since then, the dam has played an important role in generation of electricity in the country. Masinga Dam was established on Tana River, which is the lifeline of the Kenya's Seven Fork System. This dam

⁹⁰Irungu Elizabeth, *Impact of Oil Price on Real Exchange Rate in Kenya*, A Research Paper Submitted to the School of Economics in Partial Fulfillment of the Requirement for the Award of Degree of Masters of Arts in Economics of the University of Nairobi, 2017, pp. 1 – 8.

⁹¹Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118

⁹²John Illife, *Africans: The History of a Continent*, Cambridge University Press, 2007, pp. 260 – 267.

⁹³Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118.

⁹⁴Andreas Nandaenga, *Water Resource Conflict in Kenya: The Case of Turkwel Dam and Pokot – Turkana Relations*, 1984 – 2015, 2019, pp. 36 – 46.

⁹⁵Charles Hornsby, *Kenya: A History since Independence*, I.B Tauris, London 2012, pg. 188.

is the largest reservoir of the Seven Fork HEP project in the Tana River with an installed capacity of 40 MW of power.⁹⁶ The power generated in Masinga Dam was transmitted to the Kamburu power station for transmission to Nairobi. In the power generation system, the Masinga Dam was a vital reservoir whose main purpose was to store water and regulate the flowing during the dry season. In the hydro-electric power generation, water was cascaded from one station to the next, and as such the dam was essential in controlling the downstream flooding of the Tana River System.⁹⁷ The other reservoirs had other inflows apart from the Masinga discharge. However, during the dry season river inflows to these reservoirs were insufficient to supply water for the optimal operation of the power plants. In such times, the Masinga Dam reservoir discharge was amplified to sustain the downstream plant generation requirements.⁹⁸

Nevertheless, the energy infrastructure that was designed to entrench electricity generation in the country emerged as a source of anguish to the local communities. The Kenya power channeled electricity produced in Masinga Dam to the national grid system, to power industries and residential areas in urban centres, while the local residents continued to live without electricity connectivity. Moreover, the energy infrastructure that was designed to entrench electricity generation in the country emerged as a source of anguish to the local communities. The neighbouring communities lamented about rampant attack by crocodiles and hippopotamus. In several occasions some residents were injured by hippopotamus and crocodiles as they drew water on the shores of the Masinga Dam. Besides the animal attacks, the farmers in the neighborhood incurred losses as the aquatic animal feasted on their crops at night. As a result, there has been a protracted conflict between the neighbouring communities and the Tana & Athi River Development Authority (TARDA) from the early years of the establishment of the dam until today. For instance, the local residents vehemently resisted the plans by the TARDA management to upgrade the Masinga Dam reservoir since 1990s. According to the authority, the upgrade aimed to increase the capacity of the dam to ensure steady output of electricity during the dry spell. However, the local communities unrelentingly resisted such plans fearing that trapping more water would cause upstream

⁹⁶Bobotti, O.K, Masinga Reservoir Capacity and Sedimentation, Kenya. A World Bank Project: *Tana and Athi River Development Authority, TARDA Report*, Vol. 2, 1998.

⁹⁷ M. Martin, Vulnerability of Hydro-Electric Energy Resources in Kenya Due to Climate Change Effects: The Case of the Seven Forks Project, *Journal of Agriculture and Environmental Sciences*, Vol. 1, No. 1, 2012, pp.36 – 39.

flow, bringing crocodiles and hippopotamus closer to the homesteads. Arguably, the cost of construction of the Masinga Dam to the local residents usurped the perceived benefits such as prospects of irrigation and catching more fish when volume of water increased. Moreover, the residents of Masinga area continued to lament about underdeveloped in the area, specifically because of lack of clean water and electricity, despite their proximity to the Masinga Dam. Majority of residents did not access to electricity until late 1990s. For a decade, the Kenya Power continued to exploit the power resource in the area, without benefiting the residents.⁹⁹

Similarly, the Turkwel dam which was constructed in 1984 produced 106KW. The dam affected the Pokot and Turkana communities in two ways. Firstly it upset the water balance, as downstream dried up. This contributed to food insecurity as fertile silt which the continued flow of river Turkwel supported during drier season was swept away. Consequently, homes and livelihoods of these communities who relied also on agriculture were affected. Equally, the construction of the dam induced displacement of approximately eight hundred Pokot and Turkana families, with no clear resettlement plans for the affected families.¹⁰⁰ In this regard, The Pokot and Turkana people were affected both physically and psychologically, by the construction of the Turkwel dam. Arguably, feeling of marginalization among these communities heightened, because of inability to provide basic needs like food and water for their families, due to changes in floods pattern, which made life quite precarious. Moreover, Kenya Power channeled electricity produced by the Turwell to the national grid through a 220 KV transmission line, over a distance of 230 kilometers, benefitting only two percent of Turkana and three percent of West Pokot residents with electricity connectivity. Transmission lines went over the heads of rural residents, without accruing benefits of electricity access.¹⁰¹ As a result, majority of rural residents continued to rely on ineffective sources of fuel such as wood, charcoal and kerosene for cooking and lighting. It can be argued therefore that, the post - colonial state perpetuated colonial trends of urban - centered trajectory in distribution of electricity.

Nevertheless, the late 1990s was a period of renewed optimism in Kenya Power sector. It was a period that was epitomized by continental wave of democratization beginning in early

⁹⁹The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

¹⁰⁰Andreas Nandaenga, *Water Resource Conflict in Kenya: The Case of Turkwel Dam and Pokot – Turkana Relations*, 1984 – 2015, 2019, pp. 36 – 46.

¹⁰¹Andreas Nandaenga, *Water Resource Conflict in Kenya: The Case of Turkwel Dam and Pokot – Turkana Relations*, 1984 – 2015, 2019, pp. 36 – 46.

1990s.¹⁰² The progressive weakening of the post- colonial state in 1980s resulted in a confluence of non - state and international actors who continued to play critical role in Kenya's power development. This convergence produced much more complex trajectories in electricity distribution in the country, than those witnessed during colonial and immediate post - colonial era. The diminishing role of the state in energy development in 1980s influenced restructuring of the power sector, and brought to an end an interesting historical interface between the state, and electricity generation and supply in Kenya.

3.3 The Penetration of the Electricity in Masinga Division, 1990- 2019

In the late 1990s, the Kenya Energy Sector experienced significant diversification in its structure. The energy sector initiated major reforms that aimed to improve the provision of electricity in the country. Historically, KPLC monopolized the Kenya Power Sector, in the generation, transmission, and distribution of electricity in the country.¹⁰³ Consequently, the Kenya power sector performed dismally, a situation that necessitated reorganizations in the power sector in the last years of the 1990s. In 1997 KPC demerged from KPLC and was renamed Kenya Electricity Generation Company (KenGen). Under The Energy Act of 1997, KenGen was in charge of all public power generation plants.¹⁰⁴ On the other hand, KPLC became in charge for only transmission and supply of electricity in Kenya. Significantly, the energy reform facilitated the participation of private investors in power production. The ultimate goal was to attract the private sector to improve the competitiveness and efficiency of the overall energy infrastructure in the country. The Kenya power sector saw re-privatization of power utilities as the most effective panacea to the problems that faced the sector: the commodification of previous public services, earmarked by nepotistic connections, and huge liabilities. The conviction was that private investors were bound to bring in the desperately needed financial resources, and break the patron-client relations, in an attempt to make the sector to be able to provide better services.¹⁰⁵

¹⁰²Crawford Young, *The Post – Colonial State in Africa: Fifty Years Of Independence, 1960 – 2010*, University of Wisconsin Press, 2012, pp. 3 – 31.

¹⁰³ Tom & Morton, The Impact of Energy Sector Reforms on Clean Development Mechanism Renewable Energy Projects in Kenya, *Carbon, and Climate Law Review*, Vol. 4, No. 4, 2010, pg. 3, <https://www.jstor.org/stable/24324251>, Accessed: 29-08-2018

¹⁰⁴ Douglas Kiereini, *The Origin of the Kenya Power and Lighting Company Monopoly*, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

¹⁰⁵ Ute Hasenohrl, *Rural Electrification in the British Empire, History of Retailing and Consumption*, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960.

Arguably, the late 1990s reforms enhanced the power production capacity and led to increased exploration of diversified sources of renewable energy in Kenya. Consequently, rural electrification process in Masinga Division gathered pace albeit slowly.

In the early 1990s, the incumbent legislator of the area engaged the government through the ministry of energy, to put in place measures that would ensure the area is connected to the national grid, owing to the fact that the area housed the Masinga Dam energy infrastructure. Rtd. Col Kiluta asked the Assistant Minister for Energy why the Kenya Power by passed centres such as Kaewa, Kikumini and Ekalakala, without due provision for supplying power to the residents and: when ministry intended to supply electricity to the areas which were by - passed.¹⁰⁶ Consequently the government adopted an electrification pattern in the area that started by connecting the major trading centres in the sub - county to the national grid. Masinga Township, the headquarters of the divisional offices and Kivaa, a township adjacent to the Masinga Dam were the first to be connected to the grid. Other townships in the neighbouring divisions like Matuu and Sofia among others were also connected at the same time. By the year 2000, major trading centres in the division had been electrified.¹⁰⁷ This was a significant step as public institutions as well as household got access to the much desired facility. However, the villages in the interior remained unconnected to electricity. The residents from the remote villages continued to walk for long distance to access electricity services in the aforementioned townships.

Nevertheless, the situation changed in the first two decades of the Twenty First Century. Since 2000, KenGen embarked on the expansion of the production of renewable energy in Kenya. Geothermal power, solar energy, and wind power proved to be formidable sources of clean and renewable sources of power in Kenya.¹⁰⁸ The development of these reliable sources of power was an important milestone for the energy generation sector in the independent era because the renewable sources helped the nation to circumvent the obstacles that arose from the perpetual over-reliance of HEP in the country. Therefore, the beginning of the 21st Century was a watershed period for the Kenya Power sector. It was the genesis of intensified attempts by the state to increase access to electricity to the rural communities,

¹⁰⁶The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

¹⁰⁷The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: [books.google.co.ke>books](https://books.google.co.ke/books)

¹⁰⁸ Tom & Morton, The Impact of Energy Sector Reforms on Clean Development Mechanism Renewable Energy Projects in Kenya, Carbon, and Climate Law Review, Vol. 4, No. 4, 2010, pg. 3, <https://www.jstor.org/stable/24324251>, Accessed: 29-08-2018

through increased public and private cooperation in the exploration of geothermal, solar, and wind energy.

It was in this context that the National Rainbow Coalition (NARC) government ascended to power and initiated unprecedented modernist policies in a bid to reverse many years of social and economic decadence. The Economic Recovery Action Plan was the blue print that guided the state's efforts to achieve social and economic development over the next five years. Essentially, Economic Strategy Plan was a guide towards a stable economic growth that would engender significant social and economic changes for the majority of the poor people. In the quest for improved standards of living for the government concentrated on primary education, enhanced access to basic medical care, expanded agricultural production, and improving living conditions for rural population that experienced low infrastructural development.¹⁰⁹

The NARC government perceived increased provision of electricity to the rural communities as integral towards a persistent economic growth, through increased production of goods and services, and a comprehensive upgrading in well-being of majority rural citizens.¹¹⁰ The state initially connected major trading centres in Masinga Division, which acted as community connections points. This trend was then replicated in other rural areas in Kenya as the NARC regime put enormous efforts to enhance access to electricity among rural communities in the country. For instance, in the fiscal year 2006/2007 KPLC connected a record of 122,080 new customers across the countryside. This was in contrast to the period between 1993 and 2003 in which the K.A.N.U Government disbursed a total of Ksh.6.1 billion on provision of electricity to rural areas. Within four financial years, from 2003, the state sponsored rural electrification programme worth Ksh.9.93 billion.¹¹¹ Arguably, this was a pointer to the regime's efforts to increase electricity connectivity in rural areas of Kenya. It is also a pointer to how weak post-colonial state institutions in Kenya inhibited access to electricity in rural areas in Kenya. Chapter two argued that the widespread leakages in the Kenya power sector in the 20th Century contributed to energy poverty in rural areas, which further trapped rural population in low standards of living.

¹⁰⁹Government of Kenya, Kenya: Economic Recovery Strategy for Wealth and Employment Creation, 2003-2007, *Ministry of Planning and Development*, June 2003.

¹¹⁰Government of Kenya, Sessional Paper No. 4 on Energy, *Ministry of Energy*, May 2004.

¹¹¹The National Assembly Official Record: *Parliamentary Debates*, August 8, 2007, Accessed: books.google.co.ke/books

While efforts to connect public utilities were largely a success in the Masinga division, household connection to grid electricity remained limited, only reaching a few household. These were the households that were located within the six hundred metre radius away from the electricity transformer. The success in connecting public utilities in the areas was attributable to the ultimate objective of Rural Electrification Authority since its inception in 2006. The goal was to speed up the process of rural electrification in Kenya through connection of public utilities such as schools, health institutions and rural markets to both national grid and solar power systems to the Off- Grid areas.

As a result, from 2007 REA increasingly installed transformers in the village trading centres in the area. These transformers acted as connection points to other public utilities such as; primary and secondary schools, healthcare institutions, village boreholes, and administration offices among others.¹¹² In 2013, ninety percent of public schools in Masinga Sub-county were connected to electricity. As at 2019, all public primary schools on Masinga Sub-county were connected to electricity: one hundred and thirty seven primary schools had grid connections while seven primary schools in the Off- Grid areas were connected to solar power systems. This represented hundred percent connectivity rates, for both primary, and secondary schools in Masinga Sub-county as at 2019. For health institutions REA succeeded in connecting medical centres in the area to electricity. In the year 2005 only seven health centres were connected to electricity.¹¹³ However, they were distantly located in the seven locations of the division, which were connected to electricity in early 2000s. Nonetheless, from 2007, the number of health facilities in the area which were connected to electricity improved tremendously. In the year 2018, seventy eight percent of government-run clinics in the area were connected to electricity.¹¹⁴ However, despite the aforementioned success in the connections of public facilities to electricity in Masinga Sub-county, household grid connections remained very minimal, standing at 10.29% as at 2017.¹¹⁵ This was attributed to high connection cost for the majority of households.

¹¹²Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering*, 2016.

¹¹³Ministry of Health, *Masinga District*, 2007

¹¹⁴*Machakos County Strategic and Investment Plan 2020-2023*

¹¹⁵Source: KPLC access rate as at 2017

TABLE 1**KPLC ACCESS RATE IN MASINGA SUB-COUNTY AS AT 2017**

S/No.	LOCATION	NUMBER OF CUSTOMER METERS
1.	Ekalakala	802
2.	Ikaatini	103
3.	Ithanga	50
4.	Kangonde	382
5.	Kithyoko	456
6.	Kivaa	861
7.	Mananja	362
8.	Masinga	994
9.	Muthesya	204
10.	Ndithini	256
	TOTAL	4470

Source: KPLC access rate as at 2017.

TABLE 2

KPLC PROJECTED ACCESS RATE IN MASINGA SUB-COUNTY BY 2022

KPLC LTD PLC PROJECTED ACCESS RATE IN MASINGA SUB-COUNTY			
Sub-County	County	Access rate as at 2017	Projected access rate after implementation of the last mile project
Masinga	Machakos	10.29%	18.76%

Source: KPLC access rate as at 2017.

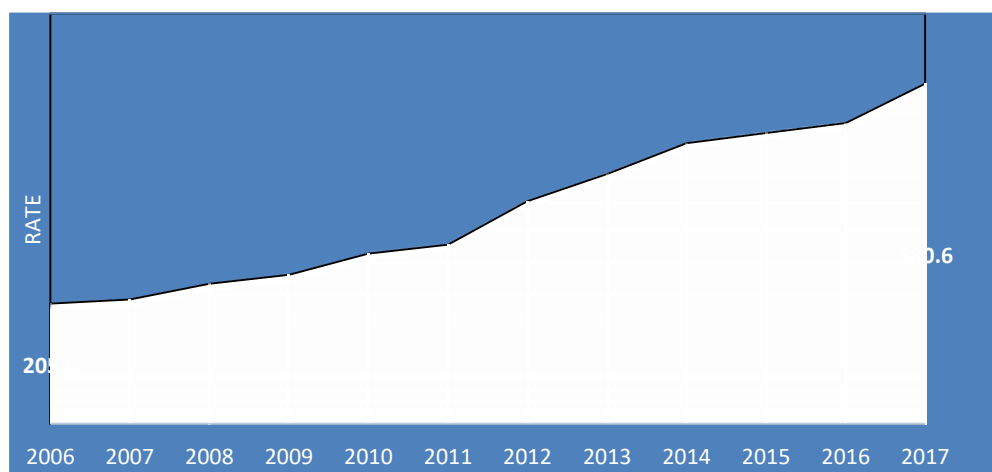


Figure 1: Electricity Consumption: Annual: Rural Electrification, 2005- 2017

Source: www.CEIDATA.COM /Kenya National Bureau of Statistics

In 2015, the Last-mile connectivity project aimed at addressing the challenge of low electricity consumption at the household level. Under this initiative, the government lowered the cost of household connection from Ksh.35, 000 to Ksh.15, 000. The primary goal was to reach out to the groups in the society that did not benefit from previous power development in Kenya. In 2018, three years after the rollout of the 'Last mile Connectivity' Project, seventy-three percent of the population had access to electricity.¹¹⁶ This was a remarkable improvement in the rural communities' access to electricity. The project aimed at reaching over seventy percent connectivity by 2017 and universal access by 2020. Under this

¹¹⁶ Kenya leads East Africa Peers in Access to Electricity; Kenya Power, 2018, May 8.

initiative, the homes within a 600-meter radius from the transformer were to be connected to electricity. The aim was to ensure affordable electricity to households in rural areas in Kenya.

In February 2016, Kenya's Cabinet Secretary for Energy, Charles Keter stunned residents of Poroko village with rather a bizarre gift. Henceforth, he declared that homes would be connected to electricity even without requesting it. Interestingly, that was at the height of the early campaigns in the run-up to the contested 2017 polls. 'Whether you live in mud or a wooden house, the state will supply you with electricity without the constraints of the application processes', became the campaign mantra for the jubilee administration throughout the electioneering period.¹¹⁷

Arguably, it was a case of patron - client relation in the post - independent political system in Kenya. The incumbent regime attempted to retain state power in the 2017 general elections, by providing visible electricity services to political constituencies, in a bid to win support from rural communities. It was a case of continuation of colonial tendencies, in which patron-client relations kept the colonial state running: White settlers in Kenya had enormous political influence and were pampered by the state. The owners of the large farms used the state power to bias the economy to their favour. The colonial state supported settler farmers by allocating cheap and favourable land to them, through labour laws, as well as protection from African competition in production of lucrative cash crops. Interestingly, in the post - war period African elites were drawn into the colonial patron - client relations. Economic legislations that barred Africans' participation in lucrative business opportunities, like cultivation of profitable cash crops were relaxed, as independence approached.¹¹⁸ Arguably, the decision to incorporate "progressive" African farmer into cash economy marked the genesis of client - patron relations, in the independence period that followed. Consequently, patron-client relations in provision of public services inhibited attempts by the state to initiate development projects that would engender a meaningful transformation of lives of the citizens.¹¹⁹ State institutions became the main conduit of power and wealth in the independent era. In effect, institutions were erected to oil patronage networks rather than to provide social services effectively. As a result, social and economic development was being

¹¹⁷Moses Michira, *Last Mile: Costly Project that Ruined Kenya Power*, The Standard, November 26th, 2019, www.standardmedia.co.ke

¹¹⁸Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, 1992, Nairobi, pg. 79.

¹¹⁹Norman Leys, *Kenya, Quest for Prosperity*, Westview Press, London, 1984, pg. 34.

forgone for short term political benefits. Such inclinations were apparent in the Lastmile Connectivity Project in Kenya.

The populist energy project marked a period where public coffers were looted by the administrators and the contractors of the project alike. Consequently, at the dawn of what was to be the beginning of a bright nation, a blanket of darkness threatened to swallow the light. Following an internal audit ordered by the energy cabinet Secretary, REA found out at least 1,500 transformers were either fake or substandard. With the average cost said to be ksh.300,000, it meant that ksh.450 million had gone down the drain. Additionally, while the managers claimed that they had connected all public primary schools, the ministry of education figures showed that more than 600 schools had not yet been connected to electricity. Initial investigation into the scandal suggested that the HR department had exaggerated the number of short term employees it engaged.¹²⁰ Further details alluded that REA tenders were won by those closely related to the senior managers. Subsequently, the board members were forced to step aside to allow room for the investigation to be carried out. Fraudulent deals were exposed to the public, informing the decision to cancel tenders and vet others.

3.4 Conclusion

The chapter discussed the circumstances under which the rural electrification process was implemented in Masinga Sub- County since 1973. The discourse noted that both local and global challenges coalesced to make 1980s to be a period of great disappointment in the rural electrification process in Kenya. During this period the state exploited energy resources in Masinga Division without benefitting the local communities. Consequently in the midst of new global and local crisis, predatory tendencies re-emerged in 1980s. However, the chapter argued that from the late 1990s, and in turn of the twenty first Century, there was a renewed optimism in the Kenya power sector. Failures of 1980s provided an interlude of changing role of the state in power generation and distribution in the country. The restructuring of the Kenya power sector in the late 1990s contributed to amplified provision of electricity to the majority of the population in Masinga Division, in the first two decades of the twenty first Century, albeit intractable constraints. It is therefore interesting to look at the ways that local communities appropriated access to electricity in ways that bespeak of ingenuity and some

¹²⁰Moses Michira, *Last Mile: Costly Project that Ruined Kenya Power*, The Standard, November 26th, 2019, www.standardmedia.co.ke

localized level of opportunism, despite of the aforementioned challenges in the electrification process, in the next chapter.

CHAPTER FOUR

ELECTRICITY AND SOCIAL CHANGE IN MASINGA SUB-COUNTY, 1990-2019

4.1 Introduction

Masinga is the largest sub - county in Machakos county, with a total population of 148,522 people and a land mass of 1,405.7 Km². The approximate population density of the area is 106km².¹²¹ Masinga Sub - County has unique physical and topographical features. Tana River is the only permanent river within the area. This river is an essential energy resource in the country. The seven fork dams, which are the major electricity generation stations in the country, are found along the Tana River.¹²² Masinga Dam, one of the seven forks is found in Masinga sub -county. The power generated in Masinga Dam is transmitted to the Kamburu power station for transmission to Nairobi.

The subsequent sections offer a detailed analysis of how the local population in Masinga Sub-County appropriated access to electricity in ways that led to social and economic reorganization in the area despite the aforementioned constraints in the rural electrification process in Kenya. The discussion will specifically delve on the central theme, on the social and economic impact of the rural electrification process in an African rural setting, in an attempt to illuminate important light on the ways through which local people seized access to electricity, despite the inadequacies, in ways that contributed to rural social and economic restructuring, more than how studies on under - development in the post-colonial Africa have appreciated. In this study I qualitatively examined the implications of the prevalent installation of transformers in Masinga Sub-County from 1990s up to the second decade of the Twenty First Century. The study unearthed the role of electricity access in social and economic reorganization, in an area whose largely residents lived in darkness in the Twentieth Century. The argument is that in order to understand the influence of improved sources of energy on a community, one needs a context where people have lived in energy poverty for long time. From there one is able to trace structural changes after the provision of the much desired power.

¹²¹KNBS, *2019 Kenya Population and Housing Census*, Vol. 1, November 2019, pg. 30

¹²²Machakos County Integrated Development Plan, 2015, www.machakosgovernment.com

4.2 Electricity and Social Change in Masinga Sub- County

With advent of modern forms of energy in Masinga Sub-county rural households increasingly turned to electricity consumption in diverse ways which had not been witnessed in the 20th century. In the context of energy poverty in the previous decades rural households were forced to perpetually rely on ineffective sources of fuel such as firewood, charcoal and kerosene for cooking and lighting.¹²³ Over dependence on these sources of fuel negatively affected the well-being of rural populations in myriad ways. For instance, the cost of kerosene, mostly used for lighting was overwhelming especially to the low income households. Rural households spent more than twenty percent of their income on Kerosene.¹²⁴ Consequently, the lack of modern forms of energy lowered the standards of living of the residents. Poor household's expenditure on fuel sometimes overtook other essential items like schooling and health costs, especially when local fuel prices rose. The argument is that expensive and unhealthy sources of fuel in rural areas negatively affected the well-being of residents in Masinga Sub- County.

Electricity access in Masinga area provided a cheaper alternative source of energy to the residents. Households were able to cut costs on expenditure of fuel such as kerosene, wood, candles and torch. The sampled households argued that they were able to reduce expenditure on household lighting. Respondents reported that electric lighting replaced traditional sources of lightning such as wood, kerosene, candles and torches that were common before electricity connectivity. With access to electric lighting, the sampled households attested that they were able to reduce expenditure on household lighting. In this sense, respondents considered electric lighting to be far cheaper than kerosene lamps. Use of improved sources of energy saved rural families on the cost incurred on lighting. On average, household in Masinga Sub-County spent Ksh. 175 per week on kerosene.¹²⁵ Consequently costly kerosene, forced majority of low income earners to stay in darkness at night when there was no money to purchase fuel. With adoption of solar and grid lighting, households went from buying eight litres a month to only one.¹²⁶ Moreover, kerosene and hurricane lamps were expensive to maintain since the glass often broke, and the hurricane lamps got rust forcing households to either repair or buy other lamps. A respondent recounted that the

¹²³Norman Miller, *Kenya: The Quest for Prosperity*, Westview Press, London, 1984, pp. 116 - 117

¹²⁴Oral Interview: in the absence of electricity, the household relied on firewood and Kerosine for lighting and cooking.

¹²⁵Oral Interview: electric bulbs enabled him to save on paraffin cost, since electricity lighting was cheaper.

¹²⁶On average, households spent Ksh.175 per week on kerosene for lighting purpose.

money saved on lighting was channeled to other arenas, such as paying school fees, and catering for other domestic obligations.¹²⁷ Besides this, electric bulbs were installed at various points of the homestead. Increased household illumination enhanced security of the compound at night. Improved lighting deterred predators from attacking domestic animals at night. Similarly, cases of theft of household property at night reduced with installation of security lights. It can be argued that access to electric lighting for rural households in Masinga was important in lessening the financial burden associated with perpetual consumption of unhealthy and costly sources of fuel.¹²⁸

Besides cutting on the expenditure on lighting for, school going children were the ultimate beneficiaries of the household electricity connectivity. Respondents reported that pupils and students had more time to study and complete assignments. Use of kerosene lanterns that contributed to indoor pollution in the households reduced significantly. It provided unfavorable learning environment for pupils besides the associated health risks for the whole family at large.¹²⁹ The World Health Organization guidelines on indoor air pollution discourage use of kerosene lighting and wood because of their associated respiratory ailments.¹³⁰ Ill health is one important factor that entrapped rural people in Kenya in perpetual poverty. Over the years, sickness reduced the earning capacity for the rural population. Ill health prohibited local people from participating in income generating activities, and sometimes significant cost for treatment are incurred by the rural families. All these factors coalesced together and drove most rural families to an unending indebtedness.¹³¹ In this context, improved household lighting enabled by use of electric lamps and solar lanterns improved the quality of air circulation in households in Masinga-Sub County. Consequently, pupils had more hours of study, as compared to the period prior the acquisition of solar lanterns or electric bulbs.

Putting on gender sensitive lens, access to electricity altered gender relations in rural families in Masinga area. In colonial and post- colonial periods, rural families in Kenya were dominated by patriarchal relations where the male enjoyed various privileges at the expense of women rights.¹³² Patriarchal domination of women in most societies in Africa was manifested in gendered division of labour and access to economic resources. Traditional role

¹²⁷ Oral Interview

¹²⁸ Oral Interview

¹²⁹ Oral Interview

¹³⁰ Mills E., *Health Impact of fuel – based Lighting*, University of California.

¹³¹ Robert Chamber, *Rural Development: Putting the Last First*, Prentice Publishers, London, 1983.

¹³² Betty Friedan, *The Feminine Mystique*, W.W. Norton & Company, New York, London, pp. 250 – 260.

on the female gender cast upon them drudgery: on chores such as cooking, fetching water, collecting firewood and childcare. In the patriarchal society, rural women tended to have less access, than men to productive resources. For instance, the patriarchal transfer of land in Kamba community is entrenched in the traditional ideas of gender roles in the household in the family. In this community, the belief is that women would be able to own land through their spouses.¹³³ Such cultural practices among rural communities in Kenya reinforced gender inequality. Consequently women discrimination in access to economic resources, despite explicit provision by the constitution on gender equality and women rights perpetuated gender based violence in rural areas in Kenya. The argument is that the deeply rooted gender discrimination contributed significantly to low productivity of women's economic enterprises, which in turn exacerbated poverty and ill - health of rural women in Kenya.

Nevertheless, access to electricity in the 21st century brought about sociological phenomena that altered patriarchal relations of males and females' differential access and control over resources, and the livelihoods underpinning men and women bargaining power. Increased access to electricity in Masinga entrenched gender mainstreaming in rural areas in two important ways: First, labour saving electric appliances freed rural women from the household drudgery, and as such were able to engage in diverse income generating activities. Secondly, increased access to electric gadgets promoted awareness of women rights among rural women.¹³⁴ I will revert to the former shortly. Increased access of electric gadgets such as radios and televisions in the villages linked rural women with the feminist movements that advocated for women rights. Feminist movements had gathered pace in 1980s, more so after the Beijing Women Conference. The ultimate objective of the women movement was to deconstruct patriarchy by revealing and critically analyzing its manifestations.¹³⁵ Essentially, feminist movement was a platform for plan of actions that revolved around empowerment of women. In this context, access to educative programmes in the media reached formerly isolated villages and raised the level of awareness for rural women in Kenya. In contrast to previous years, rural women received information on important issues like hygiene, childcare and women rights.

¹³³Forbes Munro, *Colonial Rule and the Kamba, Social Change in the Kenya Highlands, 1889 – 1939*, Clarendon Press, Oxford, 1975.

¹³³T. Goodale, & G. Godbey, *The Evolution of Leisure: Historical and Philosophical Perspectives*.

¹³⁴Oral Interview, Ruth Nzisa, Treasurer, Kavuta Traders Women Group: electricity access enabled shop electricity connectivity. Women opened several shops in the village market, such as salons, hotels and cyber. The shops run from 6:00 a.m to around 10:00 pm.

¹³⁵*Association for Women's Rights, and Development*, 2004, pg. 1.

Information on gender based violence and rape raised awareness of women and girls in the formerly isolated villages, access to electric gadgets linked women and girls in Masinga rural sub-county to the outside world. Access to educative programmes aired by local radio stations on women issues reached the formerly isolated village: Information on gender-based violence and rape raised awareness of women and girls in the village. For long time victims were desperate in patriarchal settings, in which perpetrators of rape and violence against women often went scot-free.¹³⁶ The point of contention here is that access to information in rural areas reduced impunity for gender crimes. Local media continue to sensitize members of rural communities on how to access justice in an attempt to bring to end violence against women. Undoubtedly, one of the ways of confronting violence against women is holding its culprits liable to the point of preventing them and other prospective offenders from committing the similar crimes. Gachihi and Misigo argue that easily reached justice plays an important role in bringing to an ending the impunity of violence against females in all contexts.¹³⁷ The authors emphasize that deterrent sentences enabled by free legal representation in courts are vital in mitigating violence against women. In this context, increased access to information through local radio stations emancipated women in Masinga Sub-County on ways of seeking justice whenever they were assaulted by abusive husbands.

Moreover, interviewees attested that local radio stations perpetually teach the entire community about sexual harassment and degradation of women. People are taught that behaviors such as catcalling, calling women derogatory names or commenting on their personal appearance are unacceptable and misogynistic.¹³⁸ Through radio programmes members of community are sensitized about consent and conflict resolution mechanisms in marital relationships. Undoubtedly, this is an important way of triggering a paradigm shift and changing the accepted culture of sexism and misogyny that perpetuates intimate partner violence in rural areas.

From economic perspective, the study indicates that rural women increasingly appropriated modern forms of energy in ways that embedded their economic power. Rural women in utilized modern lighting to engage in home based businesses, especially in cases where the village market was located far from the rural household. Such small scale

¹³⁶In-depth interview, Mukayauni Women Group

¹³⁷Gachihi, Misigo et al, 'Ending Impunity for Gender Crimes: Access to Justice for Violence against Women and its Contribution to Sustainable Peace Building in Rwanda', *Rwanda Journal of Social Sciences, Humanities and Business*: ISSN 2708-759X (Print); ISSN 2708-7603(online). DOI: <https://dx.doi.org/10.413/rjsshb.v2i2.4>

¹³⁸Musyi FM, Mbaitu FM, Athiani FM, and Syokimau FM are the leading local stations that air programmes aimed at enlightening rural women on their rights.

businesses included hair dressing, electric posho mills and general shops. Similarly, purchase of more quality lighting created more time for craft activities like weaving, which were important sources of income for rural women.¹³⁹ In this context, it can be argued that diversification of rural women's economic activities ushered in social changes in gendered division of labour in Masinga. The new opportunities advanced rural women economic power and reduced the old age men's monopoly as the sole financial providers. Arguably, access to electricity improved women's decision making power. This was a significant break from traditional division of labour, which gave women very little access to income augmenting resources, and contributed to inefficient allocation of resources that retarded development. Viewed from this perspective, provision of electricity in Masinga was an important component in gender mainstreaming in Kenya. The ultimate aim of gender mainstreaming is a society in which women and men enjoy same prospects, privileges and obligations in all domains of life.

Beyond gender relations, electricity changed the landscape of leisure and entertainment in Masinga Sub-county. Leisure and entertainment is one of the essential aspects of human welfare. In the pre-colonial era, it was common for African communities to carve out time for pleasure and entertainment. Archaeological evidence provides a nuance of leisure activities among the pre-colonial era East African communities. For instance, the paintings in Olduvai Gorge point to the fact that early pre-colonial Kenyan communities integrated jumping into their dances.¹⁴⁰

However, the British incursion altered the course of African entertainment and leisure. The colonial state associated the idea of African Leisure with idleness and irresponsibility.¹⁴¹ By 1907, African chiefs were empowered to implement the ban on drinking alcohol, and on ceremonies such as circumcision, during which heavy drinking occurred in most African communities. For instance, the government abolished use of beer for judicial hearings in Machakos in 1916.¹⁴² The colonial state saw a link between drunkenness and avoidance of wage - employment. However, the ban on alcohol aimed at entrenching African labour supply to the white managed economy. Viewed from this

¹³⁹Nzukini Women Group: Women-run shops are important sources of income for rural households. Incomes from the shops supplement husband earnings.

¹⁴⁰Emmanuel A. & C. Ambler, Leisure in African History, An Introduction, *Journal of African Historical Studies*, Volume 35, NO. 1, 2002, PP. 1- 16.

¹⁴¹C. Ambler, Drunks, Brewers and Chiefs: Alcohol Regulations in Colonial Kenya, 1900 – 1939, in *Drinking Behaviour in Modern History*, Oxford University Press, 1991, pp. 165 – 183.

¹⁴²Forbes Munro, *Colonial Rule and the Kamba, Social Change in the Kenya Highlands, 1889 – 1939*, Clarendon Press, Oxford, 1975.

perspective, colonial notions on African leisure are disputable. In fact, in pre - colonial African societies, traditional liquor was taken in moderation and leisure activities were carried out after the daily chores had been accomplished.

In the colonial era, all recreational facilities were a preserve of the white settlers. For instance, access to radio was restricted to Europeans up to 1950s.¹⁴³ The broadcasts targeted white settlers who received news from their home country and other parts of the world. European monopoly of communication was part of the colonial state's efforts to control information access to the colonized for political expediency. In 1953, the colonial state created the first broadcast service for Africans.¹⁴⁴ The broadcast carried programmes in Swahili and vernacular languages such as kikuyu, Luo and Kikamba, among other local languages. This was an important change in information and entertainment in rural areas, because radios increasingly found their way to rural areas, especially among the more affluent rural residents.

At independence, the post - colonial state continued to run broadcasting services directly, first as Voice of Kenya (VoK), and later as Kenya Broadcasting Corporation (KBC).¹⁴⁵ The colonial tendencies resurfaced at independence, as the post- colonial state attempted to perpetuate state's monopoly of information up to early 1990s. Consequently radio services remained limited in rural areas up to this period. However, in the early years of 1990s the state loosened its iron grip on the control of mass media in the country. This was a period that Kenya experienced a strong wave of continental democratization. The activist for democracy argued a case for free media, as an important principle of a democratic society. Consequently, private entities set up radio and television stations. As a result, at the turn of the Twenty First century, more radios and televisions found their way into rural areas in Kenya, as the private commercial broadcasts scrambled to fill the market niche in the communication sector. However, communication services in rural areas were inhibited by energy poverty in rural areas. For instance, radios mostly relied on dry cells which were unreliable and costly. Batteries were also ineffective in powering radio and televisions in context of lack of modern forms of energy.

¹⁴³T. Goodale, & G. Godbey, *The Evolution of Leisure: Historical and Philosophical Perspectives*.

¹⁴⁴Dan Vidija, *the Place of Community Radio in Rural Development in Kenya, Case Study of Sauti FM in Rarienda, Siaya County*, Masters Project, University of Nairobi, 2014, pp. 22 - 29

¹⁴⁵Communications Commission of Kenya. (2009). *The Kenya Information and Communications (Broadcasting) Regulations*, 2009)

Coincidentally, increased access to electricity in rural areas in the late 1990s circumvented challenges that rural communities encountered in powering radios and televisions. As a result, these gadgets became cheaper and common in rural areas with advent of electricity.¹⁴⁶ The argument is that, access to electricity embedded new forms of entertainment in Masinga that were previously perceived as urban leisure practices. For instance, increased access to radios and televisions in the area triggered an unprecedented passion for soccer. Hundreds of youth soccer fans poured into village markets especially on weekends to watch international soccer in crowded halls. On the market streets boys and young men engaged in seemingly endless debates on both local and international games, and followed with intense interest debates on fortunes of their favorite European sides, local clubs and their star players. For many young and old people in rural areas today, football represents passion and pleasure. In this context, access to electricity in rural areas enabled explosion of new forms of entertainment in the Twenty First century.¹⁴⁷ This analysis offers an opportunity to capture historical texture of leisure and entertainment among rural communities in Kenya. It is a showcase of the determination of rural communities in the Twenty First Century, like the pre- colonial African communities to engage in leisure and entertainment. It illustrates important shift in leisure behaviors of rural communities in Kenya: \from dance parties, to listening to radios, and from riddling sessions to face booking and sharing memes via WhatsApp, all enabled by increased grid connections and solar power systems in households in the Masinga. Moreover, educational programmes for farmers were of particular importance. Information on better farming practices entrenched local residents' knowledge on hybrid seeds, fertilizers and pesticides.¹⁴⁸ This knowledge contributed to increased adoption of modern farming practices for rural households, at times when government sponsored agricultural extension services have apparently withered away.¹⁴⁹

In the realm of health care, rural electrification in Masinga enabled health facilities to provide better medical services. Provision of efficient health care services is essential to social welfare of communities, yet Masinga residents faced variety of barriers in both colonial and post - colonial period. Barriers to medical care resulted into unmet medical

¹⁴⁶Shahidur R. & Douglas Barnes, Welfare Impact of Rural Electrification: Panel Data Analysis From Vietnam, *Economic Development and Cultural Change*, Volume 61, No. 3, 2013, pp. 659 – 692.

¹⁴⁷. Oral Interview: The most followed international football games were the English Premeir League and the UEFA Champions League in the area.

¹⁴⁸Oral Interview: from his agro-chemist shop at Ekalakala Market, customers purchased chemicals which were advertised by the local radio stations.

¹⁴⁹Oral Interview: watching television provided important sensitizations on safe health practices.

needs, such as lack of preventive drugs and screening services in the treatment of illnesses. During the colonial period, the medical department interested primarily in providing medical care to Africans living in few urbanized centres and did not give a priority into improving health conditions of the vast masses of rural population.¹⁵⁰ Medical provision in this context remained a piecemeal affair reaching only fraction of people segregated on racial lines. Arguably, the colonial health policies were less important in either controlling African population or treating diseases in rural areas. In absence of strong medical care for rural masses, the material factors that determined the rate of illness and mortality in the colonial Kenya, prior 1945, were not therapeutic intervention but major social, economic and ecological conditions in African rural settings.¹⁵¹

At independence health service provision experienced a change towards capitalism which was already under way in the post - war period.¹⁵² In the context of nationalist euphoria of 1960s, the state attempted to expand and Africanize the health sector in the country. In the first decade, medical services absorbed significant national resources. The initial prosperity enabled the state to provide remedies for part of their enormous backlog of untreated sickness. Whereas the late colonial government had introduced fees at medical facilities, Kenya National African Union (KANU) made free basic medical treatment a campaign at 1963 election. In alignment with its Manifesto, the state introduced free outpatient treatment for all and free in patient for children in July 1965.¹⁵³ However, populist policies in health sector at independence proved unsustainable. Doctors found themselves badly hampered by the poverty of the post - colonial state. Free medical care came without adequate preparation for medical workers. Mombasa outpatient attendance multiplied five times while many other rural districts in central province found themselves treating patients every two minutes.¹⁵⁴

Further pressure on the medical care came from the self - help movement which President Kenyatta especially encouraged. Many communities tried to secure local dispensaries or health centres by building rough structures and expecting their politicians to induce the ministry to supply staff. In retrospect, this upsurge of impoverished rural dispensaries came to be seen as a critical moment of deterioration health care in Kenya. Many

¹⁵⁰Miriam S, Primary Health Care Initiatives in Colonial Kenya, *World Development*, Volume 26, issue 9, 1998, pp. 1701 – 1717.

¹⁵¹Meghan Vaughan, *Curing their Illness, Colonial Power and African Illness*, Wiley, 2013.

¹⁵²John Illife, *East African Doctors, A History of Modern Profession*, Cambridge University Press, pp. 169 - 200

¹⁵³Charles Hornsby, *Kenya : A History Since Independence*, I.B Tauris, 2012, pg. 201.

¹⁵⁴John Illife, *East African Doctors, A History of Modern Profession*, Cambridge University Press, pp. 169 - 200

buildings stood empty or half - completed. In 1967, for example Kenya had 157 health centres in various stages of construction. Functioning health centres were so inundated with curative work that they neglected the preventive outreach work which was their distinctive function.¹⁵⁵

The subsequent progressive weakening of the state further undermined the hegemonic state provision of healthcare in 1980s and 1990s.¹⁵⁶ With the oil price crisis and international depression of the time, the government expenditure devoted to health fell from seven to five percent. The budgetary cuts meant that the state run medical facilities declined to an extent that the states run medical facilities declined to such a degree that dispensaries stopped to be a symbol of hopes of the communities.¹⁵⁷ In this context, access to modern health care in rural areas remained rare. The governments - run clinics remained understaffed and poorly supplied in 1990s. Overcrowding, deteriorating facilities, drugs shortage made medical officers reluctant to work in rural clinics.

Kenyan doctors responded by entering private practice, either in full time or more often, while retaining their government posts, and taking advantage of the Ndengwa report, which had encouraged civil servants to engage in private business. Arguably this was a threat to the health of the majority poor. Many part time private practioners employed a clinical assistant or other paramedic to run the clinics in their absence. Eager to fill the market niche in the medical services provision, entrepreneurs located clinics close to government medical institutions to attract patients seeking treatment but deterred by enormous queue. Private health sector was epitomized by provision of medical services by unqualified practioners. For instance, mid wives run maternity and nursing homes with an arrangement to call a doctor in case of emergency. Moreover, many former nurses and paramedics with less training operated small illegal clinics or simply dispensed drugs and injections from their homes. Unprofessionalism apparently aroused less alarm in Kenya's highly commercialized society.¹⁵⁸

Moreover, energy poverty in rural areas exacerbated the situation. Lack of modern forms of energy incapacitated both public and private clinics in rural areas. Consequently

¹⁵⁵Richard Wamai, *Healthcare Policy Administration and Reforms in Post – Colonial Kenya, and Challenge for the Future*

¹⁵⁶Kenneth Ombongi, 'The Historical Interface Between the State and Medical Services in Africa, Kenya's Case', *Evidence, Ethos and Experiment: The Anthropology of the Medical Research in Africa*, New york and Oxford, Bergham Books, pp. 352 – 372.

¹⁵⁷Frederick Cooper, *Africa Since 1940: The Past of Present*, Cambridge University Press, 2002, pp. 91 – 118

¹⁵⁸John Illife, *East African Doctors, A History of Modern Profession*, Cambridge University Press, pp. 169 - 200

medical facilities in the Masinga were unable to store vaccines or carryout lifesaving operations, because of untimely provision of medical services.¹⁵⁹ In this context, many people in the area continued to depend on herbal medicine.¹⁶⁰ Although handful politicians championed for indigenous treatment, more Kenyan leaders were openly hostile to herbal treatments, probably because of country's capitalist and modernizing ethos. Some district officers licensed herbalists, but generally the government did almost nothing to encourage them, choosing instead a silent dismissal of traditional medicine as useless.

The first decade of the 21st Century was a watershed period for rural health facilities in Masinga. Majority of health facilities in were connected to either grid system or to solar power system, for the medical centres that were situated in off - grid areas. Arguably, this changed the trajectory of the provision of medical services in the area. For instance, connection of rural health centres enabled retention of qualified medical officers, who were formerly reluctant to work in the countryside as the working environment drastically improved with access to modern forms of energy. With increased access to sophisticated medical equipment, effective maternal and newborn care services became more prevalent in the village health facilities. This was in contrast to previous dependence on village mid wives for maternal and delivery services for rural women.¹⁶¹ Medical officers in rural division attested that the working environment drastically improved with connection to electricity.¹⁶² For instance, medical equipment is better sterilized and hygienic standards are maintained more easily. Most important, diagnosis of patients is now done more effectively. Access to electricity facilitated laboratory work, and drugs and vaccines are now kept safely in the refrigerators. All these changes were not possible without the modern sources of power.¹⁶³

In Masinga Sub- County, health facilities have electricity requirements that differ according to the size of the health institution. Basic dispensaries have a low electricity demand as compared to larger clinics and hospitals. In most cases, local dispensaries require electricity for lighting, ICT administration, and information and health care services. Added to these, electricity is important for the laboratory equipment, and also for refrigerators used for storage of drugs and vaccines, blood and other medical supplies. In contrast, larger clinics

¹⁵⁹Kat Harrison, Andrew Scott et al, *Accelerating Access to Electricity in Africa with Off – Grid Solar: the Impact of Solar Household Solutions*, Report 2016.

¹⁶⁰Meghan Vaughan, *Curing their Illness, Colonial Power and African Illness*, Wiley, 2013.

¹⁶¹Oral Interview: Medical Officer, Ekalakala Dispensary, Masinga Division

¹⁶²Oral Interview: Medical Officer, Ekalakala Dispensary, Masinga Division

¹⁶³Kat Harrison, Andrew Scott et al, *Accelerating Access to Electricity in Africa with Off – Grid Solar: the Impact of Solar Household Solutions*, Report 2016.

in Masinga, while requiring electricity for all these purposes, need electricity for more energy demanding medical machines such as ultra sound and X - Ray equipment, for diagnosis of complex ailments such as internal injuries and HIV and AIDS among other array of medical complications. The contention is that with access to electricity in rural dispensaries and hospitals in Masinga, the delivery of health care services in the countryside improved significantly. Prior to rural electrification, vaccines deliveries in the dispensaries were going to waste, due to unreliable power from the installed generators. Abed Nzau, a district medical officer in Masinga Hospital Level Four, argued that prior to connection of electricity, treatment in the facility was hectic. According to Nzau, change came with electricity, since the operations in the hospital were made effective.¹⁶⁴

On education, access to electricity changed the trajectory of learning institutions in Masinga in the 21st century. After Kenya's independence in 1963, the first president of the Republic of Kenya identified ignorance as one of major problems that confronted the independent nation. The president emphasized the need to for a collective action by the citizen, in partnership with the government to disentangle the country from ignorance. In this context, Kenyans had an insatiable thirsty for education.¹⁶⁵ The colonial state had offered very limited education opportunities for Africans. At independence, majority of citizens perceived education as an important way of moving up the social ladder, and earn better incomes. Consequently, both the state and citizens channeled scarce resources toward promoting formal education in rural Kenya. The mushrooming of the community-sponsored schools epitomized the harambee philosophy in the independent era. Harambee schools were built by use of local resources. The rural communities were the initial benefactors of these schools. Religious groups too capitalized on the rural populations' dire need for education and sponsored harambee schools in Kenya. Similarly, the local politicians seeking political mileage contributed funds to harambee schools.¹⁶⁶

However, rural schools were incapacitated in provision of quality education for the learners in the countryside. In the context of economic crisis of 1970s and 1980s, the government was unable to fund harambee schools that had been bourgeoned all over the country. The paucity of funds led to insufficient supply of educational resources for the majority of rural

¹⁶⁴*Oral Interview*, Medical Officer in Masinga, Machakos County.

¹⁶⁵Charles Hornsby, *Kenya : A History Since Independence*, I.B Tauris, 2012, pp. 266 - 270.

¹⁶⁶Kilemi Mwiria, Kenya's Harambee Secondary School Movement: The Contradiction of Public Policy, *Comparative Education Review*, Volume 34, No. 3, 1990, pp. 350 – 368, Accessed: <https://www.jstor.org/stable/1187989>

residents.¹⁶⁷ Consequently, teaching and learning environment disadvantaged learners and teachers in the countryside. Energy poverty in the Nineteenth Century, further hindered provision of education services in rural areas in Kenya. In 2003 for instance, only 285 public secondary schools were connected to electricity.¹⁶⁸ In this context, provision of boarding facilities remained minimal in rural areas up to the first decade of the Twenty First Century. As a result, school going children travelled huge distances, often walking miles to school. This had certain disadvantage to pupils in rural areas: Young children were prone to being taken out of school to help at home. The young girls were especially vulnerable group, as they were likely to be taken out from school and forced into marriages. In Masinga Division, without access to electricity, schools were not able to provide boarding facilities until late 1990s, when electricity reached the area. In 2000 there were only two schools offering pure boarding facilities. These were the biggest schools in the area, located adjacent to Masinga Township.¹⁶⁹ Similarly, lack of electricity meant schools in this area were incapacitated in provision of computer literacy to learners. This was as spectacular disadvantage to rural learners, because they missed computer education in an increasingly digital era.

Nevertheless, rural electrification changed the trajectory of education in Masinga in myriad ways. In 2013, ninety percent of the public utilities were connected to electricity, suggesting that majority of rural schools had access to either electricity grid or solar power systems. The government paid special attention to providing electricity to rural public primary and secondary schools. The ultimate objective was to support the government's laptop project for the primary pupils. Consequently, increased access to electricity enhanced provision of better teaching and learning environment. Rural electrification in Masinga supported education delivery, through integration of modern technology in education process in rural areas.¹⁷⁰ With access to electricity young people in the villages were more empowered with information and technology. In this background, access to electricity in rural areas enhanced computer literacy in the area. Use of laptops, internet and music players facilitated higher quality education for school children by boosting their abstract reasoning.¹⁷¹

Indirectly, access to electricity helped retention of teachers in rural areas. Teachers were motivated to live and work in rural areas. With better and quality lighting, rural teachers

¹⁶⁷Charles Hornsby, *Kenya : A History Since Independence*, I.B Tauris, 2012, pp. 266 - 270.

¹⁶⁸Lee Kenneth, E. Brewer et al, "Electrification for " Under Grid" House Holds in Rural Kenya ", *Development Engineering* , 2016

¹⁶⁹Masinga Boys and Masinga Girls benefitted after connection of Masinga Township to the national grid

¹⁷⁰Oral Interview: teacher Kyeeteni Secondary, Masinga Sub-County.

¹⁷¹Oral Interview, Head Teacher, Mukayauni Primary School.

were able to prepare lessons and mark assignments in the evening.¹⁷² The school managers acknowledged that recruiting and retaining of teachers was a problem prior to electrification of the schools. The deputy principal of Kasuvilo secondary school argued that access to electricity came with significant changes for the school. According to Muia, electricity was of great assistance to the children as the use of computers among the students increased tremendously. Parents, students and teachers were no longer reluctant to be stakeholders of the institution, as it was the case prior to connection of the school to electricity.¹⁷³

Without electricity the rural schools were not a good place at night. Thieves and burglars came anytime. Consequently, the school lost properties like furniture and even cereals. With access to electricity, the compound became more secure at night. Most significant, after the electrification of the schools, most institutions changed from day school to a pure boarding schools or mixed day and boarding. This was achieved through construction of dormitories. In 2010 there were seven secondary schools that offered boarding facilities, out of twenty five secondary schools at the time.¹⁷⁴ However, the second decade of the century was a watershed period for education in Masinga Sub-County. This period was marked by unprecedented increase in public secondary schools in the region. In 2019, the number of schools that provided boarding facilities increased to twenty four, representing fifty five percent of secondary schools that offered pure boarding and mixed day and boarding facilities to learners. Increased boarding facilities meant that students had more quality lighting and more study hours in the evening. Consequently, small day and boarding schools were in a position to offer stiff competition to schools considered to be 'big' in the district, because of their infrastructural development, fees requirements and age.¹⁷⁵

The implication was that students had more quality lighting and more study hours in the evening. According to the principal of Nzukini Secondary School, benefits of electricity for the school are reflected in the gradual improvement in the performance of the school's mean grade. Besides this, the school adopted electric cooking, and that relieved the kitchen staff of the smoky heathens. Electric cooking saved on time and cost as few kitchen staff is required.¹⁷⁶ Generally, the principal had unreserved gratitude to REREC, for extending electricity to the institution. The assertion is that, just as it is the case for other many rural

¹⁷²Oral Interview: teacher Kakuku Secondary School, Masinga Sub-County.

¹⁷³Oral Interview: with the deputy principal, Kasuvilo Secondary School.

¹⁷⁴Ministry of Education, Masinga Sub-County, 2010.

¹⁷⁵The Best Secondary schools in Masinga Constituency 2010

¹⁷⁶Oral Interview: with the principal, Nzukini Secondary

schools in Kenya, rural electrification provided myriad opportunities in improving education in Nzukini Secondary School.

4.3 Economic Restructuring in Masinga Sub-County

Access to improved sources of energy transformed economic organization of residents in Masinga Sub-county. Availability of reliable heat and light forms of energy presented novel opportunities to rural areas, which they tapped in ingenious ways and consequently changed the economic trajectory of the area. Throughout the Twentieth Century, population in Masinga district relied on subsistence crop production and small scale livestock keeping. People in the area put land into different uses: arable land called *ng'undu* produced maize, beans and peas for household consumption. The grazing space referred to as *kisesi* offered pasture for herds of cattle, sheep and goats. Communal land which was known as *weu* was source of household items like firewood, and hunting and gathering which provided supplements to the diet. For exchange purposes, village dwellers met specific places which were referred to as *ing'ang'a*, for trading.¹⁷⁷ These places later emerged as busy village markets in the district, as I shall argue later in the subsequent discussion.

The subsistence crop production in the area relied on rainfall for crop production. Historically, the annual rainfall of the region is unevenly distributed and unreliable. The average rainfall is between 500mm and 1300mm. The long rains are usually experienced in March to May, while short rains are experienced from October to December. Unfavorable climatic conditions meant that insufficient rainfall often led to widespread drought in the area. Oral traditions point to numerous disastrous famines in the area in the 20th Century. For instance, in 1980, the famine dubbed 'staggering famine' because people walked in a staggering manner killed several people and animals. In 1990s there were other famines like the famine which was called *ngeetele*, because during this drought people tightened their belts on stomach to dull the hunger pains.¹⁷⁸ Arguably, absence of irrigation practices in the area threatened the existence of the community in the area.

Advent of electricity revolutionized farming activities for some part of residents in Masinga division. Between 2003 and 2008 the Government of Kenya in its ninth development plan had drilled bores in Machakos County, in an attempt to improve water

¹⁷⁷Forbes Munro, *Colonial Rule and the Kamba, Social Change in the Kenya Highlands, 1889 – 1939*, Clarendon Press, Oxford, 1975.

¹⁷⁸Oral Traditions, *Kyanganga sounds*

supply in the region. It was a grand project funded by the Government of Japan which aimed at development of water resources in the region in 2002. The project enhanced water supply through construction of boreholes, hence shortening the long access to water points. The project contributed to improvement of extremely poor water supply condition for population of sixty thousand.¹⁷⁹ However, in a context of energy poverty, water resources in the area relied on costly and ineffective fossil fuels in pumping water. Consequently, viable irrigation was not possible as the cost of production written off the benefits.

After the promulgation of the 2010 Constitution, the county government took over water resource management services. In the second decade of the twenty first century, the Machakos County Government continued with the remarkable initiative of drilling boreholes and constructing dams, in an attempt to alleviate water scarcity that contributed to food insecurity in the region.¹⁸⁰ Within six years, the county government constructed four hundred and ninety dams and 503 solar powered boreholes.¹⁸¹ After the inception of REA in 2006, the period which followed witnessed an unprecedented connection of boreholes to electricity in Masinga district. In its strategic plan, REA prioritized public utilities like health clinics, schools, village markets and community boreholes in electricity connections.¹⁸²

Electrification of community boreholes and increased use of solar powered generators freed a part of population in Masinga Sub-County from the old-age dependence upon nature. Irrigation practices enabled farmers to schedule crop production to fit the demand in the market. With entrenched water supply, farmers were able to produce crops like bananas and sugarcane. Such crops were uncommon in the area, and people only got the during the market days in the major market centres. Electric pumps lessened the need of many farm workers in agricultural production. In this context, the cost of agricultural production was reduced. From this study, farmers saved on expenses incurred when using costly diesel generators. Prior to access of effective sources of energy, it was expensive for the rural farmers in the area to hire a pump and buy fuel for irrigation every week.¹⁸³ Electric pumps entrenched

¹⁷⁹Republic of Kenya, Ministry of Water and Irrigation: the Implementation Review Study Report on the Project for Rural Water Supply, February 2011, *Japan International Cooperation Agency, 2011.*

¹⁸⁰Machakos County Integrated Plan-2015

¹⁸¹Rachael Kilonzo, 'Reprieve to Kivaa Residents as 150 Million Litres Dam Nears Completion,' *Kenya News Agency, Information for Development*, August 3, 2020.

¹⁸²Tom & Morton, The Impact of Energy Sector Reforms on Clean Development Mechanism Renewable Energy Projects in Kenya, *Carbon, and Climate Law Review*, Vol. 4, No. 4, 2010, pg. 3, <https://www.jstor.org/stable/24324251>, Accessed: 29-08-2018.

¹⁸³Oral interviews: On average farmers would spend ksh.1000 on fuel and hire the pump at ksh.500 per week to pump water for irrigation.

irrigation practices in the area and ensured success of mixed rotational farming. Arguably, electricity powered irrigation in Masinga Sub-County modernized agriculture and marked a significant shift from subsistence production to commercial production. It was an important mitigation opportunity to climatic changes that contributed to food insecurity in Masinga area.

Increased shift from subsistence agriculture to commercialized production as a result of increased irrigation practices enhanced enterprising culture in Masinga. Residents increasingly engaged in off - farm economic activities. This situation was further enhanced by connection of most of village markets in rural areas in Kenya, through the rural electrification programme by the state. The formerly sleepy village trading centres spread across the division awakened into action in the first two decades of the Twenty First Century. Businesses that most people in urban areas took for granted opened new opportunities for the local population, when electricity finally reached village markets in Masinga. Local people's ingenuity in appropriation of access to electricity was epitomized by emergence of the small micro enterprises.

Businesses which were enabled by access to quality and more reliable light and heat energy sprung up across the country. Prior to electrification of village trading centres, traders in the area relied on the ineffective and costly sources of power. These included kerosene, acid-batteries and diesel-run generators among others. As a result, operating cost often usurped the profits accrued from the business ventures.¹⁸⁴ Arguably, energy poverty hindered potential entrepreneurs in the area, further delaying economic transformation of the division. For instance, prior the advent of electricity in rural areas in Kenya, diesel - run flour mills was common in the village markets. After rural market electrification in Kenya, most of these mills were converted into electric operated mills. Electric mills are more efficient and profitable, because of reduced operation cost. Consequently, rural entrepreneurs were encouraged to open more mills to serve the burgeoning village markets.¹⁸⁵ Generally, electricity - run mills relatively worked to a large capacity, and effectively catered for the needs of the villagers in rural areas in Kenya. The introduction of more efficient flour mills in the village markets freed away many women from the tiresome and time consuming task of grinding grain at home. In this case, rural electrification in Kenya saved time and energy for

¹⁸⁴ Oral interviews with entrepreneurs in Masinga Township highlighted various challenges they experienced when using ineffective sources of power.

¹⁸⁵. All mills in Masinga Market are electric-operated: owners attested on cost-cutting effect of the electricity power.

the women in the countryside. Despite the size in terms of capital, small micro firms in Kenya increased employment levels, and enabled the previously unemployed people to participate in income oriented activities. Arguably, rural electrification acted as an important panacea for rural out - migration in Kenya.

The argument is that the cost of running firms in the interior villages decreased, with increased electrification of business units. Consequently entrepreneurs were encouraged to start various business activities which were not possible prior to electrification of the markets. In this context services which were scarcely accessed at electrified townships became a common place in the small village markets. For instance, rural entrepreneurs established petrol stations which were initially scarce, benefitting the burgeoning *Boda- Boda* sector in the area.¹⁸⁶ The availability of variety business relieved residents stress of walking for long distances to access services such as welding, hair-dressing and cyber services among others. With benefits of hindsight, electrification of village trading centres in Masinga Sub-County provided viable environment for business activities. Consequently this created myriad employment opportunities for the previously unemployed young people in the area. For instance, welding workshops, saloons and cyber cafes among others, absorbed young people trained in the vocational institutes in the area. Arguably, despite the size of small micro-enterprises in rural areas in terms of the capital invested, their emergence is an important source of employment to previously unemployed people. New micro firms provide opportunities for more people to engage in income generating activities.

Rural outmigration is a constraint to social development in most parts in Africa. As a result of impoverishment in rural areas, people are enticed to move to the city in search for job opportunities and other dazzles of urban life. Consequently, urban centres expand industrially, while villages naturally contract.¹⁸⁷ Rise of small scale businesses in rural Kenya after electrification of the village markets to the grid highlighted importance of rural population efforts in rural social development, through engagement in various economic activities that embedded rural incomes and minimized the need to migrate to urban areas. Apparently, there is a need to continually harness the skills and knowledge of the young population in the rural areas, in an attempt to engender a significant rural social transformation in Kenya. Efforts ought to be made to equip the youthful population with

¹⁸⁶For instance, Petrol stations are located in every village market along Masinga-Ekalakala Road. (Mukayauni mrt., Kaplot mrt., Nzukini mrt., and Wendano mrt.)

¹⁸⁷Current Science Association, Rural Development, *Current Science*, Vol. 4, 1935, pp. 209 – 212.

necessary entrepreneurial skills and knowledge, tailored for rural reconstruction. With enhanced business skills, local population will continue to strategically appropriate access to electricity in ways that entrench rural economy in Kenya.

4.4 Conclusion

From the forgoing discussion, electricity is viewed as a utility that engendered significant social and economic changes in villages in Masinga since 1990s. The chapter argued that local people in Masinga seized opportunities brought by electricity access, in ways that implied ingenuity, and some level of localized opportunism, which changed the trajectory of social and economic organization of the population in the area in several aspects. In this context, the rural population benefitted from access to electricity, despite the constraints that earmarked the rural electrification project in Kenya, as discussed in the previous chapter.

In the discourse on the nexus between electricity and social changes in rural areas, it is important to acknowledge the fact that the dynamics of social and economic changes are multifaceted, and encompass several fundamental forces. For instance, investments in rural infrastructure such as roads, water supply, education and health facilities, act as conduits for significant social changes in rural areas. In this context, electricity has both independent and complimentary effect in the reorganization of rural communities. It is critical to interrogate the issue of causality, without which one cannot assertively point social and economic changes in the countryside to electricity. The chapter attempted to investigate both independent and complimentary pathways, through which access to electricity in Masinga Sub - County in Machakos, contributed to social and economic changes in the area from 1990 up to 2019. The chapter explored how rural residents of Masinga Sub - County utilized access to electricity in ways that worked for their benefits.

CHAPTER FIVE:

CONCLUSION

This is a study on statecraft and the provision of social services in post-colonial African Settings. The research approaches the debate by delving into the state-centered perspectives on development and delineates how the post-colonial African state intervened in the provision of social projects in the continent. The extant literature logically argues that the patrimonial state constrained decentralization of resources in the post-colonial Africa. In this context, the African state emerged, and was built against, and at the expense of formal government institutions. As a result, the post-colonial African state sustained itself through destructive practices that were characterized by favoritism and nepotism. Consequently, patron-client relations, through a network of influential cartels epitomized state provision of social services. These groups included among others, local politicians, and prominent business people. As a group, these people may not have had the power to initiate changes from the top but could block and negate government initiatives from below.

Chapter three of this study reveals that patronage relations in the rural electrification process in Kenya took the form of bribery in government contracts, supply of substandard equipment, exaggeration of logistics, and nepotism among others. Such imprudent practices slowed down the pace of rural electrification in the country because they undermined rational economic decision-making and encouraged corruption. Nevertheless, in contrast to the extant literature, this study focuses on the agency of the rural African population, in their interface with state-mediated development. Rather than following the conventional narratives of the rural population as passive recipients of state projects, the study reflects on the creative tensions that emerge, as the rural African communities endeavor to appropriate state-provided social projects, in an attempt to generate livelihoods at the bottom.

In doing so, this study depicts some of the important ways in which the rural population in the Masinga Division seized opportunities brought by electricity services in ways that changed the social and economic trajectory of the area. The findings in chapter four demonstrates how local people in the division endeavored to uplift their living standards, not just through resilience, but by crafting ingenious responses to state-provided electricity, that at least brought success to them, despite the aforementioned constraints in the rural electrification process in the country.

In contrast to electricity connectivity to public institutions, grid electricity connectivity to households in Masinga Division remained low, as was indicated in chapter three. This was attributed to the high cost of connection for the majority of rural families. Moreover, the high cost of wiring and bureaucratic procedure in applying for and waiting for electricity prevented many households from accessing the national electricity grid. Consequently, rural households turned to solar power systems, because they were more affordable, and were available in the short term, and did not depend on government infrastructure plans. Will solar power systems become Kenya's next frontier in the rural electrification process?

REFERENCES

Primary Sources

Oral Interview, Peter Muia: electric bulbs enabled him to save on paraffin cost, since electricity lighting was cheaper.

Oral Interview, Daniel Kioko: in the absence of electricity, the household relied on firewood and Kerosine for lighting and cooking.

Oral Interview, Michael Katelu: electricity lighting was non-pollutant, it did not bring adverse health effects as was the case before electricity connection.

Oral Interview, Ruth Nzisa, Treasurer, Kavuta Traders Women Group: electricity access enabled shop electricity connectivity. Women opened several shops in the village market, such as salons, hotels and cyber. The shops run from 6:00 a.m to around 10:00 pm.

Oral Interview, Medical Officer in Masinga Level Four Hospital, Machakos County.

Oral Interview: with the chairman, Mukayauni Primary school, Masinga Sub-County.

Oral Interview: with the Deputy Principal, Kasuvilo Secondary, Masinga Sub-County.

Oral interviews: On average farmers would spend ksh.1000 on fuel.

Musyi FM, Mbaitu FM, Athiani FM, and Syokimau FM are the leading local stations that air programmes aimed at enlightening rural women on their rights.

Nzukini Women Group: Women-run shops are important sources of income for rural households. Incomes from the shops supplement husband earnings.

Oral Interview, Ndolo Matheka: The most followed international football games were the English Premeir League and the UEFA Champions League in the area.

Oral Interview, Urbanus Peteo: From his agro-chemist shop at Ekalakala Market, customers purchased chemicals which were advertised by the local radio stations.

Oral Interview, Francisca Mumbua: watching television provided important sensitizations on safe health practices.

Oral Interview, Makau Harrison, Ekalakala Dispensary, Masinga Division.

Oral Interview, Sixtus Mayaka, Teacher Kyeeteni Secondary, Masinga Sub-County.

Oral Interview, Patrick Kyallo, Teacher Kakuku Secondary School, Masinga Sub-County.

Oral Interview, Head Teacher, Mukayauni Primary School.

The National Assembly Official Record: *Parliamentary Debates*, Accessed: books.google.co.ke>books.

The National Assembly Official Record: *Parliamentary Debates*, Pg. 496, April 19, 1995, Accessed: books.google.co.ke>books

Colony and Protectorate of Kenya: *Report of the Development Committee*, Vol. 1 1946.

Government of Kenya, The Project for Groundwork in Rural Districts (Machakos, Kitui, Makueni and Mwingi), *The Ninth Development Plan 2003 – 2008*, October, 2004.

Kenya leads East Africa Peers in Access to Electricity; Kenya Power, 2018, May 8.

Kiereini, Douglas *The Origin of the Kenya Power and Lighting Company Monopoly*, Thursday, May 24, 2018, <https://www.businessdailyafrica.com>

Kat, Harrison Andrew Scott et al, *Accelerating Access to Electricity in Africa with Off – Grid Solar: The Impact of Solar Household Solution*, Report 2016.

Kenya – Energy Sector Recovery Project, Washington D.C: World Bank Group, [htt](#) Kimani Esther, ‘Misogyny and Sexism, not Intoxicants Behind Rise in Gender Violence Cases’, *Daily Nation*, Wednesday, May 12th 2021.

KNBS, *2019 Kenya Population and Housing Census*, Vol. 1, November 2019.

[ps://documents.worldbank.org](https://documents.worldbank.org).

Machakos County Integrated Development Plan, 2015, www.machakosgovernment.com

Ministry of Education, Masinga Sub-County, 2010.

Rachael ‘Reprieve to Kivaa Residents as 150 Million Litres Dam Nears Completion,’ *Kenya News Agency, Information for Development*, August 3, 2020.

Republic of Kenya, Ministry of Water and Irrigation: the Implementation Review Study Report on the Project for Rural Water Supply, February 2011, *Japan International Cooperation Agency, 2011*.

Republic of Kenya, Ministry of Water and Irrigation: the Implementation Review Study Report on the Project for Rural Water Supply, February 2011, *Japan International Cooperation Agency, 2011*.

KNA EP. 15/37- Kitui Boma Electricity Supply
KNA EP.15/32- Homa Bay Electricity Supply
KNA DC/KMG2/20/9- Electricity Supply and General Correspondence, 1965
KNA EP/15/2/VOL. 1- Meru Electricity Supply, 1948
KNA EP.15/25- Ministry of Works, 3rd June, 1959.
KNA 5/5439- Machakos Electricity Supply Report, 1956
Source: www.ketraco.co.ke.

Secondary Sources

- A. Bernard, Energy, and Africa: Some Pointers, *African Affairs*, Vol. 82, No. 328, 1983.
- A. Sen, *Development as Freedom*, Oxford University Press, Oxford, 1999.
- Berman Bruce, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, Nairobi, 1992.
- Biketti et al, Gendered Division of Labour and Feminisation of Responsibilities in Kenya: Implications for Development Interventions, *Gender, Place and Culture, A Journal of Feminist Geography*, Volume 23, No. 10.
- C. Ambler, Drunks, Brewers and Chiefs: Alcohol Regulations in Colonial Kenya, 1900 – 1939, in *Drinking Behaviour in Modern History*, Oxford University Press.
- Chambers, Robert *Rural Development: Putting the Last First*, Prentice Hall Publishers, London.
- Charles Hornsby, *Kenya: A History Since Independence*, I.B Tauris, 2012, pg. 201.
- Christine & Letema, Energy Poverty and its Implication on Standards of Living in Kirinyaga, Kenya, *Journal of Energy*, Volume 2018, pp. 1 -12, <https://doi.org/10.1155/2018/3196567>
- Colleen M, Gordon et al, *Platform, Participation, and Power: How Dominant and Minority Stakeholders Shape Agricultural Innovation*, Accessed: www.mdpi.com/journal/sustainability
- Cooper, Frederick *Africa since 1940: The Past of Present*, Cambridge University Press, 2002.

- Crawford Young, *the Post – Colonial State in Africa: Fifty Years of Independence, 1960 – 2010*, University of Wisconsin Press, 2012.
- Current Science Association, Rural Development, *Current Science*, Vol. 4, 1935.
- Dinkleman, Taryn The Effects of Rural Electrification on Employment: New Evidence from South Africa, *the American Economic Review*, Vol. 101, No.7, 2011.
- Eric, Kenneth, et al, Electrification for ‘Under – Grid Households in Rural Kenya, *Development Engineering* Vol. 1, 2006, pp. 26 – 35, www.elsevier.com/locate/deveng.
- Friedan, Betty *The Feminine Mystique*, W.W. Norton & Company, New York, London.
- Gachihi, Misigo et al, ‘Ending Impunity for Gender Crimes: Access to Justice for Violence against Women and its Contribution to Sustainable Peace Building in Rwanda’, *Rwanda Journal of Social Sciences, Humanities and Business*: ISSN 2708-759X (Print); ISSN 2708-7603(online). DOI: <https://dx.doi.org/10.413/rjsshb.v2i2.4>
- Hornsby, Charles *Kenya: A History since Independence*, I.B Tauris, London 2012.
- Illife, John *Africans: The History of a Continent*, Cambridge University Press, 2007.
- Irungu Elizabeth, *Impact of Oil Price on Real Exchange Rate in Kenya*, A Research Paper Submitted to the School of Economics in Partial Fulfillment of the Requirement for the Award of Degree of Masters of Arts in Economics of the University of Nairobi, 2017, pp. 1 – 8.
- Kilemi Mwiria, Kenya’s Harambee Secondary School Movement: The Contradiction of Public Policy, *Comparative Education Review*, Volume 34, No. 3, 1990, pp. 350 – 368, Accessed: <https://www.jstor.org/stable/1187989>
- Kilonzo, Rachael ‘Reprieve to Kivaa Residents as 150 Million Litres Dam Nears Completion,’ *Kenya News Agency, Information for Development*, August 3, 2020.
- Lee Kenneth, E. Brewer, et al, "Electrification for ‘ Under Grid’ House Holds in Rural Kenya ‘’, *Development Engineering*, 2016
- Leo, Christopher The Failure of the ‘Progressive Farmer’ in Kenya’s Million Acre Settlement Scheme, *the Journal of Modern African Studies*, Volume 16, No. 4, 1978, pp. 619 – 638. Accessed: <https://www.jstor.org/stable/159635>
- Leys, Norman, *Kenya: Quest for Prosperity*, Westview Press, London, 1984.

- M. Martin, Vulnerability of Hydro-Electric Energy Resources in Kenya Due to Climate Change Effects: The Case of the Seven Forks Project, *Journal of Agriculture and Environmental Sciences*, Vol. 1, No. 1, 2012, pp.36 –39.
- Machakos County Government, Exploring Kenya’s Inequality: Pulling Apart or Pooling Together? *Kenya National Bureau of Statistics*, 2013.
- Marthur, Jaskiran et al, Dark Homes and Smoky Hearths: Rural Electrification and Women, *Economic and Political Weekly*, Vol. 40, No. 7, 2005, pp. 638 – 643, <https://www.jstor.org/stable/4416201>.
- Marthur, Jaskiran et al, Dark Homes and Smoky Hearths: Rural Electrification and Women, *Economic and Political Weekly*, Vol. 40, No. 7, 2005, pp. 638 – 643, <https://www.jstor.org/stable/4416201>.
- Md. Mahmudul Hasan, *Introduction: Working for Human Rights in Bangladesh*. Emmanuel A. & C. Ambler, *Leisure in African History, An Introduction, Journal of African Historical Studies*, Volume 35, NO. 1.
- Meghan Vaughan, *Curing their Illness, Colonial Power and African Illness*, Wiley, 2013.
- Michira, Moses *Last Mile: Costly Project that Ruined Kenya Power*, The Standard, November 26th, 2019, www.standardmedia.co.ke
- Bruce Berman, *Control and Crisis in Colonial Kenya: The Dialectic of Domination*, East African Educational Publishers, 1992, Nairobi.
- Miller, Norman *Kenya: The Quest for Prosperity*, Westview Press, London, 1984.
- Mills E., *Health Impact of fuel – based Lighting*, University of California.
- Munro, Forbes *Colonial Rule and the Kamba, Social Change in the Kenya Highlands, 1889 – 1939*, Clarendon Press, Oxford, 1975.
- Munro, Forbes *Colonial Rule and the Kamba, Social Change in the Kenya Highlands, 1889 – 1939*, Clarendon Press, Oxford, 1975.
- Nandaenga, Andreas *Water Resource Conflict in Kenya: The Case of Turkwel Dam and Pokot – Turkana Relations*, 1984 – 2015, 2019.
- Nanka, Bruce The Socio – Economic Drivers of Rural Electrification in Sub – Sahara Africa, *the Journal of Energy and Development*, Vol. 33, No. 2, 2008, pp. 215 – 247, <https://www.jstor.org/stable/24812978>, Accessed on 18 – 04 – 2018.

- Ombongi, Kenneth 'The Historical Interface Between the State and Medical Services in Africa, Kenya's Case', *Evidence, Ethos and Experiment: The Anthropology of the Medical Research in Africa*, New York and Oxford, Bergham Books.
- R. Shahidur & Douglas Barnes, Welfare Impact of Rural Electrification: Panel Data Analysis From Vietnam, *Economic Development and Cultural Change*, Volume 61, No. 3, 2013.
- Richard Wamai, *Healthcare Policy Administration and Reforms in Post – Colonial Kenya, and Challenge for the Future*
- Rodney, Walter, *How Europe Underdeveloped Africa*, Tanzania Publishing House, 1972.
- S, Miriam, Primary Health Care Initiatives in Colonial Kenya, *World Development*, Volume 26, issue 9, 1998.
- Shahidur R. & Barnes, Douglas Welfare Impact of Rural Electrification: Panel Data Analysis From Vietnam, *Economic Development and Cultural Change*, Volume 61, No. 3, 2013.
- T. Gathui & W. Ngagi, Bio – Energy and Poverty in Kenya: Attitudes, Actors and Activities, Accessed: <https://www.acts.org./dmdocuments/projects>
- T. Goodale, & G. Godbey, *The Evolution of Leisure: Historical and Philosophical Perspectives*.
- T.N, Valunekar Social Consequences of Rural Electrification, *Economic and Political Weekly*, Vol. 3, No. 10, 1968, pp. 431 – 434, <https://www.jstor.org/stable /4358345>, Accessed on 18 – 04 – 2018.
- T.N, Valunekar Social Consequences of Rural Electrification, *Economic and Political Weekly*, Vol. 3, No. 10, 1968, pp. 431 – 434, <https://www.jstor.org/stable /4358345>, Accessed on 18 – 04 – 2018.
- Tom & Morton, The Impact of Energy Sector Reforms on Clean Development Mechanism Renewable Energy Projects in Kenya, Carbon, and Climate Law Review, Vol. 4, No. 4, 2010, pg. 3, <https://www.jstor.org/stable/24324251>, Accessed: 29-08-2018
- Ute Hasenohrl, Rural Electrification in the British Empire, History of Retailing and Consumption, Vol. 4, 2018 – Issue I: Off-Grid Empire: Rural Energy Consumption in Britain and the British Empire, 1850 – 1960.

Valunjar T.N, Social Consequences of Rural Electrification, *Economic and Political Weekly*, Vol. 3, No. 10, 1968, pp. 431 – 434, [https://www.jstor.org/stable /4358345](https://www.jstor.org/stable/4358345), Accessed on 18 – 04 – 2018.

Vidija, Dan *the Place of Community Radio in Rural Development in Kenya, Case Study of Sauti FM in Rarienda, Siaya County*, Masters Project, University of Nairobi, 2014.