INFLUENCE OF URBANIZATION ON THE SOCIAL WELLBEING OF MAASAI COMMUNITY: A CASE STUDY OF KITENGELA MUNICIPALITY, KAJIADO COUNTY

DAVID AKILIMALI CHIPINDE

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DECLARATION

I hereby declare that this research thesis is my own original work and has not been submitted for any degree or other qualification at any other academic institution.

Signature…… Date……

DAVID AKILIMALI CHIPINDE

ADM MDS/00071/2/21

As the university supervisor, I confirm that this research thesis has been submitted for examination with my approval.

Signature…….... Date……

DANIEL KOMU

LECTURER,

The Management University of Africa

DEDICATION

I dedicate this thesis to my dear family, Mrs Loise Akilimali, Nyamvula, Nigel and to my mentor, Mrs Githaiga

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I like to express my sincere gratitude to my supervisor for the guidance throughout this thesis development. I would also want to thank my friends and family, as well as God's divine protection and provisions, each has played a crucial role in making this study a success. The collective efforts and contributions of these individuals and institutions have been crucial in shaping this study and its potential to contribute to a better understanding of the influence of urbanization on the social well-being of the Maasai community.

ABSTRACT

Urbanization is a global phenomenon with far-reaching implications for communities worldwide. In the case of the Maasai community in Kitengela Municipality, Kajiado County, Kenya, urbanization presents a complex challenge. As Nairobi expands, changes in land use, population growth, governance, and socioeconomics affect the traditional pastoralist lifestyle of the Maasai. The purpose of the study was to assess the effects of urbanization on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County. The study examined four specific objectives: to determine the effects of changing land use, changing tenure systems, population growth, and cultural practices on the social well-being of the Maasai community. The study was anchored on the Ecological Modernization Theory, which provides a framework for understanding how societies balance economic development with environmental and social sustainability. The study employed a descriptive research methodology with a target population of 234,000 persons. Using Fisher's method, a sample size of 384 participants was determined, achieving a 96% response rate. Data was collected using questionnaires and analyzed using SPSS. The major findings revealed that 94% of respondents reported significant changes in traditional land use patterns, 86% noted increased individual land ownership, 87% indicated increased in-migration, and 88% reported declining traditional language fluency. Correlation analysis revealed strong positive relationships between all variables and social well-being ($r = 0.65$, $p = 0.001$), while regression analysis showed that all independent variables significantly predicted social well-being ($p < 0.05$), with the model explaining 72.6% of the variance ($R^2 = 0.726$). Based on these findings, the study concluded that changing land use patterns have significantly altered traditional pastoralist practices, increased individual land ownership has transformed communal land management systems, population growth has intensified pressure on available resources, and cultural practices are experiencing substantial transformation due to urbanization. The study recommends establishing participatory land use planning processes, developing policies that protect both individual and communal land rights, implementing sustainable infrastructure development to support population growth, and creating cultural preservation protocols that integrate traditional practices with modern urban life.

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LIST OF ABBREVIATIONS

CO_2: Carbon Dioxide

GIS: Geographic Information System

KII: Key Informant Interviews

KNBS: Kenya National Bureau of Statistics

NACOSTI: National Commission for Science, Technology and Innovation

SDG: Sustainable Development Goals

SPSS: Statistical Package for the Social Sciences

UN-Habitat: United Nations Human Settlements Programme

OPERATIONAL DEFINITION OF TERMS

Term	Definition
Cultural Practices	The traditional customs, beliefs, ceremonies, language use, and dress codes that define the identity and way of life of the Maasai community.
Land Use Change	The transformation of natural landscapes into developed areas, including the conversion of grazing lands into residential, commercial, or agricultural use.
Population Growth	The increase in human numbers within a specific geographic area over time, leading to demographic changes and increased settlement density.
Social Well-being	A state of physical, mental, and social prosperity encompassing access to healthcare, education, social networks, community bonds, and preservation of cultural identity.
Tenure Systems	The formal and informal arrangements that govern how land is owned, used, and transferred, including both traditional communal systems and modern individual property ownership.
Urbanization	The process of physical and social transformation of rural areas into urban settings, characterized by increased population density, infrastructure development, and changes in lifestyle patterns.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This section discusses global, regional, and local influence of urbanisation on the Maasai community in Kitengela Municipality, Kajiado County. It introduces the study's main themes—social well-being, urbanisation, and Maasai dynamics. The chapter describes the study's problem statement, objectives, research questions, significance, and scope. The complex relationship between urban development and the Maasai community's traditional lifestyle in a rapidly urbanising area is explained by this introduction.

1.1 Background of the Study

Globally, the phenomenon of urbanization across the globe is linked to a rise in urban population, which in turn is giving rise to novel mental health concerns (Ventriglio et al., 2021). Li, Yan and Xu (2021) in China found that residing in urban areas has a positive influence on subjective well-being, whereas urban household registration (hukou) does not have a notable impact. Garcia (2020) discovered that the magnitude of urban areas has a favorable influence on the welfare of White households, while it has an unfavorable influence on Afro-Americans and Hispanics. Surya et al. (2020) indicated that urbanization in Indonesia led to a shift of rural poverty to urban poverty. Feruni et al. (2020) emphasized that urbanization in the United States has diverse effects, encompassing social and economic ramifications. However, the study does not specifically examine the socioeconomic well-being. Further, a separate investigation conducted in the United States by Hummel (2020) analyses how income is affected by population and housing density. The study reveals that increased urban density has a statistically significant indirect influence on income within metropolitan regions. Malek and Yusof (2022) assert that urbanization in Malaysia has engendered apprehensions among the urban underprivileged, thereby impacting their psychological and social well-being. Abdul and Yu (2020) emphasized the difficulties encountered by urban inhabitants in Pakistan, such as climate change, uncontrolled growth, housing scarcity, and a deficiency of fundamental civic facilities.

Regionally, rapid urbanization is a key development strategy, especially for underdeveloped nations. Significant worries, including air pollution, habitat loss, and agricultural land degradation,

are associated with it, nevertheless (Avtar et al., 2019). Urbanization influences long-term sustainability in South Africa and Egypt in diverse ways, according to Salah (2022). These effects range across domains including economics, society, and the environment. In contrast to the reductions seen during industrialization, Nkoa et al. (2021) discovers that urbanization exacerbates economic, environmental, and housing disparities throughout Africa. In a recent study, Mignamissi and Djeufack (2022) found that the intensity of CO2 emissions in Africa is positively correlated with urbanization, with variations based on resource richness and institutional quality. On the other hand, Effiong (2018) suggests that urbanization reduces environmental pollution in Africa, particularly in terms of ambient particulate matter emissions. In Nigeria Abubakar and Dano (2018) suggests that challenges in urban areas can be turned into opportunities for socioeconomic development through fostering regional economic growth, advocating for sustainable urban practices, and launching smart and knowledge city programs. Awah and Kimengsi (2021) brought attention to the fact that urban growth in Cameroon is positively correlated with land disputes in Bamenda, emphasizing the need for policy interventions to regulate urban expansion and address land conflicts.

Locally, the growth of urban areas in Kenya, such as the rapidly developing city of Nairobi, has had a substantial impact on the nearby rural regions, affecting both the utilization of land and the changes in population (Odongo & Donghui, 2021). This influence extends beyond mere physical proximity, affecting the social wellbeing structure of these regions. Esekon et al. (2019) have demonstrated that environmental pollutants in urban areas have a detrimental effect, resulting in health issues and the occurrence of disease outbreaks. Otim et al. (2022) contend that urbanization plays a role in the deterioration of the environment. Okumu and Moenga (2021) argue that urban-to-rural migration can result in shifts in income and occupation, particularly influenced by factors such as educational attainment and land ownership. Omondi et al. (2017) propose that urban farming has the capacity to improve the food security of households and offer avenues for generating income. The Maasai community, renowned for their conventional pastoral way of life, has not been impervious to these alterations.

1.1.1 Urbanization

The process of urbanization, driven by the shift from suburban to city life, has significant ramifications for social, economic and environmental contexts, particularly in developing nations

(Nuissl & Siedentop, 2021). Urban areas, commonly regarded as centres of advancement, have a significant influence on natural resources and quality of life. However, this transformation is not devoid of its challenges. Somarriba et al. (2022) explored the relationship between urbanization and subjective well-being. Their findings suggest that urbanization can have a nuanced impact on different aspects of individual well-being. On one hand, they observed that factors such as job satisfaction and family contentment tended to increase with urban living. According to Navarro et al. (2020) urbanization differ depending on the specific regions and are influenced by local factors.

Borzenko (2019) highlights the adverse effects of urbanization, including the detachment from natural surroundings and disturbances to ecosystems, underscoring the complex nature of this process. Urbanization has an adverse effect on mental health due to Ventriglio et al. (2021) identified social, economic, and environmental elements. According to research, prominent mental disorders tend to cluster in urban areas, according to research. Social inequality, social instability, pollution, and isolation from the environment are some of the known issues impacting mental health in metropolitan areas (Lee & Lee, 2019). With the rise of urban regions transition from agrarian-based economies to more industrial and service-oriented economies, they emerge as hubs of economic expansion and progress (Pham et al., 2021). This transition has the potential to increase efficiency and originality while also providing superior job opportunities, higher salaries, and increased service availability, all of which contribute to higher living standards (World Bank, 2019). However, Glaeser and Poterba (2021) point out that these benefits are frequently accompanied by challenges such as growing income disparities and infrastructure deficiencies. According to Gebrekristos (2021), urbanization does not provide equal economic opportunities, resulting in income disparities and the expansion of informal settlements.

1.1.2 Land Use Change

For indigenous pastoralist groups like the Maasai, land use change is a major danger to their economic security and sense of cultural identity. Traditionally, the Maasai rely on communal rangelands to graze their livestock, which provide the basis for their economy and livelihoods through milk, meat, hides and trade (Gai, 2020; Raycraft, 2022). However, analysis by Mwangi et al. (2017) demonstrates extensive changes in land use patterns in Maasailand, with former grazing areas being converted into large and small-scale farms. Loss of grazing land to other uses like agriculture, infrastructure development and urban expansion has severely impacted pastoral

mobility and livestock production among Maasai households (Ameso et al., 2018; Gai, 2020). Estimates suggest more than 70% of the Kajiado rangelands have been converted since the 1960s, restricting available dry season grazing reserves (Mugambi, 2022). This has increased pressure on remaining grasslands, resulting in overgrazing and pasture degradation, reducing livestock condition and household incomes derived from livestock and livestock products (Michalk et al., 2019).

In peri-urban areas near cities like Nairobi with higher population growth, land has become increasingly privatized and subdivided into smaller plots unsuited for grazing (Kore, 2019). Rapid demographic expansion has catalyzed unplanned development, poverty expansion in informal settlements and pressure on infrastructure like water, housing and sanitation facilities (Koyamo, 2022). Income inequality is high in such areas, with those lacking education or assets struggling to transition from eroding pastoral lifestyles (Feldt et al., 2020). Overall, according to Achola (2021) escalating population growth has threatened traditional pastoral socioeconomic organization, precipitating livelihood stress and cultural changes. Targeted development plans are key for enabling sustainable transitions. Loss of dry season grazing lands has also increased human-wildlife conflicts for Maasai communities near conservation areas, with predation on livestock having substantial economic costs (Nyerembe, 2020).

1.1.3 Population Growth

Rapid population growth in Maasailand is linked to factors such as reduced child mortality due to health interventions and the end of traditional birth spacing practices (Lawson et al., 2019; Coast et al., 2020). Census data reveal that populations in districts inhabited by Maasai groups have nearly doubled since the 1980s (Nyumba et al., 2022). This population increase has placed pressure on available grazing land per household in pastoral areas (Kimani et al., 2020). Studies show a decline in cattle holdings among Maasai households, with reductions of up to 60% in some regions since the 1960s (Nkedianye et al., 2020).

The decreasing land-to-labor ratio and shrinking herd sizes have impacted the ability of pastoralism to sustain livelihoods. Estimates suggest that around a quarter of the Maasai population has transitioned away from pastoralism, seeking alternative income sources (Mburu et al., 2020). Additionally, the rapid population growth has led to youth becoming economically dependent on relatives due to insufficient opportunities to establish independent homesteads, undermining their

sociocultural status (Archambault et al., 2021). Increased household densities have also been linked to higher calf mortality and disease transmission between wildlife and livestock (Ogutu et al., 2021). In peri-urban areas near cities like Nairobi, land has been increasingly privatized and subdivided into smaller plots unsuitable for grazing (Kore, 2019). This demographic expansion has led to unplanned development, poverty in informal settlements, and strain on infrastructure such as water, housing, and sanitation (Koyamo, 2022). High income inequality in these areas has left those without education or assets struggling to transition from diminishing pastoral lifestyles (Feldt et al., 2020). Overall, escalating population growth threatens traditional pastoral socioeconomic structures, causing livelihood stress and cultural changes (Achola, 2021).

1.1.4 Changing Tenure Systems

The shift from communal to individual property rights, driven by the establishment of group ranches and changes in national land policies, has also led to the sedentarization of previously nomadic pastoralists (Damonte et al., 2019). Settlement has complicated the maintenance of large herds, resulting in herd fragmentation, destocking, and a departure from pastoralism for many Maasai households (Gai, 2020). Pelek (2022) found that those unable to adapt face proletarianization, taking up casual wage employment, with urban migration causing cultural disruption. The loss of dry season grazing lands has increased human-wildlife conflicts for Maasai communities near conservation areas, with substantial economic costs associated with livestock predation (Nyerembe, 2020).

The move towards individual land tenure has eroded traditional systems of resource management and governance among the Maasai (Rutten, 2020). This erosion has weakened communal institutions that previously regulated access to pastures and water, leading to overexploitation and resource degradation (Archambault, 2021). The breakdown of these collective arrangements has exacerbated inequalities, with wealthier individuals accumulating larger landholdings at the expense of poorer community members (Mwangi, 2020). The shift towards individual ownership has also facilitated the leasing and sale of land to outsiders, often for commercial agriculture or conservation purposes (Osano et al., 2022). This has further restricted Maasai access to key resources and increased their vulnerability to drought and other shocks (Cavanagh et al., 2020).

1.1.5 Cultural Practices

The Maasai community, known for their traditional pastoral lifestyle, is experiencing significant changes due to modernization and urbanization. In Kajiado County, near Nairobi, urban pollution and the encroachment of a cash-driven society are transforming Maasai life. Grazing lands are being purchased, leading to pressures that their ancestors did not face. Modernization has profoundly impacted the traditional Maasai way of life, which is centered on pastoralism and a deep connection to the land (Stølen et al., 2018). The expansion of urban areas and changes in land use and tenure systems have disrupted the social and cultural fabric of Maasai society (Fegter, 2021). This disruption has caused a gradual erosion of traditional practices and values, such as the age-set system, communal resource management, and customary decision-making structures (Glass, 2019).

The integration of the Maasai into the market economy has led to the commodification of livestock and land, diminishing the cultural significance of these resources (Cavanagh et al., 2020; Veldhuis et al., 2019). The younger generation, facing limited opportunities in pastoralism, is increasingly moving to urban areas for education and employment, resulting in a generational divide and weakening traditional knowledge transfer (Archambault, 2021). Despite these challenges, the Maasai have shown resilience and adaptability. Many communities have adopted diversification strategies, including small-scale agriculture, wage labor, and tourism, to supplement their traditional livelihoods (Cavanagh et al., 2020).

1.1.6 Social Well-being

Social well-being is the dependent variable in this study, encompassing aspects such as, education, health, housing, and social networks. The social well-being of the Maasai community is influenced by urbanization, land use change, population growth, changing tenure systems, and cultural practices. Recent studies have examined how these factors impact the social well-being of pastoral communities, including the Maasai. For instance, Homewood et al. (2020) found that land privatization and fragmentation in Maasailand have led to increased inequality and poverty, with poorer households losing access to vital resources and seeking alternative livelihoods. Similarly, Archambault (2021) documented how the transition from communal to individual land tenure in Maasailand eroded social capital and safety nets, making households more vulnerable to shocks and stresses.

Other research has explored the complex interactions between urbanization, population growth, and social well-being in pastoral contexts. Nkedianye et al. (2020) observed that while urban migration can offer new opportunities for education and employment, it also erodes traditional support systems and increases vulnerability for those left behind. Cavanagh et al. (2020) reported that population growth and land use change in the Maasai Mara region led to intensified competition for resources and reduced per capita livestock holdings, negatively affecting household food security and income. Additionally, studies have investigated the connections between cultural practices, identity, and well-being among the Maasai (Cavanagh et al., 2020).

1.1.7 Profile of Kitengela and the Maasai Community

Kitengela is a rapidly urbanizing area located in Kajiado County, Kenya, on the outskirts of Nairobi. A large percentage of Kitengela and the neighboring regions' residents are Maasai. According to the Kenya National Bureau of Statistics (KNBS, 2019), Kitengela Municipality is approximately 234,000 people. The Maasai community within this geographical area constitutes the target population for the current study. Kitengela Municipality is divided into several areas, including Kitengela Town, Isinya, Oloosirkon, Kisaju, Acacia, and Noonkopir. The Maasai population is distributed across these areas, with Kitengela Town having the highest concentration of approximately 80,000 people, followed by Isinya with 50,000, Oloosirkon with 40,000, Kisaju with 30,000, Acacia with 20,000, and Noonkopir with 14,000. The Maasai community in Kitengela has traditionally relied on pastoralism as their primary livelihood. However, urbanization and changing land use patterns have led to a gradual shift towards other economic activities. The transition from pastoral to urban livelihoods has not been easy for many Maasai households, who face challenges such as limited skills and education, discrimination, and poor living conditions in informal settlements (Achola et al., 2021). The erosion of traditional social support systems and cultural practices has also had negative impacts on community cohesion and well-being (Kioko & Bollig, 2017).

1.2 Statement of the Problem

Urbanization is a global phenomenon with far-reaching implications for communities worldwide. One of the many complicated challenges that urbanization poses is to the Maasai people in Kitengela Municipality, Kajiado County, Kenya. As Nairobi expands, changes in land use, population growth, governance, and socioeconomics affect the traditional pastoralist lifestyle of

the Maasai. Several studies have examined urbanization impacts on the Maasai, but significant gaps remain in the current body of knowledge. From a contextual perspective, most existing research has focused on specific aspects of urbanization, such as land tenure changes, declining livestock mobility and pasture availability, barriers to education, land conflicts, human-wildlife conflicts and perceptions of change. Nevertheless, these studies have not thoroughly examined the many ways in which urbanization has affected the Maasai community's socioeconomic welfare within the particular framework of Kitengela Municipality.

In order to understand the Maasai people and their perspectives, most prior research has used qualitative methods like focus groups and interviews. While these methods provide valuable insights, there is a lack of quantitative data and analysis to objectively measure the effects of urbanization on key social wellbeing indicators, such as health, education, and food security. This methodological gap limits the ability to generate robust evidence to inform policy and intervention design. Further, it is not yet fully understood how the Maasai community in Kitengela Municipality's social well-being is influenced by factors like as urbanization, changing land use, population increase, shifting tenure systems, cultural traditions, and their interplay. Existing studies have addressed discrete issues arising from urbanization but have not holistically examined how these factors interact to shape the lived experiences and outcomes of the Maasai people in this specific context. Hence, this study intends to fill these gaps in knowledge, methodology, and context by conducting an empirical evaluation of the effects of urbanization on the Maasai community's social well-being indicators, including, health, food security, education, and cultural preservation in Kitengela Municipality.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study is to assess the influence of urbanization on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County.

1.3.2 Specific Objectives

i. To determine the influence of changing land use on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County

ii. To examine the influence of changing tenure systems on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County
iii. To establish the influence of population growth on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County
iv. To assess the influence of cultural practices on the social well-being of the Maasai community in Kitengela Municipality, Kajiado County

1.4 Research Questions

i. How does changing land use influence the social well-being of the Maasai community in Kitengela Municipality, Kajiado County?
ii. How do the evolving tenure systems influence the social well-being of the Maasai community in Kitengela Municipality, Kajiado County?
iii. How does population growth influence the social well-being of the Maasai community in Kitengela Municipality, Kajiado County?
iv. How do cultural practices influence the social well-being of the Maasai community in Kitengela Municipality, Kajiado County?

1.5 Justification of the Study

From a policy perspective, this research will illuminate how urbanization impacts the social well-being of the Maasai people in Kitengela Municipality, Kajiado County. The findings will be instrumental in guiding policymakers at national and county levels to develop targeted interventions and policies that address the challenges posed by rapid urbanization while preserving the Maasai's traditional way of life and cultural heritage. Government officials will gain crucial insights into the unique impacts of urbanization on indigenous communities like the Maasai, enabling them to formulate more inclusive and culturally sensitive urban development policies.

Theoretically, this study contributes significantly to the existing body of knowledge on urbanization's effects on indigenous communities. By providing a unique case study of the Maasai community in Kitengela Municipality, the research will serve as a valuable reference point for future studies in similar or different cultural and geographical contexts. The findings will enhance understanding of the complex relationships between urbanization, indigenous cultures, and social well-being, thereby expanding the theoretical framework for studying urban development's impact on traditional communities.

In terms of practical application, the study's outcomes will be valuable for NGOs and organizations working with indigenous communities, helping them refine their programs and initiatives to better serve community needs. The findings can be applied to improve the effectiveness of community development efforts and enhance well-being outcomes not only for the Maasai but also for other indigenous communities facing urbanization challenges. This research will provide practical insights for implementing more equitable and sustainable urban development approaches, benefiting indigenous communities worldwide who are experiencing similar urbanization pressures.

1.6 Scope of the Study

All three of these factors' population, period, and content define the study's scope. The study lasted from January 2024 to October 2024, a total of six months, focusing on the Maasai community residing within Kitengela Municipality, Kajiado County, Kenya. This research gave specific attention to changes in land use, land tenure, and population growth as key influencing factors. Various dimensions of socioeconomic well-being, including income, health, education, food security, and cultural preservation, was examined by a combination of qualitative interviews and quantitative surveys, a technique known as mixed-methods. Community engagement and participation was prioritized throughout the research process to ensure accurate representation of Maasai perspectives and experiences.

1.7 Chapter Summary

This chapter provided a Specific introduction to urbanization influence on the Maasai community in Kitengela Municipality. The Measurable aspects were outlined through clear research objectives and questions focusing on land use changes, tenure systems, population growth, and cultural practices. The chapter presented Achievable goals by defining the scope in terms of time, population, and content parameters. The Research relevance was demonstrated through a three-fold justification covering policy implications, theoretical contributions, and practical applications. Lastly, the Time-bound nature of the study was established within the context of contemporary urbanization challenges facing the Maasai community.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section gives a comprehensive review of literature relevant to this study. It is designed to include theoretical framework underpinning the research, an empirical review of pertinent studies, and an examination of the conceptual framework. The chapter concludes by identifying gaps in the existing literature, thereby positioning current research within broader context of research on urbanization and its influence on indigenous communities.

2.1 Theoretical Literature Review

The research was represented by three key theories: Ecological Modernization Theory, Cultural Ecology Theory, and Modernization Theory. These concepts provide a foundation for thinking about how the Maasai people of Kitengela Municipality may feel about the future of their environment, culture, social structure, and economy because of urbanization. The anchor theory for this study is the Ecological Modernization Theory, as it touches on most of the variables, including land use change, tenure systems change, and their effects on the social well-being of the Maasai community.

2.1.1 Ecological Modernization Theory

The Ecological Modernization Theory was developed by Joseph Huber in the 1980s and later advanced by scholars (2000) (Mol & Spaargaren, 2000; Buttel, 2000). It is a theory that seeks to reconcile economic development with environmental protection. The theory posits that continued economic growth and technological advancements can coexist with environmental conservation and sustainability (Mol & Spaargaren, 2000). The Ecological Modernization Theory assumes that as societies become more affluent and technologically advanced, they develop an increased awareness of environmental issues and a greater capacity to address them (York et al., 2010). The theory suggests that environmental protection can be achieved through technological innovations, policy reforms, and changing societal values (York & Rosa, 2003).

The theory is based on several key assumptions. First, it assumes the potential for both economic development and ecological preservation to mutually reinforcing, rather than contradictory goals (Mol & Spaargaren, 2000; York & Rosa, 2003). Second, it emphasizes the role of technological

innovations, such as cleaner production processes, recycling systems, and renewable energy sources, in reducing environmental impacts (Mol & Spaargaren, 2000; Huber, 2008). Third, it suggests that policy reforms, including environmental regulations, economic incentives, and public-private partnerships, are crucial for driving sustainable practices (Mol & Spaargaren, 2000; York & Rosa, 2003). Finally, it recognizes the importance of changing societal attitudes and consumer preferences towards more environmentally-friendly products and lifestyles (Mol & Spaargaren, 2000; Buttel, 2000).

One of Ecological Modernization's strongest points Theoretically, it holds forth hope that environmental preservation and economic progress may coexist peacefully (Buttel, 2020). It provides a framework for achieving sustainable development through technological advancements and policy reforms (York & Rosa, 2003). The theory's detractors, nevertheless, contend that underestimates the structural barriers and power dynamics that can hinder sustainable transformations, particularly in developing countries (Buttel, 2020). Additionally, the theory has been criticized for its technocentric approach and for overlooking the potential rebound effects of increased consumption enabled by efficiency gains (Fisher & Freudenburg, 2001).

The Ecological Modernization Theory is relevant to the variables an alteration in land use and the consequences on the socioeconomic well-being of the Maasai community. The theory suggests that urbanization and the associated changes in land use can be managed through technological innovations, policy reforms, and changing societal attitudes towards more sustainable practices. This can potentially minimize negative impacts on the environment and traditional livelihoods, thereby influencing the socioeconomic well-being of the Maasai community.

2.1.2 Cultural Ecology Theory

The Cultural Ecology Theory was developed by Julian Steward in the 1950s and later expanded by scholars like Andrew Vayda and Roy Rappaport (Steward, 1955; Vayda & Rappaport, 1968). It is a theory that examines the relationship between a cultural group and its natural environment. The theory posits that a community's cultural practices, beliefs, and social organization are shaped by their adaptation to the local environment and its resources (Steward, 1955; Vayda & Rappaport, 1968). According to the Cultural Ecology Theory, cultural groups develop strategies and technologies to exploit and manage the resources available in their environment (Robbins, 2004). Weather, terrain, and the distribution of available resources are some of the variables that impact

these approaches. The theory suggests that over time, the cultural practices and social structures of a group evolve to optimize their use of local resources while minimizing environmental impacts (Steward, 1955; Vayda & Rappaport, 1968).

The theory is based on several key assumptions. First, it assumes it is greatly influenced by the natural environment in determining the cultural practices and social organization of a group (Ogbu & Simons, 2022). Second, it suggests that cultural groups develop adaptive strategies and technologies to exploit and manage the resources available in their environment (Steward, 1955; Vayda & Rappaport, 1968). Third, it recognizes that cultural practices and social structures evolve over time in response to changes in the environment and resource availability (Steward, 1955; Vayda & Rappaport, 1968). One of the strengths of the Cultural Ecology Theory is its recognition of the reciprocal relationship between culture and the environment (Steward, 1955). It acknowledges that cultural practices and social structures are not static but rather adapt to changing environmental conditions (Vayda & Rappaport, 1968). However, critics argue that the theory oversimplifies the complex relationship between culture and environment, overlooking function of historical, political, and economic aspects in molding cultural practices. Further, the theory has been criticized for being deterministic and ignoring the agency of cultural groups in shaping their own environments (Vayda et al., 1968).

When considering the factors of shifting land use and tenure systems and how they impact the Maasai people's economic and social standing, the Cultural Ecology Theory becomes very pertinent. The theory informs the potential impact of urbanization-induced changes in land use and tenure systems on the cultural practices, social organization, and access to natural resources of the Maasai community. As these factors are closely tied to their traditional livelihoods and social well-being, the Cultural Ecology Theory offers insights into how these changes may affect the community's overall well-being.

2.1.3 Modernization Theory

The Modernization Theory was developed by scholars such as Walt Rostow, Daniel Lerner, and David McClelland in the 1950s and 1960s (Rostow, 1960; Lerner, 1958; McClelland, 1961). This idea seeks to provide light on how cultures progress from more primitive to more advanced forms of civilization. According to the Modernization Theory, societies undergo a series of stages as they transition from traditional, agrarian-based economies to modern, industrialized economies

(Rostow, 1960). The theory posits that this transition is driven by factors such as economic growth, urbanization, and the adoption of modern values and attitudes (Roxborough, 1988). The theory is based on several key assumptions. First, it assumes that classic cultures are defined by agrarian subsistence, limited educational opportunities, and strong adherence to traditional values and customs (Lerner, 1958). Second, it suggests that characteristics of contemporary cultures include industrialization, urbanization, increased educational attainment, and the adoption of modern values such as individualism, secularism, and rationality (Rostow, 1960; McClelland, 1961). Third, it recognizes that the transition from traditional to modern societies is a linear process, with societies passing through distinct stages of economic growth and social change (Rostow, 1960).

The capacity to provide a comprehensive framework for comprehending the significant societal, economic, and social shifts that accompany the transition from traditional to modern societies (Lerner, 1958). It recognizes the interconnectedness among a number of variables, including rising prices and the size of the economy, urbanization, and changing values, in driving societal transformation (McClelland, 1961). However, critics argue that the theory is overly deterministic and ethnocentric, imposing Western models of development and progress on non-Western societies (Armer & Katsillis, 2001). Additionally, the theory has been criticized for overlooking the potential negative consequences of modernization, such as environmental degradation, cultural erosion, and increasing social inequalities (Mol, 2003).

The Modernization Theory is relevant to the variable of population growth and its effects on the social well-being of the Maasai community. The theory informs the potential impact of urbanization-induced population growth on the traditional pastoralist culture and livelihoods of the Maasai community. It provides a framework for understanding how the population growth associated with urbanization, often accompanied by economic growth, changing values, and the adoption of modern lifestyles, may affect community's traditional way of life and, consequently, its socioeconomic well-being. The Modernization Theory offers insights into the broader societal transformations, such as changes in education, employment, and cultural values that may occur as a result of population growth driven by urbanization.

2.2 Empirical Literature Review

The empirical review for each research aim is presented in this section.

2.2.1 Changing in Land Use and the Social Well-Being

Cristo et al. (2022) examine community social status and land-use changes along the carajás railroad in the eastern Amazon. The research looked at environmental factors by analyzing Google Earth photos qualitatively and social and economic factors by examining 17 variables. The research found that rural areas in Maranhão had lower poverty rates and greater earnings compared to metropolitan populations. The overall sustainability of the state was found to be worse, nonetheless, due to poor socioeconomic indicators and notable shifts in land cover. Study also found that communities near the railway had greater socio-environmental condition variation. Communities at risk, such as those with limited resources, substandard housing, or residing in places experiencing substantial land cover changes, can be better prepared for disasters by analyzing data from satellite images and social and economic surveys, according to the study. Policymakers, managers, and others should prioritize addressing community-level shortcomings, particularly in priority neighbourhoods, according to the study's findings. Researchers in eastern Amazonia tracked the socioeconomic and land-use changes along the Carajás railroad. Thus, the research was carried out in a distinct geographical and cultural setting, which creates a contextual gap, which may not accurately reflect the situation of the Maasai community in Kitengela Municipality.

Appelt et al. (2022) conducted a systematic review to evaluate the social and economic effects, as well as the possible benefits, costs, and synergies, of changing agricultural land usage in Southeast Asia. One hundred twenty-six instances of land use change in agriculture were examined in the research. Income (SDG 1, 100 cases) and employment (SDG 8, 11 cases) had overwhelmingly positive outcomes, whereas health (SDG 3, 9 instances) had variable results. However, economic equality (SDG 10, 14 occurrences), gender equality (SDG 5, 13 cases), and food security (SDG 2, 44 cases) had the worst outcomes. Income, food security, and employment, together with economic equality and income, may have both positive and negative effects, according to the findings. Due to its exclusive emphasis on changes in agricultural land use, the research introduces a conceptual gap, which may not fully capture the dynamics of urbanization and its effects on the social well-being of the Maasai community.

Smith et al. (2019) examine the impact of land usage intensification (LUI) on inequality and human well-being. Several interdisciplinary, multiscale social-ecological methodologies were used in the research. The research discovered that while inequality remained same, wellbeing increased as smallholder commercial and subsistence agriculture became more intensive. The research also

found no general correlation between the intensification of unsustainable charcoal production and inequality or well-being. Further, when communities had easily accessible marketplaces, the research discovered that increases in the well-being of the poorest families were only seen when commercial crop production increased. According to the study's findings, localized environmental trade-offs may be short-term offset by the socioeconomic gains of agricultural growth and intensification. Since the research took place in a distinct cultural and geographical setting, it creates a contextual gap, which may not accurately reflect the dynamics of the Maasai community in Kitengela Municipality.

Research by Handavu et al. (2019) looked at how social and economic factors affected land-use and land-cover patterns in Zambia's Copperbelt miombo forests. Researchers used focus groups and household questionnaires to gather information from 372 homes and 30 people living within a 5-kilometer radius of the forest reserves. There were substantial socioeconomic predictors of forest product usage, including gender, age, education, income, family size, and resident status. Findings also indicated that changes in family size accounted for the relationship between population growth and agricultural development, which in turn explained variations in land-use and land-cover. Plus, the research showed that locals rely heavily on forest goods. Numerous socioeconomic variables showed a strong correlation with the utilization of certain forest products, including but not limited to: charcoal, building poles, firewood, wild fruits, honey, wild vegetables, thatching grass, cattle feed, bush meat, and broomstick materials. Since the research took place in a distinct cultural and geographical environment, it creates a contextual gap, which may not accurately represent the unique dynamics of the Maasai community in Kitengela Municipality.

Mootian (2021) conducted a study to determine how land use and land cover have been impacted by social wellbeing activities in Narok North Sub-County, Kenya. Targeting a population of 59,996 homes, descriptive research methodology was employed. The researchers used stratified and systematic random selection methods to choose 100 homes for the study. The research discovered that whereas settlement and agriculture areas rose from 25.2% in 1986 to over 40.6% in 2019, there were notable changes in wooded areas, which decreased from 45% in 1986 to 23% in 2019. The research also determined that political instability, urbanization, poverty, pastoralist lifestyles, religious systems, and lax rules and regulations were among the factors contributing alterations in the distribution of land. The research also discovered a strong correlation between shifts in surface and subsurface land cover as well as social and economic landscape. The research

looked at how changes in land cover and usage were affected by socioeconomic activity in Kenya's Narok North Sub-County. Thus, the research failed to address the Maasai community's social well-being or the unique circumstances of Kitengela Municipality, which creates a conceptual gap.

2.2.2 Changing Tenure Systems on the Social Well-Being

Verma (2024) looked on the historical development and contemporary challenges of India's land tenure system. The study used a historical analysis approach to examine the evolution of land ownership patterns from ancient agrarian practices through various ruling dynasties and colonial periods to post-independence reforms. The study indicated that India's land tenure system has been significantly influenced by different ruling powers throughout history, shaping current land ownership patterns. The study also established that post-independence land reforms were implemented with the aim of ensuring fair land allocation and social justice. In addition, the study indicated that the current land tenure system has far-reaching social, economic, and environmental implications affecting various stakeholders, particularly small farmers, marginalized communities, and landless laborers.

Akram et al. (2019) studied the relationship between different land lease agreements and their impact on agricultural investment decisions, focusing on sustainable growth through soil conservation and wheat productivity in Punjab, Pakistan. The study used cross-sectional data from rural households and employed a multivariate Tobit model for empirical analysis to account for possible substitution in investment choices and tenancy status endogeneity. The study found that landowners engaged in agribusiness showed a higher likelihood of investing in soil improvement and productivity enhancement measures compared to those on lease contracts. The study also established that yield per hectare was significantly higher for landowners compared to sharecroppers. In addition, the study indicated support for Marshall's assumption regarding the lower efficiency of tenants under sharecropping arrangements.

Doss and Meinzen-Dick (2020) examine stability of land tenure for women. For the purpose of comparing the tenure security of women in various, the study found that context, threats and opportunities, and the action arena (including those who promote or limit tenure security and the resources used to do so) are all important pieces of information. Key variables impacting women's tenure security across settings were also addressed in the research. Whether women are formally recognized as owners or only have influence over plots handed to them by their spouses are among

the many questions that the results shown varied greatly between research on women's land rights. The study concluded by outlining a theoretical framework for future research on the many factors and aspects of women's land tenure security.

Tseng et al. (2021) conducted a comprehensive study to evaluate the influence of land tenure security interventions on human well-being and environmental outcomes. Land tenure security initiatives were the focus of 117 studies that sought to determine their impacts. Around two-thirds of these research found beneficial effects on human health and environmental conditions. Specifically, interventions that formalized land rights through government-implemented programs, such as land titling and formalization, were particularly effective in improving well-being. This study highlights the importance of stable land ownership in improving social welfare, especially for groups like the Maasai who are highly dependent on land for subsistence. As the Maasai people face the difficulties of urbanization and shifting land use patterns, non-technical solutions, such as capacity development, may prove to be crucial; yet, this study highlights a lack of research on this topic.

Murken and Gornott (2022) conducted a systematic review to understand the extent to which land farmers' resilience to climate change and the ways in which climate change affects operationalized in the literature. This research used theme network analysis to create a web of relationships about agricultural land use and the effects of climate change settings after reviewing 106 papers, the majority of which were peer-reviewed. There were three main relationships that the research found between land tenure systems, climate change, and agricultural livelihoods: (i) the type, amount, and tenure of land that farmers adapt to changes in their environments are impacted by climate change; (ii) women, migrants, and indigenous communities are more vulnerable in agricultural systems due to specific tenure settings; and (iii) Climate change affects how people perceive the security of their tenure. However, the study highlighted that most studies have an inadequate definition of tenure security, which leads to erroneous results and significant gaps in our understanding of the best incentives for farmers' adaptive response related to land tenure.

Schürmann et al. (2020) assessed connected to changes in land cover and land tenure in the area around Kenya's Arabuko Sokoke Forest. This research mixed biophysical and socioeconomic techniques. Alterations of land cover from 1954 to 2017 were examined using Geographic Information System (GIS) and historical photographs and satellite imagery. According to the

research, crops mostly supplanted natural vegetation from 1954 to 2017. It was determined that the revenue of the land users is connected to the population of trees per plot. Additionally, the research discovered that plots with land ownership exhibited increased fragmentation when the property was inherited, although the ability to transfer ownership had no effect on the tree-to-plot ratio. Significant connections between interviewee income and tree population on land plots were found in the research. Respondents whose property was inherited had less fragmented land cover on plots than respondents whose land was acquired, according to the study.

Bollig and Österle (2018) examined the the Pokot of northwest Kenya's grazing system and its impact on community land tenure. The study examined the evolution of scientific interest in pastoral land tenure, ranging from worries about overstocking and environmental damage brought in order to highlight the non-equilibrium features of savannah habitats and locally relevant information about grazing plants, "irrational accumulating behavior" and the "tragedy of the commons" tale are used. The research provided a brief overview of the Pokot pastoralists' century-long management of common pool resources. Based on specific political and environmental implications, it was discovered that institutions of common pool resource management underwent significant changes. Specifically, major disruptions of the social-ecological system, such as drought or violence, were linked to abrupt changes in the tenure regime rather than gradual changes. The study argued that such changes in pastoral tenure regimes have not been the result of gradual processes but have occurred relatively abruptly in response to major disturbances.

Owino (2021) conducted a study to assess how gender plays a role in association between issues pertaining to land ownership and rehabilitation in the districts of Alebtong and Lira in northern Uganda. Individuals who possess property on a household, agricultural, environmental, or district scale officials, and local council leaders were surveyed via three rounds of questionnaires, and data was derived from a literature research on policy papers pertaining to land in Uganda. According to the research, most landowners used customary land tenure, and women held very little land ownership. The majority of women, according to the survey takers, were just entitled to utilize the property. Nonetheless, the research found that women played a significant role in efforts to rehabilitate damaged property. Gender plays critical role in planning and execution of land restoration initiatives, research also found that tenure of property affects restoration methods. The research found that gender plays a significant role in restoration project design and implementation, and that tenure affects restoration methods. This research looked at how different

land tenure regimes affected land reclamation efforts in Uganda's northern region. Thus, it presents a conceptual gap as the study did not specifically examine the social well-being of indigenous communities or the effects of urbanization.

2.2.3 Population Growth on the Social Well-Being

Weber and Sciubba (2019) conducted a study to examine looking at data from different parts of Europe to see how the ecosystem is impacted by the increasing human population. Using data collected from 1062 locations in 22 European countries between 1990 and 2006, researchers were able to draw conclusions on the effects of population growth on carbon dioxide emissions and urban land use changes. The study contrasted fast-growing regions against slower-growing ones in the same region using panel regressions, spatial econometric models, and propensity score matching. There was a robust correlation between rising CO2 emissions, urban land usage, and regional population growth in Western Europe, according to the research. Because it only looked at certain areas in Europe, the research lacks context, which may not accurately represent the dynamics of the Maasai community in Kitengela Municipality due to different geographical, cultural, and social and equity contexts.

Singh (2019) studied the connections between Ethiopia's social and equity progress and population increase, using Mettu town as a case study. The study included descriptive statistics in addition to quantitative and qualitative approaches. Town of Mettu's social development is negatively impacted by population expansion, according to the research. In particular, the findings showed that food shortages per capita at certain family levels, land fragmentation, a lack fast population growth had a direct impact on provision of economic and social services as well as other associated concerns. The study also found that natural population increase and migration, especially between rural and urban regions are the main sources of population expansion. Population increase has been shown to have an impact on a range of social wellbeing indices, including wealth, income, and material goods. In Mettu town, Ethiopia, the research examined the connections between population increase and social development. Thus, the research was carried out in a distant nation and inside an urban area, which creates a contextual gap, which may not accurately reflect the dynamics of the Maasai community in Kitengela Municipality.

Inoti et al. (2022) examined how the social status of Maasai women in Isinya, Kajiado County, Kenya, changed as they diversified their income streams into entrepreneurship and activities

relating to wildlife tourism. An unbiased sample of 279 women from the research region homes were included in the research, and they were interviewed in 2017 using semi-structured questionnaires. The research discovered that diversification into entrepreneurial ventures and wildlife and tourism-related pursuits had a large and beneficial impact on Maasai women's well-being. Thus, it presents a conceptual gap as the study did not explicitly examine the effects of urbanization or the interplay between changing land use, land tenure systems, and how the increase in the Maasai population has affected their economic and social conditions.

2.2.4 Cultural Practices on the Social Well-Being

Fegter (2021) examined child well-being as a cultural construct, particularly in the context of digital cultures. The study analyzed how children's concepts of well-being are shaped by cultural practices and digital environments, emphasizing that these concepts are not universal but are deeply rooted in specific cultural and social settings. This research found that children's well-being is increasingly defined by their ability to integrate into and navigate digital cultures, which may challenge traditional cultural practices. Fegter's work is relevant for understanding how urbanization and modern technology might influence the social well-being of the Maasai, especially the younger generation. Nevertheless, there is a conceptual gap in the research since it is too focused on digital cultures and fails to adequately address the intricacies of cultural practices in more conventional, non-digital settings, such as the Maasai.

Oman (2021) conducted a comprehensive review on understanding well-being data, focusing on improving social and cultural policy, practice, and research. According to the research, traditional measures of social well-being often overlook important cultural details that must be considered when interpreting well-being data. Oman's findings suggest that well-being indicators must be culturally sensitive, particularly when applied to indigenous communities like the Maasai, where communal land ownership, traditional rituals, and social obligations are central to their sense of well-being. However, the research presents a methodological gap as it does not specifically examine the impacts of urbanization on cultural practices within these communities.

Osei-Tutu et al. (2020) investigated the cultural conceptions of happiness present in the four official languages of Ghana Akan, Dagbani, Ewe, and Ga. To get a better understanding of these concepts, we spoke with local cultural specialists who are custodians of religion and health. The study revealed that in Ghanaian settings, well-being is strongly associated with good health,

positive affective states, material sufficiency, moral living, and successful navigation of normative obligations. These findings underscore the embeddedness of well-being in cultural and social contexts, which contrasts with the individualistic notions prevalent in Western cultures. This research highlights how cultural models of well-being can provide a more holistic understanding of social well-being in communities like the Maasai, who similarly value relational harmony and sustainability. However, this study focused on West African cultural contexts, presenting a geographical gap as it does not directly address the experiences of East African communities such as the Maasai.

Spencer et al. (2019) explored the integration of cultural practices into resilience promotion strategies, particularly for children in vulnerable communities. The study highlighted the intersection of race, socioeconomic status, and cultural practices in promoting resilience and well-being. Spencer et al. found that culturally informed strategies, which incorporate traditional practices and social ecologies, are more effective in fostering resilience and overall well-being. This approach is particularly pertinent to the Maasai community, where the preservation of cultural practices plays critical duty in maintaining social cohesion and identity in face of urbanization. Despite the study's insightful commentary on cultural traditions, it fails to address the Maasai or other indigenous tribes disproportionately affected by urbanization and instead concentrates on children from more generalized disadvantaged populations, hence presenting contextual gap.

2.3 Summary of Research Gaps

Previous studies on the effects of urbanization on indigenous communities have primarily focused on general impacts, with limited attention paid specifically to the socioeconomic well-being of the Maasai community in the context of Kitengela Municipality. Another limitation is that the majority of these studies have been carried out in different cultural and geographical settings, which means they may not fully capture the specific difficulties and dynamics encountered by the Maasai people in this region. The correlation between land use changes and socioeconomic characteristics is explored in this research, it presents a conceptual gap as it did not explicitly focus on the socioeconomic well-being of the Maasai community or the specific context of Kitengela Municipality. Due to its varied geographical and cultural location, this research presents a contextual gap, which may not accurately reflect the unique dynamics of the Maasai community in Kitengela Municipality.

Owino (2021) evaluated gender as it relates to land restoration in Northern Uganda and the effect of various land tenure institutions. This research does a great job of clarifying the connection between land tenure and restoration, it presents a conceptual gap, as it did not specifically examine the socioeconomic well-being of indigenous communities or the effects of urbanization. Inoti et al. (2022) assessed the influence of livelihood diversification on the socioeconomic well-being of Maasai women in Isinya, Kajiado County, Kenya. Although this study is more closely aligned with the current research, it presents a conceptual gap, as it did not explicitly examine the effects of urbanization or the interplay between changing land use, land tenure systems, and how the increase in the Maasai population has affected their economic and social conditions.

Table 1: Summary of Research Gaps

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
Singh (2019)	Relationship between population growth and social wellbeing development in Mettu town, Ethiopia	Descriptive statistical analysis (quantitative and qualitative)	Population expansion has a detrimental effect on the social wellbeing development of Mettu town.	Focused on a specific town in Ethiopia, which may not reflect the dynamics of the Maasai community in Kitengela Municipality	Examining the effect of population growth on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Weber and Sciubba (2019)	Environmental impacts of increasing human populations in Europe, including changes in urban land use and carbon dioxide emissions	Panel regressions, spatial econometric models, propensity score matching	Increasing urban land usage and carbon dioxide emissions are major consequences of Western Europe's expanding population.	Focused on environmental impacts in European regions, which may not capture the specific socioeconomic effects on indigenous communities like the Maasai	Assessing the socioeconomic impacts of urbanization, including population growth, on the Maasai community in Kitengela Municipality
Mootian (2021)	Impacts of social wellbeing activities on land use and land cover changes in Narok North Sub-County, Kenya	Descriptive research design, stratified random and systematic random sampling	Significant changes in land cover, with forest land being converted to farmland and settlements due to social wellbeing factors	Focused on land use changes in a different region of Kenya, which may not accurately reflect the dynamics in	Examining the effects of changing land use on the socioeconomic well-being of the Maasai community in Kitengela Municipality

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
				Kitengela Municipality	
Owino (2021)	Effects of gender-specific land tenure systems on land rehabilitation in northern Uganda	Literature review, questionnaires, focus group discussions	Restoration techniques are influenced by land tenure, and gender plays a significant role in the planning and execution of restoration initiatives.	Focused on land restoration in a different geographical and cultural context (Northern Uganda)	Investigating effects of changing land tenure systems on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Inoti et al. (2022)	Effect of occupation diversity on the economic and social status of Isinya Maasai women in Kenya's Kajiado County	Stratified random sampling, semi-structured questionnaires, focus group discussions, descriptive and inferential statistics	Diversification into business and wildlife tourism activities positively affected the well-being of Maasai women	While focused on the Maasai community, did not explicitly examine the effects of urbanization or the interplay between land use, land tenure, and population growth	Assessing the combined effects of changing land use, changing land tenure systems, and population growth on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Smith et al. (2019)	Impacts of land use intensification on human wellbeing and inequality in rural Mozambique	Multi-scale, multidisciplinary social-ecological methods	Wellbeing improved with intensification of smallholder agriculture, but inequality did not change; unsustainable charcoal production had no effect on wellbeing or inequality	Conducted in a different geographical and cultural context (rural Mozambique), which may not accurately reflect	Examining the effects of changing land use on the socioeconomic well-being of the Maasai community in Kitengela Municipality

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
				the dynamics of the Maasai community in Kitengela Municipality	
Handavu et al. (2019)	Socio-economic factors influencing land-use and land-cover dynamics in the Copperbelt miombo woodlands of Zambia	Household surveys, focus group discussions	Use of forest products was affected by socioeconomic characteristics such as gender, age, education level, income, and residency status; the expansion of agriculture and population increase were affected by household size.	Conducted in a different geographical and cultural setting (Zambia), which may not accurately represent the unique dynamics of the Maasai community in Kitengela Municipality	Investigating the effects of changing land use, changing land tenure systems, and population growth on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Cristo et al. (2022)	Land-use changes and socioeconomic conditions of communities along the Carajás railroad in eastern Amazonia	Analysis of socioeconomic and environmental dimensions, qualitative analysis of satellite images	Urban communities had better socioeconomic conditions than rural ones; communities near the railroad showed higher variation in socio-environmental conditions	Conducted in a different geographical and cultural context (eastern Amazonia), which may not accurately reflect the situation of the Maasai community in Kitengela Municipality	Assessing the socioeconomic impacts of urbanization, including land use changes, on the Maasai community in Kitengela Municipality

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
Appelt et al. (2022)	A comprehensive analysis of the social and economic effects of shifting agricultural land uses in Southeast Asia, including possible costs and benefits	Review of 126 cases of agricultural land use change	Results for income and employment are generally good, but those for food security, gender equality, and economic equality are negative; there are trade-offs between achieving sustainable development and just economic growth.	Focused on agricultural land use change, which may not fully capture the dynamics of urbanization and its effects on the socioeconomic well-being of the Maasai community	Examining the combined effects of changing land use, changing land tenure systems, and population growth on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Murken and Gornott (2022)	Research systematically examining the relationship between farmers' resilience to climate change and land tenure security and other aspects of land tenure	Thematic network analysis of 106 studies	Various socio-demographic groups are more or less vulnerable depending on the nature of their land tenure, and farmers' perceptions of their own tenure security are impacted by climate change.	Focused on the relationship between land tenure and climate change adaptation, which may not directly address the effects of urbanization on the socioeconomic well-being of the Maasai community	Investigating the effects of changing land tenure systems on the socioeconomic well-being of the Maasai community in Kitengela Municipality
Osei-Tutu et al. (2020)	A look at four Ghanaian languages' cultural conceptions of happiness	Interviews with local cultural experts in Ghana	Identified well-being as associated with good health, material sufficiency, moral living, and relational harmony in Ghanaian settings.	Focused on West African cultural contexts, not directly addressing the Maasai community in Kenya.	Investigating how cultural practices influence the social well-being of the Maasai community in Kitengela Municipality.

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
Fegter (2021)	Child well-being as a cultural construct, particularly in digital cultures	Analytical reflections and discourse theory in the context of digital cultures	Children's understanding of well-being is shaped by cultural practices and digital environments.	Primarily focuses on digital cultures, which may not fully capture the cultural challenges faced by traditional communities like the Maasai.	Assessing the impact of urbanization and cultural change on the well-being of the Maasai community in Kitengela Municipality.
Spencer et al. (2019)	Integration of cultural practices into resilience promotion for children in vulnerable communities	Theoretical frameworks and programming application in child development	Culturally informed strategies are effective in promoting resilience and well-being, especially in social wellbeing disadvantaged settings.	Focused on children, with a gap in addressing broader community impacts, including adults and the elderly in the Maasai community.	Exploring how cultural resilience strategies can enhance the social well-being of the Maasai community in Kitengela Municipality.
Tseng et al. (2021)	Impact of measures to ensure land tenure on economic growth, ecological sustainability, and human health	Data from 117 research projects on land tenure security initiatives	Enhanced land tenure security was shown to have a favorable effect on human well-being and environmental outcomes in almost two-thirds of the investigations.	Lacks focus on non-technical interventions and their effects on communities like the Maasai facing urbanization.	Assessing the impact of changing land tenure systems on the socioeconomic well-being of the Maasai community in Kitengela Municipality.

Researcher	Area of Study	Methodology	Findings	Knowledge Gap(s)	Focus of current study
Doss and Meinzen-Dick (2020)	Analysis of women's land tenure security	Conceptual framework	Presented a theoretical framework for the characterization and analysis of the variables impacting women's land tenure security.	Did not explicitly examine the effects of urbanization or the interplay between changing land use, land tenure systems, and population growth on the socioeconomic well-being of indigenous communities	Investigating the effects of changing land tenure systems on the socioeconomic well-being of the Maasai community in Kitengela Municipality, with a focus on gender dyn

2.4 Conceptual Framework

It is set of concepts, ideas, and hypotheses. Understanding connections between many variables and ideas is made easier with its methodical and structured approach. Conceptual framework is shown in Figure 1.

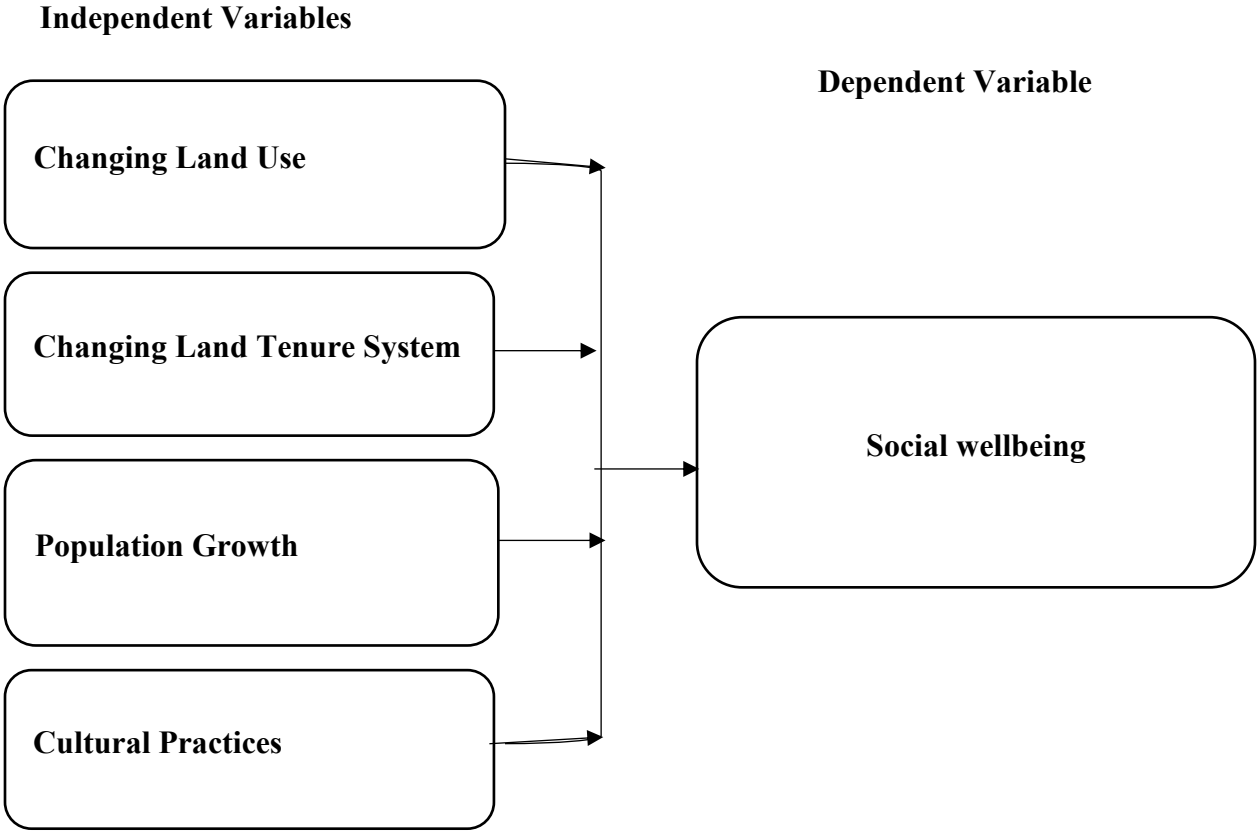

Figure 1: Conceptual Framework

2.5 Operationalization of the Variables

Table 2 outlines operationalization of the variables for the current study, including the independent variables (changing land use, changing land tenure systems, population growth and cultural practices) and the dependent variable (social well-being of the Maasai community). For each variable, specific indicators are listed to measure the respective concepts. The measurement scale for all variables is set as an interval scale, utilizing a five-point Likert scale. The tool of analysis for collecting data on these variables is a questionnaire, with six statements or items for each variable.

Table 2: Operationalization of the Variables

Variable	Indicators	Measurement Scale	Tools of Analysis
Changing Land Use	Land converted to urban development Grazing lands lost Change in traditional land use patterns	Nominal interval using 5-point Likert scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5 = Strongly Agree	Questionnaire 6 statements
Changing Land Tenure Systems	Land under communal tenure Land under individual tenure Degree of land privatization	Nominal interval using 5-point Likert scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5 = Strongly Agree	Questionnaire 6 statements
Population Growth	Number of births Number of in-migrants Population density	Nominal interval using 5-point Likert scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5 = Strongly Agree	Questionnaire 6 statements
Cultural Practices	Participation in traditional ceremonies Use of traditional language Adherence to traditional dress codes	Nominal interval using 5-point Likert scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5 = Strongly Agree	Questionnaire 6 statements
Social Well-being of the Maasai Community	Access to education Access to healthcare Community cohesion Cultural identity preservation	Nominal interval using 5-point Likert scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5 = Strongly Agree	Questionnaire 6 statements

2.6 Chapter Summary

This part reviewed relevant theories like Ecological Modernization Theory, Cultural Ecology Theory, and Modernization Theory. The empirical literature review on land use changes, land tenure systems, population growth, and socioeconomic outcomes identified research gaps that the current study addressed. The study's focus on urbanization's effects on Kitengela Municipality's Maasai community's socioeconomic well-being was highlighted by summarising these research gaps. Figure 1 showed how changing land use, land tenure systems, and population growth affected Maasai socioeconomic well-being. Table 2 describes how variables was measured and analysed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Chapter's research methodologies were utilised to analyze urbanization's influence on the Maasai population in Kitengela Municipality, Kajiado County. Design, target population, sampling, data collection, pilot study, analysis, and presentation are all described, along with the ethical concerns that were made throughout the investigation.

3.1 Research Design

A correlational research design was employed in this study to examine the relationship between urbanization and social well-being of the Maasai community. This design was chosen because it allows for the investigation of relationships between variables using statistical methods such as correlation and regression analysis, which are central to this study's objectives. The design followed a systematic procedure that began with problem definition, where research objectives were clearly identified, variables to be measured were defined, target population was specified, and data collection methods were determined.

The research process involved several sequential phases: research planning (developing sampling framework, designing research instruments, planning data collection schedule, establishing quality control measures), data collection (administering questionnaires, conducting key informant interviews, documenting field observations), data processing (organizing collected data, coding responses, cleaning data), and analysis and interpretation using statistical techniques to identify patterns and relationships between variables.

This correlational design was chosen for several compelling reasons. First, it enables the examination of relationships between multiple variables simultaneously without manipulating the study environment (Kumar, 2019). This was particularly important for investigating how various aspects of urbanization (land use, tenure systems, population growth, and cultural practices) relate to social well-being. Second, the design supports both descriptive and inferential statistical analyses, allowing for a more comprehensive understanding of the relationships between variables

(Nassaji, 2015). Third, it facilitates the testing of hypotheses about relationships between variables, making it suitable for predictive analyses (Shields & Rangarajan, 2013).

3.2 Target Population

Researchers use the term "population" to describe any set of things, whether they be people, places, things, or things themselves that could provide a sample for the study (Shao, 2001). For the current study, target population was identified as Maasai community residing within the Kitengela Municipality. According to Borg and Gall (1989), the term "target population" or "universe" refers to the broad category that includes all the people, places, and things that an investigator hopes to draw conclusions about based on their research. According to the Kenya National Bureau of Statistics (KNBS, 2019), the total population of Kitengela Municipality is approximately 234,000 people. In addition to the Maasai community members, the target population also includes 15 Administrative Leaders, which consist of community leaders and chiefs from the Maasai community. The Maasai community within this geographical area constitutes the target population for the current study.

Table 3: Target Population

Area within Kitengela Municipality	Target Population	Administrative Leaders and Location
Kitengela Town	80,000	1 Chief (Kitengela Location) 1 Assistant Chief (Kitengela Sub-location) 2 Community Leaders
Isinya	50,000	1 Chief (Isinya Location) 1 Assistant Chief (Isinya Sub-location) 1 Community Leader
Oloosirkon	40,000	1 Chief (Oloosirkon Location) 1 Community Leader
Kisaju	30,000	1 Assistant Chief (Kisaju Sub-location) 1 Community Leader
Acacia	20,000	1 Assistant Chief (Acacia Sub-location)

		1 Community Leader
		1 Assistant Chief (Noonkopir Sub-location)
Noonkopir	14,000	1 Community Leader
Total	234,000	15

Source: KNBS, 2019

3.3 Sample and Sampling Technique

A systematic approach of choosing a certain number of people or units to take part in a research is known as the sampling technique (Ngulube, 2005). For the current research, a combination of sampling techniques was employed. Stratified random sampling technique was utilized. This involves breaking down the target population into smaller, more manageable subsets (or "strata") based on their shared characteristics (Cochran, 1977). In this case, the Maasai community in Kitengela Municipality was stratified according to aspects like age, gender, socioeconomic status, and length of residence. A systematic technique was then employed to choose sample from each stratum, with sample size for each stratum proportional to its representation in the overall target population.

It is an essential component that determines the accuracy and reliability of study findings. Quantity is measure of how many people or units were selected randomly from the population of interest to take part in research. It is vital to choose an adequate sample size so that the research may make valid conclusions and discover significant impacts (Singh & Masuku, 2014). One of the commonly used formulas for calculating sample size is the Fisher's formula (Fisher, 1922). This formula is particularly useful when the target population is finite and known. The Fisher's formula is expressed as:

n = Z^2 p q N / (e^2 (N - 1) + Z^2 p q)

Where:

n = desired sample size

Z = standard normal deviate (1.96 for 95% confidence level)

p = proportion of the target population estimated to have the characteristic being measured (assume 0.5 for maximum sample size)

q = 1 - p

N = total target population

e = acceptable margin of error (assume 0.05 for 95% confidence level)

Given:

N = 234,000 (total population of Kitengela Municipality)

p = 0.5

q = 1 - 0.5 = 0.5

Z = 1.96 (for 95% confidence level)

e = 0.05 (for 95% confidence level)

Thus, using formula:

$n = (1.96)^2\ 0.5\ 0.5\ 234{,}000 / ((0.05)^2\ (234{,}000 - 1) + (1.96)^2\ 0.5\ 0.5)$

n = 384

Therefore, the desired sample size is approximately 384. The calculated sample size was further divided into the respective strata to ensure proportional representation of the different demographic characteristics within the Maasai community. This stratified sampling approach is advantageous as it helps to capture the essential features.

Table 4: Distribution of the Sample Size

Area within Kitengela Municipality	Target Population	Proportion (%)	Sample Size
Kitengela Town	80,000	34%	131
Isinya	50,000	21%	82
Oloosirkon	40,000	17%	66
Kisaju	30,000	13%	49
Acacia	20,000	9%	33
Noonkopir	14,000	6%	23
Total	**234,000**	**100%**	**384**

3.4 Instruments

The research employed a quantitative data gathering methods. The quantitative component, the researchers developed structured questionnaire to gather numerical data regarding social well-being indicators of the Maasai community, including access to education, healthcare, community cohesion, and cultural identity preservation. The questionnaire primarily comprised closed-ended questions using five-point Likert scale to ensure consistency and ease of quantitative analysis. These closed-ended questions were designed to strictly deal with study's objectives and questions.

3.5 Pilot Study

A pilot study was conducted in Kiserian, a neighboring municipality to Kitengela, to test research tools and refine data collection protocols before the main data collection. Using stratified random sampling, 40 participants (10% of the estimated sample size) were selected from the Maasai community in Kiserian, following recommendations by Connelly (2008) and Hertzog (2008). The participants were distributed across Kiserian Town (15), Oloolua (10), Ngong (8), and Rimpa (7). The pilot involved administering quantitative survey questionnaires in both English and Maa languages, with feedback used to refine the research instruments. The data collected from this pilot study was not included in the final analysis to maintain the integrity of the main study findings.

3.5.1 Validity

Preliminary testing and expert evaluations confirmed that the study tools were valid. To guarantee that the instruments are assessing the desired constructs, specialists in the area of urbanization and socioeconomic well-being assessed the questionnaire and interview guide. The feedback from the experts was used to revise and refining the instruments before the pilot study. The researchers also made sure the questions were easy to understand by administering a pilot test to a subset of the intended respondents. The process helped identify any issues with the wording, flow, or sensitivity of the questions, allowing the researchers to make necessary modifications to enhance the validity of the instruments.

Face Validity: This refers to the extent to which a test appears to measure what it claims to measure (Nevo, 1985). In the pilot research, people were asked to rate how well the interview questions and questionnaire items were explained and how clear they were. This helped ensure that the instruments appear relevant and appropriate to the respondents, enhancing their willingness to participate honestly in the main study.

Construct Validity: This refers to the degree to which a test measures what it claims, or purports, to be measuring (Cronbach & Meehl, 1955). The pilot study allowed researchers to perform preliminary statistical analyses to assess whether the items in the questionnaire are measuring the intended constructs (e.g., social well-being, cultural practices). To make sure the questionnaire questions were structured in a way that was consistent with the study's theoretical components, factor analysis was used.

3.5.2 Reliability

The researchers performed a test-retest reliability study to guarantee that the quantitative data gathering tool was reliable. A subset of the pilot study participants was asked to complete the questionnaire twice, with a time interval of two weeks between the administrations. The study used Cronbach's alpha to test the reliability of the research instruments. The coefficients obtained were: changing land use (0.782), changing land tenure systems (0.815), population growth (0.793), cultural practices (0.846), and social well-being (0.867). All variables showed coefficients above the recommended threshold of 0.7, indicating high reliability of the measurement instruments.

3.6 Data Collection Procedure

A pilot research and any required instrument adjustments were followed by the real data collection. The researchers first sought approval and permission from the relevant authorities, such as the local government and community leaders, to conduct the study in the Kitengela Municipality. Data collection commenced after obtaining approval from the National Commission for Science, Technology and Innovation (NACOSTI) as shown in Appendix III, and the relevant county authorities in Kitengela Municipality. Once the necessary approvals are obtained, the researchers proceeded with the data collection. Members of the Maasai community who were randomly selected were asked to fill out standardized questionnaires as part of the quantitative component. Researchers ensured that participants' free consent to participate was confirmed after explaining the study's purpose to them. The completed surveys were gathered, and the information was added to an electronic database so that it was examined further.

3.7 Data Analysis and Presentation

Data analysis employed both descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics included frequencies, percentages, means and standard deviations. Inferential statistics included correlation analysis to examine relationships between variables, and multiple regression analysis to test the hypotheses.

The multiple linear regression equation was:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \varepsilon$$

Where:

Y = represents the dependent variable, which is the social well-being of the Maasai community.

B_0 = is the constant or intercept.

The partial regression coefficients, denoted as B_1, B_2, B_3, and B_4, show how much the dependent variable changes when the independent factors vary by one unit.

X_1 = changes in land use.

X_2 = changes in tenure systems.

X_3 = population growth.

X_4 = cultural practices.

ε = error or residual.

3.8 Ethical Considerations

Ethical considerations in research refer to the principles, guidelines, and moral standards that researchers must adhere to while conducting their studies within indigenous communities. They guide the research design and practices, especially when dealing with sensitive cultural contexts like the Maasai community. These considerations are essential in ensuring the protection of traditional rights, cultural welfare, and communal dignity, as well as the integrity of the research process itself. Key ethical principles include informed consent, voluntary participation, confidentiality, privacy, and anonymity.

3.8.1 Informed Consent

Informed consent was a fundamental ethical principle in this research involving the Maasai community. It involved providing participants with comprehensive information about the study's purpose, focusing on understanding urbanization's effects on their social well-being. The consent process was conducted with cultural sensitivity, ensuring participants understood all procedures, potential impacts, and benefits in their preferred language. Written consent was obtained while respecting traditional decision-making processes within the Maasai community.

3.8.2 Voluntary Participation

The study ensured voluntary participation by respecting the Maasai community's hierarchical structure and cultural protocols. Participants were informed of their right to withdraw at any time without consequences or explanation. Special attention was paid to ensuring that community pressure or traditional obligations did not influence individual participation decisions. This was particularly important given the communal nature of Maasai society.

3.8.3 Confidentiality

Given the sensitive nature of information about land use changes and cultural practices, strict confidentiality measures were implemented. All information shared about land tenure systems, population dynamics, and cultural adaptations was protected. The research team-maintained confidentiality by securing data storage and limiting access to authorized personnel only. This was crucial in maintaining trust with the Maasai community.

3.8.4 Privacy

Privacy considerations were paramount when discussing sensitive topics like cultural practices and social well-being. Participants were assured control over what information they shared about their experiences with urbanization. The research respected traditional privacy norms and cultural boundaries, allowing participants to decline answering questions about sensitive cultural matters or personal experiences with land use changes.

3.8.5 Anonymity

To protect participant identities within the close-knit Maasai community, strict anonymity measures were implemented. Each participant was assigned a unique numerical code, and all identifying information was removed from research documents. This was particularly important when discussing potentially contentious issues like changing land tenure systems or cultural adaptations to urbanization. The study ensured that no individual responses could be traced back to specific community members.

3.9 Chapter Summary

The chapter highlights the methods used by the researcher to conduct the survey. It highlights the population of target, the sample size and the method that was used to analyse the findings.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

This chapter focused on data analysis, findings, and interpretation. Results were presented in tables and figures. The analyzed data was arranged under themes that reflected the research objectives.

4.1 Presentation of Research Findings

It presents detailed findings of research, starting with the response rate and moving through the demographic characteristics of the respondents. It then provides descriptive statistics for each of the study variables, including changing land use, changing tenure systems, population growth, cultural practices, and social well-being. The section also includes correlation and regression analysis.

4.1.1 Response Rate

It is a critical indicator of study's reliability and representativeness. Here is the response rate for this research, as seen in Table 5.

Table 5: Response Rate

Response	Frequency	Percent
Returned	368	96%
Unreturned	16	4%
Total	384	100%

The results show an exceptionally high response rate of 96%, with 368 out of 384 questionnaires successfully completed and returned. Only 4% (16 questionnaires) were unreturned. This high response rate significantly improves credibility and reliability of findings. Suggesting that data collected represents highly the target population, which strengthens the validity of conclusions drawn from this research. The high participation rate also indicates that the study topic resonated with the Maasai community, reflecting their interest in and concern about the influence of urbanization on their social well-being.

4.1.2 Demographic Characteristics

It presents the demographic characteristics of participants, like their gender, age, duration of residence in Kitengela Municipality, and highest level of education. These characteristics provide important context for understanding the composition of the study sample and interpreting the research findings.

4.1.2.1 Gender of the Respondents

Gender distribution of participants is an important factor in understanding representation of the Maasai community in this study. The results broken down by gender are shown in Figure 2.

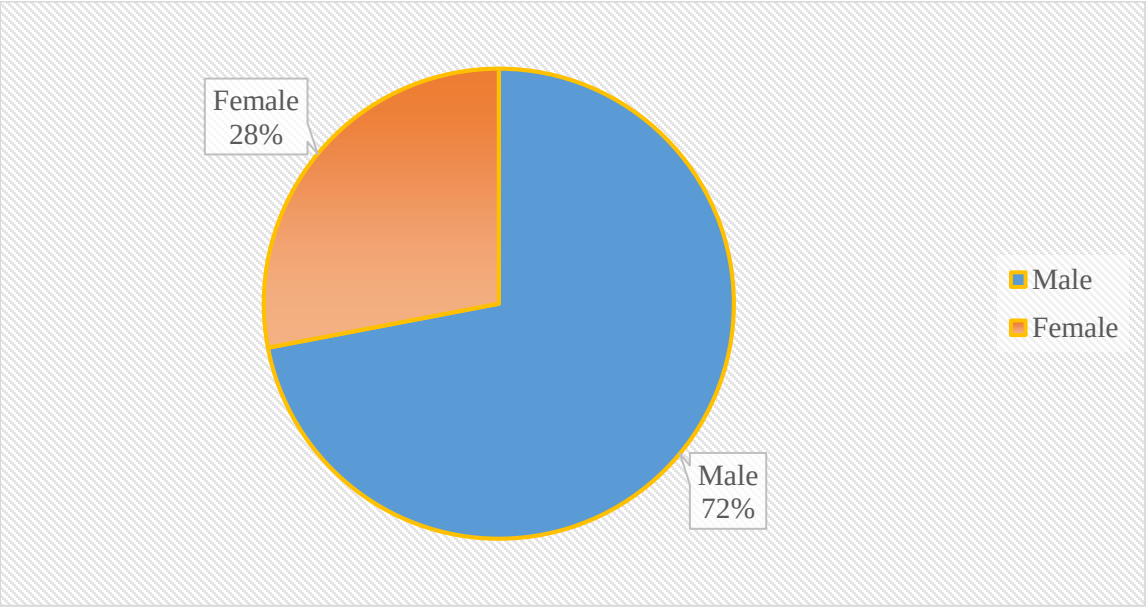

Figure 2: Gender of the Respondents

The results shown in Figure 2 indicate that most participants were male, accounting for 72% (264) of the sample, while females comprised 28% (104) of the respondents. This disparity reflects existing cultural barriers where women often require permission from male household heads to participate in research activities, and some are hesitant to engage with external researchers due to traditional customs that designate men as primary community spokespersons.

4.1.2.2 Age of the Respondents

Age distribution of participants provides insight into the generational representation in the study. The age distribution of the participants is shown in Figure 3.

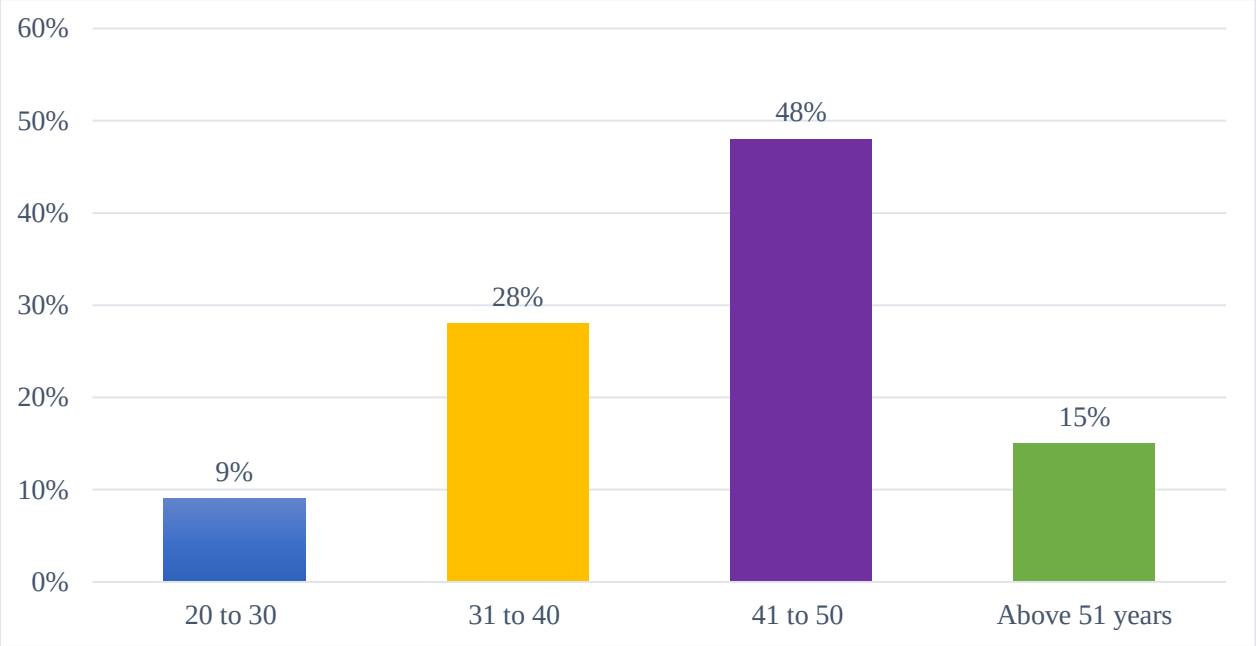

Figure 3: Age of the Respondents

Figure 3 indicates that largest age group was 41 to 50 years, representing 48% (177) of the sample. This was followed by 31 to 40 years at 28% (103), those above 51 years at 15% (54), and the 20 to 30 years age group at 9% (34). This age distribution shows that most participants were middle-aged, suggesting a population with significant life experience and potential involvement in community matters.

4.1.2.3 Duration of Residence in Kitengela Municipality

The length of time respondents has lived in Kitengela Municipality is crucial for understanding their experience with the urbanization process. The distribution of respondents by period of residency is seen in Figure 4.

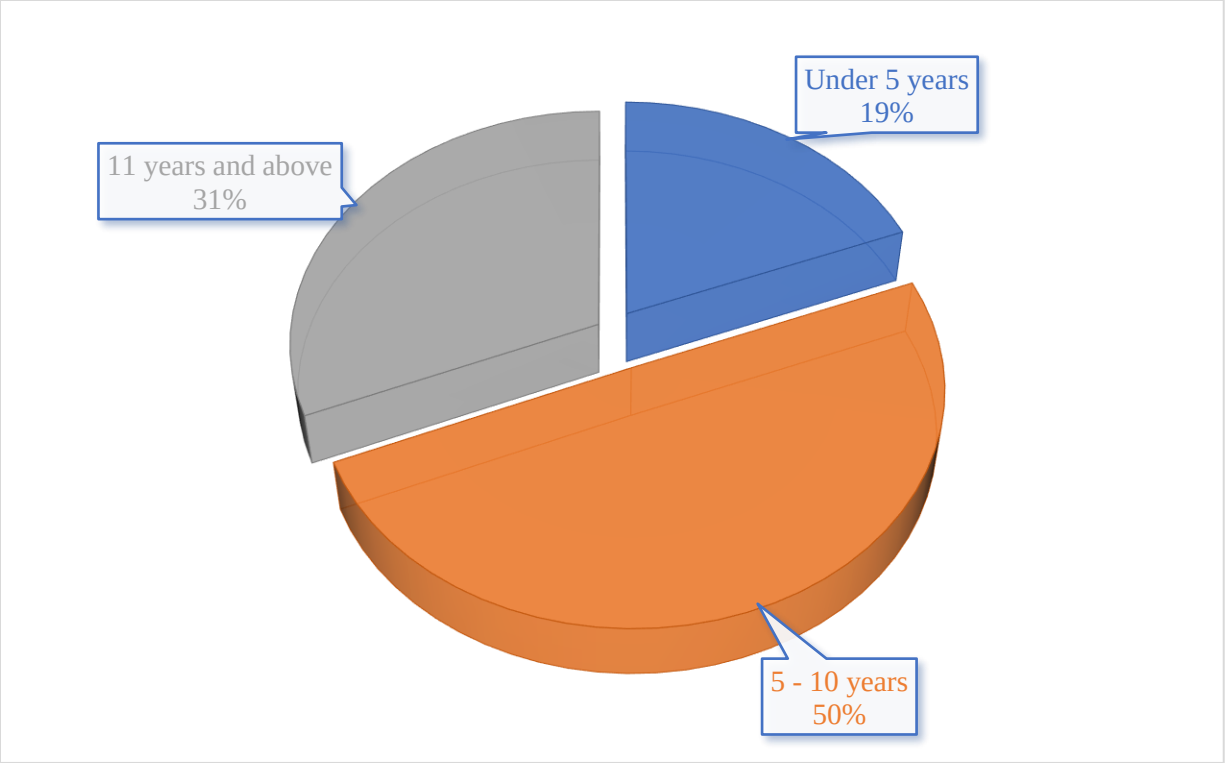

Figure 4: Duration of Residence in Kitengela Municipality

Figure 4 shows that half of the respondents (50% or 183) have lived in Kitengela Municipality for 5-10 years. This is followed by 31% (115) who have resided there for 11 years or more, and 19% (70) who have lived there for less than 5 years. The distribution shows that most participants have substantial experience living in the area during its urbanization process, providing valuable insights into the changes occurring over time.

4.1.2.5 Highest Level of Education

Participants' educational background can influence their perceptions and experiences with urbanization. Based on their greatest degree of education, Table 6 shows how the respondents were distributed.

Table 6: Highest Level of Education

	Frequency	Percentage
No formal education	27	7%
Primary education	34	9%
Secondary education	48	13%
Vocational/technical training	108	29%
Undergraduate degree	105	29%
Postgraduate degree	46	13%
Total	368	100%

Table 6 shows that the most common education levels among respondents were vocational/technical training and undergraduate degrees, each accounting for 29% (108 and 105 respondents respectively). This was followed by secondary education and postgraduate degrees, each at 13% (48 and 46 respondents). Primary education accounted for 9% (34), while 7% (27) had no formal education. This distribution indicates a relatively well-educated sample, with 71% having education beyond the secondary level, which may influence their perceptions and experiences of urbanization impacts.

4.1.3 Descriptive Statistics

This part provides a detailed analysis of respondents' perceptions and experiences with changing land use, tenure systems, population growth, cultural practices, and social well-being in the context of urbanization in Kitengela Municipality. The analysis incorporates measures of central tendency and dispersion to provide a comprehensive overview of the data collected.

4.1.3.1 Descriptive Statistics for Changing Land Use

This subsection examines the respondents' views on how land use has changed in their community due to urbanization. It covers aspects such as urban development, grazing land availability, changes in traditional land usage patterns, and effect of these changes on Maasai community.

Table 7: Descriptive Statistics for Changing Land Use

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. D
Area of urban development has increased in our community.	18%	38%	6%	22%	17%	2.81	1.40
The amount of available grazing land has decreased.	6%	5%	2%	71%	17%	3.87	0.95
The degree of change in traditional land use patterns has been significant.	2%	0%	4%	82%	12%	4.00	0.62
The conversion of land from pastoralism to urban development has negatively impacted my community.	1%	1%	14%	56%	29%	4.11	0.71
The loss of grazing lands has affected the traditional livelihood activities of the Maasai community.	1%	0%	12%	26%	61%	4.46	0.78
The Maasai community has faced challenges in adapting to the changes in land use.	5%	1%	12%	20%	62%	4.34	1.06
Average						**3.932**	**0.919**

Table 7 shows majority (94%) of participants agreed that degree of change in traditional land use patterns has been significant, with mean of 4.00 and SD of 0.62. This table also indicates that a majority (88%) agreed that the amount of available grazing land has decreased, with mean of 3.87 and SD of 0.95. Furthermore, significant majority (87%) agreed that the loss of grazing lands has affected the traditional livelihood activities of the Maasai community, with mean of 4.46 and SD of 0.78. Table also reveals that a majority (85%) agreed the conversion of land from pastoralism to urban development has negatively impacted their community, with mean of 4.11 and SD of 0.71. Further, a majority (82%) agreed that the Maasai community has faced challenges in adapting

to the changes in land use, with mean of 4.34 and SD of 1.06. However, only a minority (39%) agreed that the area of urban development has increased in their community, with mean of 2.81 and SD of 1.40. Overall mean for changing land use is 3.932 with SD of 0.919. This mean score, close to 4 on a 5-point scale, implies that respondents generally agree that significant changes have occurred in land use due to urbanization. SD of 0.919 shows moderate level of consistency in responses.

4.1.3.2 Descriptive Statistics for Changing Tenure Systems

This subsection examines respondents' perceptions of how urbanisation has impacted their community's land tenure systems. It discusses communal and individual land ownership, land privatisation, and how these changes affect the Maasai community's traditional land management and cultural practices.

Table 8: Descriptive Statistics for Changing Tenure Systems

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. D
Area of land under communal ownership has decreased.	3%	11%	8%	35%	43%	4.04	1.10
The area of land under individual ownership has increased.	4%	7%	2%	56%	30%	4.01	1.00
The degree of land privatization has been significant.	8%	9%	6%	53%	24%	3.75	1.16
The shift from communal to individualized land tenure has impacted the Maasai community's traditional land management practices.	3%	2%	15%	49%	32%	4.06	0.88
Changes in land access and ownership rights have affected the Maasai community's	4%	1%	15%	37%	44%	4.15	0.97

ability to maintain their cultural practices.							
The Maasai community has faced challenges in adapting to the changes in land tenure systems.	9%	2%	14%	31%	44%	3.98	1.22
Average						**3.998**	**1.055**

Table 8 shows that most (78%) of participants agreed that area of land under communal ownership has decreased, with mean of 4.04 and SD of 1.10. This table also indicates that significant majority (86%) agreed that the area of land under individual ownership has increased, with mean of 4.01 and SD of 1.00. Furthermore, most (77%) agreed that degree of land privatization has been significant, with mean of 3.75 and SD of 1.16. Table also shows that a large majority (81%) agreed that shift from communal to individualized land tenure has impacted the Maasai community's traditional land management practices, with mean of 4.06 and SD of 0.88. Additionally, significant majority (81%) agreed that changes in land access and ownership rights have affected the Maasai community's ability to maintain their cultural practices, with mean of 4.15 and SD of 0.97. Lastly, a majority (75%) agreed that Maasai community has faced challenges in adapting to the changes in land tenure systems, with mean of 3.98 and SD of 1.22. Overall mean for changing tenure systems is 3.998 with SD of 1.055. This mean score, very close to 4 on a 5-point scale, implies that respondents strongly agree that significant changes have occurred in land tenure systems. SD of 1.055 reveals moderate level of variation in responses.

4.1.3.3 Descriptive Statistics for Population Growth

This subsection examines the respondents' perceptions of population growth in their community and its effects on various aspects of their lives. It covers topics such as birth rates, migration, population density, and the impact of these changes on resources, infrastructure, and traditional livelihood activities of the Maasai community.

Table 9: Descriptive Statistics for Population Growth

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. D
Birth rate in our community has	4%	6%	10%	40%	40%	4.04	1.07

increased significantly.							
There has been a noticeable increase in the number of people moving into our area.	4%	8%	2%	54%	33%	4.05	0.99
The number of people per hectare of land has increased.	8%	10%	6%	51%	26%	3.78	1.16
The increasing population density has put pressure on the available resources and infrastructure.	5%	4%	13%	44%	35%	3.99	1.03
Rural-urban migration has led to changes in the demographic composition of the Maasai community.	4%	4%	10%	35%	47%	4.16	1.03
The population growth has made it more challenging for the Maasai community to maintain their traditional livelihood activities.	10%	1%	13%	35%	41%	3.95	1.23
Average						**3.995**	**1.083**

Table 9 shows that significant majority (80%) of participants agreed that birth rate in their community has increased significantly, with mean of 4.04 and SD of 1.07. This table also indicates that large majority (87%) agreed that there has been a noticeable increase in the number of people moving into their area, with mean of 4.05 and SD of 0.99. Furthermore, a most (77%) agreed that number of people per hectare of land has increased, with mean of 3.78 and SD of 1.16. This table also shows that a significant majority (79%) agreed that increasing population density has put pressure on the available resources and infrastructure, with mean of 3.99 and SD of 1.03. Additionally, large majority (82%) agreed that rural-urban migration led to changes in demographic composition of the Maasai community, with mean of 4.16 and SD of 1.03. Lastly, a majority (76%) agreed that population growth has made it more challenging for the Maasai community to keep their traditional livelihood activities, with mean of 3.95 and SD of 1.23. Overall

mean for population growth is 3.995 with SD of 1.083. This mean score, very close to 4 on a 5-point scale, implies that respondents strongly agree that significant population growth has occurred and is impacting their community. SD of 1.083 indicating moderate level of variation in responses.

4.1.3.4 Descriptive Statistics for Cultural Practices

This subsection examines the respondents' perceptions of how cultural practices have been affected by urbanization in their community. It covers aspects such as participation in traditional ceremonies, language fluency, traditional dress, and the impact of urbanization on maintaining cultural practices, especially among the younger generation.

Table 10: Descriptive Statistics for Cultural Practices

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. D
Frequency of participation in traditional ceremonies has decreased.	3%	8%	10%	40%	39%	4.04	1.04
The level of fluency in the traditional language among community members has declined.	5%	5%	2%	52%	36%	4.08	1.02
The frequency of wearing traditional dress has reduced.	8%	7%	5%	53%	27%	3.82	1.16
Urbanization has made it difficult to maintain traditional cultural practices.	3%	3%	8%	45%	41%	4.17	0.94
The younger generation shows less interest in learning and practicing traditional customs.	4%	2%	12%	36%	46%	4.17	1.00
There are fewer opportunities to	14%	1%	13%	30%	41%	3.84	1.35

engage in traditional cultural activities due to urbanization.		
Average	**4.020**	**1.086**

Table 10 shows that a significant majority (79%) of the respondents agreed that the frequency of participation in traditional ceremonies has decreased, with a mean of 4.04 and SD of 1.04. This table also indicates that a large majority (88%) agreed that the level of fluency in the traditional language among community members has declined, with mean of 4.08 and SD of 1.02. In addition, a majority (80%) agreed that the frequency of wearing traditional dress has reduced, with mean of 3.82 and SD of 1.16. This table again shows that a significant majority (86%) agreed that urbanization has made it difficult to maintain traditional cultural practices, with mean of 4.17 and SD of 0.94. Moreover, a large majority (82%) agreed that the younger generation shows less interest in learning and practicing traditional customs, with mean of 4.17 and SD of 1.00. Lastly, a majority (71%) agreed that there are fewer opportunities to engage in traditional cultural activities due to urbanization, with mean of 3.84 and SD of 1.35. Overall mean for cultural practices is 4.020 with SD of 1.086. This high mean score (above 4 on a 5-point scale) implies that respondents generally agree that urbanization has had significant adverse effect on their cultural practices. SD of 1.086 suggests a moderate level of variation in responses, indicating that while there is a general consensus, there are also some differences in individual experiences or perceptions.

4.1.3.5 Descriptive Statistics for Social Well-Being

This section explores respondents' perceptions of how urbanisation has impacted various aspects of social well-being in their communities. It addresses issues such as educational access, health care utilisation, community participation in decision-making, cultural practice retention, and overall adaptation to urbanisation.

Table 11: Descriptive Statistics for Social Well-Being

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. D

Access to education has improved in our community.	7%	16%	4%	51%	22%	3.65	1.19
The number of health facility visits per year has increased.	7%	2%	16%	58%	17%	3.76	0.98
The level of community participation in local decision-making has changed.	6%	1%	7%	50%	36%	4.09	1.00
The degree of cultural practice retention has been affected by urbanization.	8%	0%	7%	32%	53%	4.21	1.14
The changes brought about by urbanization have positively impacted the overall social well-being of the Maasai community.	0%	1%	5%	49%	46%	4.40	0.61
The Maasai community has been able to adapt and maintain their social well-being despite the challenges posed by urbanization.	0%	5%	1%	60%	34%	4.23	0.70
Average						**4.057**	**0.936**

Table 11 shows that majority (73%) of the respondents agreed that access to education has improved in their community, with mean of 3.65 and SD of 1.19. This table also indicates that a large majority (75%) agreed that number of health facility visits per year has increased, with a mean of 3.76 and SD of 0.98. Furthermore, significant majority (86%) agreed that the level of community participation in local decision-making has changed, with mean of 4.09 and SD of 1.00. This table also shows that a large majority (85%) agreed that the degree of cultural practice retention has been affected by urbanization, with mean of 4.21 and SD of 1.14. In addition, an overwhelming majority (95%) agreed that the changes brought about by urbanization have positively impacted the overall social well-being of the Maasai community, with mean of 4.40 and SD of 0.61. Lastly, a significant majority (94%) agreed that the Maasai community has been able

to adapt and maintain their social well-being despite the challenges posed by urbanization, with mean of 4.23 and SD of 0.70. Overall mean for social well-being is 4.057 with SD of 0.936. This high mean score, above 4 on a 5-point scale, implies that respondents generally agree that urbanization has had a substantial effect on various aspects of their social well-being, with many perceiving these impacts as positive. SD of 0.936 suggests a moderate level of consistency in responses, indicating general consensus among respondents.

4.1.4 Validity and Reliability Results

4.1.4.1 Validity

Picco, Middleton, Bruno, Kowalski and Nielsen (2020) define validity as the extent to which evidence and expert opinions support the interpretations of test scores in measuring research constructs. This study examined construct validity, content validity, and face validity to ensure instrument accuracy. Construct validity measures whether a test evaluates what it claims to measure. The study employed Keyser Meyer Olkin (KMO) method and test of Sphericity as recommended by Dikko (2019). Results are presented in Table 12.

Table 12: Construct Validity

Variable	KMO Value	Sphericity
Changing Land Use	0.612	0.021
Changing Land Tenure Systems	0.528	0.003
Population Growth	0.545	0.000
Cultural Practices	0.634	0.001
Social Well-being	0.571	0.028

The variables demonstrated KMO values above 0.4 and Sphericity P-values below 0.05, confirming validity in measuring intended constructs. For content validity, procedures recommended by Cooper and Schindler (2013) were followed. This involved identifying existing scales from literature, developing the data collection instrument, and consulting two experts each in urbanization impacts and indigenous community well-being. Their feedback was incorporated to enhance clarity, comprehensiveness, and relevance. Face validity was established by having

selected Maasai community members review the instrument to ensure it appropriately assessed urbanization impacts and social well-being in their cultural context.

4.1.4.2 Reliability

Reliability measures the instrument's consistency in generating accurate data. Following Bryman and Bell (2018), a reliability index of 0.7 or 70% was considered satisfactory. The study used Cronbach's alpha coefficient, recommended by McNeish (2018), to assess internal consistency. Results are shown in Table 13.

Table 13: Reliability Test

Variable	Items	Cronbach Alpha	Decision
Changing Land Use	6	0.782	Accepted
Changing Land Tenure Systems	6	0.815	Accepted
Population Growth	6	0.793	Accepted
Cultural Practices	6	0.846	Accepted
Social Well-being	6	0.867	Accepted

All variables showed Cronbach alpha coefficients above 0.7, indicating high reliability of the measurement instruments. This aligns with Cronbach's (1951) recommended threshold of 0.7 for acceptable reliability.

4.1.5 Correlation Analysis

Here the results of the correlation analysis are presented, they examine relationships between study variables: social well-being, changing land use, tenure systems, population growth, and cultural practices. The analysis helps to understand strength and direction of associations between these factors in context of urbanization's impact on the Maasai community in Kitengela Municipality.

Table 14: Correlation Analysis

	Social Well-being	Changing Land-use	Tenure Systems	Population Growth	Cultural Practices
Social Well-being	1.000				
Changing Land-use	.718**	1.000			
	0.000				
Tenure Systems	.652**	.480**	1.000		
	0.000	0.000			
Population Growth	.736**	.539**	.549**	1.000	
	0.000	0.000	0.000		
Cultural Practices	.684**	.533**	.431**	.580**	1.000
	0.000	0.000	0.000	0.000	

Table 14 shows that there are significant positive correlations between all variables in the study. Changing land use reveals a strong positive correlation with social well-being ($r = 0.718$, $p = 0.000$), suggesting that as land use changes due to urbanization, it significantly impacts the social well-being of the Maasai community. These finding conforms to Smith et al. (2019), who reported that land use intensification affected well-being, although in their study, well-being increased with agricultural intensification. A strong positive correlation exists between changing tenure systems and social well-being ($r = 0.652$, $p = 0.000$), indicating that shifts in land ownership patterns are closely related to changes in social well-being. The results align with Owino (2021), who found that land tenure significantly affects community dynamics and well-being.

The strongest correlation is observed between population growth and social well-being ($r = 0.736$, $p = 0.000$). It indicates that demographic changes have a substantial effect on social well-being of the community. This finding supports Singh's (2019) study, which found that population growth

significantly affected socioeconomic development in urban areas. Cultural practices show a strong positive correlation with social well-being ($r = 0.684$, $p = 0.000$), implying that changes in cultural practices are closely associated with changes in social well-being. This aligns with Osei-Tutu et al. (2020), who emphasized the strong connection between cultural practices and well-being in African contexts.

4.1.6 Regression Analysis

This part gives results of multiple regression analysis conducted to determine impact of changing land use, tenure systems, population growth, and cultural practices on the social well-being of the Maasai community in Kitengela Municipality. The analysis offers insights into the predictive power of the model and the relative importance of each independent variable in explaining variations in social well-being.

Table 15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.852a	0.726	0.723	0.1675559

Table 15 shows the model summary of the regression analysis. R-square value of 0.726 shows that 72.6% of variation in social well-being may be expressed by the four independent variables included in the model. This suggests that the model has a strong explanatory power. Adjusted R-square of 0.723 confirms that model keeps its predictive power even when accounting for the number of predictors.

Table 16: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.958	4	6.739	240.05	.000b
	Residual	10.191	363	0.028		
	Total	37.149	367			

Table 16 presents ANOVA, which assess overall significance of the regression model. The F-statistic of 240.05 with a p-value of 0.000 ($p < 0.05$) shows that model is statistically significant. Implying that independent variables collectively have a substantial impact on social well-being.

Table 17: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.499	0.117		4.281	0.000
	Changing Land-use	0.16	0.024	0.214	6.611	0.000
	Tenure Systems	0.214	0.027	0.27	7.926	0.000
	Population Growth	0.269	0.035	0.29	7.79	0.000
	Cultural Practices	0.285	0.031	0.318	9.334	0.000

Table 17 displays the regression coefficients for each independent variable. The results show that all 4 independent variables have statistically significant positive effect on social well-being ($p < 0.05$ for all variables). Changing land use has substantial positive impact on social well-being ($B = 0.160$, $p = 0.000$). The findings conform to Smith et al. (2019), who reported that land use intensification can lead to improvements in well-being, particularly when it involves shifts towards more productive land use practices. Tenure systems show a substantial positive impact on social well-being ($B = 0.214$, $p = 0.000$). This result is consistent with Tseng et al. (2021), who found that land tenure security interventions generally had positive impacts on human well-being, particularly when they lead to increased investment in land and improved access to resources. Population growth demonstrates a significant positive effect on social well-being ($B = 0.269$, $p = 0.000$). This finding is supported by Weber and Sciubba (2019), who found that population growth in urban areas can lead to increased economic opportunities and improved social services, contributing to overall well-being. Cultural practices have the strongest positive effect on social well-being ($B = 0.285$, $p = 0.000$). This aligns with the findings of Osei-Tutu et al. (2020), who emphasized the strong connection between cultural practices and well-being in African contexts, highlighting the importance of maintaining cultural identity in the face of urbanization. The constant term ($B = 0.499$, $p = 0.000$) represents the expected level of social well-being when all other variables are zero, and it is statistically significant.

4.1.7 Discussion of Findings

The demographic characteristics significantly shaped responses to urbanization impacts in Kitengela Municipality. The male-dominated sample (72%) reflects traditional decision-making patterns in land use and tenure systems, while the predominant middle-aged population (48% aged 41-50) brings extensive experience in observing community changes. Long-term residency (81% living in the area for over 5 years) provided reliable insights into urbanization effects, while high education levels (71% with post-secondary education) suggest increased adaptation to modern socio-economic demands while maintaining cultural practices. These demographic patterns influenced how the community responded to changing land use, adapted to new tenure systems, managed population growth impacts, and balanced cultural preservation with social well-being needs. The variables of interest were changing land use, tenure systems, population growth, cultural practices, and social well-being. The regression analysis conducted provided insights into the relationships between these variables and their impact on the social well-being of the Maasai community.

4.1.7.1 Changing Land Use

The strong positive correlation ($r = 0.718$, $p = 0.000$) and significant regression coefficient ($\beta = 0.160$, $p = 0.000$) between changing land use and social well-being reveal the profound impact of land transformation on the Maasai community. This relationship is evidenced by 94% of respondents reporting significant changes in traditional land use patterns and 88% indicating decreased grazing land availability. These findings mirror the global patterns observed in Cristo et al.'s (2022) Amazon study and Appelt et al.'s (2022) Southeast Asian research, where land use changes significantly affected community socioeconomic status, though with varying impacts between rural and urban areas. The mixed effects observed in these studies, where positive outcomes in income and employment contrasted with negative impacts on food security and equality, reflect our findings of urbanization creating both opportunities and challenges for the Maasai community. Regional studies like Handavu et al.'s (2019) work in Zambia support these findings by highlighting how socioeconomic factors significantly influence land use patterns.

At the local level, our findings strongly resonate with Mootian's (2021) research in Narok North, which documented substantial land cover changes with settlement areas increasing from 25.2% to

40.6% between 1986-2019. The significant proportion (87%) of our respondents indicating that loss of grazing lands has affected traditional livelihood activities aligns with the broader pattern of land use transformation in Kenyan pastoral communities. This transformation is characterized by the conversion of communal grazing lands to private settlements and commercial developments, fundamentally altering the traditional Maasai pastoral economy. The challenges in adapting to these changes, reported by 82% of respondents, reflect the complex interplay between urbanization, land use changes, and social well-being.

4.1.7.2 Tenure Systems

The second objective of the study was to determine effects of changing tenure systems on social well-being of the Maasai community in Kitengela Municipality, Kajiado County. The significant correlation ($r = 0.652$, $p = 0.000$) and regression coefficient ($\beta = 0.214$, $p = 0.000$) between changing tenure systems and social well-being demonstrate the substantial impact of evolving land ownership patterns on the Maasai community. This relationship is evidenced by 78% of respondents reporting decreased communal land ownership and 86% noting increased individual land ownership. These findings align with global research by Tseng et al. (2021), who found that approximately two-thirds of land tenure security interventions positively affected human well-being and environmental outcomes. The study's emphasis on the importance of formalizing land rights through government programs mirrors our findings where structured tenure changes have led to improved social outcomes. Similarly, Doss and Meinzen-Dick's (2020) global analysis of women's land tenure security supports our findings about the complex relationship between tenure systems and community well-being, particularly highlighting how context and social structures influence tenure security impacts.

At the regional and local levels, our findings correspond strongly with both Owino's (2021) Ugandan study and Schürmann et al.'s (2020) Kenyan research. Owino's findings about gender disparities in land ownership and restoration efforts parallel our observation that changing tenure systems have differential impacts across community segments. The local context is particularly illuminated by Bollig and Österle's (2018) study of the Pokot community, which revealed how tenure changes often occur abruptly during environmental or social disruptions. This aligns with our finding that 81% of respondents reported significant impacts on traditional land management practices, indicating that tenure system changes are fundamentally reshaping the community's

relationship with land. The data suggesting that 81% of respondents acknowledge effects on cultural practice maintenance further emphasizes the deep interconnection between tenure systems and social-cultural well-being.

4.1.7.3 Population Growth

The third objective of the study was to establish the effect of population growth on social well-being of the Maasai community in Kitengela Municipality. The strongest correlation among all variables was found between population growth and social well-being ($r = 0.736$, $p = 0.000$), with a significant regression coefficient ($\beta = 0.269$, $p = 0.000$). This robust relationship is reflected in our findings where 80% of respondents reported significant increases in birth rates and 87% noted increased in-migration. These results present an interesting contrast to Weber and Sciubba's (2019) European study, which primarily focused on environmental impacts. However, their findings about the relationship between population growth and urban land use changes provide valuable context for understanding our results. The correlation between population growth and social services expansion observed in our study aligns with their findings about the relationship between demographic changes and urban development patterns. Furthermore, Singh's (2019) Ethiopian research provides important regional context, showing how population growth affects socioeconomic development particularly regarding service provision and resource distribution.

The local context is enriched by Inoti et al.'s (2022) study in Isinya, which demonstrated how population changes drive adaptation strategies among Maasai communities. Our finding that 79% of respondents identified increasing pressure on available resources and infrastructure reflects similar patterns observed in their research. The data showing that 82% of respondents noted significant changes in demographic composition due to rural-urban migration adds depth to our understanding of how population growth affects community structure. This is particularly significant given that 76% of respondents indicated that population growth has made maintaining traditional livelihood activities more challenging. These findings suggest that while population growth brings certain advantages through urbanization and modernization, it also creates significant pressures on traditional community structures and resource management systems.

4.1.7.4 Cultural Practices

Fourth objective of study was to assess the effect of cultural practices on social well-being of the Maasai community in Kitengela Municipality, Kajiado County. The relationship between cultural

practices and social well-being showed a strong positive correlation ($r = 0.684$, $p = 0.000$) and the highest regression coefficient among all variables ($\beta = 0.285$, $p = 0.000$). This substantial impact is reflected in our findings where 88% of respondents reported declining traditional language fluency and 86% indicated difficulties in maintaining traditional practices. These results strongly align with Oman's (2021) global research emphasizing the importance of culturally sensitive well-being indicators for indigenous communities. The study's emphasis on how traditional measures often overlook crucial cultural dimensions parallels our findings about the complex relationship between cultural preservation and community well-being. Similarly, Fegter's (2021) work, though focused on digital cultures, provides valuable insights into how cultural practices adapt and evolve in response to modernization pressures.

The regional and local contexts provide particularly relevant perspectives through Osei-Tutu et al.'s (2020) Ghanaian research and Spencer et al.'s (2019) Kenyan study. Our finding that 82% of respondents noted reduced interest from younger generations in traditional practices aligns with broader patterns of cultural change observed in these studies. The data showing that 71% of respondents identified fewer opportunities for traditional cultural activities due to urbanization reflects similar challenges documented in other African communities. This is especially significant given that 79% reported decreased participation in traditional ceremonies, suggesting a fundamental shift in cultural practice patterns. The positive correlation between cultural practice maintenance and social well-being, despite these challenges, supports Spencer et al.'s findings about the importance of culturally informed strategies in promoting community resilience. These results indicate that while urbanization presents significant challenges to cultural preservation, communities that successfully maintain and adapt their cultural practices show enhanced social well-being outcomes.

4.2 Limitations of the Study

Study was confined to the Maasai community in Kitengela Municipality, Kajiado County, Kenya. It focused on the influence of urbanization on social well-being, using four variables namely changing land use, tenure systems, population growth, and cultural practices. The study was primarily quantitative, relying on structured questionnaires, which may have limited the depth of qualitative insights into the complex socio-cultural dynamics of urbanization. The research was subject to cultural sensitivities and potential language barriers within the Maasai community,

which may have affected the data collection process. Resource constraints, including time and financial limitations, also impacted the scope and depth of the research. The results also only reflect a moment in time and may not reflect continuous changes due to the fast rate of urbanization in Kitengela Municipality.

4.3 Chapter Summary

The chapter presented the analysis, findings, and their interpretation. The results were presented in tables and diagrams. The analyzed data was arranged under themes that reflected the research objectives.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter summarizes study's findings, conclusions, and recommendations.

5.1 Summary of Findings

The results were organized according to the four research objectives, examining the effects of changing land use, tenure systems, population growth, and cultural practices on the Maasai community's social well-being. For each objective, statistical evidence from both descriptive and inferential analyses is presented, including correlation coefficients, regression results, and frequency distributions. These findings are discussed in relation to existing literature, demonstrating how this study contributes to our understanding of urbanization's impact on indigenous communities.

5.1.1 Changing Land Use

First aim of the study was to determine effects of changing land use on social well-being of the Maasai community in Kitengela Municipality. The analysis revealed a strong positive correlation between changing land use and social well-being ($r = 0.718$, $p = 0.000$), with regression analysis yielding a significant coefficient of $\beta = 0.160$ ($p = 0.000$), where 94% of respondents reported significant changes in traditional land use patterns and 88% indicated decreased grazing land availability. The impact on traditional activities was particularly notable, with 87% reporting effects on traditional livelihood practices and 82% indicating challenges in adapting to new land use patterns. These findings align with Mootian's (2021) research in Narok North, which documented similar transitions showing settlement areas increasing from 25.2% to 40.6% between 1986-2019, while Cristo et al.'s (2022) findings on changing land patterns and Appelt et al.'s (2022) research further support the observed relationship between land use changes and community well-being, particularly noting how 85% of respondents acknowledged negative impacts from the conversion of pastoral lands to urban development, suggesting a significant transformation in the community's traditional land-based activities and livelihood patterns.

5.1.2 Tenure Systems

Second objective was to examine effects of changing tenure systems on social well-being of the Maasai community. Analysis demonstrated a strong positive correlation between tenure systems and social well-being ($r = 0.652$, $p = 0.000$), with a regression coefficient of $\beta = 0.214$ ($p = 0.000$), where the data revealed that 78% of respondents reported decreased communal land ownership and 86% noted increased individual land ownership, while 81% indicated significant impacts on traditional land management practices. These findings strongly correspond with Tseng et al.'s (2021) research showing positive impacts of tenure security interventions on community well-being, particularly evidenced by the 81% of respondents acknowledging effects on cultural practice maintenance. The study also aligns with Schürmann et al.'s (2020) observations about tenure changes and community adaptation, supported by Bollig and Österle's (2018) research on the Pokot community, which emphasized how 75% of respondents reported challenges in adapting to new tenure systems, while Doss and Meinzen-Dick's (2020) global analysis of tenure security further validates the observed patterns in how changing tenure systems fundamentally reshape community relationships with land.

5.1.3 Population Growth

The third objective explored effect of population growth on social well-being of Maasai community. The study revealed the strongest correlation between population growth and social well-being ($r = 0.736$, $p = 0.000$), with a regression coefficient of $\beta = 0.269$ ($p = 0.000$), where 80% of respondents reported significant increases in birth rates and 87% noted increased in-migration, while 79% identified increasing pressure on available resources and infrastructure. These findings align with Weber and Sciubba's (2019) research on population growth's impacts on urban development, particularly evident in how 82% of respondents noted significant changes in demographic composition due to rural-urban migration, while Singh's (2019) findings on demographic changes support the observed patterns where 76% indicated that population growth has made maintaining traditional livelihood activities more challenging. The research is further validated by Inoti et al.'s (2022) study in Isinya, which demonstrated how 77% of respondents acknowledged increased population density's impact on land resources, while 79% reported that demographic changes have significantly altered community dynamics and social structures.

5.1.4 Cultural Practices

Fourth objective was to assess impact of cultural practices on the social well-being of the Maasai community. The analysis showed a strong positive correlation between cultural practices and social well-being ($r = 0.684$, $p = 0.000$), yielding the highest regression coefficient of $\beta = 0.285$ ($p = 0.000$), where 88% of respondents reported declining traditional language fluency and 86% indicated difficulties in maintaining traditional practices, while 82% noted reduced interest from younger generations in traditional practices. These findings strongly align with Osei-Tutu et al.'s (2020) research on the connection between cultural practices and well-being, particularly evident in how 79% reported decreased participation in traditional ceremonies and 71% identified fewer opportunities for traditional cultural activities due to urbanization. The results are further supported by Spencer et al.'s (2019) findings on cultural preservation and community resilience, while Fegter's (2021) work on cultural adaptation complements the observation that 85% of respondents recognized the challenge of maintaining cultural identity in an urbanizing environment, with Oman's (2021) research on culturally sensitive well-being indicators validating the strong relationship between cultural practice maintenance and community well-being.

5.2 Conclusions

The study concludes that changing land use patterns significantly influence the social well-being of the Maasai community in Kitengela Municipality. The robust positive correlation between changing land use and social well-being underscores the pivotal role of balanced land use transitions. When land use changes are managed effectively, considering both urban development needs and traditional practices, it leads to a substantial enhancement in overall community well-being. The research concludes that the social well-being of the Maasai community is significantly affected by changes in tenure systems. The strong positive correlation between changing tenure systems and social well-being highlights the vital role that land ownership patterns play in shaping community outcomes. The study underscores the value of tenure systems that balance individual rights with communal land management practices, contributing positively to social well-being.

The study concluded that the Maasai community's social well-being is greatly influenced by population increase. The substantial positive correlation between population growth and social well-being emphasizes the essence of managing population dynamics within the context of urbanization. Population growth, when managed sustainably, contributes to improved social outcomes through increased economic opportunities and social services.

The research findings indicate that cultural practices significantly impact the social well-being of the Maasai community. The substantial positive correlation between cultural practices and social well-being underscores key role of cultural preservation in face of urbanization. Maintaining and adapting cultural practices empowers the community to navigate urban transitions while preserving their cultural identity, creating an environment conducive to improved social well-being.

5.3 Recommendations

The study recommends that urban planners and policymakers prioritize balanced land use management in Kitengela Municipality. To achieve this, they should establish participatory land use planning processes that involve the Maasai community. Sustainable urban development strategies that integrate traditional land use practices with modern urban needs should be encouraged. Regular assessment of land use impacts on community well-being is essential to guide adaptive management strategies.

The investigation recommends that organizations and government bodies prioritize the development of inclusive tenure systems. To achieve this, they should invest in community education programs about land rights and tenure options. Developing policies that recognize and protect both individual and communal land rights will lead to more equitable outcomes. Establish frequent dialogue between traditional leaders and formal governance structures to ensure tenure systems reflect community needs and values.

Based on the study's conclusions, recommendations include that local authorities adopt strategies to manage population growth sustainably, including a combination of urban planning and social service provision approaches. Investing in education, healthcare, and infrastructure to support growing populations is vital. Regular demographic assessments can identify areas for improvement in service delivery. Offering avenues for economic diversification within the community will contribute to sustainable growth and improved social well-being.

The study advises that cultural preservation be prioritized within urban development strategies. Establish clear cultural preservation protocols to ensure the continuity of Maasai traditions. Leveraging cultural tourism and education programs will promote cultural awareness and economic opportunities. Regular cultural events and education programs for younger generations

will enhance cultural transmission. Encouraging the integration of traditional practices in modern urban life will foster a culturally rich environment that enhances community well-being.

5.4 Implication for Research

5.4.1 Implication for Practice

Study's findings hold significant implications for practical implementation within urbanizing areas with indigenous communities like the Maasai in Kitengela Municipality, Kenya. By emphasizing balanced land use management, local authorities can create an environment where urban development and traditional practices coexist, enhancing overall community well-being. Prioritizing inclusive tenure systems allows for the protection of both individual and communal land rights, contributing to improved social outcomes. Managing population growth sustainably through improved infrastructure and social services can drive engagement and economic opportunities, positively impacting community success. Moreover, emphasizing cultural preservation ensures the continuity of Maasai traditions while adapting to urban life, fostering an environment conducive to improved social well-being. Implementing these recommendations can result in tangible enhancements in community well-being, ultimately contributing to the long-term success of urbanization efforts that respect and integrate indigenous communities.

5.4.2 Implication for Knowledge and Theory

The implications of this study extend to knowledge and theory by enriching our understanding of urbanization dynamics through the lens of social well-being, along with the integration of complementary theories such as Ecological Modernization Theory, Cultural Ecology Theory, and Modernization Theory. In light of shifting land use and tenure patterns, this research adds to the growing body of evidence supporting the Ecological Modernization Theory and its relevance to indigenous peoples living in fast-growing metropolitan regions. The theory's focus on the potential for technological and institutional innovations to address environmental challenges is particularly relevant to the Maasai community's adaptation to urban transitions. Moreover, incorporating Cultural Ecology Theory highlights the role of cultural practices and adaptations in enhancing social well-being, emphasizing dynamic link between Maasai community and their changing environment. The theory shows significance of maintaining cultural practices in driving improved community outcomes amidst urbanization pressures. Further, the study's alignment with Modernization Theory emphasizes the critical role of social and economic changes in facilitating

community development. Understanding how traditional communities adapt to urbanization is possible with the help of this idea and it offers a framework for understanding the Maasai community's transition from a primarily pastoralist lifestyle to an increasingly urban one.

5.5 Suggestions for Further Studies

The study highlights potential areas for further research in urbanization impacts and social well-being in indigenous communities like the Maasai in Kenya. More research on the effects of various urban development techniques in different cultural settings is needed, providing insights into how cultural factors influence community adaptation to urban life. Further investigation of the interplay between individual and community-level well-being and the long-term sustainability of cultural preservation strategies could lead to a better understanding of cultural practices' lasting effects in urban settings. To further understand the long-term effects of well-balanced growth on community welfare, it may be instructive to examine the execution and development of land use policies. Moreover, research could focus on how technology can enhance community participation in urban planning, land management, and cultural preservation within these urbanizing areas, keeping up with digital transformation trends.

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APPENDICES

Appendix I: Letter of Introduction

To whom it may concern,

Dear Sir/Madam,

RE: ACADEMIC RESEARCH

The above subject refers.

I am a student in the Development Studies pursuing my Master's degree. It is a requirement to conduct a research project and write a dissertation as a partial fulfillment of the course. I am carrying out a study to investigate the effects of urbanization on the socioeconomic well-being of the Maasai community in Kitengela Municipality, Kajiado County.

This is therefore to seek permission to collect data to facilitate the same. The information provided will be purely for academic purposes and will be treated in confidence.

Your assistance and cooperation will be highly appreciated.

Yours faithfully,

David Akilimali Chipinde

Appendix II: Questionnaire

Section A: Demographic Information

Please tick the appropriate response:

1. Indicate your gender.

i. Male

ii. Female

2. Indicate your age bracket.

i. 20 to 30 years [ ]

ii. 31 to 40 years [ ]

iii. 41 to 50 years [ ]

iv. Above 51 years [ ]

3. Indicate how long you have lived in Kitengela Municipality.

i. Less than 5 years [ ]

ii. 5 - 10 years [ ]

iii. 11 years and above [ ]

4. Indicate your highest level of education.

i. No formal education [ ]

ii. Primary education [ ]

iii. Secondary education [ ]

iv. Vocational/technical training [ ]

v. Undergraduate degree [ ]

vi. Postgraduate degree [ ]

Section B: Changing Land Use

Please rate the following statements based on your experience, using a scale of 1-5, where 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Statements	**1**	**2**	**3**	**4**	**5**

1. The area of urban development has increased in our community.						

2. The amount of available grazing land has decreased.					
3. The degree of change in traditional land use patterns has been significant.					
4. The conversion of land from pastoralism to urban development has negatively impacted my community.					
5. The loss of grazing lands has affected the traditional livelihood activities of the Maasai community.					
6. The Maasai community has faced challenges in adapting to the changes in land use.					

Section C: Changing Tenure Systems

Please rate the following statements based on your experience, using a scale of 1-5, where 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Statements	**1**	**2**	**3**	**4**	**5**
The area of land under communal ownership has decreased.					
The area of land under individual ownership has increased.					
The degree of land privatization has been significant.					
The shift from communal to individualized land tenure has impacted the Maasai community's traditional land management practices.					
Changes in land access and ownership rights have affected the Maasai community's ability to maintain their cultural practices.					
The Maasai community has faced challenges in adapting to the changes in land tenure systems.					

Section D: Population Growth

Please rate the following statements based on your experience, using a scale of 1-5, where 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Statements	1	2	3	4	5
The birth rate in our community has increased significantly.					
There has been a noticeable increase in the number of people moving into our area.					
The number of people per hectare of land has increased.					
The increasing population density has put pressure on the available resources and infrastructure.					
Rural-urban migration has led to changes in the demographic composition of the Maasai community.					
The population growth has made it more challenging for the Maasai community to maintain their traditional livelihood activities.					

Section E: Cultural Practices

Please rate the following statements based on your experience, using a scale of 1-5, where 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Statements	1	2	3	4	5
The frequency of participation in traditional ceremonies has decreased.					
The level of fluency in the traditional language among community members has declined.					
The frequency of wearing traditional dress has reduced.					
Urbanization has made it difficult to maintain traditional cultural practices.					
The younger generation shows less interest in learning and practicing traditional customs.					
There are fewer opportunities to engage in traditional cultural activities due to urbanization.					

Section E: Social Well-being

Please rate the following statements based on your experience, using a scale of 1-5, where 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Statements	**1**	**2**	**3**	**4**	**5**
Access to education has improved in our community.					
The number of health facility visits per year has increased.					
The level of community participation in local decision-making has changed.					
The degree of cultural practice retention has been affected by urbanization.					
The changes brought about by urbanization have positively impacted the overall social well-being of the Maasai community.					
The Maasai community has been able to adapt and maintain their social well-being despite the challenges posed by urbanization.					

Appendix III: NACOSTI Permit

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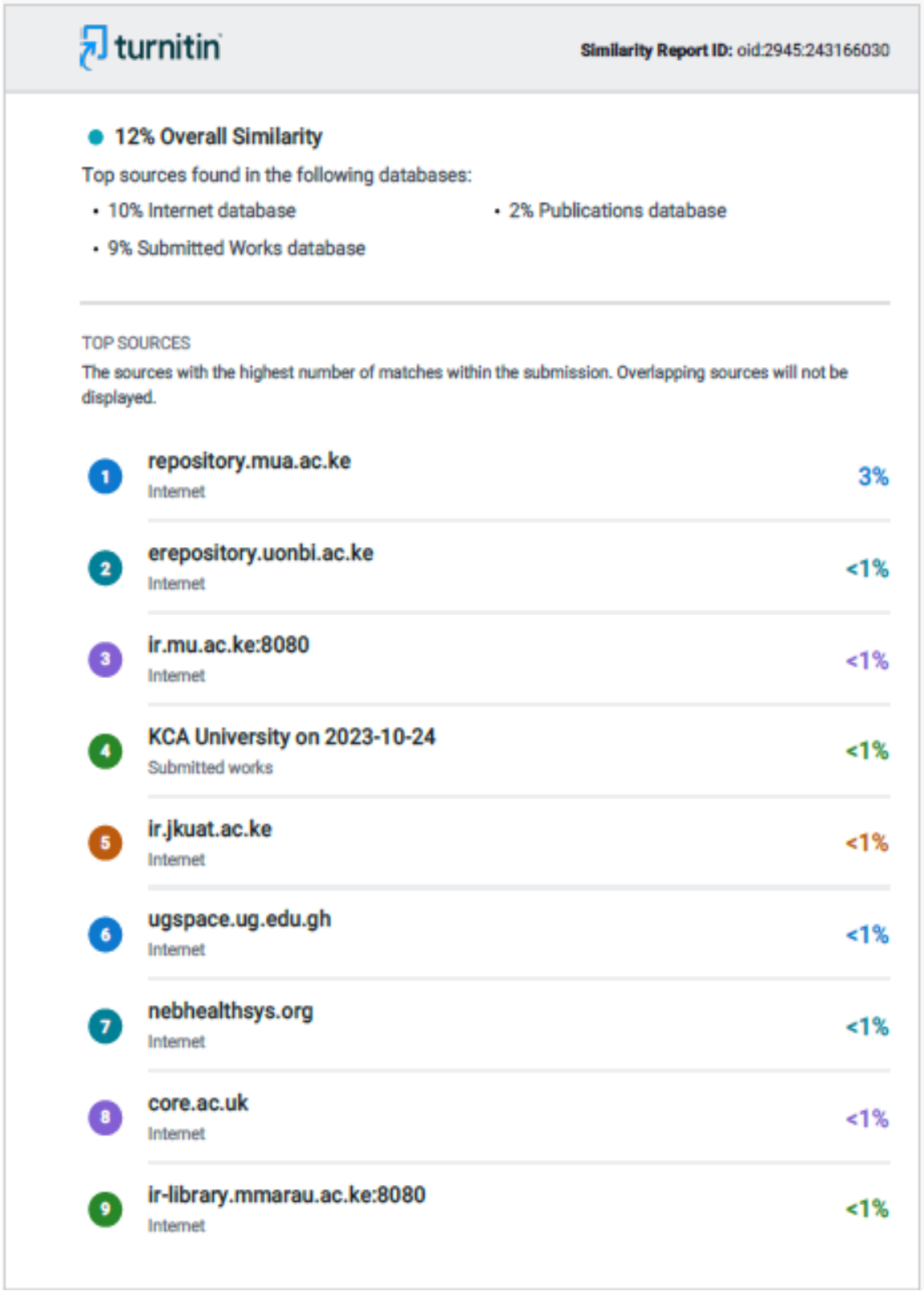

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