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Devolved Governance Finances and Pastoralist Livelihood Diversification in Moyale, Marsabit County, Kenya

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Abstract
The pastoralist communities account for over 25 million people in Sub-Saharan Africa whose livelihood is based on livestock keeping as they move from one place to another. In the recent past, some of the pastoralists have shifted to doing other agricultural activities in combination with mobile livestock keeping. The choice of livelihood is influenced by the social, cultural, economic, political and psychological components. Devolved governments facilitate sustainable, equitable and high-quality services for all citizens. In Kenya, devolution gives political powers to the county governments which determines among others the livelihoods of communities including pastoralists. The objective of this study was to assess the effects of Devolved Governance on Pastoralist Livelihood in Moyale Sub- County, Marsabit County, Kenya. The study employed a descriptive research design. The target population included 1771 household heads, stratified as per their role in the pastoralist communities. Simple random and purposive sampling techniques were utilized to select a sample size of 315 respondents using the Kothari Formula. Questionnaires, key informant interview guides and focus group discussions were used to collect data. Financial analysis was done based on the Annual County Fiscal Strategy Papers. Results indicate that through devolution, between the financial years 2017/2018 to 2023/2024, the county received a total revenue of Ksh. 54,433,192,393.00. Out of these sum total, (Approx. 53.0%) were spent on recurrent expenditures while (Approx. 36.4%) were spent on development expenditures. Recurrent and development expenditures accounted for 89.4% while 10.6% were not absorbed. Key sectors aligned to powering pastoralist livelihood diversification such as agriculture, livestock, fisheries, water, environment and natural resources received less than 10% of the total annual revenue allocated in the county. Although devolved governance had initiated measures that could catalyse livelihood diversification, such as educating the locals on livelihood diversification measures and budgetary allocation on livelihoods diversification programmes, the impact made by these strategies were less than 20% (mean =1.96 SD=1.00). Pastoralists continued experiencing considerable challenges in an effort to embrace livelihood diversification that include livestock diseases, drought, lack of business skills, lack funds for capital to diversify into other economic activities, climatic variability, inter-tribal conflicts and degradation of land. The study concludes that devolved governance did not adequately, prioritize key pastoralist livelihood diversification sectors based on local priority needs and hence the pastoralist remained unsatisfied with devolved governance financing impact on their livelihoods. The study recommends the need to enhance pastoralist livelihood diversification through devolved governance adequately financing activities in agriculture, livestock, fisheries, water, environment and natural resources together with education and skill development as a counter measure of the climate change impacts, poverty and resource- based insecurity among other challenges.

Keywords: Devolved Governance, Finances, Pastoralist, Livelihood Diversification

1. Introduction

The pastoralist communities account for over 25 million people in Sub-Saharan Africa whose livelihood is based on livestock keeping as they move from one place to another. In the recent past, some of the pastoralists have shifted to doing other agricultural activities in combination with mobile livestock keeping (Asfir, 2016). The choice of livelihood is influenced by the social, cultural, economic, political and psychological components. The pastoralists living in arid and semi-arid regions experience difficulty in making use of their land for an economic purpose like agricultural activities due to unpredictable rainfall patterns and inadequate amount, harsh temperatures, and improbable soil texture (Liao & Fei, 2017). Climatic changes make the communities to adopt a nomadic lifestyle of moving from one place to another to find food and water for their animals like cattle, goats, sheep and camels. Some of the reasons for shifts in pastoralist lifestyle include environmental degradation, droughts, flooding, conflicts among the neighboring communities, lack of basic infrastructure and increased insecurity (Githinji, *et al.,* 2019). Pastoralists derive their subsistence needs from the consumption of animal products especially milk, meat and blood; in addition to purchased foodstuffs (Salih *et al.,* 2017). Small stocks are easily sold compared to large stocks, which are sold when there is no other alternative. Both animal products and purchased grains contribute to pastoral household food security. Food security is therefore defined as the availability of adequate food, accessibility and affordability by household members at all times for an active and comfortable life (Nyariki *et al.,* 2016). Over the years, Sub-Saharan African governments have been addressing national food self-sufficiency, yet it is evident that, from the outset, perennial hunger could coexist with adequate food supply at national, regional and international levels (Islam *et al.*, 2019). On the other hand, there are several case studies where pastoral strategies were integrated into a wider livelihood system: prehistoric South African foragers at times kept some livestock, as did prehistoric hunter-gatherers in East Africa; impoverished herders in north-western Namibia and Kenya in the 19th Century resorted in a great number to non-pastoral risk- buffering strategies which allowed for survival and the protection of emaciated herds. Pastoralism in southern and eastern Africa has been heavily influenced by state-led national conservation policies (Berzborn & Solich, 2017). In general, pastoralism has been regarded as environmentally problematic and state policies have sought to control pastoral land use through restricting mobility and/or fixing carrying capacities. Adams and McShane (1996) considered African pastoralists to be detrimental to wildlife, even if the game had been severely reduced by European hunters.

Studies present that where mobility if not well managed along specific routes, can cause a definite effect on the natural resources. However, the use of these resources by pastoralists depends on property rights, regime and sustainable management to support their socioeconomic livelihood (McCabe, 2017). To cope with these uncertainties in pastoral livelihoods, diverse and flexible strategies through a number of social, economic, environmental and political mechanisms are necessary. These may include improving market outlets, livestock diversity, and monitoring the impact of mobility on natural resources, key site management and establishing small-scale businesses (Akabwai & Stites 2018). To complement these strategies, appropriate policies related to pastoral development including infrastructure and adequate social amenities are needed (de Bruijin & Van Dijk, 2017). In Ethiopia, Dinku (2018) revealed that for pastoralism to thrive there must be a symbiotic relationship between the pastoralist community members, the land and the livestock. Whenever the three aspects experience changes, then one aspect will suffer and it will affect the others, such that when land is unproductive, then the animals lack food and the people also suffer. With the changes in the climatic conditions, prolonged droughts and heavy rainfall causing floods, shifts in socio-economic demands as sustaining livelihoods need more resources, the pastoralist communities are shifting and adopting diversified measures to survive and thrive. According to Addisu (2017), some of the measures included settling down in and around urban centers to conduct training activities and some are seeking employment opportunities.

Devolved government paves the way for fair, high-quality, and sustainable services for all Kenyans, with monitoring and assessment that aligns county and national goals (Bache, Bartle & Flinders, 2016). The devolved governance views pastoral livelihood differently as shared by Bache, et al. (2016) further mention that most of those at the national governing level push for a sedentary lifestyle to enable them to offer social services like people registration, education, healthcare and other social amenities. According to Wangai, *et al.* (2017) the local

communities' greatest desire is to retain their cultural ecosystem and advocates for their pastoralist lifestyle, while the local governance level advocate for a mid-point where the cultural and social practice is not completely changed but also see a need for living quality livelihoods. At the same time, Demissie (2017) shares that is why there is a need for adopting agro-pastoralist livelihood and also to empower pastoralists in policy formulation on pastoral legislation that will be able to protect the pastoral land rights and offer alternatives that can sustain their livelihood. The transfer of finance/cash and the enactment of several laws have aided the delegated tasks under devolved governance as per the County Government Act (2012) Section 5. According to the Fourth Schedule of the Constitution of Kenya (2010), Kenya has a unique devolved system where both national and county governments appropriate budgets for various projects on livelihoods including for the pastoralist at any given time. The procedures within the Act establish an institutional structure that outlines the new management and institutional structures that are expected under the devolved system, which is in line with Kenya's long-term development plan, The Vision 2030. The county level is where the devolved system governance takes place (Asrat & Anteneh, 2019).

Decentralization of the Kenyan governing system into the county government has helped in bringing government services closer to its people. The pastoralist communities have been able to slowly adapt and shift to other livelihood and economic activities as they try to survive the climatic changes and conserve the natural resources. The local governance structures have helped the communities to diversify, but challenges still linger due to weak communication systems, decisions made without consultation and participation of the locals and unequal power and authority sharing with biasness against the local communities. Recent studies, looked at measures to manage livelihood risks by adopting diversified income in pastoral settlements in Isiolo County (Achiba,2018). The study recommended for the pastoral communities and households to settle down in one specific area without mentioning needed governance reforms and livelihood diversification. Upon examination of the effectiveness of watershed governance for food security in the Sio River Basin, Naburi *et al.,* (2020) concluded that water resource management had yet to be implemented under devolved governance hence food insecurity was on the rise. The greatest challenge of devolved governance in the arid Northern Counties including the County of Marsabit is placing more emphasis on traditions as opposed to empowering pastoralists to diversify their livelihoods. This has increased the vulnerability of the pastoral local communities of County to shocks occasioned by drought and other unforeseen calamities. Lack of diversification has contributed to overreliance on livestock as a source of livelihoods among pastoral communities. It is against this background that the present study assessed the effectiveness of devolved governance on pastoralist livelihood diversification in Moyale, Marsabit County, Kenya.

2. Research Materials and Methods

2.1. The study area

The Moyale, Marsabit County covers an area of 9,390.3 km^2. It borders the Republic of Ethiopia to the north, Marsabit District to the southwest and Wajir District to the southeast. It lies between latitude 02° 11 North and 02° 4 North and longitude 38° 16 East and 39° 21 East. The study site in areas included administrative and political units for the wards within Moyale Sub-County, Marsabit County Kenya as per Marsabit County Integrated Development Plan (CIDP) (2018-2020) namely: Butiye, Sololo, Manyatta/Heillu, Moyale Township, Uran, Golbo and Obbu. The majority of the local community members are pastoralists and this lifestyle is facing challenges like an increase in the human population that depends on the meagre earnings from animals, change in land ownership, community fights with neighbours and hence the need to explore livelihood diversification. The culture is also foreboding with practices like early marriages, nomadic lifestyle and warring communities. The area has experienced prolonged droughts and heavy rainfall seasons that cause havoc to the pastoral lifestyle as many animals die, making the people seek other means of survival.

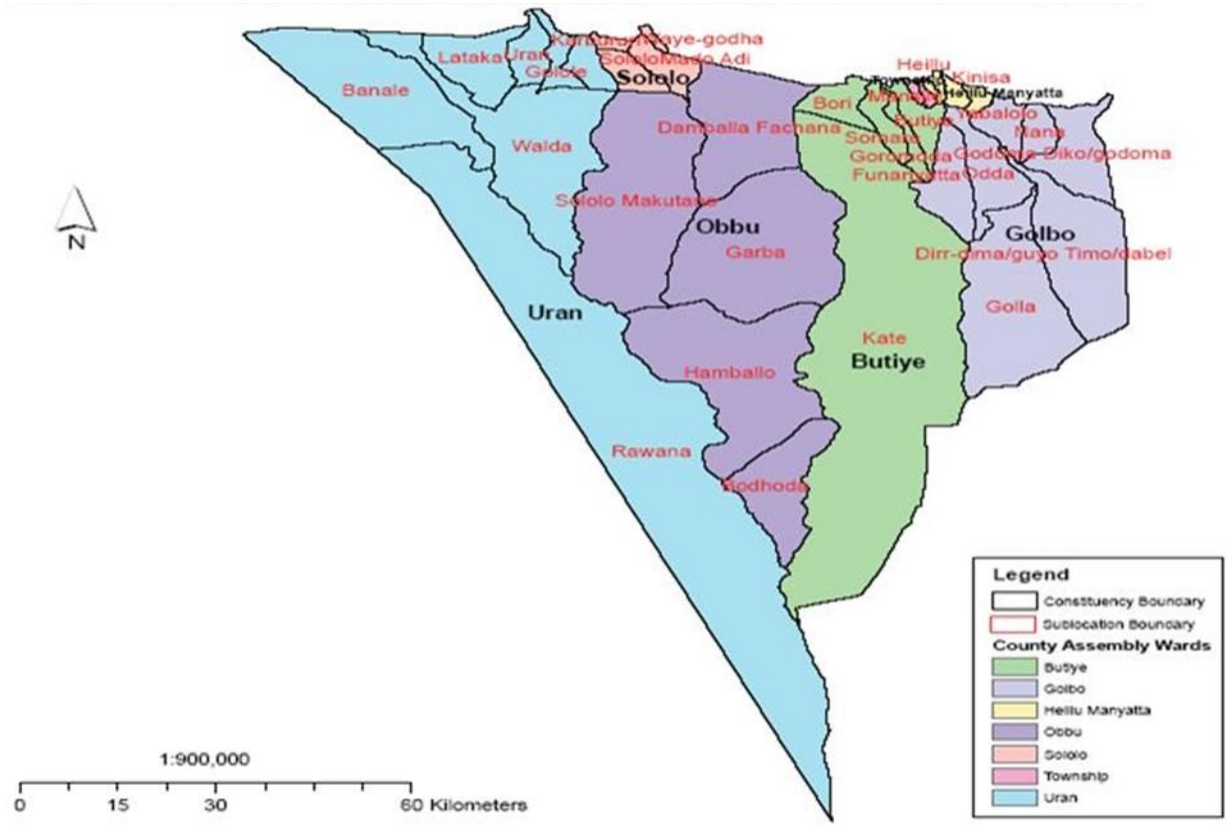

Figure 2.1: Map of Moyale Sub-county, Marisabit County, Kenya
Source: Information Cradle 2017

2.2 Research Design

This study employed a concurrent mixed methods approach. The organization of current data, collecting, and analytic circumstances in a way intended to provide relevance to the study goals is the research design (Tobi & Kampen, 2018). This section guides the researcher on how to plan the study coherently and logically through various research methods and techniques to integrate the two basic approaches applied to research, which are quantitative and qualitative methods Kothari (2004). The descriptive design applied both approaches to assess the effect of devolved governance finance on pastoralist livelihood diversification in Moyale Sub-County, Marsabit County Kenya. The design enabled to make efficient and effective ways to review and make inferences on the whole population.

2.3. Sampling Methods

The study appropriately applied stratified sampling techniques to simplify the assessment strategy which further facilitated the comparison strategy. Thereafter, sampling was carried out using simple random and purposive to select the respondents. Using Kothari's (2004) formula the study calculated the target population of 1771 with 95% confidence level and an error of 0.05 to arrive at a sample size of 315. The study used the 10% of the 17706 households to target 1771 male Pastoral Households including the elected leaders from national and county governments, religious and community leaders, the public and the head of sedentary pastoralists in the respective wards within the Sub- County. The study conducted interviews with elected leaders, focus ground discussion with the community elders and religious leaders applying stratified sampling while survey questionnaires used random sampling for the heads of households practicing pastoral sedentary livelihood. The elected leaders were 8 (1 Member of Parliament and 7 MCAs from each ward), the religious leaders were 14 two per ward, community elders were 21, three from each of the seven wards.

Simple random sampling was used to sample the community members while purposive sampling was used to select the key study informants. The primary source of data collection was the KNBS 2019 Kenya Population and Housing Census since The Kenya National Bureau of Statistics is the principal agency of the Government of Kenya for collecting statistical data then analyzing, disseminating and custodian of official statistical information. The study used 10% of the 17706 households to target 1771 Pastoral Households. Thereafter, a sample group of people was selected from the target population who took part in the investigation. This was done by using Kothari's (2004) formula the study calculated the target population of 1771 with a 95% confidence level and an error of 0.05 to arrive at a sample size of 315 households.

2.4. Data collection

Primary data was collected using a questionnaire that was administered to the respondents. Financial analysis data was collected from published Marsabit County Fiscal Strategy Papers between 2017 and 2024 available at https://respository.kippra.or.ke . The household questionnaires were both closed and open-ended questions that captured all the variables. Open-ended permitted the free response from the respondents without any suggestion of answers. A questionnaire was used because it allowed the researcher to collect a larger amount of data within a limited area. These questionnaires were self-administered, dropped and picked later. The questionnaire used the five-point Likert scale where; 1=strongly disagree, 2=disagree, 3=neutral, 4 agree and 5 strongly agree.

The quantitative data collection essentially necessitated semi structured questions, open and closed ended questions. The procedure for qualitative data collection was done using a focus group discussion guide administered in various community groups in the basin. Key informant interview guide was used to obtain data from national and county governments' departmental officers and representatives of non-governmental organizations. Focus group discussion checklist was also used to collected data from groups of community members. The primary data was collected from the respondents in the period between June to December, 2024, while secondary data presents was accessed from documents that existed between the same period. A pilot study was conducted to detect weakness in design and instrumentation and to provide proxy data for the selection of a sample. Etikan and Bala (2017) noted that a pilot study can be conducted using 1-10% of the respondents from the sample size. Therefore, the researcher selected a pilot group of 3 individuals (being 1% of the sample size) for pilot testing that was done in Moyale Township.

2.5. Data Analysis

The quantitative data were entered into the Statistical Package for social sciences version 25.0 through coding of the questionnaires, numbering and coding their indices; later further analysis was conducted. Descriptive analysis was conducted where means, frequencies and standard deviation measures were obtained for the study. The qualitative data collected in the interviews and focus group discussions were analyzed using content analysis and arranged in themes. There were no statistical measurements for qualitative data, however analysis was done based on each thematic area to provide for quantitative data triangulation for coherent results. Findings were presented in graphs, charts and tables which are easy reading, as compared to reading data in full content and presentations of data. This has enabled the analysis and reporting of response rate easy to analysis. Similarly, the study accurately illustrates the distribution of respondents by gender using tabulation.

3. Results and Discussions

3.1. Households' Socio-demographic Characteristics

Socio-demographic data of the study showed that out of the 315 targeted households, the majority (61.0%) of the respondents were females whereas 39.0% were male. The majority (56.0%) of the household heads were aged between 41-50 years. Further 32.0% were aged between 31-40 years, whereas only 12% were aged above 51 years. The age between 30-50 years contributed to 86% of the respondents from the pastoralists' households. The majority (54.0%) of the respondents had no formal education, 25.0% primary education, 14.0% secondary education and only 7% with a college education. Subsistence livestock keeping as the main source of income more

indicating approximately 47% livestock and peasant farmers, 21% salaried and the rest in some kind of business, small scale farming and charcoal burning. A large portion (80%) of interviewees reported, rearing of livestock which remains the backbone of their livelihood.

3.2. County Government Financial Allocations and Expenditures

A key pillar of devolution in Kenya is fiscal decentralization which is envisaged in the Constitution of Kenya 2010 to help facilitate the citizens to make decision on the local resource allocation on key priority areas for grassroots' development. In this study, financial allocation by the County Government of Marsabit formed the basis on which perception of citizens in Moyale sub-county on devolution and pastoral livelihood diversification was assessed. The study in Table 3.1 and further analyzed in Figure 3.1 presents the financial analysis obtained from the County Fiscal Strategy Papers (CFSP) between financial years 2017/2018 and 2023/2024. The county received a Total Revenue of Ksh. 54,433,192,393. Out of these sum total, Ksh. 28,879,560,208 (Approx. 53.0%) were spent on recurrent expenditures while Ksh. 19,810,832,977 (Approx. 36.4%) was spent on development expenditures. Recurrent and development expenditures accounted for 89.4%. 10.6% of the Total revenue allocated in the county was not utilized between the study period. Further analysis of CFSPs revealed that the gap of 10.6% accrued as a result of challenges of absorptive capacity of the county government departments to absorb the whole budget allocated to them. This was as a result of various factors beyond the county government capacity such as delayed in disbursement by the national government. Although, the unabsorbed balance was carried forward to the next financial year, these affected timely and adequately on the services provided to the pastoralist communities in the county who were the primary beneficiaries.

Table 3.1: Financial Analysis of Marsabit County Revenue and Expenditure Allocations between 2017/18-2023/24

Financial Year	**2017/2018**	**2018/2019**	**2019/2020**	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**
Development Actuals	254,000,000	3,605,000,000	3,161,421,289	3,438,431,831	3,245,198,049	2,698,781,808	3,408,000,000
Recurrent Actuals	4,040,000,000	3,862,700,000	4,004,926,369	3,764,875,624	4,514,000,000	4,928,058,215	3,765,000,000
Total Revenue Available	7,595,700,000	7,564,300,000	7,745,161,707	8,373,103,193	6,938,000,000	8,416,927,493	7,800,000,000

Source: Financial Analysis from Marsabit County Fiscal Strategy Papers Financial Years 2017/18-2023/24

On the other hand, the analysis shows development actuals lagging behind the recurrent actuals, 36.4% and 53.0% respectively within the analysis period. This implied that a large portion of county financial resources is spent on salaries and administrative functions and very little financial resources are spent on key areas considered as development for the pastoralist communities in the county. Development areas form key priority sectors for pastoralist livelihood diversification.

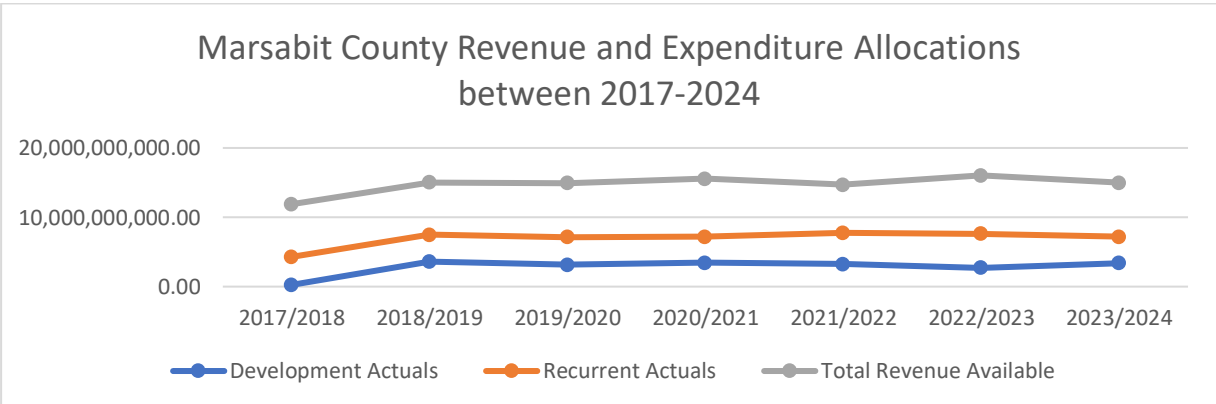

Figure 3.1: Financial Analysis of Marsabit County Revenue and Expenditure Allocations between 2017/18-2023/24

Source: Financial Analysis from Marsabit County Fiscal Strategy Papers Financial Years 2017/18-2023/24

Further analysis for example, from CFSP for the year 2024 indicates that Agriculture, Livestock & Fisheries sector was allocated a ceiling of 10% of annual total allocation to development; Water, Environment & Natural Resources a ceiling of 4%; Education, Skills Development, Youth & Sports a ceiling of 2%; and Health Services 5%. These figures compared to recurrent expenditures in the sectors recorded to low allocation compared to historical development challenges facing the county, such as increasing need for water, pasture, transformation to agro-pastoralism livelihood practices, resource conflicts among others. Being an arid county, with majority of the citizens being pastoralists, it is expected that agriculture, livestock and fisheries together with water, environment and natural resources would be allocated more financial resources with the aim of enhancing community resilience through pastoralist livelihood diversification investments for perennial climate change impacts such as droughts. Although, increased recurrent expenditure is expected to arise due to employment of specialists in various sectors to help the transformation of the pastoralist livelihoods through education, awareness creation for skill transfer and knowledge development, the case perception was difference during field interviews.

3.3. Effectiveness of Devolved Governance System Structures on Pastoralism

Results as shown in Table 3.2 indicate that majority of the respondents agreed that there was devolved governance system budgets for livelihood diversification among the pastoralist communities (mean =4.16 SD=0.68) and that the Marsabit County Integrated Development Plan 2023-2027 (CIPD) had set aside resources for livelihood diversification activities (mean =3.88 SD=0.99). Results also revealed that local initiatives like the training of pastoralists have not helped youth to shift to other sources of livelihood and that the elected leaders both at national and county level have no initiatives that support livelihood diversification efforts (mean = 1.64 SD=0.63). According to Nyangena (2018), education is essential for livelihood diversification because it provides pastoralists with the necessary skills and knowledge to engage in alternative livelihoods. Mobile schools should be encouraged to provide primary education, particularly to pastoral communities, in order to achieve this, pastoralists have also attempted to get access to educational programs that would help them learn the specific skills required to engage in the political processes. The above findings concur with the study conclusion by the GoK (2019) reported that diversification opportunities, such as value addition to livestock products through rural-based processing industries, irrigated crop farming, fishing, and more, must be encouraged among the pastoralist communities through training among other forms of capacity building.

Table 3.2: Effectiveness of the devolved governance system on pastoralist livelihood diversification

Statements	N	Mean	Std. Dev
The County ensures that the locals are educated on how they can maintain their livelihoods	201	2.16	0.93
The devolved governance system budgets for livelihood diversification among the pastoralist communities	201	4.16	0.68
The CIPD has set aside resources for livelihood diversification activities	201	3.88	0.99
Community members are consulted in developing livelihood diversification policies	201	1.72	0.60
The elected leaders (national and county level) support livelihood diversification efforts	201	1.64	0.63
The area Member of Parliament (MP) uses Constituency Development Fund (CDF) for development of livelihood diversification activities	201	1.68	0.68
The government works to conserve the natural resources by training locals on diversification activities they can engage in	201	1.76	0.71
The national government has established conservancy in regard to climate change, run in collaboration with pastoral Community	201	1.68	0.68
The communities are engaged in the decision making on climate change adaptation mechanisms	201	1.72	0.72
Local initiatives like training help youth to shift to other sources of livelihood	201	1.64	0.63
Local leaders advocate for resilience measures to survive the	201	1.76	0.82

changing tide

Valid N (listwise)

Further, descriptive results show that the national government has inadequately established conservancy in regard pastoral ecosystem management in response to climate change, managing in collaboration with the pastoral community. Further, the study revealed that the area Member of Parliament (MP) as a patron does not use National Government Constituency Development Fund (NG-CDF) another form of decentralized fund, for the development of livelihood diversification activities (mean =1.68 SD=0.68). During the focus group discussion, this was reported to be attributed to the NG-CDF Act 2023 which regulates areas where NG-CDF should be allocated in community development. The Act was reported to restrictive on enhancing key areas of pastoralist livelihood diversification because of its generality. Failure to initiate such measures escalates livelihood risk. According to empirical evidence by Kaye-Zwiebel and King (2014), climate change could have serious consequences, including the loss of livestock due to heat stress.

Furthermore, results show that community members are not consulted in developing livelihood diversification policies (mean = 1.72, SD=0.60), and that the communities are not engaged in the decision-making on climate change adaptation mechanisms (mean =1.72 SD=0.72). The above findings concur with the study conclusion by Nyangena (2018) that for decades, pastoralists have been side-lined in decision making on issues concerning their livelihoods. Further, the study established that local leaders are reluctant in advocating for resilience measures to survive the changing tide (mean =1.76 SD=0.82) at the same time, government has no measures in place that seek to conserve the pastoralists natural resources by training locals on diversification activities they can engage in (mean =1.76 SD=0.71). Reluctance by the government in the implementation of environmental conservation measures dispels the study results and recommendation by Mengistu (2015) that education is essential for livelihood diversification because it provides pastoralists with the skills and knowledge they need to pursue alternative sources of income. The findings by Little (2018) found out that most African governments' policies and practices have failed to provide alternative livelihoods for pastoralists. This legitimizes the practice of stocking large herds in order to ensure that at least some animals survive drought deaths while also protecting people from starvation. Nature and government neglect fuel the pastoralists' tragedy of the commons. Devolved governance in Kenya has also failed to enhance local government livestock institutions such as Pastoral Associations and facilitate decentralized planning and accountability procedures, according to focus groups discussions. Furthermore, the Marsabit county administration failed to put in place sufficient systems to manage conflict between pastoral groups and others (allowing effective early warning, anticipatory drought management strategies and methods) by allocating necessary and timely budget and resources. In a verbatim reporting one respondent stated following;

> *'The County Government should be committed to developing of response policies and livelihoods framework that emphasizes the overall livelihood of pastoral people depending on both access to assets, such as pasture, water, animal health services, markets, credit and education, and the environment'* (Community Member A. 1/09/2021).

From the key informant's interviews, it was suggested that the government should enhance the development and growth of infrastructures such as electricity, roads, business expansion like providing low-cost tractors to plough where land resources allow and funds for pastoralist women empowerment. A verbatim:

> *'Rural employment through Kazi Mtaani can source the creation of youths and self-employment in our region. Further, the community members have been empowered through awarding contracts and drilling of boreholes both by the county and the national government. The county government should also improve health facilities, provide water tanks and tractors during rainy season, train and supply seedling to farmers in areas where agro-pastoralism can be practised'. (Member of County Assembly B. 5/09/2021)*

In enhancing diversification by the county government, respondents suggested the following: support and motivation by elected leaders MCAs and Elders of the community in order to encourage investment, conduct seminars /workshops, create positions of village administration, sensitization through community Baraza's and

handling pasture and water related conflicts in the community by helping coping with stressful situations and pressure tactics.

3.4. Challenges Pastoralist Communities Experience

Focused group discussions revealed that the major challenge affecting pastoralist communities in Moyale Sub-county was drought and livestock, pasture and water resources insecurity. Drought affected the area vegetation leading to livestock losses and increased incidences of resource conflicts. Areas cited with insecurity challenges included; Uran, Obbu and Golbo area. On the other hand, the study sought to determine the extent to which respondents agreed with the following statements assessing on challenges pastoralist communities experience and the impact on pastoralist livelihood. Results in Table 3.3 show that majority of the respondents strongly agreed that pastoralists communities encounter changing land and land-use policies (mean=4.56 SD=0.50), other agreed that livelihood diversification efforts is slowed by the pastoralists' lack of awareness of modern technologies (mean =4.40 SD=0.57) and that poor attitudes and cultural barriers by pastoralists has hindered livelihood diversification efforts (mean =4.36 SD=0.56).

Table 3.3: Challenges pastoralist experience and the impact on pastoralist livelihood diversification

Statements	N	Mean	Std. Dev
Pastoral communities lack funds for capital to diversify into other economic activities	201	4.28	0.72
Pastoralists communities encounter changing land and land-use policies	201	4.56	0.50
Changes in land tenure hinders the diversification efforts of the pastoralist communities	201	4.32	0.68
Pastoral communities suffer from climatic variability even during livelihood diversification efforts	201	4.24	0.59
Pastoralists communities face regular loss of fertile grazing land	201	4.20	0.49
Poor attitudes by pastoralists have hindered livelihood diversification efforts	201	4.36	0.56
Livelihood diversification efforts are slowed by the pastoralists' lack of awareness of modern technologies and cultural barriers	201	4.40	0.57
High poverty levels hinder adoption of livelihood diversification among the pastoralist communities	201	4.32	0.68

These results support the findings by Yona and Mathewos (2017), who found that strengthening policies aimed at pastoralists livelihood diversification provides them more life options by improving access to education and training, as well as encouraging the establishment of jobs for Arid and Semi-Arid Land (ASAL) residents. The study established that changes in land tenure hinder the diversification efforts of the pastoralist communities. Further, high poverty levels hinder the adoption of livelihood diversification among the pastoralist communities (mean = 4.32SD=0.68). The results of the study by Teka, *et al.,* (2019) support the conclusion that pastoralists must be empowered to influence policy and execution at the national and sub-national levels, and that the government should actively incorporate them in development programs, such as livelihood diversification.

The results are also in accord with those of Gufu (2017), who discovered that pastoralists must begin to think about transforming themselves. The fact is that, nomadic existence is becoming more difficult as land fragmentation and private land ownership gain traction. Only a tiny number of animals may be maintained, barely enough to meet daily demands. Pastoralists can plan to diversify their livelihoods rather than waiting for circumstances to force change on them. The first step is to concentrate on education, which will provide new opportunities for the younger generation. Pastoralists' decades- long "we" vs "them" mentality, which has alienated them from other national groups, must shift if they are to get the support they need from other communities. The study also established that pastoral communities lack funds for capital to diversify into other economic activities (mean =4.28 SD=0.72), pastoral communities suffer from climatic variability even during livelihood diversification efforts (mean =4.24 SD=0.59) and that pastoralists communities face regular loss of fertile grazing land (mean =4.20 SD=0.49). The

data above support Little et al. (2001) conclusions that many livelihood diversification alternatives in town, such as lodging, retail, and processing enterprises, need considerable sums of capital for start-up. From the focus group discussions, it was reported that pastoral areas are prone to climate change challenges and insecurity due to inter-tribal conflicts resulting from cattle raids and theft. On how to solve such challenges, one respondent stated the following;

> *'Pastoral communities should be given chances and business skills to help them become more self-sufficient and participate in entrepreneurial enterprises. Dairy cooperatives, tanneries, and leather-working businesses are examples of such skills and opportunities. Pastoralists should also be given information on animal pricing, as well as assistance in stabilizing grain costs via increased local storage'.* (Religious leaders A. 2/09/2021).

3.5. Pastoralist Livelihood Diversification

The study sought to determine the extent to which participants agreed with the following statements relating to pastoralist livelihood diversification. Results in Table 3.4 show that majority of the respondents agreed that they conducted trade with their neighbors in the local markets (mean =3.64 SD=0.63). The findings agree with the evidence provided by Martin, et al. (2018) that due to their livestock-dominated livelihood, pastoralists depend on cross-border trade as a source of wealth. Descriptive results also show that only a few of the Marsabit residents had opted for crop farming (mean =1.68 SD=0.73). Marsabit residents were also not keeping high breeds of animals (mean =1.76 SD=0.76) and community members were not shifting to fishery activities (mean =1.84 SD=0.79).

Table 3.4: Pastoralist Livelihood Diversification

Statement	N	Mean	Std. Dev
Community members are seeking employment opportunities	201	1.84	0.79
We have taken to crop farming	201	1.68	0.73
We conducting trade with our neighbors in the local markets	201	3.64	0.63
We are keeping high breeds of animals	201	1.76	0.76
Community members are shifting to fishery activities	201	1.84	0.73
Valid N (listwise)	201		

The findings fail to concur with those of Morton & Meadows (2018) who observed that various pastoral communities have been exploring a broad variety of income-earning alternatives for decades, and they are being pursued more aggressively in response to drought impacts. Additional sources of revenue such as fishing, fuel wood, and charcoal sales are highly encouraged. This also contradicts the results by Belsky & Barton (2018), who found that, despite limited options, some pastoralists in Kenya's northwestern region diversify their income-generating activities by collecting firewood and burning charcoal. The findings support Rass (2016), who stated that pastoralists have been diversifying their livestock species in their herd for decades, taking into account that some species are better suited to arid environments and are more drought-resistant. Pastoralists investigated prefer goats, donkeys, and camels over cattle because these animal kinds adapt well to hard desert conditions and can resist drought events, according to their experience.

3.6. Conclusion and Recommendations

The study concludes that devolved governance finacing through county government did not adequately, prioritize key pastoralist livelihood diversification sectors based on local priority needs and hence the pastoralist remained unsatisfied with developed governance impact on their livelihoods. Based on the study results, pastoral communities in Moyale, Marsabit County mostly relies of livestock keeping with some on small-scale farming and business activities. This long-term reliance on livestock-based livelihoods of pastoral and agro- pastoral communities in Moyale, Marsabit County are increasingly becoming unsustainable and highly vulnerable for natural disasters and thus the need to conserve climate and diversify into alternative sources of livelihood so as to better quality of life.

The study also concludes that the pastoralists perceive that devolved governance had performed poorly in strengthening local government livestock institutions such as Pastoral Associations and facilitating decentralized planning and accountability mechanisms. Further county government had not put in place appropriate mechanisms in place to manage conflict between pastoral groups and others by providing adequate funding and resources. To address frequent natural-drought disaster, both national and county governments have established various mitigation programmes, policies, initiatives which are contained in the fourth schedule of the Constitution of Kenya 2010. The study concludes that despite the existence of devolved governance, pastoralists in Moyale, continue to experience considerable challenges in their efforts to embrace livelihood diversification. These challenges include livestock diseases, droughts, such as high poverty levels, lack of empowerment, lack of business skill, lack funds for capital to diversify into other economic activities, climatic variability, degradation of land, inter-tribal conflicts resulting from cattle raids and theft, lack of business skills, lack of markets, price fluctuations and lack of modern storage facilities.

The study recommends that there was need enhance pastoralist livelihood diversification through devolved governance adequately financing activities in agriculture, livestock, fisheries, water, environment and natural resources together with education and skill development as a counter measure of the climate change impacts, poverty and resource- based insecurity. Given that poor climatic conditions were increasing affecting the over-relied pastoralism activities in Moyale, there is, therefore, the need for the residents in this area to embraced alternative sources of livelihood. Such may include activities like, poultry and bee keeping, trading, basket weaving, fishing, aquaculture, dairy products, processing milk, hides and skins, fat processing, bones and blood processing, manure, horns and modern-day farming technologies. There is an urgent need to address tree planting and water harvesting at the household level. The Elders and the pastoralists have not harnessed the strength of the joining hands to form groups to source capital to start ranches for pasture and agro farming. Therefore, Members of the County Assemblies (MCAs) need to mobilize groups to source seeds, fertilizers, plowing equipment for farming crops like maize, beans, and green grams during the annual rainy season to support agro-pastoralism activities in favorable agro-ecological areas. The County Government need to facilitate the provision of necessary agro-pastoralism support infrastructure and resources and provide capacity development for livelihood diversification change to occur. The list is to educate the people to save and let them understand in-depth the basic diversification approach, for example, to start garden farming, orchards, keeping poultry, also close collaboration is required between the County Government and National Government addressing challenges such as the insecurity policies to promote peace and safety. In mitigating the challenges, all the stakeholders including the local communities, the County Government, National Government, donors and other interested parties must meet frequently and get thoroughly involved in development initiatives. This partnership will accord each individual an opportunity to be heard especially on how challenges impeding livelihoods changes can be mitigated at an earlier stage before being faced by the mentioned challenges.

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References

Achiba, G. A. (2018). Managing livelihood risks: Income diversification and the livelihood strategies of households in pastoral settlements in Isiolo County, Kenya. *Pastoralism: Research, Policy and Practice Springer* Vol: 8 Issue: 1:20.

Adams, J.S.G., and T.O. McShane. (1996). *The Myth of Wild Africa: Conservation without Illusion*. Berkeley: University of California Press

Addisu, Y. (2017). Livelihood strategies and diversification in western tip pastoral areas of Ethiopia. *Pastoralism*, *7*(1), 9.

Akabwai, D., and E. Stites. 2018. *The Poor Are Not Us: Poverty and Pastoralism in Eastern Africa.* Paper presented at the International Association for the Study of the Commons Conference, Lima, Peru.

Asfir, S. (2016). Determinants of rural households' livelihood strategies: evidence from Western Ethiopia. *Journal of Economics & Sustainable Development*, 7,103-109.

Asrat, D., & Anteneh, F. (2019). The determinants of irrigation participation and its impact on the pastoralist and agro-pastoralists income in Ethiopia: A review study. *Cogent Food & Agriculture*, 5(1), 1679700.

Bache, I., Bartle, I., & Flinders, M. (2016). *Multi-level governance. In Handbook on theories of governance*. Edward Elgar Publishing.

Belsky, J. M., and D. R. Barton. (2018). Constitutionality in Montana: A Decade of Institution Building in the Blackfoot Community Conservation Area.

De Bruijn, M., & Van Dijk, H. (2017). Religious movements in the drylands: ethnicity, jihadism, and terrorist violence in the drylands of Africa, the Middle East, and Central Asia. *In Drylands facing change: contemporary issues in African environments.* Routledge/Taylor & Francis.

Demissie, G. (2017). Livelihood diversification: Strategies, determinants and challenges for pastoral and agro-pastoral communities of Bale Zone, Ethiopia. *American Journal of Environmental and Geoscience*, 1(1), 19-28.

Dinku, A. M. (2018). Determinants of livelihood diversification strategies in Borena pastoralist communities of Oromia regional state, Ethiopia. Agriculture & Food Security, 7(1), 41.

Etikan I, Bala K. (2017). Sampling and sampling methods. *Biom Biostat Int J*. 5(6):215–7. https://doi.org/10.15406/bbij.2017.05.00149

Githinji, G. M., Otieno, D. J., Ogutu , C. A., Mureithi, S., & Bostedt, G. (2019). Understanding the livelihood challenges and diversification options in pastoral areas: Evidence from Laikipia County, Kenya. 6th African Conference of Agricultural Economists, Abuja.

Government of Kenya (GoK) (2017). Marsabit County Integrated Development plan 2018 2022.pdfhttps://cog.go.ke › reports › category › 106-county...PDF

Government of Kenya (GoK) (2017).Marsabit County Integrated Development plan 2017/04 https://informatincradle.com/wp-content/upload//Moyale constituency map-pmg.

Government of Kenya (GoK) (2012). County Government Act 2012. Nairobi. Government Printers.

Government of Kenya (GoK) (2010). The Constitution of Kenya 2010. Nairobi. Government Printers.

Government of Kenya (GoK) (2012). Vision 2030 Development Strategy for Northern Kenya and other Arid Lands. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2017-2018. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2018-2019. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2019-2020. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2020-2021. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2021-2022. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2022-2023. Nairobi. Government Printers.

Government of Kenya (GoK) (2017). Marsabit County Fiscal Strategy Paper 2023-2024. Nairobi. Government Printers.

Gufu, B. S. (2017). Sustainable Pastoral Livelihoods at a Crossroads. Regenerating Africa: Bringing African Solutions to African Problems, 266.

Islam, M., Razzaq, A., Zubair, M., Hassan, S., Kalroo, M. W., Khan, A., ... & Louhaichi, M. (2019). Effects of climate change and grazing pressure on shrub communities of West Asian rangelands. *International Journal of Climate Change: Impacts and Responses*, 14(5), 1-13.

Kaye-Zwiebel, E., & King, E. (2014). Kenyan pastoralist societies in transition: varying perceptions of the value of ecosystem services. *Ecology and Society*, 19(3).

Kothari R. "Research Methodology: Methods and Techniques"(Second revised edition) ISBN (13): 978-81-224-2488-1 (pp. 176).

Liao, C., & Fei, D. (2017). Sedentarisation as constrained adaptation: Evidence from pastoral regions in far northwestern China. *Human ecology*, 45(1), 23-35.

Little, P. D. (2018). *Pastoralism in Africa's drylands*. Rome, FAO

Little, Peter D.; Smith, Kevin; Barbara, A.; Cellarius, D.; Coppock, Layne; Barrett, Christopher B. Avoiding Disaster: Diversification and Risk Management Among East African Herders. *Development and Change*. 2001; 32:401–433

Martin, E., Perine, C., Lee, V., & Ratcliffe, J. (2018). Decentralized governance and climate change adaptation: Working locally to address community resilience priorities. In Theory and Practice of Climate Adaptation (pp. 3-22). *Springer*, Cham.

McCabe JT, Leslie P, DeLuca L. (2010). Adopting Cultivation to Remain Pastoralists: The Diversification ofPastoral Livelihoods in Northern Tanzania. *Human Ecology*.38(3):321–334.

Mengistu, S. (2015). Challenges of Livelihood Diversification in Pastoral Lands of Ethiopia Evidence from South Omo Pastoralists. *International journal of scientific & technology research*, 4(8), 147-153.

Morton, J., & Kerven, C. A. R. O. L. (2013). Livelihoods and basic service support in the drylands of the Horn of Africa.

Morton, J., & Meadows, N. (2000). *Pastoralism and sustainable livelihoods: An emerging agenda*. Natural Resources Institute, University of Greenwich.

Naburi, D. N., Obiri, J., & Mugalavai, E. (2020). Watershed Governance for Food Security in the Sio River Basin: A Paradox of Kenya's Devolution System. *Budapest International Research and Critics Institute-Journal (BIRCI- Journal)*, 2465-2478.

Nyangena, J. (2018). Drought, Land Use Change and Livelihood Diversification among Pastoral Communities in Oltiasika, Kajiado County, Kenya (Doctoral dissertation, School of Environmental Studies, Kenyatta University).

Amwata, D. A., Nyariki, D. M., & Musimba, N. R. K. (2016). Factors influencing pastoral and agropastoral household livelihood diversification in the drylands of Kenya: A case study of Kajiado and Makueni Counties. *Journal of International Development*, 28(5), 771-787.

Rass, N. (2016). *Livestock Markets and Drought in Sub-Saharan Africa. In Economic Spaces of Pastoral Production and Commodity Systems* (pp. 265-280). Routledge.

Salih, A. A. M., Hassaballa, A. A., & Rahma, A. E. (2017). Spectral mixture analysis (SMA) and change vector analysis (CVA) methods for monitoring and mapping land degradation/desertification in arid and semi-arid areas (Sudan) using Landsat imagery. *The Egyptian Journal of Remote Sensing and Space Sciences*, 20(2), S21-S29.

Susanne Berzborn and Martin Solich (2017). "Pastoralism and Nature Conservation in Southern Africa". Pastoralism in Africa: Past, Present, and Future. Berghahn publications.

Teka, A. M., Woldu, G. T., & Fre, Z. (2019). Status and determinants of poverty and income inequality in pastoral and agro-pastoral communities: Household-based evidence from Afar Regional State, Ethiopia. *World Development Perspectives*, 15, 100123.

Teka, et al., et.al (2019). Economic contribution of pastoral and agro pastoral production to food security and livelihoods systems in Africa: The case of Eastern Sudan, Eritrea and Western Ethiopia in the Horn of Africa. Ethiopian e-*Journal for Research and Innovation Foresight* (Ee-JRIF), 5(2).

Tobi, H., & Kampen, J. K. (2018). Research design: the methodology for interdisciplinary research framework. *Quality & Quantity*, 52(3), 1209–1225.

Wangai, P. W., Burkhard, B., Kruse, M., & Müller, F. (2017). Contributing to the cultural ecosystem services and human wellbeing debate: a case study application on indicators and linkages. *Landscape Online*, 50, 1-27.

Yona, Y., & Mathewos, T. (2017). Assessing challenges of non-farm livelihood diversification in Boricha Woreda, Sidama zone. *Journal of Agricultural Economic*, 9(4)*, 87-96.