

**THE CONTRIBUTION OF DEVOLUTION OF THE AGRICULTURAL SECTOR  
TO THE ECONOMIC EMPOWERMENT OF WOMEN MANGO FARMERS IN  
MBOONI SUB-COUNTY, MAKUENI COUNTY**

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## DECLARATION

This research is my original work and has not been submitted for examination in any other university.

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This research project has been submitted for examination with my approval as the university supervisor.

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## **Dedication**

My wish is to dedicate this project to my two daughters: Natalie Wairimu and Imani Kigali. I hope this project serves as a motivation for them to pursue education beyond what I have been able to achieve. Further, I dedicate this project to my friend, Edith Muluhya, one so special and dear to my heart and who gave me the much-needed emotional support. Finally, I wish to dedicate this project to my mother, who has always believed in me and prayed for me.

## **TABLE OF CONTENTS**

<b>DECLARATION.....</b>	<b>ii</b>
<b>TABLE OF CONTENTS .....</b>	<b>ii</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>LIST OF FIGURES .....</b>	<b>xi</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS .....</b>	<b>xii</b>
<b>ABSTRACT.....</b>	<b>xiii</b>
<b>1.0 BACKGROUND TO THE STUDY .....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Statement of the Problem.....	5
1.3 Research Objectives.....	7
1.3.1 Overall Objective.....	7
1.3.2 Specific Objectives .....	7
1.4 Assumptions of the Study.....	7
1.5 Justification of the Study .....	7
1.6 Scope and Limitations of the Study .....	8
<b>2.0 CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>10</b>
2.1 Introduction.....	10
2.2 Empirical Literature Review.....	10
2.2.1 Devolved agricultural financing and women economic empowerment .....	10

2.2.2 Devolved agricultural extension and women economic empowerment .....	13
2.2.3 Devolved agricultural produce marketing and women economic empowerment .....	17
2.3 Theoretical Framework.....	19
2.3.1 Allocative Efficiency Theory.....	19
2.4 Conceptual Framework.....	21
2.4.1 Agricultural Financing.....	22
2.4.2 Agricultural Extension Services .....	23
2.4.3 Agricultural Produce Marketing .....	24
2.4.4 Women Economic Empowerment .....	25
<b>3.0 CHAPTER THREE: METHODOLOGY.....</b>	<b>26</b>
3.1 Introduction.....	26
3.2 Research Design.....	27
3.3 Study Site.....	26
3.3.1 Location and size .....	26
3.3.2 Livelihoods .....	27
3.4 Study Population.....	28
3.5 Sampling Procedure and Sample Size .....	28
3.6 Data Collection Methods .....	29
3.6.1 Structured Questionnaire .....	29
3.6.1.1 Response Rate.....	30

3.6.2 Focus Group Discussion .....	30
3.6.3 Key Informant Interviews .....	31
3.7 Data Processing and Analysis.....	31
3.8 Ethical Considerations .....	32
<b>4.0 CHAPTER FOUR: PRESENTATION, DISCUSSION AND INTERPRETATION OF FINDINGS.....</b>	<b>33</b>
4.1 Introduction.....	33
4.2 Devolved Agricultural Financing Practices and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county .....	33
4.2.1 Age group of Respondents.....	33
4.2.2 Marital Status .....	34
4.2.3 Descriptive Results on Agricultural Financing Practices .....	35
4.2.4 Correlation Results for Agricultural Financing Practices and Women Economic Empowerment.....	37
4.2.5 Regression Results for Agricultural Financing Practices and Women Economic Empowerment.....	37
4.3 Devolved Agricultural Extension Services and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county.....	41
4.3.1 Level of Education.....	41
4.3.2 Descriptive Results on Agricultural Extension Services .....	42

4.3.3 Correlation Results for Agricultural Extension Services and Women Economic Empowerment.....	44
4.3.4: Regression Results for Agricultural Extension Services and Women Economic Empowerment.....	44
4.4 Devolved Agricultural Produce Marketing and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county.....	47
4.4.1 Descriptive Results on Agricultural Produce Marketing Practices.....	47
4.4.2 Correlation Results for Agricultural Extension Services and Women Economic Empowerment.....	49
4.4.3: Regression Results for Agricultural Produce Marketing Practices and Women Economic Empowerment.....	50
4.5 Devolution of Agricultural Sector and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county.....	53
4.5.1 Awareness of Women Economic Empowerment.....	53
4.5.2 Descriptive Results for Women Economic Empowerment.....	54
4.5.3: Overall Regression results for Devolution of Agricultural Sector Practices and Women Economic Empowerment.....	55
<b>5.0 SUMMARY, CONCLUSION AND RRECOMMENDATIONS.....</b>	<b>59</b>
5.1: Introduction.....	59
5.2: Summary.....	59
5.3: Conclusions.....	61

5.4: Recommendations.....	61
5.5: Recommendations for Further Research.....	62
<b>REFERENCES.....</b>	<b>62</b>
<b>APPENDICES.....</b>	<b>71</b>
Appendix I: Questionnaire.....	71
Appendix II: Focus Group Discussions.....	75
Appendix III: Key Informant Interview Guide.....	76



## LIST OF TABLES

Table 3.1: Distribution of Sample Size.....	29
Table 3.2: Response Rate.....	30
Table 4.3: Descriptive Results on Agricultural Financing Practices .....	36
Table 4.4: Correlation Results for Agricultural Financing Practices and Women Economic Empowerment.....	37
Table 4.5: Model Summary .....	37
Table 4.6: ANOVA.....	38
Table 4.7: Regression Coefficients .....	38
Table 4.8: Descriptive results for Agricultural Extension Services.....	43
Table 4.9: Correlation Results for Agricultural Extension Services and Women Economic Empowerment.....	44
Table 4.10: Model Summary Results.....	44
Table 4.11: ANOVA Results .....	45
Table 4.12: Regression Coefficients .....	45
Table 4.13: Descriptive results on Agricultural Produce Marketing Practices.....	48
Table 4.14: Correlation Results for Agricultural Produce Marketing and Women Economic Empowerment.....	50
Table 4.15: Model Summary Results.....	50
Table 4.16: ANOVA Results .....	51
Table 4.17: Regression Coefficients .....	51
Table 4.18 Awareness of Women Economic Empowerment in the current days .....	53

Table 4.19: Descriptive results for Women Economic Empowerment .....	55
Table 4.20: Model Summary .....	56
Table 4.21: ANOVA Results .....	56
Table 4.22: Regression Coefficients .....	57

## LIST OF FIGURES

Figure 2.1: Conceptual Framework of the Study.....	22
Figure 3.2: Map of Makueni County, Kenya (KNBS Household Survey, 2021).....	26
Figure 4.3: Age groups of Respondents.....	34
Figure 4.4: Marital Status of Respondents.....	35
Figure 4.5: Level of Education of Respondents.....	41

## **LIST OF ABBREVIATIONS AND ACRONYMS**

ANOVA	Analysis of Variance
ASALs	Arid and Semi-arid Lands
CBO	Community Based Organizations
CDF	Constituency Development Fund
CIDPs	County Integrated Development Plans
FGDs	Focus Group Discussion
GDP	Gross Domestic Product
HCDA	Horticultural Crops Development Authority
KIIs	Key Informant Interviews
NACOSTI	National Commission for Science, Technology and Innovation
NGOs	Non-Governmental Organizations
SPSS	Statistical Package of Social Sciences
USSR	Union of Soviet Socialist Republics

## ABSTRACT

Mango farming is a significant agricultural activity in Mbooni sub-county, and women play a crucial role in this sector. The purpose of this study is to examine the contribution of devolution of agricultural sector to the economic empowerment of women mango farmers in Makueni County, Eastern Kenya. Specifically, the study assessed the influence of devolved agricultural financing practices, devolved extension services and devolved agricultural produce marketing practices on women's economic empowerment. Guided by the allocative efficiency theory the study adopted the descriptive research design among 302 women mango farmers who double as members of Kyeni Kya Yathonza mango growers group. Data was collected through structured questionnaires, focus group discussion and key informant interviews. Quantitative data from the questionnaires was edited, coded and then analysed using the SPSS v27 statistical software to generate descriptive and inferential results. On the other hand qualitative data from the focus group discussion and key informant interviews was analysed using content analysis. The descriptive results revealed that majority of the selected women mango farmers had benefited from all the three devolved agricultural practices which promoted women economic empowerment. The correlation results also showed that devolved agricultural financing practices had the highest positive and significant correlation with women economic empowerment ( $r=0.767$ ,  $p=0.000$ ), followed by agricultural extension services ( $r=0.648$ ,  $p=0.000$ ), and then agricultural produce marketing practices ( $r=0.609$ ,  $p=0.000$ ). In addition, the regression results also demonstrated that agricultural financing practices ( $\beta=0.208$ ,  $p=0.000$ ) had the highest positive and significant influence on women economic empowerment, followed by agricultural extension services ( $\beta=0.115$ ,  $p=0.000$ ) and then agricultural produce marketing practices ( $\beta=0.104$ ,  $p=0.000$ ). Thus, the study concluded that devolved agricultural sector practices have a positive and significant influence on women economic empowerment among women mango farmers in Mbooni sub-county. This includes; control over and active use of the loans accessed through financing by the County, the women's role in household decision-making, ability to make large and small purchases and ability to make decisions on what food and when to buy food from the proceeds of mango sales. The study recommends that women mango farmers should be encouraged to take appropriate steps in accessing affordable loans offered by credit-lending institutions which can enable them expand their mango farming activities, improves their economic well-being and promote financial independence. Policymakers at the county agricultural department should enforce gender responsive policies to strengthen the gender blind policies in order to ensure there are equal opportunities for men and women to access financial resources. The study also recommends on additional county government interventions in partnership with private organizations to plan for more agricultural exhibition and trade fairs which provide more effective marketing opportunities for women mango farmers and enables them gain access to skill expertise on modernized production techniques in mango farming.

## **CHAPTER ONE**

### **BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

Agricultural production is important to the populations of many nations around the world (Lind & Oringa, 2016). It, therefore, follows that agriculture is a very important source of livelihood for many households, especially those in the low-income categories and specifically those in rural areas. Therefore, its enhancement as a business is critical to enhance well-being, food security and industrial development, and much also for increasing earnings from international trade. In Kenya, agriculture is one of the devolved functions (Rusch & Voland, 2016). While agriculture is a critical source of income for many poor small peasants and farming workers in remote regions, it seems to have been placed on the rearguard by policy makers, including political leaders at various levels of governance (Venkateswarlu, 2014).

In this vein, it is noteworthy to point out that women supply much of the labour force for agricultural production, more so when it comes to crop production, in many countries in Africa. In Kenya, in particular, in addition to current household roles, women represent between 42% and 65% of the agricultural labour force (Valiani, 2022). Even so, given the crucial role of women in the agricultural Production, studies indicate that they are lagging behind men in terms of benefits from the agricultural industry in Africa (Filmer & Fox, 2014; Muhumed & Minja, 2019). This is mainly due to gender disparities that exist in terms of entry, influence and usage of resources such as land, animals, manpower, schooling, development and capital services and innovation (O'Sullivan et al., 2014).

Devolution has been defined in many ways with its meaning varying in various countries. “The concept of devolution has evolved over time and in the process has undergone changes in terminology and meaning” (Jacobs & Chavhunduka 2003). Mukonza and Chakauya defined devolution as “a form of decentralization through which authority to formulate policies in selected areas of public policy is conferred to elected sub-national levels of government.” (Mukonza and Chakauya 2012). The World Bank and Government of Kenya note that ‘the constitution of Kenya 2010 was the institutional response to long-standing grievances over the centralization of state powers and public sector resources as well as regional disparities in service delivery and development outcomes’ (Williamson,., OwuorKinuthia.,2022). With the

constitution of Kenya 2010, therefore, Kenya adopted a decentralized system thereby entrenching two levels of government: the National Government and the forty-seven (47) County Governments. The Constitution further assigned functions and powers to both levels of government, with agriculture being one of the devolved functions.

Empowerment refers to increasing the political, social or economic strength of individuals and communities (Khobragade, 2019). Women's Economic Empowerment therefore encompasses the transformative process that helps women and girls move from limited power, voice, and choice at home and in the economy to having the skills, resources, and opportunities needed to compete equitably in markets as well as the agency to control and benefit from economic gains (Bill & Melinda Gates Foundation, 2019).

As Floros (2014) has argued, the empowerment of women through the devolution of agriculture can result in advancements in their economic and social conditions within and outside the family home, which include increased influence on the allocation and distribution of domestic and public sphere resources, including but not limited to improved mental health; decreased time restraints; and enhanced access to financing, medical services, development of new skills, income-earning potential, market data and legal justice (Zereyesus, 2017). Therefore, promotion of gender equality is an important focus of a Country's growth plan aimed at achieving sustained food supply and poverty reduction in the agricultural economy.

Furthermore, Faguet (2014) notes that the provision of social facilities to the less advantaged can be stimulated by independent devolution of the administrative structures. Those who propose devolved powers assert that it results into more cohesion between regional government staff leadership and the citizens and, consequently, allows them to channel their specific interests and motivations in order to effectively reflect these in the evolutionary readiness (Gundersen et al., 2014). Devolution is often promoted for greater transparency, liability, and efficacy in the distribution of services, particularly to the least fortunate and vulnerable sectors of the population, due to the decentralization of power with adequate control and public investments (Morehart, 2014).

Elsewhere, some scholars point out that improved service provision in some countries, such as the United States of America, has been accomplished through the growth of agricultural

activities and the operationalization of industrial agriculture (Filmer & Fox, 2014; Muhumed & Minja, 2019). However, this progress has also been facilitated by strong legal and policy developments at the local (State and County) levels (Gundersen et al, 2014). Therefore, devolved powers, or devolution, of certain national government services to the state or municipal level, has been justified by varying needs and desires throughout the Western World. Due to substantial disparities among states in fields such as crop output, production prices, income allocation, and prospects for off-farm jobs, the shift toward the decentralization of U.S. agriculture policies already represents an understanding of the benefits from decentralization, with some systems addressing disparities in national and regional priorities (Gundersen, Kuhn, Offutt & Morehart, 2014).

Perestroika refers to a series of political and economic reforms aimed at revitalizing the stagnant economy of the Soviet Union in the 1980's. Butterfield (2010) has concluded that if perestroika, were to prevail, the complexities of operational restructuring of the agricultural production of the USSR at the community level enabled the USSR do little about the food crisis in the immediate future. It was suggested that only by collective economic control in lieu of lease agreements and collective modes of administration could the expected benefits be obtained in the perestroika of agriculture, all of which largely disregard collective policy processes and focus on incentives for producers, food industry staff and executives. It was suggested that regional amendment was challenging due to various factors: the level and scope of local officials' education; their ability to address the spirit of decentralized administration; and the existence of the administrative climate under which local leadership government works but have produced improved agricultural output.

Closer home in Ethiopia, food malnutrition in slum areas and desert and semi-arid regions accounts for nearly sixty percent of the nation as a whole. The implication is that food shortages have impacted some of the people of these communities, who struggle from disease, hunger, low infrastructural growth and conflicts (Lind & Oringa, 2016). Anthropologists have observed that communities typically respond to the famine-related loss of crops and livestock in areas with unpredictable rainfall in Ethiopia by incorporating risk mitigation and sustenance activities (Wassie and Fekadu 2014; Kima et al. 2015). The coping mechanisms include bartering their sole vital resources and taking away their infants from accessing institutions and performing



income-creating procedures. Many of these are deleterious to the environment. The decrease in food safety, mainly in the drier regions, has been observed to be due to unpredictable rainfall affecting crop and animal agriculture productivity (Zereyesus, 2017).

With an annual input of estimated 26 percent of GDP and an indirect participation of about 25 percent to GDP, agricultural production is the key component of Kenya's industry. The industry contributes over 65 percent of Kenya's combined exports and accounts for over 70 percent of rural casual jobs (Filmer & Fox, 2014). The agricultural sector, therefore, is not only the backbone of Kenya's economy, but also the means of revenue for a significant proportion of the Kenyan population. This means that sustained agricultural improvement is important for improving the well-being of the population and for generating social development that is requisite for rapid economic progress. Alongside these efforts is targeting promotion of gender equality in agricultural production so as to provide women and men an equitable platform for participation and capacity building. This will go a long way to addressing factors that precipitate susceptibility to deprivation for marginalized groups, especially women.

A number of factors affect the agricultural production in the Country: Fund contribution: The distribution of the community funding to the business varies from 3 to 14 percent, while Government Budget contributions ranged 2.2 percent between 2003/2004 and 2011/2012, which is much smaller. The total African agricultural spending is 4.5 percent; the regional contribution of Kenya is 1.8 per cent in the 2019/2010 allocation and even below in the counties. Collaborative work, creativity and planning was hampered by a lack of cooperation between the state governments, national parliament, growth partner organisations in the agriculture sector.

The adoption of the Kenyan constitution 2010 brought about the devolution of several functions, including agriculture. The agricultural sector is important for ensuring both food security and empowerment of women at devolved County units. Evidently, women play a key role in agriculture and they make up between 42% and 65% of the agricultural labour force in Kenya (World Bank, 2014). In Kenya, just like other developing countries, women produce between 60 and 80 per cent of food, which provides agriculturally based income used for women social-economic empowerment (Chinery, 2011). The devolution of the agriculture sector therefore

accords women at National and County level access to various agricultural empowerment funds and related benefits.

As noted by the World Bank report, agricultural sector provides food and incomes for majority women that helps to cushion these vulnerable populations from adverse effects of poverty. Prior to the Constitution of Kenya 2010, agricultural initiatives, agricultural institutions and farming trades skills training, agricultural extension, financing, and produce marketing was done through centralized government system. However, the enactment of the 2010 constitution shifted agricultural sector activities from the centralized government system to the devolved county units.

Due to the inconsistent weather patterns brought about by climate change and the subsequent effects on agricultural production, different Counties have adopted different farming techniques and crop production methods to ensure sustained food security. Kericho County for example, has always been known to be the centre of tea growing in Kenya. (Carr, 2018). However, due to the shifting climatic conditions over the years, the County adopted the one-ward-one-crop concept where each ward focuses on one crop. Kakamega County on the other hand adopted the one household one cow concept to encourage dairy farming aimed at substituting income for the various households.

Horticulture (fruits, flowers and vegetables) is a key agriculture sub-sector in rural Kenya. A report of the Horticultural Crops Development Authority (HCDA) shows that major fruits produced in Kenya in terms of volumes are bananas, mangoes, and pineapples (HCDA, 2010). Mangoes, however, seem more adaptable than all others for their ability to thrive in low rainfall (500-1000mm) and a wide range of temperature (10-42 degrees Celsius) which makes it suitable even for the Arid and Semi-arid lands (ASALs). Makueni is the leading Mango producer in Kenya.

## **1.2 Statement of the Problem**

The centralized agricultural production was cumbered by layered bureaucracy, inefficiencies, poor local farmer's direct support which adversely affected farmers, particularly small-scale farmers, in which case women are largely represented. Secondly, policies affecting agricultural sector were made at the national centralized level, without participation of farmers at the

devolved grassroots levels. As such, challenges facing local farmers, particularly women got inadequate attention, or no attention at all. The result was poor implementation of agricultural sector policy frameworks such as financing, farmer extension support, access to quality seeds, agricultural value chains and markets for farmers produce.

The Constitution of Kenya 2010 sought to address this challenge, by having agricultural functions moved to the devolved County Units (Kennedy and Bieniek (2010). Through devolution, several efforts were put in place, including formulation of the County Integrated Development Plans (CIDPs) to ensure county economic planning and development, including agricultural production was localized. The purpose was to address the needs of local communities, in the context of the proposed study, local farmers. Therefore, the devolved county units are largely responsible for small-scale agricultural sector financing, farmer extension support, access to quality seeds, agricultural value chains and markets at the county level, and also at the national levels.

However, despite the change to devolution in agricultural sector policy formulation and functions, there remain significant challenges for women access to financial credit, mechanized farming, and access to farming technology, and value-chains for their agricultural produce. Financial budgetary allocations to small scale farmers, to which women are the majority, is still poor and inadequate (Muma, 2016). In addition, there is a limited body of research on the impact of devolution on women's economic empowerment in Makueni County, particularly in the agricultural sector. Conducting this study can fill this gap and provide valuable information for local policymakers and practitioners.

Therefore, this study examined whether efforts by Makueni County to empower small scale farmers has had socio-economic empowerment of women in Mbooni, Makueni County. The following research questions guided the study?

- i. What is the effect of devolved agricultural *financing* on economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya?
- ii. What is the influence of devolved agricultural extension service on economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya?

- iii. What is the influence devolved agricultural produce marketing on economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya?

### **1.3 Research Objectives**

#### **1.3.1 Overall Objective**

The general objective of the study was to assess the effect of devolution of agricultural sector on the economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya.

#### **1.3.2 Specific Objectives**

- i. To examine the effect of devolved agricultural financing on the economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya.
- ii. To analyze the influence of devolved agricultural extension service on the economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya.
- iii. To examine the influence of devolved agricultural produce marketing on the economic empowerment of women mango farmers in Mbooni Sub-County, Makueni County, Kenya.

### **1.4 Assumptions of the Study**

In undertaking the study, the following assumptions were made:

- i. Devolved agricultural financing has increased financial access to women mango farmers enabling them to invest in improved farming practices, expand their mango production.
- ii. Devolved agricultural extension services have economically empowered women mango farmers by providing them with valuable knowledge and training, leading to improved farming techniques, increased yields, and better access to markets.
- iii. The devolved agricultural produce marketing has diversified women mango farmers market choices and consequently increased their earnings.

### **1.5 Justification of the Study**

Makueni County has unique policies and programs related to devolution and agriculture, and understanding their impact on women's economic empowerment can inform future policies and

programs in the region. The study findings can provide valuable insights which can guide policymakers in refining devolution policies and resource allocation mechanisms to ensure gender-inclusive development outcomes. The research results can also inform the development of targeted agricultural production and marketing strategies that may be helpful to policymakers to design interventions that align with the specific needs and constraints faced by the women mango farmers, and ultimately improve the effectiveness of devolved agricultural programs.

In addition, assessing the devolved agricultural financing practices in Mbooni sub-county will provide a better understanding to the credit-lending institutions on the favourable or preferred financing schemes that can effectively meet the financial needs of the women mango farmers. On the other hand, the detailed theoretical and empirical review provided in this study will also enrich other scholars into understanding the relationship between governance structures, resource allocation, and development outcomes, particularly in the context of gender-sensitive development.

### **1.6 Scope and Limitations of the Study**

Several agricultural functions have been devolved to county governments as part of the decentralization process including agriculture extension services, agriculture financing, agriculture marketing and trade, crop and livestock production, agriculture research and innovation, agriculture and food security and agricultural land use and management. However, the current study focused on the first three functions given the limited time and financial resources available for the execution of the research.

Geographically, the study was limited to Makueni County, Mbooni Sub-County. The target population were commercially oriented women group farmers who engage in mango farming for supply to markets within and outside the County. To identify the specific women group farmers engaging in mango farming posed a challenge to the researcher since most of the women group farmers were generalized in different agricultural farming activities. Additionally, the targeted respondents appeared to conceal some of their groups' information that they considered confidential and sensitive to share to the public. Some of the respondents may have a challenge in understanding the questions due to language barrier.

To delimit the identified limitations, the researcher ensured to work closely with the sub-county director officer of the Agricultural sector in Mbooni sub-county who was quite aware of the women mango grower groups in Mbooni sub-county. The researcher also tried the best to create a good rapport with the respondents by first seeking their consent to participate in the focus group discussions and filling the questionnaire. This was to ensure that they participate voluntarily and without any coercion. The researcher also ensured to take the respondents through how to answer the questions in each section and what each section entailed in regards to the objectives of the study.

### **1.7 Definition of key terms**

**Agricultural Production** - The production of any growing crop attached to the surface of the land such as mangoes from cultivation to sale

**Women Empowerment** - Promoting women's ability to make decisions and control the production and proceeds in the cultivation and sale of mangoes

**Women farmers** – Groups of female agriculturalists targeted by the County Government in Mango production.

**Food security** - Ability of women farmers to acquire market sourced foods from the proceeds of mango sales

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter begins by presenting the empirical literature review from prior studies in the same or related areas of the subject of the current study. The section was guided by the specific objectives of the research including; devolved agricultural financing, devolved agricultural extension services, devolved agricultural produce marketing and economic women empowerment. The chapter also entails the theoretical framework discussing in-depth on allocative efficiency theory. It culminates in the development of a conceptual framework that guided the study.

#### **2.2 Empirical Literature Review**

##### **2.2.1 Devolved agricultural financing and women economic empowerment**

Women's unseen role in the creation of wealth in smallholder farmers, restricted control and management of properties, low levels of preparation (in comparison to men farm workers) and low levels of representation in agricultural producers are also seen as major barriers to women's financing (Venkateswarlu, 2014). The exclusion of accessibility to capital, including the lack of experience, is becoming a limiting factor for women to obtain better supplies and higher returns. Analysis has also revealed that even when they market their produce, female producers often receive a much cheaper price than the male colleagues. Their pricing trend is smoother, with little market details prior to the transaction (which is likely to be due to limited time to assess the market pricing) (Zereyesus, 2017). They also expend the proceeds more efficiently, suggesting that they need to pay more immediately than the male colleagues for household expenditures.

Agricultural finance provides the procurement of different forms of resources to benefit all on- and off-farm agricultural operations and industries, including the delivery of inputs, output delivery, manufacturing, refining and marketing operations. From the perspective of developed countries, funding is considered an important element in the growth of rural areas (Muhumed & Minja, 2019). Financial services for agricultural production (privately or publicly) is supported (in the form of equity or loans) to boost welfare programs through agricultural growth.

Women's company loans offer incentives for them to participate in the social and economic functions of their communities in order to increase their incomes. The loans have made it easier for many rural communities' women to start and expand their revenue options such as rabbit and fish farming, which are emerging to be successful businesses (Faguet 2014). The issues affecting such funding are the restriction of connections to or redemption of such grants for others in the interior sections of remote regions where, owing to distance and limited infrastructure, companies neglect publicity.

Hendriks (2019) study also highlighted that financial inclusion among women in Washington DC has transformative effects in funding household expenditures for their families including education finances for their children. By providing low-income women with the right financial tools to save and borrow money, make and receive payments has also assisted in poverty reduction and improving their livelihoods. Additionally, women who also have access to personal secure savings accounts have also managed to enhance their economic resilience and have greater control over their financial assets, even among those who have limited influence in household decision-making.

A comprehensive case study in Vietnam by Linh et al. (2019) assessed the impact of credit access on output production, household income, and poverty reduction among rural farmers. The study indicated that access to credit for households in Vietnam's rural areas has proven challenging due to the nature of rural credit markets and lending protocols. The rural market exhibits a coexistence of both informal and formal credit markets. However, the availability of formal lenders is limited due to imperfections in the formal market, thereby making informal sources of credit the predominant choice within rural regions. Additionally, low-income and poor households frequently face restrictions when trying to secure formal loans because they lack sufficient collateral. This makes it impossible for them to borrow solely based on their income. The research also established that credit financing policies implemented by the government of Vietnam were not adaptable to all the different household groups.

Similarly, the findings of a study done by Muthuuri (2011) which intended to evaluate the mobilization of women farmers suggest that women's organizations have not effectively begun to take control of the participative space offered by the public funding and the Constituency



Development Fund (CDF) to promote the execution of their initiatives, poor knowledge and understanding of the funds allocated, low involvement and little value to feminist organizations from the budget available in the region. Consequently, the research establishes that public leadership should plan and execute information and education programs to enable communities and individuals to recognize the essence and services of community funds and CDF. Such programs should directly meet the knowledge gaps of the affiliates of the association and of the population as a whole and of the socio-economically marginalized communities removed from the traditional conventional frameworks.

The effect of financing projects on agricultural production, wealth creation and reducing poverty in Nigeria was investigated by Egwu (2016). The results of the study showed that financial Lending to the Agricultural Sector Finance Debts to the Agriculture Sector of Nigeria were essential for the ratio of production of the agriculture production to the economic output, thereby alleviating the poverty incidence and inducing growth of the Economy, that there is a long-term connection between the factors in the intervention group in Nigeria. In the light of the study results, the researcher proposed that the cash-reserve ratio should be minimized by the Central Bank of Nigeria. Funds accruing from such measures must, nevertheless, be credited to the reserves of agriculture credit. The land management decision needs to be reviewed in order to give Nigerians unlimited rights to land property. This will ultimately raise the number of farmers who could potentially act as leverage for the financial program's credit services. Eventually, agricultural marketing was identified to be of maximum priority in the report.

On the other hand, Gichuki and Kamau (2022) study examined the determinants of financial inclusion among small and micro-sized (SMS) farming enterprises by banking institutions and table banking groups in Kenya. The findings indicate that SMS farming enterprises owned by women tend to secure smaller agricultural credit amounts from table banking groups and possess smaller farms without land titles and lower-valued assets compared to SMS farming businesses owned by men, who have access to agricultural credit from commercial and microfinance banks. Additionally, the study showed that the household dependency ratio played a significant role in determining the access to agricultural credit from mobile banks, commercial banks, and table banking groups. This also implied that female-owned SMS enterprises encounter challenges in accessing credits from banks due to the high dependency ratio and heavy economical burden as

they take care of their families. Thus, they are more likely to have limited capacity to repay loans which makes banks more hesitant to give credits to them or implicate stricter terms and conditions to mitigate the perceived financial risks.

Further, Cherotich, Ayuya and Sibiko (2019) study emphasized on the role that financial knowledge plays in improving performance of women farm enterprises in Kericho county, Kenya. Financial knowledge equips women farmers with the skills and understanding needed to make sound financial decisions. This includes budgeting, investment planning, and resource allocation, which can lead to more efficient use of resources and improved financial performance. The findings of the study also showed that women who had a strong understanding of financial concepts and practices on credit access can increase women farmers' eligibility for loans and credit. In addition, financial knowledge was also found to empower women by providing them with greater control over their financial resources. This empowerment has led to increased economic independence and reduced gender disparities in the agricultural sector.

### **2.2.2 Devolved agricultural extension and women economic empowerment**

Extension services is the supply of input data to producers, as per Anderson and Feder (2007). In agriculture, the operators are still equipped with unique and innovative methods of doing tasks. When the extension system is of great value to farmers amid the propagation of a novel strategy to agriculture, the extension initiative fades out until most of them are conscious of it. The information and expertise element that contributes to inventive approaches and techniques and regulations are the main concepts of the agricultural extension.

The empowerment of women farmers in the developing nations has many well-established advantages. It has been found that a more influential position for women in farm households results in more effective distribution of limited household capital, more equal allocation of profits on domestic output investments, and overall increases in health and poverty (Johnson et al., 2017). Empowering women may indicate that women have a higher capacity within the community to create and operate on decisions both personally and jointly.

Education and skills development are core elements of every policy to increase production in agriculture and non-agricultural sectors and to bring families out of poverty. Agricultural training

includes a broad variety of traditional and modern practices, including professional and in-service development and specialized expertise and skills that create capability within the agricultural industry and for broader rural growth. Farmers are principally trained by hands-on training. Ambitious farmers would gain knowledge through vocational training or by being monitored and educated by accomplished farmers and experts.

Reading about improved manufacturing technologies and strategies, emerging goods and industries, career and management qualities (such as fitness management, judgement, self-confidence or dispute control) will make a huge impact (ILO, 2008). The acquisition of skills is especially relevant for women who are more inclined to contribute to the informal market as family members, marginal farmers or home-starters micro-entrepreneurs, or to do low-paid, unqualified jobs as temporary laborers. Women also have separate training standards, related to their household work and nursing duties, and also to labor divisions depending on sexuality, for handling or performing particular roles in the cultivation and harvesting of crops, animals, forestry or fish.

A research on the economic advancement of women in agricultural production was carried out by Doss, Bockius-Suwyn & D'Souza (2012). As peasant farmers' commercial crop producers, food producers, and cattle owners, among several other positions, women take a pivotal function in agricultural development. Many innovation institutions have started integrating sexuality into their initiatives for economic development. Men and also women were approached by the most effective approaches, concentrating on women's allies and male local representatives. Such a method avoids alienating women or upsetting men, explicitly constructing a healthier social atmosphere for women's achievement, and more broadly, group progress.

Ugwu (2019) study that examined the role of women in agricultural farming in Enugu South, Nigeria, also revealed that women who possessed more extensive education were more actively engaged in decision-making processes, primarily because they possessed greater knowledge and expertise regarding improved agricultural practices acquired through their education. Similarly, financially well-off women exhibited a more robust level of participation in decision-making. Conversely, women without landownership had limited involvement in farm management

decisions, as they lacked the authority to make significant choices regarding the land without the owner's approval.

However, the research by Modu, Putai and Petu-Ibikunle (2021) underscored obstacles in providing extension training to women's groups, which entail enhanced government funding allocation to the Agricultural Development Program (ADP), organizational restructuring and reorientation within ADP, and mobilizing women's groups with a specific emphasis on those targeted for extension training and communication. The other challenges outlined encompassed insufficient processing skills, product spoilage, and a shortage of storage infrastructure.

Agricultural extension includes consultancy programs for agriculture. In practical language, extension involves supplying farmers with awareness of farming expertise and technologies in developed countries to increase their production, food production and wellbeing. In order to raise agricultural production, increase food security, enhance rural livelihoods and foster agriculture as a catalyst of pro-poor economic development, extension programs play an important function. Extension project will focus on people's desires, people's experience, expertise, confidence and value, and on empowering individuals to take initiative and work over their own approach to their challenges, rather than having some fully prepared solutions.

A research was undertaken by Memon, Aslam, Khushk, Ali & Mallah (2015) found that most extension officers registered increases in all extension operations while the large percentage of producers, on the other hand, recorded that there were no changes in extension operations after devolution. In order to determine interconnections between agriculture development, rural productivity and eradicating poverty, gender participation and development inclusiveness for social and economic progress, Roy, Shivamurthy, & Radhakrishna, (2010) summarizes and conceptualizes this report. The research was performed in Bangalore. As a tool for alleviating poverty, agricultural production has a properly established background and can serve as a driver of development for agribusiness nations. The commitment of women farmers to the agricultural sector and to rural development is characterized by significant variability and is affected by influences relevant to the individual group and family in concern. Agricultural extension inclusiveness is comprehensive and respects the presence and importance of various organisations with different dimensions, agendas and practices in order to implement an

extended policy for extension services with a stronger focus on the solution to regional livelihoods Government agencies ought to enact laws and illustrate gender equality in state and county government bodies.

A report on women's emancipation, agricultural expansion, and digitalization was undertaken by Lecoutere, Spielman, and Van Campenhout (2020). Women profit from such programs as this will influence their capability of making educated choices, culminating in improved productivity, family revenue, and welfare of the community. The research conducted a gender experimental research in east Uganda amongst maize-farming household units to assess whether documentary extension communication influences maize production yields. Results indicate that engaging women with awareness improves their understanding of enhanced maize varieties management strategies, their involvement in decision in agriculture, acceptance of suggested activities and materials, outcomes relevant to development, and the number of women selling maize on the marketplace. Extension attempts to explicitly resolve intra-household imbalances of knowledge could be the first best way to encourage women in agriculture.

Johnson, Balagamwala, & Agnes (2018) conducted out a report on empowering women within the advancement of agriculture training. Even though there is no conclusive proof that the productivity of projects serving women is improved by hiring female extension employees or female project personnel, this is a commonly held belief by many social enterprises. In addition, programs which have been active in preparing and recruiting women may be described. Agricultural activity encourages farmers to undertake many initiatives to better their personal livelihood.

Okeyo et al. (2020) study also sought to determine the influence of agricultural extension services on participation of women in sorghum farming in Siaya county, Kenya. The research underscores the significant effect of resource allocation decision on the adoption of sorghum cultivation within farming households. The results reveal that access to valuable technical knowledge and training in the best agricultural practices and modern farming techniques helped in empowers women with the skills and expertise needed to engage in sorghum farming activities effectively. This activities include soil preparation, planting techniques, pest and disease management, and harvesting practices in both small scale and large scale. The study also found

that tailored extension programs that address the unique challenges and opportunities faced by women in sorghum farming encouraged their active involvement.

### **2.2 3 Devolved agricultural produce marketing and women economic empowerment**

Agricultural promotion of most big crops and new supplies like fertilizers, equipment and hybrid seeds for sale and food has always been a challenge. When extension officers, analysts and development agencies operating in remote regions challenge farmers to prioritize their challenges, among the most critical concerns facing agricultural marketing is constantly posed (Patil & Babus, 2018). It may occur in the sense of the launching of new seeds or of productive output technologies, or it could be felt especially acutely in rural areas where public agencies no longer work, which are heavily impacted by professional traders. Farmers in rural regions are most certainly improperly supported by agricultural merchants (not only remotely due to geographical barriers from customers but also because of bad roads) and are often forced to pay somewhat unappealing price of the products. Low access to businesses is reflected by limited access to community resources of all sorts. The poverty that occurs renders those populations hazard in particular (Ball, 2020).

The entire of the grain, feed, crop, and livestock sectors incorporates this principle of agricultural marketing. However, with some other agriculture sectors such as textile products tobacco, pesticides and farm equipment the need to retain a manageable scale of the research program demands that the term be limited to certain selling activities including these other enterprises in direct communication with producers as the first dealers or final purchasers.

The assets utilized in the transport from the farm to the manufacturer of an agricultural product are explains the agricultural marketing concept. The preparation, coordination, management and processing of agricultural goods in such a way as to please producers, middlemen and customers is part of these facilities. Marketing would not only assume a very significant function in boosting production and demand, but also in speeding up the rate of economic growth. Agriculture supplies different sectors with raw materials and, consequently, the selling of those crops (Oduol et al., 2017).

Agricultural Promotion and Sustainable Growth in India's economy are researched by Jyothi (2014). Moving farm produce more effectively from the farm to the market could lead to significant benefits for farmers, customers, and the economy at large of India. More productive agricultural promotion stimulates widespread production and income gains for the market, increases the prices of agricultural producers, lowers consumer food costs and raises domestic demand, especially among low-income groups. The paper further stresses the significance of agricultural marketing and its goals. The result is that the promotion of the development of agricultural marketing is important to improve the sustainable growth of the nation.

Gupta and Sharma (2018) explored the role of agri-business in growth. The study showed that, with growing attempts to encourage free trade, it is important to question if the effect might be less than favorable for certain agricultural farmers. Small farmers with restricted access to finance, technological support and reasonable customers may not be willing to take part in emerging prospects for marketing. This article recommends that growth strategy be extended to cover agribusiness companies without suggesting a switch to extensive state. Localized cultivation can assist rural communities to gain additional value which is otherwise unavailable to foreign agents.

Moreover, Liu et al. (2019) study on the role of agricultural cooperatives in serving as marketing channels for low-income farmers in Sichuan province, China. The research findings reveal that individuals' inclination towards risk, the size of their farms, ownership of machinery, sales skills, and the effectiveness of cooperative demonstrations are the primary determinants influencing members' choices to utilize agricultural cooperatives as a marketing platform. Furthermore, those who opt for this marketing channel experience notably higher levels of farm and household income compared to those who do not. Thus, these results underscore the significance and urgency of encouraging non-users to adopt agricultural cooperatives as a marketing channel.

Theeuwien et al. (2021) study also examined women involvement in small-scale cooperatives developed in the agricultural sector in Uganda. The findings indicate that gender disparities in Uganda act as barriers preventing women from establishing business connections between agricultural organizations that assist in marketing farm produce. Female farmers also encounter obstacles such as limited mobility, lack of trust from men, restricted communication freedom,

household obligations, and responsibilities spanning from farming tasks to sales. The study also showed that these barriers, which hinder the development of inter-organization business relationships, hinder the empowerment of female farmers and their ability to bring economic benefits to their family businesses. However, the growing access to small-scale cooperatives has enabled women groups to develop inter-organization relationships with men and other women and gain access to larger markets and wider customer base.

Onyalo (2019) study also assessed the role of women in agricultural production in Kenya. The study highlighted that the involvement of women in subsistence farming, dairy and poultry farming has positively contributed to ensuring household food security. In addition, their efforts to market some of their crop and livestock produce to the available markets has assisted them in generating more income to improve their economic well-being. However, the study identified that the available marketing systems are not well-structured and are still inadequate to ensure that economic benefits are shared more equitably among all participants in the value chain, including small-scale and marginalized farmers.

## **2.3 Theoretical Framework**

### **2.3.1 Allocative Efficiency Theory**

This study was guided by allocative efficiency theory (Motta, 2004). Allocative efficiency theory was developed by Debrew (1951). The theory argues that decentralization improves the efficiency of resource allocation. Devolution is one form of decentralization that was brought into effect by the Constitution of Kenya (2010). Devolved units of government have a role to play in providing goods and services to the areas of their operations, by designing goods and services that satisfies the needs of the local communities. As such, devolved units increase economic welfare of the people they serve. One of the pillars of devolution is that since the sub-national governments are closer to the people than the central government, they are considered to have a better information about the preferences of the local communities than the central government (Hayek, 1945; Musgrave, 1959).

Traditional literature on local communities' economic empowerment under the efficiency allocative theory have focused on the efficiency of public service provision (Devaraj et al., 1996; Zou, 1996), while other studies have focused on the effects of fiscal decentralization that aids



local communities invest in local modes of production, which in turn results to expansion in social economic development and empowerment, to which women are key beneficiaries (Davood & Zou, 1998). However, according to Martinez-Vazquez et al. (2016), devolution does not necessarily result in social economic empowerment, due to decentralization of resources to the local units. They further contend that allocation efficiency theory does not automatically yield to socioeconomic inclusion and empowerment for local communities and women, but rather, how the resources are allocated at the local units. Additionally, Martinez-Vazquez et al. (2016) argue that the success of devolution of functions and resources from central government to local units depends on the design of fiscal decentralization, and inclusion of women in decision-making processes, which is largely influenced by politics and local institutions. Therefore, the interaction between devolved functions, accompanying fiscal resources, and inclusion of women are crucial factors for positive impact /effect of devolution at the sub-government local units.

Njoroge (2016) indicated that allocative efficiency theory presupposes better management and scale efficiency results with higher concentration in terms of business units (assets) leading to greater and higher profits. Odunga et al. (2013), however indicated that operational efficiency in the short run is achieved at a level of output where all economies of scale available are being employed in an efficient manner. In the seminal work of Mirrlees (1971) and Okun (1975) in interrogating efficiency allocative theory, noted that interregional (sub-governmental units) and interpersonal distribution of resources affect how social economic empowerment is experienced by the local communities. For instance, in cases where sub-governmental units under devolution are equally allocated resources (both fiscal and development skills and tools), the difference in socioeconomic empowerment is determined by the adequacy of the resources, interpersonal distribution, and capacities of the local beneficiaries to generate growth, and incomes are key pillars to social economic empowerment.

Devolution has also enhanced competition among other sub-government units which is important in improving quality of goods and services, to local people (Tiebout, 1956). Motta (2004), Hayek (1945) and Musgrave (1959) had argued that devolved sub-government units are better placed and informed to respond to the needs and demands of the local population, by providing the mechanisms for socioeconomic empowerment. It is expected that devolved agriculture will have improved the efficiency of resource allocation to projects in financing and marketing that will

empower more women within Mbooni sub-county of Makueni. The theory explains the need for devolution to be strategized towards economic empowerment of the individuals in the management of the resources. The theory will necessitate the need to strategic devolution to empower the livelihoods in the areas in providing investments in agriculture, targeting individual women and women groups for services of empowerment.

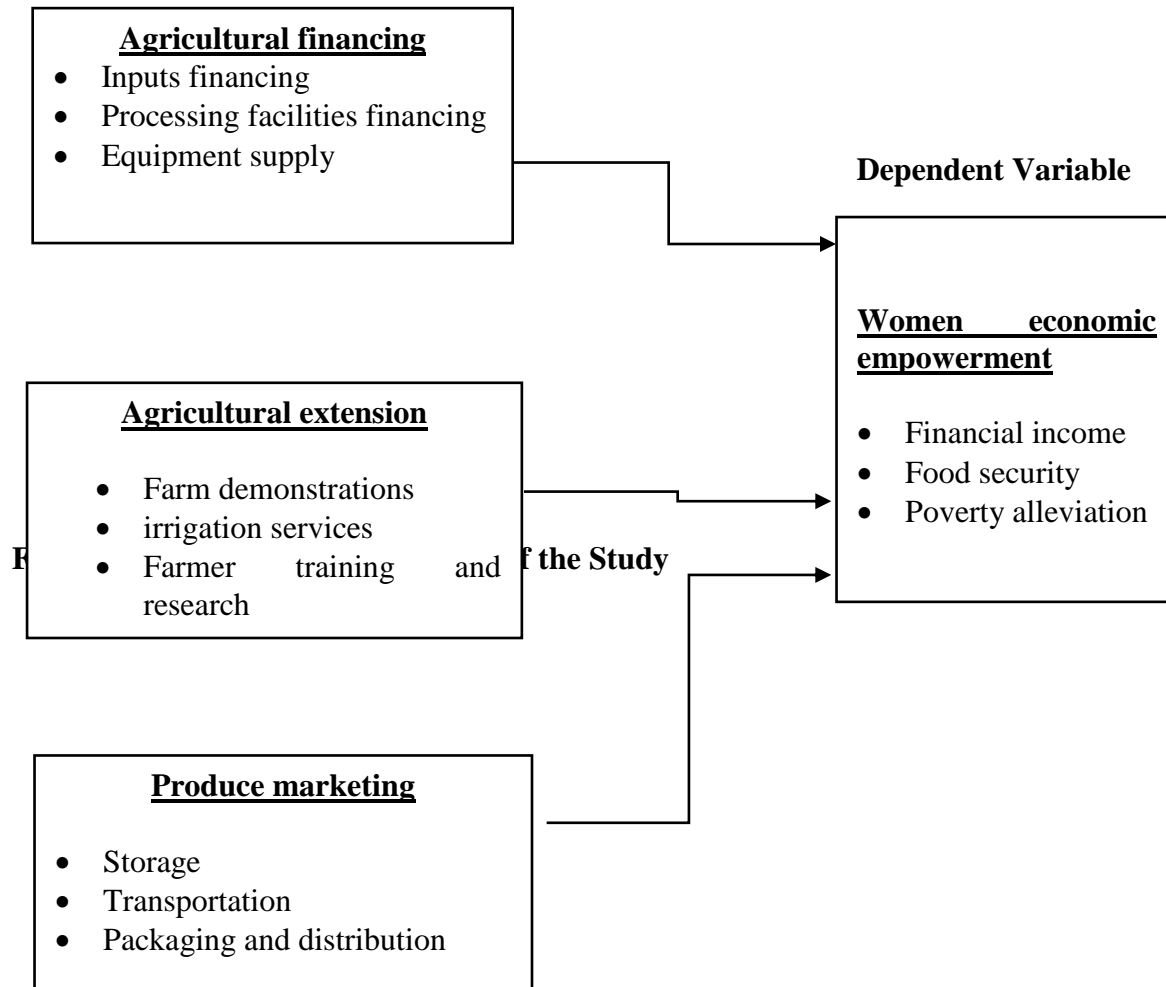
Further, in the context of the study objectives, this theory was relevant to the present research in analyzing the efficiency of financial resource allocation mechanisms, such as grants, loans, or subsidies in the devolved agricultural sector, particularly in mango farming activities. The theory's principles of marginal analysis helped in determining whether additional funding to specific programs or projects targeted at women mango farmers leads to increased economic empowerment without diminishing the economic benefits elsewhere (Xu, Zhao, Zhou & Yuan, 2021). In addition, this theory was also applicable to the researcher when evaluating whether the agricultural extension services are reaching their intended beneficiaries and whether they are leading to efficient improvements in farming practices.

The theory's assumption of information efficiency was also used to examine whether agricultural information is equally accessible to women mango farmers and whether it leads to informed decision-making, ultimately enhancing their economic outcomes (Sickles & Zelenyuk, 2019). Moreover, in regards to pareto efficiency principle applied in this theory, the study assessed whether market mechanisms such as market infrastructure, transportation, information dissemination in a devolved system result in improved market access and promote efficient and equitable trade among women mango farmers (Vidoli & Fusco, 2018).

## **2.4 Conceptual Framework**

Conceptual framework refers to a diagrammatic representation in a research study that illuminates the relationship between the independent and the dependent variable in a research work (Kivunja, 2018).

## Independent Variables



### 2.4.1 Agricultural Financing

Agricultural financing encompasses the various mechanisms and tools used to secure funds and capital for agricultural operations, including crop cultivation, livestock farming, agribusiness enterprises, and related activities (Tripoli & Schmidhuber, 2018). It includes both short-term and long-term financing options, such as loans, credit lines, grants, subsidies, insurance, and investment from public and private sources (Ruan et al., 2019). By securing affordable financing options, farmers can invest in their agricultural operations in order to increase their farm yields.

This may involve acquiring inputs like seeds, fertilizers, machinery, and livestock, which are crucial for boosting agricultural productivity (Nyoro, 2019).

Farmers can diversify their activities and experiment with innovative farming techniques. This can lead to higher income streams, improved livelihoods, and reduced vulnerability for farmers and their families, contributing to economic empowerment (Ruan et al., 2019). Financing provided through insurance products can also assist farmers in risk mitigation of their equipment supplies and crops against crop failures, natural disasters, and other unforeseen circumstances (Nyoro, 2019). As a result, agricultural financing is a fundamental component of economic empowerment in agricultural farming, as it provides the financial means for farmers to invest in their agricultural enterprises, manage risks, and improve their livelihoods.

#### **2.4.2 Agricultural Extension Services**

Agricultural Extension Services are educational and advisory services provided to farmers and agricultural stakeholders to help them improve their farming practices, enhance productivity, and achieve sustainable agricultural development (Ragasa & Mazunda, 2018). These services play a crucial role in disseminating information about best practices, new technologies, market opportunities, and management strategies from agricultural experts, researchers, and institutions to the farming communities. Verma and Sinha (2018) indicated that access to the latest agricultural knowledge and practices empowers farmers to make informed decisions about crop selection, cultivation techniques, pest and disease management etc. In return, these informed decisions can lead to increased yields and improved farm profitability.

Extension services also include information about innovative techniques in irrigation practices, conducting research analysis which help farmers improve their agricultural operations, quality of

crop yields and reduce production costs (Gupta & Rahman, 2020). Additionally, some of the extension programs offer training in entrepreneurship, financial management, and marketing strategies. These skills empower farmers to operate their farms as viable businesses, leading to increased profits and economic self-reliance (Chavas & Nauges, 2020). Thus, agricultural extension services play a pivotal role in enhancing the economic empowerment of farmers by providing them with the knowledge, skills, and resources needed to improve agricultural practices.

### **2.4.3 Agricultural Produce Marketing**

Agricultural produce marketing encompasses a range of activities and strategies aimed at efficiently getting agricultural products from producers to consumers within the agricultural value chain (Bates, 2019). This process involves various intermediaries, transportation, storage, and dissemination of market information on how to promote, distribute and sell agricultural products. Access to broader markets and a wider customer base can lead to increased sales volumes and opportunities to sell products at better prices (Gregorioa & Ancog, 2020). Marketing strategies that involve processing, packaging, and branding allow farmers to make better decisions and to align their production with market demands, reducing the risk of oversupply and market gluts. Access to information on efficient marketing systems can also help farmers minimize post-harvest losses by reducing the time products spend in transit or storage (Bazaluk et al., 2020).

In addition, Bates (2019) noted that marketing initiatives provide training and capacity-building programs to farmers which empower them with the skills and knowledge needed to participate effectively in markets and negotiate better terms. Therefore, agricultural produce marketing is a

critical component in economic empowerment for farmers which can lead to increased agricultural incomes, reduced poverty and promote sustainable rural development.

#### **2.4.4 Women Economic Empowerment**

Women economic empowerment refers to the process of enhancing the economic status, opportunities, and well-being of women by enabling them to participate actively and equally in economic activities (Tang, 2022). It involves providing women with access to resources, skills, knowledge and exercise their rights and agency within economic systems. It aims to reduce gender-based economic disparities and promote economic equality between women and men (Clark, Kabiru, Laszlo & Muthuri, 2019). It also encompasses various dimensions, including income generation, financial inclusion, employment opportunities, entrepreneurship, poverty alleviation, and access to economic resources such as land, credit, and education (Hendriks, 2019). Hence, it is a fundamental aspect of gender equality and women's rights, contributing to broader social and economic development.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter outlines the overall approach and methods that guided the study. The chapter describes the research design, research site and the study population. It also describes the sample size and sampling techniques deployed, data collection methods and data analysis procedures. The chapter concludes with a discussion on ethical considerations that guided the study.

#### 3.3 Study Site

##### 3.3.1 Location and size

The study was conducted out in Makueni County. The County is situated in the former Eastern Province of Kenya. Wote is the base capital town in the county. With more than 215,000 women, the county has a population of 987,653 (2019 census). The County has six sub-counties, 16 districts, 63 locations and 127 sub-locations are open. This research was conducted in Mbooni Sub-County comprising 6 wards (KNBS Household Survey, 2021).



Figure 3.2: Map of Makueni County, Kenya (KNBS Household Survey, 2021)





devolved functions and economic empowerment of women mango farmers within the study location, thus justifying use of the proposed design as recommended by Creswell (2014). Zikmund (2010) identifies the main aims of descriptive research as the testing hypotheses in order to determine the worth of theories and the ability of particular theories to make predictions about social developments. Further, Cross-sectional research approach often involve the selection of a representative sample from the target population and the use of proper sampling techniques to increase the likelihood of generalizing the findings from the sample to the larger population (Siedlecki, 2020).

### **3.4 Study Population**

The study population in this research will be women from households that are involved in mango farming across all the 6 wards in Mbooni Sub-County, Makueni County. The women are organized into women's farmers' groups through which the devolved agricultural interventions such as extension service, support and linkage to agricultural development services is provided. The unit of analysis will be all the 1235 women in Kyeni Kya Yathonza mango growers group in Mbooni Sub-county.

### **3.5 Sampling Procedure and Sample Size**

A sample is a smaller (but representative) collection of units from a population used to determine truths about that population (Field, 2005). The sample considers the objectives of this study and as Asika (2008) opines, it is pertinent to ensure that the sample identified is a statistical representation of the population and stands clear of bias. The unit of sampling for the study will be an individual mango female farmer.

To determine the sample size, the study applied Yamane (1973) formula, which states that;

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

Where;

n= Sample size

N= Population size

e= Margin of error

Therefore, the sample size for the respondents will be:

$$n = 1235 / 1 + 1235(0.05)^2$$

n = 302 women

Therefore, the sample size comprised of 302 women.

A stratified random sampling procedure was used to select a representative sample of women mango farmers from the 6 wards in Mbooni sub-county. The study constructed 6 strata each representing the women mango farmers in Kyeni Kya Yathonza mango growers group from each ward in Mbooni Sub-county. The distribution of the sample size is as shown in table 3.1 below.

**Table 3.1: Distribution of Sample Size**

Wards	Target Population	Sample Size	% of sample size
Mbooni	300	73	24.17
Tulimani	274	67	22.19
Kithungo	256	64	21.19
Kiteta	177	43	14.24
Waia	108	26	8.61
Kalawa	120	29	9.60
<b>Total</b>	<b>1235</b>	<b>302</b>	<b>100</b>

(Source: HR Records, Kyeni Kya Yathonza Mango Growers Group).

### 3.6 Data Collection Methods

#### 3.6.1 Structured Questionnaire

The research used structured questionnaire as the key data collection tool to collect primary quantitative data from the targeted 302 women mango farmers in Mbooni sub-county. The questionnaire consisted of closed ended questions which were used to facilitate an easier analysis as they are in immediate usable form while the open-ended questions were used as they encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information (Cheung, 2021).

The questionnaire was divided into sub-sections that reflected the objectives of the study in order to collect quantitative data on indicators of women's economic empowerment and exposure to the devolved agricultural support interventions covered by this study, that is, agricultural financing, extension service and produce marketing. In addition, the questionnaire used a five-

point likert scale where; [1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent]. This kind of likert scale was used to ensure uniformity and consistency in respondents' answers and enable the researcher to conduct more in-depth quantitative analyses (Taherdoost, 2019).

### 3.6.1.1 Response Rate

Out of the 302 questionnaires distributed by the researcher, a total of 211 questionnaires were successfully completed while the remaining 91 questionnaires were not returned. This represented an overall return rate of 70% as shown in table 3.2 below. This was made possible through the help of a research assistant, and further, researcher had allocated sufficient time to data collection and respondents were very supportive. In addition, Fosnacht et al. (2017) ascertained that a response rate of 70% and above is sufficient for further data analysis and provides unbiased population estimates under most circumstances.

**Table 3.2: Response Rate**

<b>Response Rate</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Returned Questionnaires	211	70
Non-returned Questionnaires	91	30
<b>Total</b>	<b>302</b>	<b>100</b>

### 3.6.2 Focus Group Discussion

Focus group discussions (FGD) refer to a qualitative research method in which a small group of participants, typically between 6 to 12 individuals, engage in an organized and guided discussion on a specific topic or set of topics. The researcher carried out 1 FGD with 10 women mango farmers conveniently selected from the study's sample size based on their willingness to participate in the FGD rather than in filling the questionnaire. To enhance their availability to participate in the FGD, the researcher sought permission to conduct it at the Chief's Office grounds which most of the respondents were well aware of where it was located and were provided with transport fare.

The discussion is based on a set of open-ended questions as shown in (Appendix II) that the researcher used to steer the conversation. The researcher encouraged interactions and group

dynamics to ensure all participants have an opportunity to speak and give detailed information on the different devolved agricultural development intervention implemented in their ward, how they have benefited from any of them and the ways in which they have promoted women economic empowerment.

### **3.6.3 Key Informant Interviews**

Key Informant Interviews (KIIs) are a qualitative research method used to gather in-depth information and insights from individuals who possess specialized knowledge, expertise, or unique perspectives on a particular subject or topic of interest. In this study, a key informant interview guide (as shown in Appendix III) with a set of open-ended questions was developed and used to obtain qualitative data. The researcher conducted 3 one-on-one interviews, beginning with the County Director Responsible for Agriculture, then the County Director in charge of Trade and lastly County Director responsible for finance and budgeting in Makueni County. The time schedule for conducting this interviews depended on the availability of the county directors and within the allocated period of data collection for this research. The interviews focused on the operationalization aspects of agricultural devolution and other expert information related to agricultural policy creation and implementation.

### **3.7 Data Processing and Analysis**

The first step in quantitative data processing was a check for completeness, coding and then capturing into SPSS V26. Descriptive statistics (frequency distributions, percentages and measures of central tendency (mean and standard deviations) were used to summarize the data, establish characteristics of the study population, describe response concentrations and variations on access to the devolved agricultural services and indicators of women's economic empowerment.

To evaluate the influence of devolved agricultural financing, extension service and produce marketing on women's economic empowerment, the SPSS V26 was used to generate inferential statistics including correlation and regression analysis. These results were also used to answer the research questions outlined. The qualitative data collected from the FGDs and KIIs was analyzed using content analysis techniques. This involved systematically analyzing and interpreting the textual data obtained in order, to identify themes, patterns, and

meaningful insights. The data was then categorized and results presented according to the identified common patterns that relate to the research questions. The results were also interpreted in the context of the study's three specific objectives.

### **3.8 Ethical Considerations**

The researcher sought an approval from the university and NACOSTI. The study adhered to the specific set of codes of conduct for the investigator as well as ethical obligations to study participants in relation to data collection, data management, storage and usage. The strategies that were deployed in this regard included:

1. During the data collection phase, study participants were assured of confidentiality of all data collected from them, and that the data was used exclusively for the study's purpose. This was clearly stated in the introductory section of all data collection tools and clearly read to the study participants.
2. The research tools contained fields that captured personal data used to identify respondents without necessarily indicating their names. Additionally, FGD sessions did not capture names of participants and no video recording was allowed to further enhance the level of confidentiality.
3. Participation was voluntary and based on informed consent which entailed providing study participants with information about the research and its approach, their role in the study, attendant personal benefits, both directly and indirectly.
4. Safeguards to ensure confidentiality during data processing and reporting entailed not making or implying precise references to study participants.

## **CHAPTER FOUR**

### **PRESENTATION OF FINDINGS**

#### **4.1 Introduction**

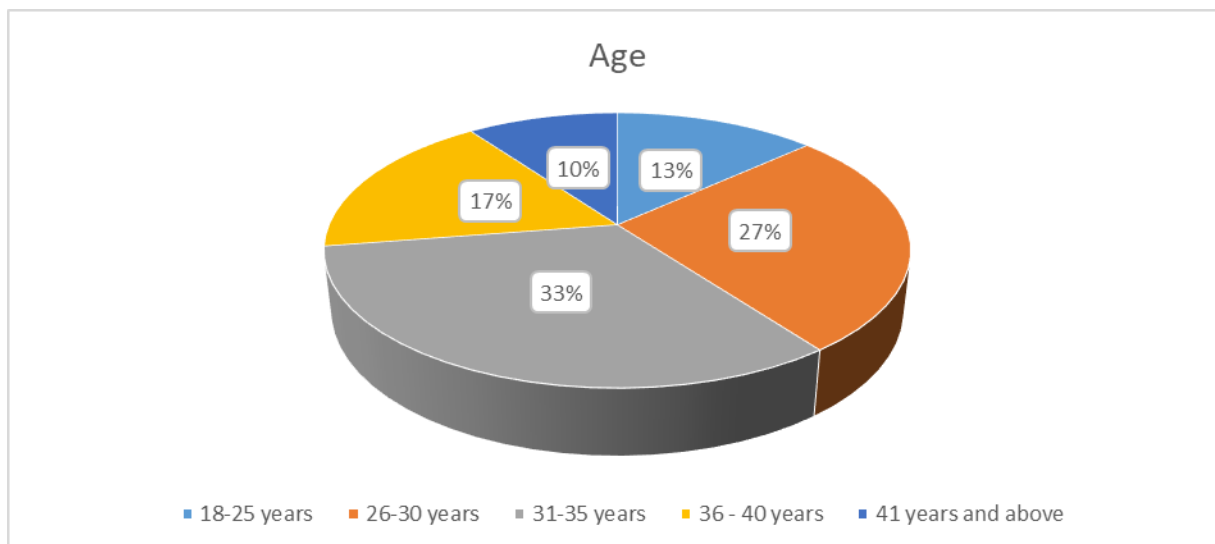
This chapter presents the findings from the three research objectives, namely; to examine the effect of devolved agricultural financing on the economic empowerment of women mango farmers in Mbooni Sub-County, to analyze the influence of devolved agricultural extension service on the economic empowerment of women mango farmers in Mbooni Sub-County and to assess the influence of devolved agricultural produce marketing on the economic empowerment of women mango farmers in Mbooni Sub-County. The results are summarized in tables and figures. Additionally, the chapter discusses the findings in view of other studies and the theoretical framework that guided study.

#### **4.2 Devolved Agricultural Financing Practices and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county**

The first objective of the study was to examine the effect of devolved agricultural financing practices on economic empowerment of women mango farmers in Mbooni sub-county. This section cross-tabulated results on the age-group and level of education of respondents, descriptive results on devolved agricultural financing practices, correlation and regression results on the relationship between devolved agricultural financing practices and economic empowerment of women mango farmers in Mbooni sub-county and verbatim responses from the FGDs and KIIs.

##### **4.2.1 Age of Respondents**

This study aimed at understanding the age distribution of the respondents. As shown from figure 4.3, it is evident that most of the participants (33%) were aged between 31-35 years, followed by 27% were aged between 26-30 years, then 17% aged between 36-40 years, 13% aged between 18-25 years and 10% were 41 years and above.

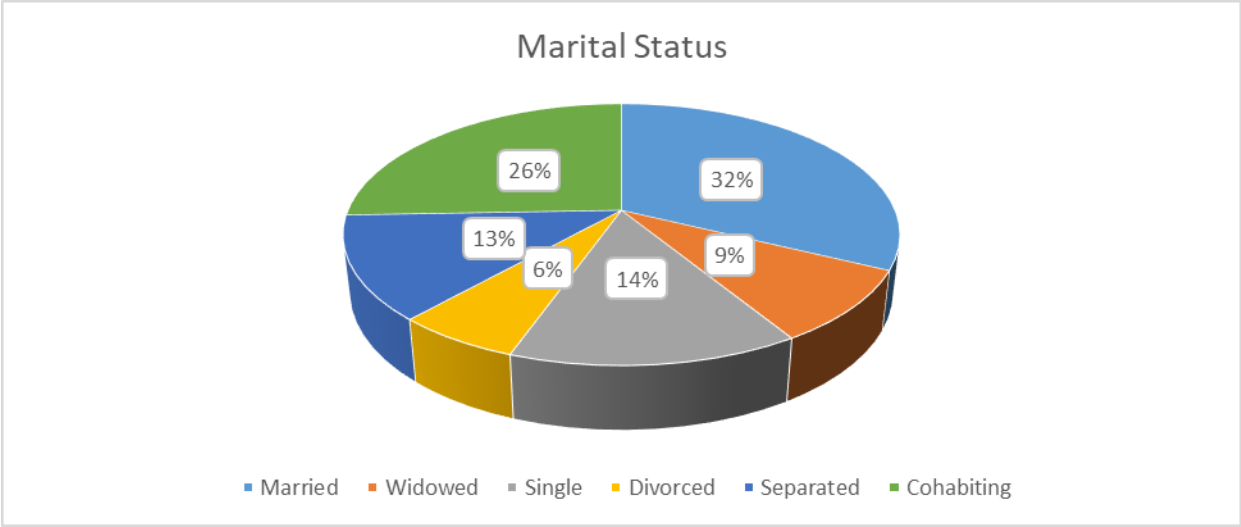


**Figure 4.3: Age groups of Respondents**

This implied that the age group of the selected women mango farmers was fairly distributed with a good representation of both the young and elder women that are benefiting from mango farming activities. In addition, an age bracket of 18 years and above also showed that the targeted respondents were within the recommended age bracket to be allowed to engage in the devolved agricultural financing practices e.g access to financial credits through the different credit lending institutions. They are also likely to have a better understanding of how such practices have economically empowered them.

#### **4.2.2 Marital Status**

The respondents were also requested to indicate their marital status and the results are shown in the figure 4.4. The findings in figure 4.4 showed that majority of the respondents (32%) were married, followed by those who are cohabiting (26%), then 14% were single, 13% were separated, 9% were widowed and lastly 6% were divorced.



**Figure 4.4: Marital Status of Respondents**

This means that most of the women mango farmers had established families where they cultivated their family lands that are relatively large and sold their produce to earn income and improve their livelihoods. In addition, the presence of established families and use of family lands is an essential factor that can be considered when women mango farmers are in need of loans or credits from credit lending institutions or table-banking groups.

**4.2.3 Descriptive Results on Agricultural Financing Practices**

The study sought to determine the extent to which women mango farmers in Mbooni sub-county agree that devolved agricultural financing practices have economically empowered them. The responses were rated on a 5 point Likert scale where: “1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent.” The results in table 4.3 revealed that 37.44% of the respondents agreed to a great extent that there are instances where they receive inputs financing for farming, 26.07% agreed to a very great extent, 18.96% agreed to a moderate extent, 12.80% agreed to a little extent while 4.74% disagreed with this statement. The mean of the responses was 3.67 implying that majority of the respondents agreed with this statement and their responses were varied as shown by the standard deviation of 1.13.

The findings also showed that 39.23% of the respondents agreed to a great extent that the processing facilities for the farm produce are financed effectively, 25.59% agreed to a very great extent, 16.11% agreed to a little extent, 15.11% agreed to a moderate extent and 3.95% disagreed with the statement. The mean of the responses was 3.74 which meant that most of the



respondents agreed with this statement and their responses were differentiated as shown by the standard deviation of 1.04. The results also indicated that 32.70% of the respondents agreed to a great extent that the equipment for the farming production are supplied to farmers to modernize production, 29.86% agreed to a very great extent, 16.59% agreed to a moderate extent and little extent respectively and 4.27% disagreed with the statement. The mean of the responses was 3.67 implying that majority of the respondents agreed with this statement and the standard deviation of 1.19 indicates the variation of these responses.

In addition, the findings also revealed that 34.60% of the respondents agreed to a great extent that there are financial services available to farmers such as credit and loans, 26.54% agreed to a very great extent, 20.38% agreed to a moderate extent, 11.85% agreed to a little extent and 6.64% disagreed with the statement. According to the mean of 3.63, most of the respondents agreed with this statement and the standard deviation of 1.19 showed that the responses were varied. The results also outlined that 30.33% of the respondents agreed to a great extent that the financing of agriculture empowers women economically, 28.91% agreed to a great extent, 18.48% agreed to a moderate extent, 12.80% agreed to a little extent and 9.48% disagreed with this statement. The mean of 3.56 confirmed that majority of the respondents agreed with the statement and their responses were differentiate as shown by a standard deviation of 1.29.

**Table 4.3: Descriptive Results on Agricultural Financing Practices**

<b>Statements</b>	<b>No extent</b>	<b>Little extent</b>	<b>Moderate extent</b>	<b>Great extent</b>	<b>Very great extent</b>	<b>Mean</b>	<b>Std Dev</b>
There are instances where we receive inputs financing for farming	4.74%	12.80%	18.96%	37.44%	26.07%	3.67	1.13
The processing facilities for the farm produce are financed effectively	3.95%	16.11%	15.11%	39.23%	25.59%	3.74	1.04
The equipment for the farming production are supplied to farmers to modernize production	4.27%	16.59%	16.59%	32.70%	29.86%	3.67	1.19
There are financial services available to farmers such as credit and loans	6.64%	11.85%	20.38%	34.60%	26.54%	3.63	1.19
The financing of agriculture empowers women economically	9.48%	12.80%	18.48%	30.33%	28.91%	3.56	1.29
Overall Average						3.65	1.17

#### 4.2.4 Correlation Results for Agricultural Financing Practices and Women Economic Empowerment

The correlation results presented in table 4.4 showed that agricultural financing practices had a positive and significant relationship with women economic empowerment ( $r=0.767$ ,  $p=0.000$ ). These findings concur with those of Zereyesus (2017) study which indicated that women are more active in marketing their produce than male colleagues and expend their proceeds more efficiently in managing all their household expenditures.

**Table 4.4: Correlation Results for Agricultural Financing Practices and Women Economic Empowerment**

Variable		Av_ Agricultural financing practices	Av_ Women economic empowerment
Av_ Agricultural financing practices	Pearson Correlation	1	
	Sig. (2-tailed)	.767**	0.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.2.5 Regression Results for Agricultural Financing Practices and Women Economic Empowerment

Regression analysis was done to determine the influence of devolved agricultural financing practices on economic empowerment of women. The regression results comprise of the model summary, Analysis of Variance (ANOVA) and regression coefficients findings.

The model summary results in table 4.5 revealed that agricultural financing practices explain 58.9% of the variations in women economic empowerment. This is according to the coefficient of determination (R-square) of 0.589. This also implied that agricultural financing practices was a satisfactory variable in explaining women economic empowerment of women mango farmers in Mbooni sub-county.

**Table 4.5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767a	0.589	0.587	0.2396

a Predictors: (Constant), Av\_ Agricultural financing practices

The ANOVA was used to test the significance of the model where the study used the 95% confidence interval to test the significance of the model. The ANOVA results in table 4.6 indicated that the overall model of regression was statistically significant and agricultural financing practices was a good predictor of women economic empowerment. This was supported by the calculated F statistic of 299.381 and the reported p-value of (0.000) which was less than 0.05 significance level.

**Table 4.6: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.187	1	17.187	299.381	.000b
	Residual	11.998	209	0.057		
	Total	29.185	210			

Additionally, the findings of the regression coefficients in table 4.7 showed that agricultural financing practices had a positive and significant influence on women economic empowerment ( $\beta=0.221$ ,  $p=0.000$ ). This implied that a unit increase in agricultural financing practices will lead to a corresponding unit increase in women economic empowerment.

**Table 4.7: Regression Coefficients**

Model		Unstandardized		Standardized	T	Sig.
		Coefficients	Std. Error	Coefficients		
1	(Constant)	3.143	0.044		71.68	0.000
	Av_ Agricultural financing practices	0.221	0.013	0.767	17.303	0.000

a Dependent Variable: Av\_ Women economic empowerment

Further, the group of women that were engaged in the focus group discussion (FGD) gave their opinions on influence of agricultural financing practices on women economic empowerment. These responses included;

*“Involvement in agricultural financing practices has benefited women mango farmers through providing them with more opportunities to secure loans and funding specifically tailored to their mango farming activities, enabling them to expand their operations and invest in necessary resources.” (Respondent 1)*

*“ The ease to now secure loans and funding at affordable interest rates, has allowed women mango farmers to invest in better farming infrastructure, adopt sustainable practices, and expand our mango farming businesses, leading to higher incomes and improved livelihoods.” (Respondent 3)*

*“While a good number of women mango farmers have profited from improved access to loans and funding, some of us still face challenges in accessing these resources due to limited awareness, complex application processes, and lack of collateral.” (Respondent 7)*

The County Directors responsible for Agriculture, Trade and Finance in Mbooni sub-county were also interviewed by the researcher and gave the following answers in regard to influence of agricultural financing practices on women economic empowerment;

*“The agriculture department at the county level have recently enforced supportive policies that address the unique needs and challenges faced by women mango farmers and facilitate their access to credit and financial resources.” (Key Informant 1)*

*There are limited policies specifically implemented to promote the adoption of devolved agricultural financing practices among women mango farmers in Mbooni sub-county. However, there are ongoing discussions and advocacy efforts at both the local and county levels to highlight the importance of gender-responsive policies in agricultural financing. (Key Informant 2)*

*“There exists policies in place to promote gender equality and women's empowerment in agriculture, but these policies are still weak in ensuring equal opportunities for women to access financial resources for their mango farming activities.” (Key Informant 3).*

According to these findings, the study discovered that most of the respondents (82.47%) had to a good extent received input financing for their farming practices and 82.93% revealed that processing facilities for their farm produce have been financed effectively. In addition, availability of financial services such as credits and loans (81.52%) have empowered women

economically and purchase of farm equipments for modernized productions (79.15%) have encouraged expansion of mango farming activities. As a result, devolved agricultural practices were found to have a positive and significant influence on economic empowerment of women mango farmers in Mbooni sub-county. However, the KII results reveal that the county directors interviewed identified a policy gap since the policies implemented to promote adoption of devolved agricultural practices were limited and still weak.

These results concurred with those of Muhumed and Minja (2019) study as it emphasized the significance of funding in fostering economic advancement for women residing in rural areas. They highlighted that funding plays a crucial role by enabling the acquisition of diverse resources, which in turn benefits various agricultural activities both on and off the farm. These resources encompass the purchase of inputs, marketing operations, and the delivery of outputs. Moreover, financial services offered in the form of grants or loans for agricultural production, whether provided privately or publicly, also contribute to enhancing welfare programs through agricultural growth.

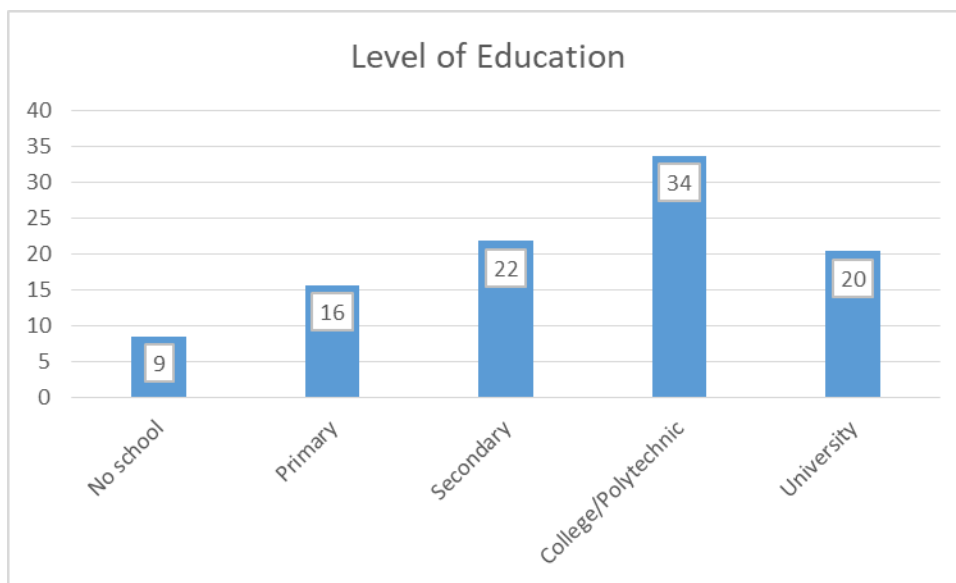
Further, these results also agreed with those of Faguet (2014) study as it found that loans provided specifically for women-owned businesses served as motivators for their active involvement in the social and economic aspects of their communities, ultimately leading to income growth. These loans also significantly facilitated the start and expansion of various income-generating opportunities for women in rural communities. However, these findings disagreed with those of Muthuri (2011) study as it argued that women's organizations have not effectively utilized the opportunity provided by public funding and the Constituency Development Fund, to actively engage and implement their initiatives. This lack of effectiveness is attributed to factors such as limited awareness and understanding of the allocated funds, minimal participation, and insufficient support for feminist organizations within the regional budget.

### 4.3 Devolved Agricultural Extension Services and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county

The second objective of the study was to examine the influence of devolved agricultural extension services on economic empowerment of women mango farmers in Mbooni sub-county. This section cross-tabulated descriptive results on devolved agricultural extension services, correlation and regression results on the relationship between devolved agricultural extension services and economic empowerment of women mango farmers in Mbooni sub-county and verbatim responses from the FGDs and KIIs.

#### 4.3.1 Level of Education

The respondents were asked to state their highest achieved level of education and the results are shown in the figure 4.5. From figure 4.5, it was found out that 34% of the respondents had attained College/Polytechnic education, 22% had secondary education, 20% had university education, 16% had primary school education and 9% had not attended school.



**Figure 4.5: Level of Education of Respondents**

Education level revealed the knowledge level of the farming women, thus as the level of knowledge rises, the competency of farming among women is likely to increase. Additionally, women mango farmers with more education levels were more likely to have a better

understanding of agricultural extension services and willing to engage in modern farming techniques to improve quality and quantity of their farm yields.

#### **4.3.2 Descriptive Results on Agricultural Extension Services**

The research aimed to determine the extent to which women mango farmers in Mbooni sub-county agree that devolved agricultural extension services have economically empowered them. The responses were rated on a 5 point Likert scale where: “1-No extent, 2-Little extent, 3-Moderate extent, 4- Great extent, 5- Very great extent.” The findings in table 4.8 highlighted that 36.02% of the respondents agreed to a great extent that there are farm demonstrations organized to enlighten farmers, 28.44% agreed to a very great extent, 16.59% agreed to a moderate extent, 14.22% agreed to a little extent while 4.74% disagreed with the statement. The mean of these responses was 3.69 implying that most of the respondents agreed with the statement and these responses were varied as shown by the S.D of 1.16.

The results also found that 37.44% of the respondents agreed to a great extent that irrigation and water supply services are adequately supplied to the farmers, 25.59% agreed to a moderate extent, 23.22% agreed to a very great extent, 10.9% agreed to a little extent and 2.844% disagreed with the statement. The mean of the responses was 3.67 showed that majority of the respondents agreed with the statement and the standard deviation of 1.04 explained the variations of these responses. The results also revealed that 32.12% of the respondents agreed to a great extent that research development in the farming area is well developed, 28.96% agreed to a moderate extent, 16.54% agreed to a very great extent, 16.11% agreed to a little extent while 6.27% disagreed. According to the mean of 3.63, most of the respondents agreed with the statement and the standard deviation of 1.26 showed the variation of these responses. In addition, 31.75% of the respondents agreed to a great extent that farm training activities are scheduled to the farmers, 28.44% agreed to a very great extent, 19.91% agreed to a moderate extent, 13.27% agreed to a little extent and 6.64% disagreed with the statement. The mean of the responses was 3.62 meaning that majority of the respondents agreed with this statement and the responses were varied as shown by the standard deviation of 1.21.

Additionally, 34.12% of the respondents also agreed to a great extent that extension services availability have an effect on economic empowerment of women, 23.70% agreed to a very great extent, 22.27% agreed to a moderate extent, 14.69% agreed to a little extent and 5.21% disagreed with the statement. The mean of these responses was 3.56 implying that most of the respondents agreed with this statement and the standard deviation of 1.15 explained the variation of these responses.

**Table 4.8: Descriptive results for Agricultural Extension Services**

<b>Statements</b>	<b>No extent</b>	<b>Little extent</b>	<b>Moderate extent</b>	<b>Great extent</b>	<b>Very great extent</b>	<b>Mean</b>	<b>Std Dev</b>
There are farm demonstrations organized to enlighten farmers	4.74%	14.22%	16.59%	36.02%	28.44%	3.69	1.16
Irrigation and water supply services are adequately supplied to the farmers.	2.84%	10.90%	25.59%	37.44%	23.22%	3.67	1.04
Research development in the farming area is well developed	6.27%	16.11%	28.96%	32.12%	16.54%	3.63	1.16
Farm training activities are scheduled to the farmers	6.64%	13.27%	19.91%	31.75%	28.44%	3.62	1.21
Extension services availability have an effect on economic empowerment of women	5.21%	14.69%	22.27%	34.12%	23.70%	3.56	1.15
Overall Average						3.63	1.14



### 4.3.3 Correlation Results for Agricultural Extension Services and Women Economic Empowerment

The correlation results in table 4.9 revealed that agricultural extension services had a positive and significant association with women economic empowerment ( $r=0.648$ ,  $p=0.000$ ). Memon et al. (2015) study results were also in agreement with this result as it discovered that the majority of extension officers observed a notable improvement in various extension activities among women farmers, following each consultation and training programs.

**Table 4.9: Correlation Results for Agricultural Extension Services and Women Economic Empowerment**

Variables	Av_ Agricultural extension practices	Av_ Women economic empowerment
Av_ Agricultural extension practices	Pearson Correlation	1
	Sig. (2-tailed)	.648**
		0.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 4.3.4: Regression Results for Agricultural Extension Services and Women Economic Empowerment

Regression analysis was carried out to assess the influence of devolved agricultural extension services on economic empowerment of women. The regression results consisted of the model summary, ANOVA and regression coefficients findings.

The model summary findings in table 4.10 indicated that agricultural extension services explained 42% of the variations in women economic empowerment. This was according to the R-square of 0.42. This also meant that agricultural extension services was found to be a suitable variable in predicting women economic empowerment of women mango farmers in Mbooni sub-county.

**Table 4.10: Model Summary Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648a	0.42	0.417	0.28469

a Predictors: (Constant), Av\_ Agricultural extension services

Table 4.11 below presented the ANOVA results which revealed that the overall model of regression was statistically significant and agricultural extension services was a good predictor of women economic empowerment. This was as per the reported F statistic of 151.095 and p-value of (0.000) which was less than 0.05 significance level.

**Table 4.11: ANOVA Results**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.246	1	12.246	151.095	.000b
	Residual	16.939	209	0.081		
	Total	29.185	210			

Moreover, the regression coefficient results in table 4.12 showed that agricultural extension services had a positive and significant influence on women economic empowerment ( $\beta=0.218$ ,  $p=0.000$ ). This meant that a unit increase in agricultural extension services will lead to a corresponding unit increase in women economic empowerment.

**Table 4.12: Regression Coefficients**

Model		Unstandardized		Standardized	T	Sig.
		Coefficients		Coefficients		
			Std.			
		B	Error	Beta		
1	(Constant)	3.153	0.06		52.802	0.000
	Av_ Agricultural extension services	0.218	0.018	0.648	12.292	0.000

a Dependent Variable: Av\_ Women economic empowerment

On the other hand, the FGD responses from the selected women regarding the influence of agricultural extension services on women economic empowerment included;

*We have benefited from organized workshops and field demonstrations by the county government which focused on pest management techniques, disease prevention, and sustainable farming practices. (Respondent 1)*

*We have managed to physically attend training programs on post-harvest handling, sorting, packaging, and marketing strategies. (Respondent 19)*

*We have gained valuable knowledge and skills from organized workshop by agricultural NGO organizations related to soil management, pest control methods, and post-harvest handling in Mango farming. However, the extension officers have been readily available to answer our questions, provide guidance, and offer ongoing support." (Respondent 10)*

The County Directors responsible for Agriculture, Trade and Finance in Mbooni sub-county interviewed also gave the following answers in regard to influence of agricultural extension services on women economic empowerment;

*The annual agricultural exhibition and trade fairs organized by the county government provide better opportunities to women mango farmers to meet with agricultural experts who provide valuable insights into post-harvest practices, including proper handling, grading, and value addition. (Key Informant 4)*

*The successful regular interactions and training sessions on soil and pest management organized at local level by NGOs that partner with the county government have empowered women mango farmers to make informed decisions, improve their crop productivity, and maximize their profitability." (Key Informant 7)*

*The policymakers in the county government have made significant efforts in implementing policies which ensure that women in mango farming activities have equal access to extension services, knowledge, and resources just like other farmers." (Key Informant 6).*

According to these results, it is observed that majority of women mango farmers have benefited from farm demonstrations organized to enlighten farmers (81.05%), adequate irrigation and water supply services (86.25%), research development in the farming area (79.62%) and farm training activities scheduled to the farmers (80.1%). Further, successful interactions and training sessions (80.09%) have empowered women mango farmers to make informed decisions, improve their crop productivity, and maximize their profitability. The findings from the women mango farmers have also been supported by the KIIs results from the county directors who stated that the efforts from NGOs and county governments to enhance devolved agricultural extension services have been fruitful in promoting economic empowerment of women mango farmers. Thus, the regression results determined that devolved agricultural extension services have a positive and significant influence on women economic empowerment.

These findings were in agreement with those of the study by Johnson et al. (2017) which discovered that when women hold a more influential role within farm households, it leads to better distribution of limited household capital, a more equitable allocation of profits towards investments in domestic output, and overall improvements in health and poverty levels. In addition, Johnson, Balagamwala, and Agnes (2018) study also found that skill acquisition through training initiatives holds particular significance for women who are more likely to participate in the informal market as family members, marginal farmers, or micro-entrepreneurs starting their own businesses from home. Moreover, Lecoutere, Spielman, and Van Campenhout (2020) study also revealed that women farmers in east Uganda had benefited from agricultural expansion and digitalization programs as these initiatives enhance their capacity to make informed decisions, resulting in increased productivity, higher family income, and overall improvement in community welfare.

#### **4.4 Devolved Agricultural Produce Marketing and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county**

The third objective of the study was to examine the influence of devolved agricultural produce marketing on economic empowerment of women mango farmers in Mbooni sub-county. This section cross-tabulated descriptive results on devolved agricultural produce marketing, correlation and regression results on the relationship between devolved agricultural produce marketing and economic empowerment of women mango farmers in Mbooni sub-county and verbatim responses from the FGDs and KIIs.

##### **4.4.1 Descriptive Results on Agricultural Produce Marketing Practices**

The research aimed to determine the extent to which women mango farmers in Mbooni sub-county agree that devolved agricultural produce marketing have economically empowered them. The responses were rated on a 5 point Likert scale where: “1-No extent, 2-Little extent, 3-Moderate extent, 4- Great extent, 5- Very great extent.” The results in table 4.13 indicated that 40.71% of the respondents agreed to a great extent that there are storage facilities for the farm product preservation of perishable goods, 26.54% agreed to a very great extent, 18.48% agreed to a moderate extent, 11.37% agreed to a little extent while 2.9% disagreed with the statement.

The mean of the responses was 3.8 and the responses were varied as shown by the standard deviation of 1.07.

The findings also outlined that 41.65% of the respondents agreed to a great extent with the statement that transport network and facilities have been enhanced, 25.59% agreed to a very great extent, 24.64% agreed to a moderate extent, 6.16% agreed to a little extent while 1.95% disagreed with the statement. The mean of 3.86 also confirmed that most of the respondents agreed with this statement and the responses were varied as shown by the standard deviation of 1.09.

The results also highlighted that 35.55% of the respondents agreed to a great extent with the statement that the distribution of farm produce is monitored to realize profits, 21.70% agreed to a very great extent, 20.85% agreed to a moderate extent, 19.95% agreed to a little extent and 1.95% disagreed. According to the mean of responses of 3.89, it is observed that majority of the respondents agreed with the statement and the responses were differentiated as explained by the standard deviation of 1.11. Moreover, 43.45% of the respondents agreed to a great extent with the statement that the preprocessing and packaging services of farm produce is available for the farmers efficiently, 26.07% agreed to a very great extent, 16.59% agreed to a moderate extent, 10.48% agreed to a little extent and 3.42% disagreed. The mean of 3.86 also indicated that most of the respondents agreed with the statement and the responses were varied as shown by the standard deviation of 1.26.

In addition, 33.65% of the respondents agreed to a great extent with the statement that produce marketing efficiency have an effect on the economic empowerment of women, 32.23% agreed to a very great extent, 17.06% agreed to a moderate extent, 14.22% agreed to a little extent while 2.84% disagreed with the statement. These responses were varied as shown by the standard deviation of 1.13 and the mean of 3.78 ascertained that most of the respondents agreed with the statement.

**Table 4.13: Descriptive results on Agricultural Produce Marketing Practices**

Statements	No	Little	Moderate	Great	Very	Mean	Std
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	extent	extent	extent	extent	great extent		Dev
There are storage facilities for the farm product preservation of perishable goods.	2.90%	11.37%	18.48%	40.71%	26.54%	3.8	1.07
Transport network and facilities have been enhanced	1.95%	6.16%	24.64%	41.65%	25.59%	3.86	1.09
The distribution of farm produce is monitored to realize profits	1.95%	19.95%	20.85%	35.55%	21.70%	3.89	1.11
The preprocessing and packaging services of farm produce is available for the farmers efficiently	3.42%	10.48%	16.59%	43.45%	26.07%	3.86	1.26
Produce marketing efficiency have an effect on the economic empowerment of women	2.84%	14.22%	17.06%	33.65%	32.23%	3.78	1.13
Overall Average						3.84	1.13

#### **4.4.2 Correlation Results for Agricultural Extension Services and Women Economic Empowerment**

The correlation findings in table 4.14 indicated that agricultural produce marketing practices and women economic empowerment were also found to be positively and significantly correlated

( $r=0.609$ ,  $p=0.000$ ). Oduol et al. (2017) study results also corroborates these findings as it indicated that agricultural marketing practices plays a crucial role not only in enhancing production and demand of commodities but also in accelerating the pace of economic advancement in rural communities

**Table 4.14: Correlation Results for Agricultural Produce Marketing and Women Economic Empowerment**

Variables	Av_ Agricultural produce marketing	Av_ Women economic empowerment
Av_ Agricultural produce marketing	Pearson Correlation Sig. (2-tailed)	1 .609** 0.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.4.3: Regression Results for Agricultural Produce Marketing Practices and Women Economic Empowerment

Regression analysis was conducted to examine the influence of devolution of agricultural produce marketing services on economic empowerment of women. The regression results consisted of the model summary, ANOVA and regression coefficients findings.

The model summary results in table 4.15 revealed that agricultural produce marketing practices explained 37.1% of the variations in women economic empowerment. This was according to the R-square of 0.371. This also implied that agricultural produce marketing practices was found to be a satisfactory variable in predicting women economic empowerment of women mango farmers in Mbooni sub-county.

**Table 4.15: Model Summary Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.609	0.371	0.368	0.2964

a Predictors: (Constant), Av\_ Agricultural produce marketing practices

The ANOVA findings in table 4.16 highlighted that the overall model of regression was statistically significant and agricultural produce marketing practices was a good predictor of

women economic empowerment. This was supported by the reported F statistic of 151.095 and p-value of (0.000) which was less than 0.05 significance level.

**Table 4.16: ANOVA Results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.824	1	10.824	123.205	0.000
	Residual	18.361	209	0.088		
	Total	29.185	210			

Additionally, the regression coefficient results in table 4.17 indicated that agricultural produce marketing practices had a positive and significant influence on women economic empowerment ( $\beta=0.21$ ,  $p=0.000$ ). This implied that a unit increase in agricultural produce marketing practices will lead to a corresponding unit increase in women economic empowerment.

**Table 4.17: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.187	0.063		50.77	0.000
	Av_ Agricultural produce marketing	0.21	0.019	0.609	11.1	0.000

a Dependent Variable: Av\_ Women economic empowerment

Furthermore, the FGD responses from the selected women regarding the influence of agricultural produce marketing practices on women economic empowerment included;

*“We have managed to secure better prices for our mangoes from the time we were allowed to sell our mangoes directly to the suppliers, rather than relying on middlemen.”*

(Respondent 14)

*“Nowadays we have been allowed to participate more actively in market transactions and negotiate better prices for their mangoes.”* (Respondent 22)

*The transformative efforts on market access availed at the local markets have enabled us to gain more control over our produce and access a wider range of markets.* (Respondent 19)



The County Directors responsible for Agriculture and Directors in charge of Trade in Mbooni sub-county interviewed also gave the following answers in regard to influence of agricultural produce marketing practices on women economic empowerment;

*Mbooni sub-county market centers has become more decentralized which has enabled majority of women farmers to gain better access to local and regional markets. (Key Informant 1)*

*The county government have enforced better policies to decentralize the marketing systems so as to reduce the number of intermediaries and secure fairer prices for the women mango farmers. (Key Informant 8)*

*Decentralizing the marketing process has opened up new income avenues for women mango farmers, enabling them to expand their businesses and improve their economic well-being. (Key Informant 10)*

According to these findings, the study established that majority of the women mango farmers have profited from availability of storage facilities for the farm product preservation of perishable goods (85.73%), transport network (91.88%), preprocessing and packaging services of their farm produces (86.11%). Additionally, the presence of a decentralized marketing process has facilitated effective monitoring, distribution of farm produce to realize better profits and improve the economic well-being of women mango farmers.

These results concurs with those of the study by Patil and Babus (2018) as it highlights that extension officers, analysts, and development agencies working in remote areas have played a crucial role in encouraging farmers to prioritize different agricultural marketing practices by initiating programs involving the adoption of new seeds or productive output technologies. These initiatives have been aimed to promote higher yields and greater profitability in their farm outputs. Additionally, Jyothi (2014) research also stressed on the significance of agricultural marketing and its goals. The findings underscored the significance of promoting the development of agricultural marketing as a crucial factor in enhancing the sustainable growth of the nation and on women empowerment. Consequently, these results disagreed with Ball (2020) study as the results disclosed that farmers residing in rural areas frequently face inadequate support from agricultural traders, leading to the burden of accepting unfavorable prices for their products. As a

result, the limited access to markets reflects in their restricted availability to various community resources.

#### **4.5 Devolution of Agricultural Sector and Economic Empowerment of Women Mango Farmers in Mbooni Sub-county**

The overall objective of the study was to assess the effect of devolution of agricultural sector on the economic empowerment of women mango farmers in Mbooni Sub-County. This section cross-tabulated results on awareness of women economic empowerment, descriptive results on women economic empowerment in relation to all the three devolved agricultural practices examined the overall regression results for all the three devolved agricultural practices and women economic empowerment.

##### **4.5.1 Awareness of Women Economic Empowerment**

The respondents were asked to indicate whether there is economic empowerment of women mango farmers through devolved agricultural practices. The results from table 4.18 showed that majority of the respondents (82.5%) were aware of the women economic empowerment through devolved agricultural practices, while 17.5% are not aware. This implies that there is a high knowledge of women economic empowerment through devolved agricultural practices. The results from Johnson et al. (2017) study also supports these findings as it highlighted that enabling the empowerment of women signifies that women possess an increased ability within the community to independently and collaboratively make decisions, both on a personal level and collectively

**Table 4.18 Awareness of Women Economic Empowerment in the current days**

	<b>Frequency</b>	<b>Percent</b>
Yes	174	82.46
No	37	17.54
Total	211	100.0

#### **4.5.2 Descriptive Results for Women Economic Empowerment**

The study sought to determine the extent to which women mango farmers in Mbooni sub-county agree that devolution of the agricultural sector has economically empowered them. The responses were rated on a 5 point Likert scale where: “1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent.” The findings in table 4.19 revealed that 39.15% of the respondents agreed to a great extent that they have experienced growth in my financial status, 31.13% agreed to a very great extent, 22.17% agreed to a moderate extent, 4.72% agreed to a little extent and 2.83% disagreed with the statement. The mean of responses of 3.91 implied that most of the respondents agreed with the statement and the standard deviation of 0.99 showed the differentiation of responses.

The results also showed 42.45% of the respondents agreed to a great extent that there is adequacy in the financial income I receive, 23.11% agreed to a very great extent and moderate extent respectively, 8.02% agreed to a little extent and 3.30% disagreed with the statement. The mean of responses of 3.74 also meant that majority of the respondents agreed with the statements and the responses were varied as shown by the standard deviation of 1.01. The findings also highlighted that 39.62% of the respondents agreed to a great extent that there has been an alleviation of the level of poverty in the economic situation of my life, 25.94% agreed to a very great extent, 19.81% agreed to a moderate extent, 11.79% agreed to a little extent and 2.83% disagreed. The mean of the responses 3.74 confirmed that most of the respondents agreed with the statement and the standard deviation of 1.06 explained the variation of the responses.

Additionally, 36.32% of the respondents agreed to a great extent that my mango farm produce and their quality have increased significantly, 28.3% agreed to a moderate extent, 25.94% agreed to a very great extent, 8.02% agreed to a little extent while 1.42% disagreed with the statement. According to the mean of 3.77, it can be observed that majority of the respondents agreed with the statement and the standard deviation of 0.97 explained the variation of the responses. Further, 33.49% of the respondents agreed to a great extent that they able to have enough food for the household and sales, 29.25% agreed to a moderate extent, 28.3% agreed to a very great extent, 6.13% agreed to a little extent and 2.83% disagreed. The mean of 3.78 also showed that most of

the respondents agreed with the statement while the standard deviation of 1.02 explained the variation of response.

**Table 4.19: Descriptive results for Women Economic Empowerment**

Statements	No extent	Little extent	Moderate extent	Great extent	Very great extent	Mean	Std Dev
I have experienced growth in my financial status	2.83%	4.72%	22.17%	39.15%	31.13%	3.91	0.99
There is adequacy in the financial income I receive	3.30%	8.02%	23.11%	42.45%	23.11%	3.74	1.01
There has been an alleviation of the level of poverty in the economic situation of my life	2.83%	11.79%	19.81%	39.62%	25.94%	3.74	1.06
My mango farm produce and their quality have increased significantly.	1.42%	8.02%	28.30%	36.32%	25.94%	3.77	0.97
I am able to have enough food for the household and sales	2.83%	6.13%	29.25%	33.49%	28.30%	3.78	1.02
Overall Average						3.79	1.01

#### **4.5.3: Overall Regression results for Devolution of Agricultural Sector Practices and Women Economic Empowerment**

Regression analysis was done to determine the influence of devolution of overall agricultural sector practices on economic empowerment of women. The regression results consisted of

the model summary, ANOVA and regression coefficients findings. The results in table 4.20 outlined that the devolved agricultural sector practices explained 59% of the variations in women economic empowerment. This was supported by the R-square of 0.59. This also implied that devolved agricultural sector practices were found to be suitable variables in predicting women economic empowerment of women mango farmers in Mbooni sub-county.

**Table 4.20: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted Square</b>	<b>R Std. Error of the Estimate</b>
1	.768a	0.59	0.584	0.24049

a Predictors: (Constant), Av\_ Agricultural produce marketing, Av\_ Agricultural financing practices, Av\_ Agricultural extension practices

The ANOVA results in table 4.21 revealed that the overall model of regression was statistically significant and devolved agricultural sector practices were good indicators of women economic empowerment. This was supported by the reported F statistic of 99.203 and p-value of (0.000) which was less than 0.05 significance level.

**Table 4.21: ANOVA Results**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	17.213	3	5.738	99.203	0.000
	Residual	11.972	207	0.058		
	Total	29.185	210			

The overall regression coefficient findings revealed that agricultural financing practices ( $\beta=0.208$ ,  $p=0.000$ ), agricultural extension services ( $\beta=0.115$ ,  $p=0.000$ ) and agricultural produce marketing practices ( $\beta=0.104$ ,  $p=0.000$ ) had a positive and significant influence on women economic empowerment. Thus, this implied that a unit increase in these devolved agricultural sector practices will lead to the respective unit increase in women economic empowerment.

**Table 4.22: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.125	0.053		58.95	0.000
	Av_ Agricultural financing practices	0.208	0.024	0.721	8.722	0.000
	Av_ Agricultural extension services	0.115	0.03	0.045	3.833	0.001
	Av_ Agricultural produce marketing	0.104	0.028	0.012	3.714	0.003

a Dependent Variable: Av\_ Women economic empowerment

This study used a multiple regression model equation of the form;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Therefore, the optimal regression model of the study based on the regression coefficient and significance is;

$$\text{Women Economic Empowerment} = 3.125 + 0.208 \text{ Agricultural financing practices} + 0.115 \text{ Agricultural extension services} + 0.104 \text{ Agricultural produce marketing practices} + e$$

The FGD responses from the selected women regarding women economic empowerment included;

*“I have increased access to affordable loans that are used in expansion of mango farming activities.”* (Respondent 4)

*“I have benefited from devolved agricultural practices that provide access to education, financial resources, and entrepreneurial opportunities.”* (Respondent 19)

*“Access to better markets to sell our produce has earned us higher returns that enable us to effectively manage our household expenditures.”* (Respondent 20)

The County Directors responsible for Agriculture, Trade and Finance in Mbooni sub-county interviewed also indicated that;

*“Nowadays, most of the women mango farmers have equal access to resources, opportunities, and decision-making power.”* (Key Informant 3)

*“Engagement in devolved agricultural sector practices have enhanced the economic status and financial independence of women mango farmers.”* (Key Informant 5)

*“Empowering women economically not only benefits individuals but also contributes to poverty reduction and overall socio-economic development.”* (Key Informant 7)

The overall results on devolution of agricultural sector also confirmed that devolved agricultural financing practices, devolved agricultural extension services and devolved agricultural produce marketing had a positive and significant influence on economic empowerment of women mango farmers in Mbooni sub-county. Moreover, these findings agreed with those of Venkateswarlu (2014) study which concluded that improved agricultural practices have made a positive impact on enhancing the involvement of women in the social and economic aspects of their communities, as well as increasing their farm incomes. In addition, Roy, Shivamurthy and Radhakrishna (2010) study also found that the dedication of women farmers to the agricultural sector and rural development exhibits considerable variation and is influenced by factors specific to each individual, group, and family involved.

## **5.0 SUMMARY, CONCLUSION AND RRECOMMENDATIONS**

### **5.1: Introduction**

This chapter presents the summary of the findings, conclusion and recommendations of the study.

### **5.2: Summary**

The study sought to determine the influence of agricultural financing practices on women economic empowerment among women mango farmers in Mbooni sub-county. In reference to the descriptive results, it was observed that most of the selected women mango farmers (>50%) agreed with the five statements on agricultural financing practices. This was also supported by the overall mean of the responses of 3.65 and the responses were moderately varied as shown by the standard deviation of 1.16.

The findings from the focus group discussions also showed that a good number of the selected women have benefited from various agricultural initiatives including securing loans and funding at affordable interest rates that have encouraged expansion of their agricultural practices and invest financial resources. However, some respondents complained of challenges of limited awareness, complex application processes, and lack of collateral. In addition, the key informant interview results also reveal that there exists supportive policies that address the unique needs and challenges faced by women mango farmers but the policies are still weak in ensuring there are equal opportunities for them to access financial resources.

Moreover, the correlation results showed that agricultural financing practices and women economic empowerment were positively and significantly associated ( $r=0.767$ ,  $p=0.000$ ). Additionally, agricultural financing practices were also found a positive and significant influence on women economic empowerment ( $\beta=0.221$ ,  $p=0.000$ ). The research also aimed to examine the influence of agricultural extension services on women economic empowerment among women mango farmers in Mbooni sub-county. The descriptive findings indicated that majority of the respondents (>50%) agreed with the five statements on agricultural extension services. This was according to the overall mean of responses of 3.63 and the responses were fairly differentiated as



shown by the standard deviation of 1.14. In addition, the focus group discussion results revealed that there were organized workshops and training sessions by the county government and NGO organizations that a good number of the women benefited from trainings on soil management, pest-control methods and post-harvest handling practices. Nevertheless, one of the respondent highlighted on the challenge of accessibility of extension officers for further support and guidance in their mango farming activities. The key informant interview results also outlined that the observed successful agricultural extension programs planned have empowered women mango farmers to make informed decisions, improve their crop productivity, and maximize their profitability.

Additionally, the correlation results also revealed that the agricultural extension services have a positive and significant relationship with women economic empowerment ( $r=0.648$ ,  $p=0.000$ ). The regression findings also showed that agricultural extension services had a positive and significant influence on women economic empowerment ( $\beta=0.218$ ,  $p=0.001$ ).

The research also aimed to assess the influence of agricultural produce marketing practices on women economic empowerment among women mango farmers in Mbooni sub-county. The descriptive results indicated that most of the respondents (>50%) agreed with the five statements under agricultural produce marketing practices. This was supported by the means per each statement and the overall mean of responses of 3.84 and the responses were fairly varied as shown by the standard deviation of 1.13. The focus group discussions findings also showed that the enhanced market access efforts have allowed a good number of the women to participate more actively in market transactions, negotiate better prices for their mangoes and access a wider range of markets. On the other hand, the key informant interview results also revealed that the enhancement of decentralized market systems have provided better access to local and regional markets, reduced the number of intermediaries, secure fairer prices for their mangoes and improve the economic well-being of women mango farmers. In addition, the correlation findings also confirmed that agricultural produce marketing practices and women economic empowerment had a positive and significant association ( $r=0.609$ ,  $p=0.000$ ). The regression results also indicated that agricultural produce marketing practices had a positive and significant influence on women economic empowerment ( $\beta=0.21$ ,  $p=0.003$ ).

### **5.3: Conclusions**

Devolution of the agricultural sector in Mbooni sub-county has positively contributed to improved mango farming practices aimed at increasing their farm produce and accessing better markets for their mangoes. It has also positively enhanced the economic well-being of women mango farmers and the livelihood of their families. Devolved agricultural financing practices have to a good extent enabled women to invest in their mango farming operations, purchase necessary inputs, and expand their lands, leading to increased productivity and income.

Additionally, access to knowledge on agricultural extension services from agricultural experts' trainings or through agricultural exhibition and trade fairs, has offered better guidance on best practices in mango cultivation, pest management, irrigation techniques, and sustainable farming methods, thus helping women to improve their yields and product quality. Moreover, the availability of storage facilities, transport network, preprocessing and packaging services of farm produce have enabled women to negotiate better prices for their mangoes in the larger market and retain a better share of the profits. Nevertheless, there is a major policy gap identified by the county directors on gender responsive policies which if strengthened to promote equal opportunities for both men and women, will lead to increase economic empowerment among women mango farmers in Mbooni sub-county.

### **5.4: Recommendations**

The study recommends that women mango farmers should be encouraged to take appropriate steps in accessing affordable loans offered by credit-lending institutions which can enable them expand their mango farming activities, improve their economic well-being and promote financial independence. The study also recommends that policymakers at the county agricultural department should enforce gender responsive policies to strengthen the gender blind policies in order to ensure there are equal opportunities for men and women to access financial resources.

The study also recommends on additional county government interventions in partnership with private organizations to plan for more agricultural exhibition and trade fairs which provide more effective marketing opportunities for women mango farmers and enable them gain access to skill expertise on modernized production techniques in mango farming.

### **5.5: Recommendations for Further Research**

This study focused on assessing the effect of devolution of the agricultural sector on economic empowerment of women mango farmers, Mbooni Sub-County, Makueni County, Kenya. For further research, other factors influencing economic empowerment of women mango farmers should be focused. Further studies can be conducted in other sub counties in Makueni County and other parts of Kenya. In addition, other studies can consider exploring the level of women economic empowerment among different women groups other than women mango farmers and the underlying factors promoting women empowerment.

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## **APPENDICES**

### **Appendix I: Questionnaire**

This questionnaire seeks to assess the effect of devolution of the agricultural sector on women's economic empowerment in Mbooni Sub-County, Makueni County, Kenya. Kindly, respond by either selecting the response among choices given that best fits your view.

#### **Section I: Demographic section**

Indicate your age group.

18-25 years  26-30 years  31-35 years  36 – 40 years

41 years and above

What is your marital status?

Married  Widowed  Single  Divorced  Separated  Cohabiting

Other, Specify \_\_\_\_\_

What is the highest level of education you have completed?

No school  Primary  Secondary  College/Polytechnic  University

#### **Section II: Women Economic Empowerment**

Are you aware of women economic empowerment in the current days?

Yes  No

In which way have the agricultural practices given you economic empowerment foundation?

Rate them using a scale of 1-5 where: "1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent" (tick [√] as appropriate)

down your opinion on the following statements. [1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent]

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I have experienced growth in my financial status					
There is adequacy in the financial income I receive					
There has been an alleviation of the level of poverty in the economic situation of my life					
My mango farm produce and their quality have increased significantly.					
I am able to have enough food for the household and sales					

### **Section III: Devolution of the Agricultural Financing Practices**

Indicate the level of adoption of the various agricultural financing practices among the women.

Rate them using a scale of 1-5 where: “1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent” (tick [√] as appropriate)

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There are instances where we receive inputs financing for farming					

The processing facilities for the farm produce are financed effectively					
The equipment for the farming production are supplied to farmers to modernize production					
There are financial services available to farmers such as credit and loans					
The financing of agriculture empowers women economically					

#### **Section IV: Devolution of the Agricultural Extension Practices**

Indicate the level of adoption of the various agricultural extension practices among the women.

Rate them using a scale of 1-5 where: “1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent” (tick [√] as appropriate)

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There are farm demonstrations organized to enlighten farmers					
Irrigation and water supply services are adequately supplied to the farmers.					
Research development in the farming area is well developed					

Farm training activities are scheduled to the farmers					
Extension services availability have an effect on economic empowerment of women					

**Section V: Devolution of the Agricultural Produce Marketing Practices**

Indicate the level of adoption of the various agricultural produce marketing practices among the women. Rate them using a scale of 1-5 where: “1-No extent, 2-Little extent, 3- Moderate extent, 4- Great extent, 5- Very great extent” (tick [√] as appropriate).

<b>Statement</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
There are storage facilities for the farm product preservation of perishable goods.					
Transport network and facilities have been enhanced					
The distribution of farm produce is monitored to realize profits					
The preprocessing and packaging services of farm produce is available for the farmers efficiently					
Produce marketing efficiency have an effect on the economic empowerment of women					

## **Appendix II: Focus Group Discussions**

1. In your opinion, do you think that the engagement of women in agricultural practices promote economic women empowerment?
2. How has the devolution of agricultural financing practices impacted women mango farmers in terms of accessing credit and financial resources for their mango farming activities?



3. In what ways have devolved agricultural extension services supported women mango farmers in improving their knowledge and skills related to mango cultivation, pest management, and post-harvest practices?
4. How has the devolution of agricultural produce marketing influenced the market access and income opportunities for women mango farmers?
5. What are the main challenges or barriers faced by women mango farmers in deploying devolved agricultural practices?
6. In your opinion, what other devolved agricultural practices do you think could influence economic women empowerment among women mango farmers in Mbooni sub-county?

### **Appendix III: Key Informant Interview Guide**

1. Indicate some of the agricultural regulatory policies that have been enforced to promote economic women empowerment?

2. In your opinion, does adoption of devolved agricultural financing practices by women mango farmers in Mbooni sub-county influence economic women empowerment?  
Explain
3. Does the adoption of devolved agricultural extension services by women mango farmers in Mbooni sub-county influence economic women empowerment? Explain
4. Does the adoption of agricultural produce marketing by women mango farmers in Mbooni sub-county influence economic women empowerment? Explain
5. What are the main challenges or barriers faced by women mango farmers in deploying devolved agricultural practices?
6. In your opinion, what other regulatory policies do you think should be implemented to influence economic women empowerment among women mango farmers in Mbooni sub-county?