ENTREPRENEURIAL DETERMINANTS OF PERFORMANCE OF COFFEE-BASED MICRO AND SMALL AGRIBUSINESSES OF THE COFFEE SMALL HOLDERS IN MURANG'A COUNTY

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Entrepreneurial Determinants of Performance of Coffee-Based Micro and Small Agribusinesses of the Coffee Small Holders in Murang'a County

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

To the memory of my revered late grandfather Gichichi wa Kimani who paid the ultimate price in this country with his life as a freedom fighter during the struggle for our beloved country's independence. This selfless patriotic noble action was endeared to give his posterity the joy of peace and independence we enjoy today.

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LIST OF ABBREVIATIONS & ACRONYMS

AAAE	African Association of Agricultural Economists
AGRA	Alliance for a Green Revolution in Africa
ANDE	Aspen Network of Development Entrepreneurs
ASDS	Agricultural Sector Development Strategy
BDS	Business development services
CIAT	Centre for International Agricultural Tropical
DFID	Department for international Development
DGGF	Dutch Good Growth Fund
EC	Entrepreneurial capabilities
EUC	European Union Cooperation
EFA	Exploratory Factor Analysis
EIU	Economic Intelligent Unit
EIP	Entrepreneurship Indicators Programme
EM	Entrepreneurial Marketing
ERS	Economic Recovery Strategy
FSR	Fiscal Strategy Paper
GCP	Gross County Product
GDP	Gross Domestic Product
GERA	Global Entrepreneurship Research Association
GEN	Global Entrepreneurship Network
GEM	Global Entrepreneurship Monitor
GII	Global Innovation Index
ICC	International Coffee Council
ICO	International Coffee Organizations
ICT	Information and Communication Technology
IEC	Information Economy Report
IFAD	International Fund for Agricultural Development
IFAMA	International Food and Agribusiness Management Association
IFC	International Finance Corporation
ILO	International Labour Organisation
JKUAT	Jomo Kenyatta University of Agriculture and Technology

KARI	Kenya Agricultural Research Institute
KCGA	Kenya Coffee Growers Association
KES	Kenya Economic Survey
KNHRC	Kenya National Human Rights Commission
KIHBS	Kenya Integrated Household Budget Survey
KNBS	Kenya's National Bureau of Statistics
KPCU	Kenya Planters Cooperative Union
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KREP	Kenya rural enterprise program
LDC	Less-Developed Country
MCIDP	Murang'a County Integrated Development Plan
MPNDV2030	Ministry of Planning, National Development & Vision 2030
MUST	Meru University of Science and Technology
MSA	Micro Small Agribusiness
MSME	Micro, small and medium-sized enterprises
MSEs	Micro and Small Enterprises
OECD	Organization for Economic Co-operation and Development
PPPs	Public-Private Partnerships
PRIDE	Promotion of Rural Initiatives and Development Enterprises
PSD	Private Sector Development
SACCOs	Savings and Credit Co-operatives
SEDA	Small Enterprise Development Agency
SID	Society for International Development
SIDA	Small Industries Development Agency
SME	Small and Medium-sized Enterprise
SMU	Singapore Management University
SSA	Sub-Saharan Africa
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
UNU-WIDER	United Nations University- World Institute for Development Economics Research
USAID	United States Agency for International Development
WES	WB Enterprise Survey

WB	World Bank
WBG	World Bank Group
WBGES	World Bank Group Entrepreneurship Survey
WEF	World Economic Forum
WFP	World Food Program
WRI	World Resource Institute

DEFINITION OF TERMS

Agribusiness: An entity or single proprietorship enterprise formed within the agricultural value chain and includes enterprises in the production of crops and livestock, processing and marketing of agricultural produce (Kwesi & Boateng, 2015).

Agro-enterprise: The entire gamut of activities concerning supply of inputs, production, processing, transporting, and marketing of agricultural and related produce. It cuts across various sectors and encompasses the institutions and businesses serving the agriculture, forestry, and fisheries sectors (Indarti & Langenberg, 2010).

Coffee Smallholders: refer to coffee production on small scale and operating on a less than 2 ha (Lowder *et al.* 2016).

Entrepreneurial capabilities: A set of knowledge, skills, behaviours and attitudes that contribute to personal effectiveness (Hellriegel *et al.* 2010). Morgan (2012) affirms capabilities develops when individuals and groups within the organization apply their knowledge and skills to acquire, combine, and transform available resources in ways that contribute to achieving the firm's strategic goals.

Entrepreneurial Culture: The extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income (GEM, 2014).

Entrepreneurial determinants: OECD/Eurostat model of entrepreneurship classifies determinants of entrepreneurship in a country, framed across six domain areas, namely entrepreneurial finance, market conditions, research and development, and technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework (EU, 2012).

Entrepreneurial Finance: Resources comprising equity and debt for small and medium enterprises, including grants and subsidies (GEM, 2014).

Entrepreneurial performance: Specific activities that entrepreneurs perform that will ultimately deliver the impacts. Indicators such as the total number of formal businesses in an economy, the number of high-growth firms (gazelles), employment figures, and enterprise survival and death rates are all considered measures of entrepreneurial performance (UK aid, 2013).

Market Conditions: relate to the attractiveness (or otherwise) of overall market conditions within a defined market that affect all factors within in which a business operates and are influenced by the demographic, economic, and locational characteristics of a market (GEM,2012).

Micro, Small Agribusinesses (MSAs): means a firm, trade, service, industry or a business activity (a) whose annual turnover is less than KShs 5M; and (b) which employs less than 50 employees (GOK, 2012).

Regulatory Framework: The extent to which government policies support entrepreneurship inclined to the presence and quality of programs directly assisting MSEs at all levels of government; national, regional, municipal (GEM, 2014).

Technology: refers to the use of scientific knowledge to develop new skills, processes and methods for practical purposes to improve efficiency and make life bearable or more pleasant and work more productive (Ndesaulwa & Kikula, 2016).

ABSTRACT

Micro and Small Enterprises (MSEs) are often considered to be a key source of productivity, growth and job creation. Therefore; the performance and the environment, in which the MSEs perform are seen as important factors of economic development. Despite this fact, MSEs in Kenya continues to face myriad of challenges which result to high mortality rate. The purpose of the study was to analyse the influence of entrepreneurial determinants of performance of coffee-based micro and small agribusiness of the coffee small holders in the Murang'a county. The study was guided by six specific objectives focusing on investigating how entrepreneurial finance, marketing conditions, technology integration, entrepreneurial capabilities, entrepreneurial culture and regulatory framework all determine the performance of these MSAEs. The study adopted a descriptive survey design that used both qualitative and quantitative research approaches. The target population of this study was 146,105 comprising of the coffee smallholders affiliated to cooperative sector within eight sub counties of Murang'a County. Sampling with probability proportionate to size was used to get a sample size of 384 respondents drawn from the eight Sub Counties of the County. For analysis, a multivariate regression model was employed to establish the relationship between the independent variables; entrepreneurial finance, marketing conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework and dependent variable which was performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County. The study finding showed that market conditions and entrepreneurial capabilities positively and significantly determined the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County, while entrepreneurial finance, entrepreneurial culture and technology were found to have insignificant influence on performance of MSAs in Kenya. Further, the findings unravelled that the regulatory framework significantly moderated the relationship between entrepreneurial finance, entrepreneurial capabilities, entrepreneurial culture and performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County. The study concluded that not all entrepreneurial determinants significantly determined the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County. The study recommends that both levels of government and private should collaborate in initiating strategies and necessary policies to improve entrepreneurial finance, market conditions, technology integration, entrepreneurial capabilities and entrepreneurial culture in an attempt to boost performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Throughout the world, changing in population demographics, technology, shifting economies and other zestful forces have revamped societies as never before, bringing new challenges and opportunities to the forefront. Among the responses to this moving influence is an increased prominence on entrepreneurship by governments, institutions as well as the society. While entrepreneurship may not be a remedy, it can surely be part of the resolution (Global Entrepreneurship Monitor (GEM), 2012). To this end, growth and development in any economy is hastened by growth of industries and businesses. The national Gross Domestic Product (GDP) in an economy rely on combined industry performance (Panda, 2015).

Micro and Small Enterprises (MSEs) have become the support of various economies and play a substantial role in socio-economic development of both developed and third world countries. Further, MSEs have been broadly recognized as the beginning point for viable economic development through entrepreneurship. Entrepreneurship is regarded to back economic development because entrepreneurs create new businesses, and new businesses create employment, offer people with a variety of products and services, strengthen competition, increase output through technological change and positively effect individual lifestyles and well-being of society on different echelons (GEM, 2013; Ong'olo & Awino, 2013).

United Nations Industrial Development Organization (UNIDO) (2013) opines that the problems facing factor driven countries and those with changing economies are many and frightening. This includes and not limited to; prevalent poverty, low levels of productivity, deficient infrastructural expansion and fragmented markets, particularly in rural areas. These problems are further made worse by weak rural industrial organization characterized by small and medium-size enterprises

imperfectly linked to worldwide markets and scarce employment and entrepreneurial opportunities for marginalized segments of the society such as women and youth.

Christiaensen, Demery and Kuhl (2011) observed that nearly 1.5 billion people are involved in smallholder farming globally. They include 75% of the world's poorest people whose existence depend on gardening, and mainly live-in rural set ups. Further, the authors assert that a 1% increase in agricultural per capita GDP reduces the poverty gap five times more than a 1% increase in GDP per capita in other sectors, mainly among the poorest people. Hence, it is a pro-poor, income-making and job-making sector for most Sub-Saharan Africa (SSA) economies. Africa Agriculture Status Report (2015) attests that viable agribusinesses need to be supported to create space for economic growth, operational changes, taking care of environment, and refined technical skills. This in turn inspire economic activities and links major economic sectors, thereby resulting in all-encompassing growth and nourishing sustenance into the continent.

Despite their important role as countryside food producers and suppliers, the commercial prospects for millions of poor smallholders remain an uphill task. Earning opportunities have improved since the long period of pressed down commodity prices, from the 1980s until the mid-2000s. As commodity prices have regained, the agricultural sector has shown signs of reviving. Several worldwide businesses have roused their investments in agriculture due to the resurrecting that enterprise continues to be the best hope of making better the livelihood anticipation for millions of rural families (Ferris, Robbins, Best, Seville, Buxton, Shriver & Wei, 2014).

1.1.1 Global Perspective of Performance of Micro And Small Agribusinesses

Books (2012) posits that long-term sustainable economic advancement and employment creation through MSEs can only be achieved through the development of an active entrepreneurial sector. UNIDO and European Union Cooperation 2005-2015 (UNIDO / EUC, 2015) reports that 90% of jobs globally are delivered by Micro

and Small Agribusinesses (MSAs). MSEs are a major feature of the economic landscape in all developing countries today. More specifically, rural MSEs development objectives have been linked to efforts aimed at poverty mitigation, job creation and increased non-farm earnings (GEM, 2016).

The catalytic roles of micro and cottage businesses have been showed in many countries of the universe such as Malaysia, Japan, South Korea and India among other countries. They chip in largely to the Gross Domestic production (GDP) export income and employment opportunities of these countries (Maragia, 2008). The Organization for Economic Cooperation and Development (OECD) (2013) report shows that MSEs subscribe to over 55% of GDP and over 65% of total employment in innovation driven economies. They amount to over 60% of GDP and over 70% of total employment in factor driven economies, while they devote over 95% of total employment and about 70% of GDP in efficient driven economies

Economic Intelligent Unit (EIU, 2010) insert that Japan leads in the number of MSEs among the first world countries, summing up to more than 99% of entire enterprises. India, according to its Ministry of MSME, had 13 million MSEs in 2008, equivalent to 80% of all the country's businesses contributing 25 per cent to the national GDP and 13 per cent of the country's export (Israr, 2017; Panda, 2015). In South Africa, it is approximated that 91% of the formal business concerns are MSEs (Abor & Quartey, 2010).

The contribution made by MSEs does differ widely between countries and regions from around 16% of GDP in factor driven countries (where the sector is typically large, but informal) to 51% of GDP in high-income countries (Dalberg, 2011). In Italy, MSEs contribute to USD35 million in exports and take in 2.2 million of job creation. Further, in OECD economies, over 95% of entities are MSEs, translating to 55% of GDP (Green, King & Miller-Dawkins, 2010).

MSEs are more labour rigorous and provide a big offering to employment. The World Bank (WB) survey of 47,745 enterprises across 99 countries disclose that businesses with between 5 and 250 workers accounted for 67% of the whole stable, round-the-clock engagement (Ayyagari *et al.* 2011). MSEs were also creating more occupations than large enterprises. Between 2002 and 2010, on average, 85% of overall employment progress were attributable to MSEs (de Kok *et al.* 2011). Nearly 1.5 billion people are engaged in smallholder farming worldwide.

This mainly rural society includes 75% of the world's poorest people whose food and lifestyle depend on agriculture (Ferris, Robbins, Best, Seville, Buxton, Shriver & Wei, 2014). The author further notes that despite their cardinal role as food producers, the profitable prospect for millions of humble smallholders remains challenging.

United States Agency for International Development (USAID) states that agribusiness is any business related to agriculture, including farming, processing, exporting, and input suppliers, trading and retailing (USAID, 2008). In particular, Alliance for green revolution in Africa (AGRA) notes that governments need to create an enabling business atmosphere for agribusiness. To undertake this plan, there will be need to form rural groundwork, invest in agricultural research and extension for small farms, safeguard intellectual property rights, and help institute and administer grading systems and health and safety standards for various farm yields (AGRA, 2017).

The cradle of China's notable yearly economic growth rate of 9.5 percent during the 1980s and 1990s was heralded by rural and agricultural enterprise policy reforms in the late 1970s and early 1980s. Indonesia and Thailand also experienced strong agricultural enterprise growth periods before attaining high non-agricultural growth. Countries have conducted experiments with a series of diverse strategic approaches to create an enabling environment for agribusiness to flourish, with variable victories (GOK, 2012).

Over the past decades, the International Coffee Organizations (ICO) noted that most coffee producing countries have diversified their economies and reduced their reliance on coffee as an earner of foreign exchange (ICO, 2009). This diversification of livelihoods by coffee producers, agricultural households boost and offers alternatives to incomes from agricultural production – alternatives that are vital pathways to poverty alleviation (OECD, 2007). This is because small enterprise progress has become a growing latent alternative for all stakeholders in rural advancement (Warren, 2010). Regardless of which diversification strategy is chosen, motivating the entrepreneurial assertiveness of farmers has helped them grasp opportunities and secure a livelihood in coffee farming (Mukeku & van der Wees, 2014). Many coffee-producing countries suffer from high levels of rural poverty, uncontrolled rural migration to already crowded cities, growing macro-economic disparity, and an incapacity to square debts (ICO, 2009).

1.1.2 Regional Perspective of performance of micro and small agribusinesses

Nagler and Naudé (2014) acknowledge that small enterprise growth is regarded as essential to the accomplishment of broader goals such as poverty lessening, economic enlargement and the rise of more democratic and pluralist civilizations in Africa. Moreover, Okafor (2013) posits that MSEs are the foremost foundation of workforce in developed and developing countries alike, encompassing over 90% of African business set-ups and ascribing to over 50% of African employment and GDP. Abor and Quartey (2010) opines that SMEs add about 70% to Ghana's GDP and account for almost 92% of trades in Ghana. Further, the authors note that in the Republic of South Africa, it is projected that 91% of the formal business entities are SMEs. They also give between 52 to 57% to GDP and offer nearly 61% to employment.

The Government of Ethiopia is attentive on the MSEs basically because of their contribution in reducing unemployment. The vision of Tanzania's 2025 MSEs, Development Policy of 2003 sets Tanzania to have an active and vigorous MSE sector that guarantees effective exploitation of resources at the disposal to attain

accelerated and sustainable growth. The Country's National Strategy for Growth and Reduction of Poverty (NSGRP) as well gives a dominant part to MSMEs that targets at Growth and Reduction of Income Poverty (Ernest & Young, 2011). The financing of MSEs in Uganda has been a matter of great concern to policy-makers and scholars in that the small-micro enterprises are seen as prime vehicles with a support of about 90% of the private sector. MSEs fund almost 75% of Uganda's Gross Domestic product (GDP) and engage more than 2.5 million people. The workforce growth is rated at 25% per year and therefore the MSEs are a principal basis of fresh careers (UIA Report, 2012).

Glatzel, Alpert, Brittain and Conway (2014) asserts that despite increased devotion to and funding for African agriculture over the last decade, the prospective of the sector remains largely untapped. Smallholders dominates a bulk of farms in Africa and yield up to 90% of the food in some countries. The authors uphold that they need better links to markets and more collaboration amongst themselves. Further, they figure out that agriculture is a vibrant sector, offering a mass of opportunities for entrepreneurship along the entire agribusiness value chain. Moreso, they admit that entrepreneurship is ingrained in small farm agriculture, but it necessities a pro-active policy strategy and investment.

Kavere and Oloko (2015) attest that agribusiness spur economic development eradicate poverty in Africa. Further, they argue that agribusiness is a strategy to inspire development and also provide business elucidation to rural poverty. Bidzakin (2009) upholds that it is vital today for most governments in Africa to ease poverty eminence among rural people through the development of agribusiness. WB (2013) reports that agribusiness is anticipated to be a $1 trillion USD industry in sub-Saharan Africa by 2030. Olatomide and Omowumi (2015) note that the Nigerian government have recognized the influence of agribusiness, small and micro agro-enterprises on job establishment, enhancement of people's standards of living and a total effect on the economy, hence, boosts entrepreneurship dependence on oil for development.

Again, in South Africa, the expansion of agro-industries and elevation of agribusiness has taken up for spans of years a vital place in the South African economy and society and in the economic and social policy perspective (KPMG, 2012). While Ernst and Young (2011) affirms that reliance on coffee for export income in Burundi has been perilous, as coffee is highly vulnerable to outward shockwaves, such as falling coffee prices and down cycles in crop earnings. One such incident in Burundi was the 1988 coffee clatter that was referred as an arousal factor, which also ended up stimulating a study on diversification of agribusinesses into other agricultural exports including skins, minerals, fruits vegetables as well as handicrafts as the most well-timed enterprises.

AGRA (2017) posits that, additionally, and more crucially, these changes need to be beneficial to Africa's huge mass of smallholder farmers and small and medium enterprises (SMEs) operating in the Agri-food system. Given the numerous manacles they face, and the more rigid requirements of urbanized markets, there is a jeopardy that many will be left out of this looming economic boom, while larger commercial smallholdings and large agribusinesses realize most of the benefits.

1.1.3 Local Perspective of Performance of Micro and Small Agribusinesses

Dutch Good Growth Fund (DGGF) (2015) report observed that Kenya is the leading economy in East Africa and is a pivot for business and entrepreneurship in the region. It has portrayed continuous GDP growth rates between 6% and 7% throughout the past five years. The report further notes that Kenya's MSE landscape is diverse, and there are numerous types of enterprises across the country, with businesspersons that are driven by divergent enthusiasms and responding in distinct ways to the business conditions around them. Argidius Foundation (2015) notes that Kenya ranks 143 on starting a business, with new businesses taking an average of ten procedures and 30 days to start.

Kenya Institute for Public Policy Research and Analysis (KIPPRA) (2018) reports that the Government of Kenya has underscored its pledge to stimulating local enterprise development as presented in the Big Four agenda in which the manufacturing sector has been singled out and is targeted to produce 1,000 small and medium enterprises (SMEs) annually. Capital Markets Authority of Kenya (2014; Ong'olo & Owino; 2013) report that MSEs provide job opportunities to nearly 7.5 million Kenyan people, account for 80% of employment, and give away above 92% of the new jobs created annually. Research points out that MSEs present about 45 per cent to Kenya's GDP. In addition, Kenya Decent Work Country Program 2013-2016, observes that the National MSEs Bill (2011) acknowledge the fact that MSEs are the mover of Kenya's economy aimed at organized, controlled and well-coordinated MSE sector in Kenya for enhanced productivity and growth.

Government of Kenya (GOK) (2012) Act defines MSEs based on the number of employees, annual turnover and investments, without clear definition of medium-sized enterprises (Appendix 111). GOK (2016) survey indicates that there are 7.4 million MSMEs in Kenya with MSEs accounting for 92.1 per cent (7,281,500) and 7.2 per cent (108,000) of the licensed and unlicensed establishments. 1.5 million of these enterprises are licensed by the 47 county governments and about 5.9 million are unlicensed. The author observes that there is a high number of undocumented businesses operating informally in Kenya.

GOK (2013) medium term plan demonstrates that the development of vibrant MSEs forms an integral component of Vision 2030 and aspires to change Kenya into a newly industrialized middle-income country by the year 2030. The Vision 2030 envisage that the devolution instruments is expected to affect the key drivers of the economy related to the MSEs which requires a local driven MSEs policy embedded in the devolution structure. Ong'olo and Awino (2013) express that the new constitutional regime is generally expected to promote Local Economic Development (LED) through devolution framework which leverages efforts to promote LED oriented activities, like those related to MSEs. The objective of fostering LED is

further supported by the recently enacted Small and Medium Enterprises Act, Urban Areas and Cities Act No 13 of 2011 and the County Government Act 2012.

AGRA (2017) reports that Kenya is a country with strong fundamentals boasting a GDP growth of 5.6% annually and a large vibrant agricultural segment that offer 30% to the GDP, 65% of all exports and a workforce of more than 75% of the country's citizens. Further, the report observes that in reaction to changes in Kenya's macro-economic context and country constitutional move to a devolved structure, Kenya has developed a new agricultural strategy to transform its agricultural structures and enhance the yields and income of smallholder farmers.

Notably, GOK (2010) stipulates that agriculture is a devolved function to County governments under the 4th schedule of the 2010 Kenyan Constitution. Features of agriculture development, such as extension services and building capacity for farmers through training are now the responsibility of the County governments. The role of the national government has only been to improve the essential frameworks while the implementation is to be taken at the county government level.

Kenya National Bureau of Statistics (KNBS) (2012; GOK, 2012) observe that the agribusiness sector in Kenya is dualist in nature, with a small proportion of large-scale firms and a large proportion of MSAEs. Agribusiness already generates 60 percent of Kenya's export income through horticulture, industrial crops, and livestock and fishery products. Despite this, Food and Agricultural Organization (FAO) (2010) observe that Kenya has dragged in developing and implementing policies and despite some progress in the last examination of stimulating incentives performed by the World Bank, it still ranks 72nd globally, in that respect.

GOK (2010) strategy affirms that Kenya has attempted to improve the enabling environment for agribusiness by expanding and upgrading the infrastructural facilities. International Fund for Agricultural Development (IFAD) (2010) asserts that a recent Agricultural Policy Review (APR) shows that agriculture-led growth in

Kenya is more than twice as effective in reducing poverty, compared to industry-led growth. FAO (2014) observes that the majority of Kenyans derive their livelihood directly or indirectly from the agricultural sector because about 76 percent of Kenyans reside in the rural areas.

However, agricultural production and market participation by smallholder farmers in Kenya continues to decline despite the market reforms undertaken in the last several decades (FAO, 2013; WB, 2013. This decline has been occasioned by the effect of the Structural Adjustment programs pushed for by the IMF and World Bank on Kenya on one hand, and a steep fall in prices of the crop on the other and which has seen its production plummeting from a peak of 130,000 tons in 1989 to 38,620 metrics in 2018 (Kenya National Human Rights Commission (KNHRC), 2015; Gebre & Mwaura, 2018).

Notably, despite the government attempts to turn around the fortunes of the coffee farmers, the upheavals that have afflicted this crop, have seen trends changing with increasing small-scale farmers abandoning the crop in the farms or in the extreme, cut down the whole crop and using the farms for other promising alternative crops (Namwaya, 2010; Mbataru, 2011; Murioga, Amutabi, Mbugua & Ajuoga 2016; Nyawira 2018; Maigua, Maina & Ndegwa, 2017). To compound the industry's troubles further, these authors have observed that, the growth of populations around major towns, especially in Central Kenya and that of the city of Nairobi has placed huge pressure for the owners of the farms in this area to convert their farms to other economic activities including the construction of housing estates and roads.

Notwithstanding, *Murang'a County's Integrated Development Plan (2013-2017)* and *Murang'a County's Fiscal Strategy Paper (2014)* observe that Murang'a County, which is located in Central Kenya has had its share of challenges. From its hey days as the cash cow of Kenya due to its lucrative tea and coffee industry, the county has dimmed over the years as the prices of these products suffered due political, economic and social dynamics and neglect. In the context of poverty index, Kenya

Integrated Household Budget Survey 2015/16 (KIHBS, 2015) report indicated that the prevailing overall poverty headcount rate for individuals for Murang'a County was 25.3% with food poverty being 22.7%.

KNBS (2019) Gross County Product report indicates that Murang'a County in between 2014 to 2017 demonstrated a growth rate of 4.2, trailing at position 35 out of 47 Kenyan counties. The topography of Murang'a has critical challenges affecting sustainable human settlements. The county has experienced major disasters that include landslides, drought and famine, accidents related to quarrying, among others (USAID, 2016). The county also has the highest proportion of old people in the country (65+ years) who form 6.9% of the total population (KNBS & SID, 2013).

Gitu and Filson (2012) uphold that the undergrowth of the leading coffee and tea crops at Murang'a County like the rest of the agricultural counties in Kenya, have seen the emergence of other crops in a desperate measure by farmers to make ends meet. For instance, Bichanga and Kariuki (2013) attests that Benson Kimani, is one of the farmers who decided to try out new crops while still holding on to the traditional coffee. His farm in Kagumo village in Kandara sub-county, Murang'a County has now become a training ground where farmers flock to learn a thing or two about alternative crops.

1.2 Statement of the Problem

In view of agriculture being a devolved function of the county governments, the performance of agribusinesses is considered as an essential catalyst for entrepreneurship growth beside a tool of poverty eradication (KNBS 2012; GOK, 2010;2012;2013; Kavere & Oloko, 2015). Agricultural entrepreneurship and market participation by smallholder farmers in Kenya has continued to decline despite the reforms undertaken by government (FAO, 2013; WB, 2013).

Noteworthy, coffee production and earning has declined in the last three decades, especially in the smallholder co-operative sub-sector, subsequently propelling the

coffee smallholders to embark on alternative micro and small agribusinesses in desperate measures to earn income (Ng'ethe, 2015; Kariuki, 2013; KNBS, 2013; 2016; 2017). However, Kanyua *et al.* (2015; Murioga *et al.* 2016; Maigua *et al.* 2017; KIHBS, 2015; KNBS, 2013; 2016; 2017) behold that despite the coffee smallholder's engagement to micro and small agribusinesses, these ventures continue to depict low performance.

Past studies have unveiled several constraints to agripreneurships that include; access to entrepreneurial finance despite the fact that Kenya has a relatively well-developed financial institutional system (WB, 2013; Kanyua *et al.* 2015; Cook & Olafsen, 2016; Sitham & Hoque, 2016), market conditions being crucial to preserving high performance in the business (Vanni, 2014; Mutura *et al.* 2015; Razak *et al.*2016), technology base facilitating greater and more efficient use of local resources, considerable flexibility and entrepreneurial growth (Romijn & Caniëls, 2011; Jones *et al.* 2013; Kiveu & Ofafa, 2013).

Moreover, (WB 2013; Gathenya *et al.* 2012; Nyang'au *et al.* 2014; Boakye, 2016; Marima & Mukulu, 2017) place great emphasis on the link between entrepreneurial skills, employees' teamwork, entrepreneurial training and entrepreneurial motivation, in pursuit to create entrepreneurial capabilities and competencies. The WB (2013; Omwenga *et al.*2015; Naikuru *et al.* 2016) recognize that entrepreneurial culture is an essential component of entrepreneurship development. Cepel *et al.* (2018; Muhika *et al.* 2017; DGGF, 2015, GOK, 2012) avers that, globally government legislated procedures and laws are a critical factor affecting entrepreneurial performance.

However, it is not well documented by previous studies how these entrepreneurial factors influence the performance of the coffee smallholders owned alternative agribusinesses. This study sought to address this knowledge gap by examining the entrepreneurial determinants of performance of coffee-based micro and small agribusiness of the coffee small holders in Murang'a County.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of the study was to examine the influence of entrepreneurial determinants of performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

1.3.2 Specific objectives

The study was guided by the following specific objectives:

1. To establish the influence of entrepreneurial finance on the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

2. To evaluate the influence of market conditions on the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

3. To examine the influence of technology Integration on the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

4. To determine the influence of entrepreneurial capabilities on the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

5. To evaluate the influence of entrepreneurial culture on the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

6. To determine the moderating influence of regulatory framework on the relationship between entrepreneurial determinants and the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

1.4 Research Hypotheses

This section presents the research hypotheses the study sought to test. The hypotheses were based on the specific objectives.

H_{A1}: Entrepreneurial finance positively determines performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

H_{A2}: Market conditions positively determine the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

H_{A3}: Technology Integration positively determine the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

H_{A4}: Entrepreneurial capabilities positively determine the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

H_{A5}: Entrepreneurial culture positively determines performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

H_{A6}: Regulatory framework positively moderates the relationship between entrepreneurial determinants and the performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County.

1.5 Significance of the Study

This research sought to understand the entrepreneurial determinants in order to support initiatives that improve the performance of the MSE sector in the context of MSAs. The study findings may be of value to the government as it may bring into light various policies which are detrimental to the performance of MSAEs in Kenya and address these factors according to the research recommendations. Further, the

study may help the national and county governments in Kenya in formulating specific county led MSAEs policies aligned with the overall MSEs Policy; as the counties create local strategies to handle their respective challenges.

The Business development services and other institutions like the World Bank may use the results of this study to formulate their economic and sector work in the rural sector towards the implementation of their programs in Kenya. Besides, the findings can have a broad audience among the stakeholders and the donor community active in the sector. The results of the findings and recommendations may be posted on regularly on website for global access and support to improve the MSEs globally.

The government strives through the Second Medium Term Plan 2013-2017 (GOK, 2013) to lay a strong and well-coordinated establishment of MSME Centers of Excellence (COEs) and operationalize forty-seven (47) MSME centers in all counties. The knowledge may supplement in establishing an open learning Program Centre on entrepreneurship and development of MSME Tool room and incubation center at Kenya Institute of Business Training Establishment of an MSME National Documentation Centre in the 47 counties.

The study strives to shed some light on challenges experienced by MSEs with the findings inclined to help the potential and current MSAs entrepreneurs to correct the mistakes that may have led to failure in the past. This study findings aspire to bridge the information gap in the existing body of knowledge in this field of entrepreneurship. The intention of the study findings is to make valuable additions to the literature in the field of performance on MSAEs in Kenya and in turn serve as a baseline for future studies.

1.6 Scope of the Study

The study was conducted in Murang'a County and one of the 47 Counties of the Republic of Kenya created under the Kenya Constitution 2010. Murang'a County is within the central part of Kenya and lies approximately 85 Kilometres northeast of

Nairobi, covering 2,558 square kilometres with eight sub-counties (*County Integrated Development Plan*, 2013-2017). The county's 89% of the population in the County is rural based while 11% is urban, thus making agriculture enterprise the main economic activity in the county (*County Integrated Development Plan*, 2013-2017). In this 89% population, comprise a total of 146,105 coffee smallholders spread out in the county and who formed the unit of observation of the study.

There were several qualifying reasons that made this county ideal for the study of entrepreneurial determinant of performance of coffee-based micro and small agribusiness of the coffee small holders. First, the county exhibited the second highest overall poverty index as it was revealed by second 2015/16 Kenya integrated household budget survey standing at 25.3% in comparison to its neighbouring counties in the region whose indexes were Nyeri 19.5%, Kirinyaga 20%, Kiambu 23.3% and Nyandarua 34.8 % (Appendix VIII).

More so, KNBS (2019) Gross County Product report indicates that Murang'a County in between 2014 to 2017 economic growth rate was only 4.2 holding the last position among its neighboring counties whose GCP were Kirinyaga 4.6, Nyeri 6.9, Kiambu 6.8 and Nyandarua 9.2. Thirdly, Murang'a County has various revolutionary agricultural programs and agribusinesses rolled out by the County government. For example, the county government-backed Murang'a County Creameries (MCC) is geared towards fetching more returns from dairy agribusiness.

In this approach, the county government in 2014/2015 bought 35 milk coolers, which were installed across Murang'a County's 35 wards and this was identified as one of the economic pillars with a huge potential in the county. The study period spanned between 2016 to 2019 and focussing on the entrepreneurial determinants of performance of coffee-based MSAs of the coffee small holders in Murang'a County.

1.7 Limitations of the Study

Kothari and Garg (2014) acknowledge that researchers and especially those engaged in empirical research encounter a myriad of limitations. In this study, the collection of data involved distributing questionnaires to the coffee smallholders in their respective households and farms. Some of the farms are located in the interior thus posing a challenge in terms of the terrain which proved difficult to access due to poor road surfaces. This was mitigated by use of bicycles and motorbikes to navigate the rough terrain.

It took considerable time to explain some questions to some farmers as their literacy levels are low. This was mitigated by using mother tongue for these types of respondents to understand and give correct and accurate information. Some respondents could not easily give information as they had mentality that they should be given monetary inducements. The researcher explained that information is for academic research which results can be accessed by both the county and national government and its implementation would help them. Some farmers openly showed frustrations and anger from income got from their dominant coffee production and other agribusinesses and this nibbled the flow of information required. This was mitigated by giving them hope.

The smallholders' confidentiality attitude further worked against the respondents' response since most respondents were not willing to share information relating to sales and profits because of fear that the information may be shared with the government resulting to their taxation. The respondents were given solid assurance that this information was only for academic research. A number of farmers didn't have in place proper update records of their operations. Such farmers were taken back chronologically to recall the information required.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework guiding this study and then examines the conceptual framework and empirical review that are to be used in regard to each variable. It also reviews the entrepreneurial variables, namely; entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework to determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The chapter also critiques the existing literature and highlights the research gap.

2.2 Theoretical Framework

To study the performance path of the enterprises, several scholars have suggested different theoretical frameworks and identified it in several theoretical perspectives: Resource-based theory of entrepreneurial finance, Entrepreneurial Marketing theory, Technology Acceptance Model (TAM), Human capital entrepreneurial theory and Sociological theory of entrepreneurship.

2.2.1 Resource Based Theory of Entrepreneurial Finance

The resource-based view (RBV) argues that firms possess resources, a subset of which enable them to achieve competitive advantage, and a subset of those that lead to superior long-term performance. Resources that are valuable and rare can lead to the creation of competitive advantage (Barney *et al.,* 2011; Fang *et al.,* 2011). Resource advantage theory argues that the value of a resource to a firm is seen in terms of its potential to yield competitive differentiation and/or customer value delivery that enhances performance outcomes (Maina & Muya, 2016).

The theory assumes that firms are made up of many resource investments, they exist to satisfy their owners' payment demands, their scope is limited by the amount and kinds of capital that they can attract, and they must operate within very set institutional parameters. Firm resources have been considered to be firm strategic assets and have an important role in gaining a competitive advantage (Cui, Liu, Wang & Sun, 2013). Barney and Hesterly (2012) viewed resources as valuable when they enable the small businesses to exploit external opportunities or minimize the external threats. Admittedly, exploiting external opportunities are not sufficient to achieve competitive advantage because competitors may possess or duplicate the resource.

Moreover, a fundamental problem of entrepreneurship is how to gain access to the key resources necessary for production without ceding too much of the surplus to agents that supply such resources. Start-up firms that are hungry for resources to catalyze their growth, active investors such as venture capitalists offer a double-edged sword (Krishnamurthy,2010; Fang & Grewal, 2011).

What's more, those firms that adhere to the resource-based (capabilities) view focus on internal strengths and weaknesses, that is, firm-specific resources and capabilities. The focus on performance, more than anything else, defines the field of entrepreneurship and development. Each year entrepreneurs start many new businesses, and some of these businesses will fail within the first 2 years. In addition, many owners will cite lack of adequate financial resources as a contributory factor to the failure (David, 2011; Shaw & Kim, 2013). One limitation of the RBV theory is based on the inability to compile an empirical study to measure performance. Due to the heterogeneity of the companies, it is hard to impossible to compile a homogeneous sample. Furthermore, the RBV does not consider the demand side of the market (Barney & Hesterly, 2012).

In the context of this study, the resources possessed by MSAs are the primary determinants of its performance. The resources may remain latent until the firm deploy its capabilities, with these may contribute to a sustainable competitive advantage. The theory is relevant as it will assist to focus on ways MSAs secure entrepreneurial finance leveraged on collaterals, grace periods, group liability lending and interest rates in effort to get entrepreneurial efforts of the ground. Thereupon, the owner/ managers of MSAs would be guided on exploiting all sources of entrepreneurial capital like savings before moving out to borrow from financial institutions. The agripreneurs should be informed the finance from the external borrowing comes with some costs as it's usually pegged to some stringent terms and conditions that should be leveraged adequately.

2.2.2 Entrepreneurial Marketing Theory.

Entrepreneurial Marketing (EM) is widely used in small and medium sized enterprises (SMEs) and particularly during the start-up and early growth phase (Amjad, Rani & Sa'atar, 2020). The authors further, in citing Morris *et al.* (2002) observe that a growing number of studies suggest that more successful SMEs over time are those that engage in higher levels of EM activities. Unlike a more controllable and formal marketing mix, the EM relies heavily on referrals for the development of a substantive customer base.

Ramos (2016) observed that EM, is the innovative, opportunity seeking approach most entrepreneurs and small and medium enterprises (SMEs) utilize when marketing their businesses, is characterized by innovative value creation, and external focus and a willingness to take risks. Kolongahapitiya (2018) posit the argument of Kotler that Marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customers in return.

Kolongahapitiya (2018) citing Kilenthong *et al.* (2015) recognize that the present marketing practices in firms have evolved during the past four decades, hence today marketing is not only a function of a firm, it has been covering broader activities by offering products, services, places, persons, ideas and causes to fulfil market needs. Kilenthong *et al.* (2015) citing Kotler (2011) posit that marketing is no longer seen as a function in a firm, but as a broader activity that can be applied not only to products, but also to other offerings, such as services, places, persons, ideas, and causes.

The authors further take note that the marketing process not only focuses to create immediate sales to fulfil customer needs, but also it works to develop integration plans to establish long term relationships with their customer bases. Moreso, according to the Schumpeterian model of economics, when the market equilibrium exists, surrounded by the stable environmental situations, the organizational managers use traditional and conventional approaches to continue their performances.

Morish *et al.* (2010) citing Moris *et al.* (2002) mention that EM approach to marketing becomes more appropriate depending on the firms' circumstances. Thus, when demand is captive, competition is passive or non-existent, suppliers have little bargaining power, technology is unchanging, the firm faces a very supportive regulatory environment, and margins are high and stable, the risks inherent in entrepreneurial efforts may not be commensurate with the rewards. Further, Morish *et al.* (2010) observe that EM approach implies that the core functions and processes of marketing remain, but adapt an entrepreneur/customer opportunity-driven approach to the culture, strategy and tactics of marketing and that these in turn shape how the firm implements segmentation, targeting and positioning.

Shcherbak *et al.* (2015) citing Hills and Hultman (2013) posit that micro and small enterprises manifest specific forms of marketing that differ from conventional and structured forms typical of large organizations, and they require novel conceptual

frameworks to be fully understood. EM provides the tool to compete on the market with limited resources and thus innovative marketing strategy might be a good weapon and particular value for the micro and small sized entrepreneurs.

In the context of this discussion, the study used EM model for competitive analysis assessing the market conditions by applying it within the Kenyan agribusiness sector. The theory is critical as it helps adjust strategies to suit the components that comprise access to markets, market competition, product quality, and demand supply which to enhance competitive environment. EM theoretical perspective would support the objective on marketing conditions and its determination of the performance of MSAs with the agribusiness managers striving to match their core competencies with the changing complexion of the marketplace. The MSAs are spread out across the country and face diverse dynamics and at their disposal are varied levels of resources at market situations for exploitation to boost their performances and this theory henceforth, is pertinent.

2.2.3 Technology Acceptance Model on Technology

Several theoretical models have been developed to investigate users' acceptance of new technologies (Deslonde & Becerra, 2018). This study was based on Technology Acceptance Model (TAM) presented by Davis (1989) (see figure 2.1) which describes how users come to accept and use a technology. The model main aim is to predict the behaviour of ICT usage inclined on the main causes of potential adopters of ICT to accept or reject information technology usage.

The source, demonstrates that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, for instance, perceived benefit is the extent to which a person believes that using a particular system would improve his or her work performance. Deslonde and Becerra (2018) attest that the perceived ease-of-use is the extent to which a person believes that using a particular system would be free from effort. Further, the authors research

has unveiled that individual are more likely to accept and use new technology if they perceive the technology as easy to use.

Forman and Goldfarb (2006) attest that theory helps to understand how adopters come to accept or reject the use of ICT in their small businesses. Although it has been criticized on various grounds: as less comprehensive compared to the diffusion approach. This model relies on the theory of reasoned action, which posits that behaviour is logically processed in the following order: belief-attitude-intention-behaviour.
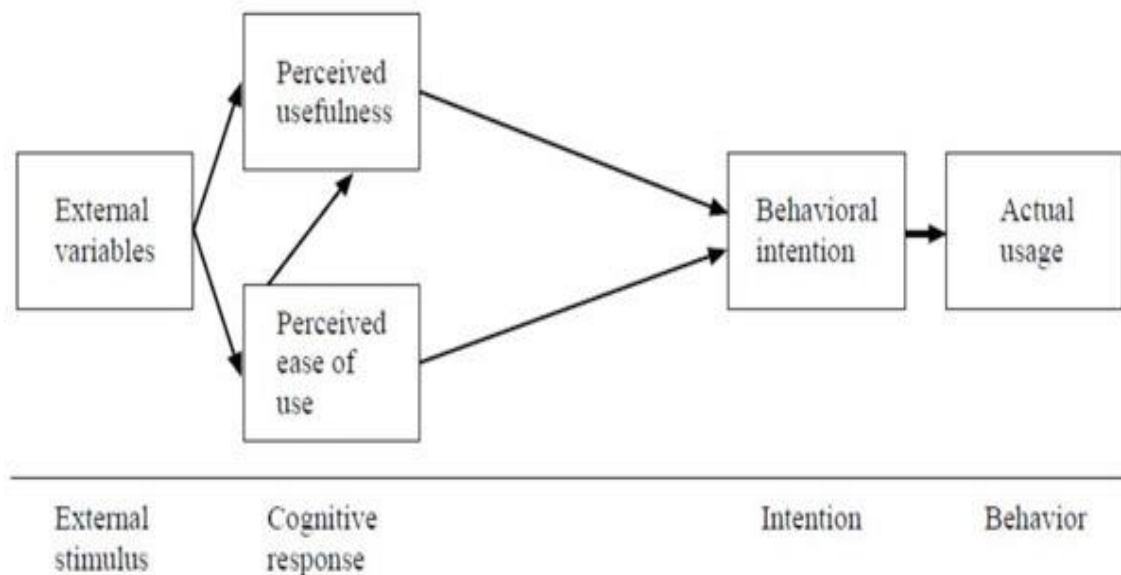
Figure 2.1 Technology Acceptance Model (TAM)

Source: Davis (1989)

Agribusiness sector has become an industry that makes production efficiency a priority. Attitudes and production processes are changing and technology has the potential for unlocking many opportunities critical to the survival and performance of Kenya's agribusiness in the domestic, regional and global markets. Within the MSAs perspective, this theory is relevant to this study as it helps understand how adopters come to accept or reject the use of ICT in operating their MSAs. Moreso,

TAM is a theory often used in understanding digital businesses use among MSEs besides prediction of MSE's intention of use and actual use of digital business as influenced by usefulness and ease of use.

2.2.4 Human Capital Theory on Entrepreneurial Capabilities

The importance of human capital as a source of progress and economic growth has long been recognized in the economic literature. Smith (1776) was the first classical economist to advance and include human capital in his definition of capital. Wuttaphan (2017; Nafukho, 2010; Vyacheslaw *et al.* 2016) aver that, in the knowledge-based economy, human resource is viewed as an invaluable asset capital that firm invested. is the stock of habits, knowledge, social and personality attributes embodied in the ability to perform labour so as to increase productivity.

OECD (2009; Fugar *et al.* 2013) postulate that in response to a knowledge-based economy and technological evolution, the prevailing sense is that the success depends in large part on the people with higher levels of individual competence. Dutt and Veneziani (2015, Fix, 2018) posit that the contribution of education to skill formation, and the resultant division of the labour force into high- and low-skilled workers, has also been widely examined in the literatures on income distribution and international trade.

In advancing this argument the authors argue that education plays a complex and multifaceted role in the economy and try to capture some important aspects of it. Wuttaphan (2017) posit that, indeed, the organization must adapt the human capital concept in different ways according to the context of the organization, culture, and country in order to gain the true value of the human capital theory or even human capital resource concept.

In conclusion, it arises from this theory that the main focus is to find methods to help managers improve the ways they use organizational resources and compete successfully in the global environment. In the context of relevance of this study,

knowledge integration capabilities within MSAs would be enhanced by entrepreneurial capabilities that include acquiring entrepreneurial skills, employees' teamwork, entrepreneurial training and entrepreneurial motivation aimed to impact on performance. A knowledge economy creates, adopts and adapts to information on production and distribution of goods and services, making it the focal point and engine for rapid agricultural growth and agribusiness performance.

2.2.5 Sociological theory of entrepreneurship

Social system has direct or indirect effect on the entrepreneurship. The power of customs, culture, values, religion, and rigidity has a significant impact on the entrepreneurs and thus helps in creativity and exposure (Reynolds, 2005; Eroğlu & Piçak ,2011). The theories of Max Weber, Hoselitz and Cocharan have propounded sociological theories. According to Max Weber, religious beliefs generate the drive for entrepreneurship by producing specific value orientations and thus chasing opportunities and the accumulation of assets (Bansal, Mahajan, Verma & Kumar, 2010).

The authors further observe the argument of Cochran, that entrepreneurs are the role model of the society and develop the solutions for their problems. Individual's performance depends on his attitude towards his occupation and understanding of the occupational requirement of the job. According to Stokes socio-cultural values guide economic deed. He put forward that personal and social opportunity and the existence of the necessary psychological distributions may be considered as situations for an individual's progress in industrial entrepreneurship. Hoselitz proposed that culturally marginal groups encourage entrepreneurship and economic development. Such groups, because of their unclear position are noticeably suited to make innovative change and thereby expand authentic innovations.

Oshinowo, Adeoye, Ishola and Kamaldeen (2017) observe that entrepreneurship is inhibited by the social system, which denies opportunities for creative facilities. The forces of custom, value system, the rigidity of status, district of new ideas and the

exercise of intellectual curiosity, combined together creates an atmosphere inimical to experiment and innovation. Entrepreneurship is likely to get a boost in a particular social culture. Society's values, religious beliefs, customs, taboos among others and influence the behavior of individuals in a society. The entrepreneur is a role performer according to the role expectations by the society.

These authors posit that sociologist argue that entrepreneurship is most likely to emerge under a specific social culture. The sociologist sees the entrepreneur as goal-oriented and has the capacity to adapt to changing environment. According to the sociologist, social sanctions, cultural values and role expectations are responsible for the emergence of entrepreneurship. Moreover, social-cultural values channel economic action that gives birth to entrepreneurship.

Li, (2007) and Gurel *et al*. (2010) as cited in Marysol *et al*. (2017) argue that the social and cultural context of an individual influences the corporate behavior of citizens, particularly in the creation of business, thereby constituting cultures that encourage more entrepreneurship than others. Moreso, they argue that a culture that supports entrepreneurship allows more people to exercise entrepreneurial potential, and in turn, increases business activity. Social and cultural context influences the individual, in this case, the entrepreneur, who is the agent responsible for the creation of new companies and changes in the environment.

Mohanty (2005; cited in Olannye & Ajai, 2016) observed that Hoselitz argument that entrepreneurship is a product of culture and based on assumption that every individual is endowed with social and cultural power. Hoselitz notes that entrepreneurs can be developed where the society is well developed. He went further to state that cultural theorists of entrepreneurship explain the differences in entrepreneurial ability and spirit across different cultures. Hoselitz argued that entrepreneurship can develop in a society when its culture permits a variety of choices and where social processes are not rigid and in a situation which encourages

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the development of personalities interested in enterprise the suggested that culturally marginal groups promote entrepreneurship and economic development.

This theory is significant in this study, as the intention of the MSAs owner/managers is to aim higher performances on their enterprises and this would be determined by the components of entrepreneurial mindset, entrepreneurial education, risk taking and entrepreneurial mentorship within the society that are geared towards impacting on MSAs performance.

2.3 Conceptual Framework

The conceptual framework is based on the OECD/Eurostat model for entrepreneurship (2008) that classifies determinants of entrepreneurship in a country, framed across six domain areas, namely entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework (EU, 2012). The framework examines the factors that motivate or impede entrepreneurship (determinants) and also provides indicators about the current state of entrepreneurship (entrepreneurial performance), and the outcomes (impact) of entrepreneurship in the economy as a whole (ANDE, 2013). The OECD conceptualizes the ecosystem of entrepreneurship as the combination of three factors: opportunities, skilled people and resources (EU, 2012). Resources reflect access to capital, and technology. These three factors are influenced by two important themes; culture and regulatory framework (EU, 2012).

Based on this discussion, a conceptual framework, constructed on the entrepreneurial determinants examined on theoretical review and based on critical success factors for agribusiness development, has been developed to guide this study. The various variables in the conceptual framework developed were access to entrepreneurial finance, market conditions, technology, entrepreneurial capabilities and entrepreneurial culture and regulatory framework as independent variables determining the performance of coffee-based MSAs of the coffee small holders in Murang'a County (see figure 2.2)

Entrepreneurial finance
- Collaterals
- Grace periods
- Group liability lending
- Interest rates

Market conditions
- Access to Markets
- Market Competition
- Product Quality
- Demand and Supply

Technology Integration
- Adoption
- Affordability
- Training and demonstration
- Adoption of digital business

Entrepreneurial capabilities
- Entrepreneurial skills
- Employee's teamwork
- Entrepreneurial training
- Entrepreneurial motivation

Entrepreneurial Culture
- Entrepreneurial mindset
- Entrepreneurial Education
- Risk taking
- Entrepreneurial mentorship

Regulatory Framework
- Agribusiness registration
- Tax Policies
- Tax incentives
- Labour Market regulations

Performance of MSAs
- Profitability
- Growth rates
- Customer satisfaction
- Employee satisfaction

Independent variable   **Moderating Variable**   **Dependent variable**

Figure 2.2: Conceptual Framework

2.3.1 Entrepreneurial Finance

Financial access is critical for the growth and development of small and medium-size enterprises (SMEs) (Essien & Arene, 2014; Bunyasi *et al.* 2013; IFC,2011). However, the WB Surveys (2013; IFC,2011; Sitharam & Hoque, 2016) reveal that in low-income countries, access to finance remains a key constraint to SME development, especially in emerging economies. A wide body of literature suggests that small firms have more difficulty accessing finance than larger firms (UNCTAD, 2009; WB 2013; Cook & Olafsen, 2016). KNBS (2016; GOK, 2010; IFAD;2010) notes that access to bank credit by farmers is still a major challenge despite the fact that Kenya has a relatively well-developed financial institutional system. Kanyua *et al.* (2015) advocate taking advantage of the available credit facilities to modernize the way agripreneurships is done.

GEM (2016; WB, 2013) reports postulate that entrepreneurs rely to a great extent on their personal savings to fund their entrepreneurial ventures in all areas of the world. Okafor, Ekene and Obinna (2018; Glatzel *et al.*, 2014) posit that credit is essential to farmers, especially the small-scale farmers who have limited capital for their production but constitute the greatest force in food production in many developing countries.

a) Collaterals

Bank lending is the most common source of external finance for many SMEs which are often heavily reliant on straight debt to fulfil their start-up, cash flow and investment needs (OECD, 2015). Sitharam and Hoque (2016) citing Okpara and Kabongo (2009) established that one of the major reasons for the difficulty of borrowing money from the bank is because of lack of required collateral to be used as security against the borrowed funds. GOK (2010; Prediger & Gut; 2013) development strategy demonstrates that risks associated with agribusiness coupled with complicated land laws and tenure systems that limit the use of land as collateral make financing agriculture unattractive to the formal banking industry.

b) Grace Periods

To reduce the credit gap, financial institutions invest in lending products and policies designed to provide SMEs with the financing they need to grow and innovate. One of the policies is the provision of grace periods. Rigol *et al*. (2011) aver that allowing clients a grace period before they begin repayment can help them invest a greater part of their loan into more profitable entrepreneurial activities and produce greater levels of profit and raise household income.

c) Group Liability Lending

Group liability lending is a social collateral approach that provides loans from the bank on the basis of group mechanism against mutual guarantees with most of the microfinance institutions using this model to provide micro finance to their clients (Sharma *et al.* 2017; Taiwo *et al.* 2016; Maria, 2009). Kendi and Kandongo (2013) observe the principle incentives for repayment of group loans is joint liability, group reputation, credit rating and future access to credit for each member, all of which are directly contingent on each member upholding their obligations. Crépon, Devoto, Duflo and Parienté (2011) as cited in Augsburg *et al.* (2011) found that the introduction of joint-liability loans in rural Morocco led to a significant expansion of the scale of pre-existing entrepreneurial activities.

d) Interest Rates

The interest rate spread between loans to MSMEs offers additional insights regarding entrepreneurships credit conditions. Typically, SMEs are charged higher interest rates than large enterprises, given their inherently riskier profiles as borrowers. As such, a narrowing interest rate spread generally indicates more favourable lending conditions for SMEs, while a widening spread indicates tighter lending conditions (OECD 2019). Njeru *et al.* (2013; WB, 2013; Garang, 2014) avers that choice of source of finance has a significant association with interest rates and the need to meet working capital requirements.

2.3.2 Market Conditions

Markets are the basis of rapidly developing agribusiness value chains that provide opportunities for entrepreneurship (Glatzel, Alpert, Brittain & Conway, 2014). Pandya (2012; Indarti & Langenberg, 2010) noted that the role of marketing in explaining firms' business performance has received significant attention throughout the history of the marketing discipline. Reardon *et al.* (2013; as cited by Mutonyi *et al.* 2016) observed that recent literature shows that the domestic markets have become more important regarding market opportunities than export markets in Africa.

a) Access to Markets

GOK (2012) strategy posit that when small-holder farmers manage to produce enough, they are unable to sell their produce because they don't have access to markets get very low prices for their produce. Further, Otieno *et al.* (2009) affirm that market information gotten from the farmers about a certain marketing channel increases a farmer's willingness to participate in that channel and hence likely to increase the output sales through that market channel. Mutura *et al.* (2015; Vanni; 2014) opines that the formation of collective action in agricultural marketing has an influence on the outcomes of collective action with farmer associations providing access and secure markets for the long term in addition to increasing technological and market efficiency. GOK (2012; Mutura *et al.*2015; Chagwiza *et al.* 2016) established that households in collective action in marketing gain more income from their agribusinesses than those who aren't.

b) Market Competition

Altenburg *et al.* (1998, cited in UN,2005) posit that enterprise competitiveness is the ability to sustain a market position by among others supplying quality products on time and at competitive prices through acquiring the flexibility to respond quickly to changes in demand and through successfully managing product differentiation by

building up innovative capacity and an effective marketing system. Sitharam and Hoque (2016) established that competition is viewed as one of the major challenges affecting the performance of SMEs. Nair and Webster (2012) support the premise that marketing as a culture relates to the ability of an organisation to access the market attractiveness and potential competitive effectiveness.

Mutura *et al.* (2015) citing Fuller *et al.* (2004) notes that access to marketing information encourages farmers to venture into new innovations. MSAs face high transaction costs, as well as higher risks and fluctuation in prices for their produce. Prices of inputs are beyond reach, and prices of outputs are low, thus dampening incentives to produce and earn a good living. Further, Markelova *et al.* (2009) (cited in Mutonyi *et al.* (2016) notes that smallholders lack proper coordination, which limits their bargaining power and affects their ability to exploit economies of scale.

c) Product Quality

Kotler and Amstrong (2012) cited in Razak *et al.* (2016) define product quality as the characteristic of a product or service that bear on its ability to satisfy stated or implied customer needs. The authors further describe product as anything that can be offered to a market for attention, acquisition, use, or consumption and satisfy a want or need. Razak *et al.* (2016) cohere that if the perceived product quality is in line with the expectation, then the customer will perceive the product quality as a good quality and also feel satisfied.

Amar (2016) posit that many SME owners make many types of products, but are seldom competitive with a product being considered to have different values and attributes in the eyes of the consumer rather than the attributes of other similar products. Chigbata and Christian (2018) observe that the competitiveness of any enterprise depends deeply on the quality of its products and significantly impact on the satisfaction of customers, which in turn lead to its high performance.

d) Demand and Supply

AAAE (2010) attests that most rural based MSAEs depend on local or village markets, which are often saturated or purchases are not backed by effective demand to make sales meaningful for the desired benefits. Reardon *et al.* (2013; Reardon, 2015) avers that there is increasing consumer awareness among the population who are demanding high value agricultural produce and increasing diet diversification. In the context to supply, Wiggins and Keats (2013) recognize the rapid changes in agribusinesses have created domestic and international market opportunities for smallholders', which have the potential to lead to improved productivity and income growth, thereby contributing to a reduction in rural poverty.

2.3.3 Technology Integration

Ndesaulwa and Kikula (2016) posit that technology make life bearable, more pleasant and work more productive. Romijn and Caniëls (2011) point out that low technological capabilities hinder and discourage MSEs from fully reaching their potential. Moronge and Mbugua (2016) citing Wendel (2012) posits that countries with high levels of technological growth tend to have high levels of entrepreneurial growth. Zappala and Gray (2010) opine that the key decision-makers such as SME owner managers need to be personally ready for ICT adoption that can take them to the next stages in the process of adoption.

a) Technology Adoption

Technological embracement of modernized production is relevant for improvements in every sector (Kanyua *et al*. 2015; Ndesaulwa & Kikula, 2016). However, there has been low adoption rates especially in developing countries due to a combination of cultural beliefs, ethical concerns, regulatory delays, and lack of information and understanding of the science and technology being used (Muturi *et al*. 2013; Chairoel *et al*. 2015; Kalaitzandonakes *et al*.2018). Financial constraints are most often cited

as a barrier to adoption of environmentally sound technologies (Baumüller, 2015; UN,2015; Ndesaulwa & Kikula, 2016). Kariuki *et al*. (2018; Kithae *et al.* 2012) opines that evidence suggests that in Kenya and Africa at large, SMEs adoption of technology is slow, with most of them operating at low levels of technology and efficiency.

b) Affordability of Technology

Wamuyu and Maharaj (2011) posit that affordability is the ability of the enterprises to acquire through buying the technologies and related services, subscriptions and continued use of the services. Zoltan *et al.* (2020) citing Nguyen *et al.* (2017) observe that to remain competitive, firms must secure and maintain technology enterprises need to acquire information on future technology while developing asset maintenance and replacement strategies. With greater technological capability, firms have more unique resources and skills and engage in more strategic activities and thus can gain competitive advantages and increase their profitability while enhancing their organizational performance. However, SMEs invariably lack resources required to acquire and develop technological capabilities (Lin & Lai, 2021, Quartey *et al.* 2017).

c) Training and demonstrations on technology

Improving access to a skilled workforce, building confidence in technology and providing expert assistance are important services that policy-makers can provide to a level playing field for SMEs (WEF, 2020; Suhasini & Suganthalakshmi, 2015). The authors further note that providing real practical examples through demonstrations on technology use is very motivating to SMEs employees and entrepreneur leaders alike. Deslonde and Becerra (2018 citing Teo, 2011) affirm that the more positive the attitude about technology, the higher the actual usage. Technological change in most cases requires more training and capital intensive despite the achievement of new business opportunities for organizations. Jones *et al.*

(2013) Jayawarna *et al.* (2007) established that most SMEs do not have the internal expertise or resources to conduct such training.

d) Adoption of Digital Business

Olatokun and Bankole (2011) posit that electronic business (e-business) generally provides new ways and opportunities for organizations to broaden their participation into new national and international markets. However, Davis *et al.* (2001, cited in Olatokun & Bankole, 2011; Kiveu & Ofafa, 2013; Talom & Tengeh,2020) observe that there are still lots of challenges for SMEs in adopting e-business because they are small and are challenged by lack of adequate resources and training, inadequate infrastructures, lack of push from the supply chain, lack of vision and a persistent poor security measure.

2.3.4 Entrepreneurial Capabilities

Entrepreneurial capabilities are sets of knowledge, skills, behaviors and attitudes that contribute to personal effectiveness (Hellriegel *et al.* 2010). Morgan (2012; Hayton & Macchitella,; 2013) affirms capabilities develop when individuals and groups within the organization apply their knowledge and skills to acquire, combine, and transform available resources in ways that contribute to achieving the firm's strategic goals. The *WB Survey* (2013) reports that 35% of the firms in Kenya identify inadequately skilled workforce as a constraint. Kenya Vision 2030 (GOK, 2007; Gathenya *et al.* 2012; Rankhumise & Rugimbana, 2010) places great emphasis on the link between education, training and the labour market, the need to create entrepreneurial skills and competencies, mainstreaming natural values in education.

a) Entrepreneurial Skills

Kamunge *et al.* (2014) opine that that majority of the micro and small enterprises in Kenya are not well equipped in terms of education and skills. Msoka (2013) noted that there is an impact of entrepreneurship skills and the performance of small-scale businesses. Babu *et al.* (2016) observe that major investments are required to build

the capacity of local agribusiness managers and firms. Khamis and Gumawa (2020) observed that entrepreneurship skill has significant effect on SMEs performance and entrepreneurs who that have more entrepreneurship skills are more likely to have more performing entrepreneurial activities.

b) Employee's teamwork

Collective action is widely recognized as a positive force for teamwork in any entrepreneurship to succeed (Boakye, 2015). Further, the author citing Jones *et al.* (2008) opines that, understanding the impact of teamwork on performance is important because teamwork its viewed as one of the key driving force for improving a firm's performance. Sanyal and Hisam (2018; Hwang, 2018) observe that the success of any organization or institution requires the positive force of teamwork because it helps the employees to empower, gain satisfaction and develop themselves and their potentials, as well as learning the proper strategies to achieve the required tasks efficiently.

c) Entrepreneurial training

Entrepreneurial training is necessary for MSEs to gain competitive exposure and enhance the organization's performance designed to develop skills, knowledge and attitude which enable entrepreneurs to start a new business or expand an existing one (Mayuran, 2016; Jones *et al.* 2013). Different studies and data demonstrate that SMEs are less likely to participate in training and skills development than large firms (OECD,2011). Kithae *et al.*(2013; Marima & Mukulu, 2017; Suminar, 2020) opined that entrepreneurship training has substantial impact on performance of entrepreneurs increasing SME's growth and productivity while Al-Mzary *et al.* (2015; Siriwardena & Morais, 2019) cohere that there is relationship between effective training and employees' job performance as an effective tool to gain competitive advantage.

d) Entrepreneurial Motivation

Zhao *et al.* (2010) observed that motivation stimulate the desire and energy in workforce to be continually interested and committed to a job, role or subject, or influence a person to engage into entrepreneurial activities. Grigore (2012; Tipu & Arain, 2011; Ucbasaran *et al.* 2010; Kirkwood & Walton, 2010) emphasized that motivation energizes, leads and supports the action that result in a certain desired outcome. Nyang'au *et al.* (2014) and Machmud and Sidharta (2016) established that motivation by entrepreneurial leadership of entrepreneurs has significant influence on the growth an enterprise. Besides, Oroni et al. (2014) posit that the managers should put in place structured promotion policy systems and measures for career advancement and promotions to motivate employees to enhance the performance.

2.3.5 Entrepreneurial Culture

Culture, defined as the underlying system of values particular to a specific group or society, is thought to shape the development of personality traits and may motivate individuals in a society to engage, or not engage, in certain behaviors (Cook & Olafsen, 2016). Further, the authors note that the culture encourages entrepreneurial activity through its selection of values in a feature of the entrepreneurial ecosystem. The WB (2013) observes that promoting an entrepreneurial culture is one of the most essential and neglected components of entrepreneurship development. Glatzel *et al.* (2014) posit that entrepreneurship is the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization.

a) Entrepreneurial Mindset

Cooney (2012) propounded that within any society, it is important to support all people with entrepreneurial mindsets, not just the entrepreneurs, as they each have the potential to inspire others to start a business. In advancing this discussion, Ntale (2013) argues that the family business background has an effect on entrepreneurial behaviour. GEM (2016; Mueller & Thomas, 2009) argued that society-wide

perceptions such as social norms, family values, networks and social value of entrepreneurship, play a key role in nurturing the entrepreneurial ecosystem. Omwenga and Mukulu (2015) posit those attitudes, values and norm determines the culture of the society and consequently this culture causes the development, progress and innovations in entrepreneurship.

b) **Entrepreneurial Education**

Entrepreneurship education and development help enhance the individuals' functional knowledge and skills at any level, and lead to expansion of their personality and mental horizons (Vakili *et al.* 2016). Cowling (2009) posit that there is a large and positive effect, with more educated individuals being substantially more likely to have built up informal capital through working in a small business. Ndlovu *et al.* (2018; Chiliya & Lombard, 2012) observed that entrepreneurship education and development help the individuals' level of productivity increase and impact on quality which helps the entrepreneurship achieve more long-term goals. Virglerova (2017; Ndlovu *et al.* 2018) established that lack of experience and education by owner managers of SMEs, is one of the major challenges impeding their survival and growth, and entrepreneurs with a higher level of education are more aware of the obstacles when starting a business.

c) **Risk Taking**

Risk taking is a dominant attribute of entrepreneurship as the higher the risk-taking orientation, the higher a firm's profitability and growth (Wambugu, 2015; Olaniran, 2016). Further, the authors demonstrate that the ability of SMEs to stay competitive is directly related to the intensity of taking risks. Asgary *et al.* (2020; Han & Nigg, 2011) aver that despite the importance of these enterprises, they face myriad risks which impact on their survival and performance. What's more, they are less prepared to handle arising risks. Wambugu *et al.* (2015) established that risk taking has a great impact on firm performance of agro processing SMEs in Kenya in terms of growth and profitability.

Dvorsky *et al.* (2020) posit those businesses of all sizes are now taking a proactive approach to risk management, seeking to centralize risk management and develop integrated management systems. The biggest barriers that will prevent entrepreneurships from managing risks effectively in the future include the availability of information, both internal and external, required to manage and evaluate risks and integrate them into decision-making processes.

d) Entrepreneurial Mentoring

Mentoring is aspired to strengthen organizational capabilities, intelligence, build organization knowledge, and sustain the organization competitive advantage (Brimah *et al.* 2020). Chebii *et al.* (2016) posit that effective and efficient mentorship programs tend to raise entrepreneurial outcomes among entrepreneurs operating SMEs. Further, these authors observe that entrepreneurial mentoring, as a function that contributes to entrepreneurial outcomes within SMEs has not been given ample importance.

Nyang'au *et al.* (2014) aver that mentorship by entrepreneurial leadership is a beneficial process that propels the growth of MSEs. Chiliya and Lombard (2012) noted that many start-up businesses, some form of mentoring is needed in varying degrees to grow business skills. Further, the authors observed that one to one mentoring is effective but expensive and unless economies of scale can be achieved, providing these support services to small enterprises is difficult to sustain.

2.3.6 Regulatory Framework

Cepel *et al.* (2018) cited in Dvorsky *et al.* (2020) and DGGF (2015) posit that the political and legal environment provides a legal and supporting framework for business activities and it regulates the international business relations, tax and levy policies, the stability of the legal environment and law enforcement, or the administrative burden on businesses. Sitharam and Hoque (2016) observed that majority of the SME owners/managers believed that government bureaucracy has an impact on the growth of the business.

Bigsten, Kimuyu and Lundvall (2009) affirms that under the enabling approach, government policy makers are expected to develop infrastructure, provide technical information, facilitate linkages between large and small enterprises, promote networking and develop appropriate laws and regulation. Indarti and Langenberg (2010; Kere, Musyoka & Odame, 2012) echo that nowadays many governments are paying a more attention to developing entrepreneurship by promoting agribusiness in order to strengthen the national economy.

a) Agribusiness Registration

Sitharam and Hoque (2016) posit that regulations governing establishment of businesses are extremely intricate and conflicting. DGGF (2015) has established that the Kenya government is trying to decrease red tape and has simplified business registration processes to reduce the administrative burden on MSEs. Cook and Olafsen (2016) note that while small and informal firms are often able to function by circumventing government regulations and taxation, they risk becoming more visible as they grow; therefore, high-growth firms tend to be formal enterprises.

b) Tax Policies

Prillaman and Meier (2014) observe that state policy makers have relied upon taxes as a policy instrument to intervene in the market in the hope of improving their business climate and their economic atmosphere as a whole. Sitharam and Hoque (2016) citing Abrie and Doussy (2006) noted that tax requirements add to the administrative burden of small businesses and use resources that could, otherwise, be used for managing such businesses more effectively.

Ojeka and Atawodi (2011) posit that a vibrant and flourishing SME sector, the tax policy needs to be appropriate such that it will neither be an encumbrance to the SMEs nor discourage voluntary compliance. Stausholm (2017) note that if the tax policies are not successful in attracting investment and growth however, the countries are risking the long term sustain ability of public finances. Mungaya (2012) opine that the results show that the increase in tax rates leads to higher production,

distribution and selling costs which lead to higher prices and as a result consumer change their buying behaviour.

c) Tax Incentives

Olayemi and Folajimi (2021) aver that the growth of SMES was however hindered by challenges ranging from the lack of financial resources to expand, inadequate infrastructural facilities, lack of support from the government, harsh business environment, and above all, unpleasant taxation policy of the government creating enormous tax burdens to the SMEs. Tax Incentives had been perceived to influence the growth of small and medium enterprises (SMEs). Mintz and Chen (2011, cited in Gasheja & Twesige, 2019) aver that in a bid to stimulate entrepreneurial activities of SMEs, a number of countries have used tax incentives, for both investors and listing firms, to promote activity on SME boards. Tax incentives for investors are the more common approach, particularly in advanced markets.

Soje *et al.* (2020) observe that incentive policy has remained challenging for developing countries and sub-Saharan African region in particular. Despite the large scale of incentive given by the sub-Saharan African countries in the last decades, economic growth has been sluggish in almost all the countries in the region. Stausholm (2017) posit that Tax incentive policies can theoretically be positive for growth and development if they are actually working as intended and attract investment by lowering cost of capital.

d) Labour Market Regulations

Labour law regulates the labour relationship by giving workers some level of protection or benefits, the right to unionize and collectively bargain and also defining procedures and duties for both parties (Chacaltana,2009). A well-functioning labour market policy on entrepreneurship is the cornerstone of a prosperous economy, it performs a crucial role in factor allocation, output creation and income generation (OECD,2015). Deakin (2014) observe that legal protection of workers is typically

justified on the grounds that it reduces or mitigates the effects of the inequality of bargaining power which is inherent in the employment relationship.

Sitharam and Hoque (2016) citing Herrington, Kew & Kew (2010b) observe that labour regulations are currently ranked as one of the most restrictive factors for doing business in South Africa for businesses dependent on labour. South Africa has extremely restrictive labour policies and the new labour regulations being promulgated have been slated as being even more restrictive than the existing problematic policies in place. Bad regulations hurt workers and firms and lower welfare Moreover, firms will not appear, grow, or close at the optimal rate.

2.3.7 Micro and Small Enterprises Performance

Competitive performance of MSEs is very critical for Kenya as an agricultural enterprise nation. Traditionally, enterprises and analysts focus on the use of performance measures because they play a critical role not only in evaluating the current performance of a firm but also in achieving high performance and growth in the future (Udofot *et al.* 2014). Further, Oumo and Rombo (2013), cited in Onyonyi et al. (2016), in advancing this argument, posit that the net profits provide a natural way through which SMEs build their financial base and replenish working capital. Additionally, the authors note that, as net profits increase, so is the likelihood that an SME is experiencing growth.

a) Profitability

Margaretha and Supartika (2016; Rivard, 2014) observe that profitability is the ratio to measure the performance of the company. Itis a main aspect in a company's financial reporting. The profitability of a company shows a company's ability to generate earnings for a certain period at a rate of sales, assets and certain of capital stock. The primary goal of the company is to maximize their profitability. Without profitability a firm could not attract outside capital and the business will not survive in the long run. By knowing and understand firm profitability, it will give the feedback for the firm.

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b) Growth rates

Gupta and Guha (2013) aver that most of the researchers suggest that each enterprise has to start, then grow while facing various challenges and crises, and finally mature and decline. Demirgunes and Ucler (2015) posit that the use of growth as a measure of firm performance is generally based on the belief that growth is a precursor to the attainment of sustainable competitive advantages and profitability. Growth can be considered in terms of net profit margins or return on assets.

c) Customer satisfaction

Kotler and Armstrong (2012) cited in Razak *et.al.* (2016) defined that customer satisfaction is the extent to the which a product's perceived performance matches a buyer's expectations. Customer satisfaction consists of several indicators, namely loyalty, satisfaction, repurchase interest, small desire to make a complaint, the willingness to recommend the product, and the reputation of the company (Kotler & Keller, 2012). Customer satisfaction is the degree to which products or services provided by an entrepreneurship meet a customer's expectations.

Letitia (2015; Mazreku, 2015) posit that knowledge of customer satisfaction can help to better identify and satisfy customer needs and can prevent small businesses from spending a considerable amount of money on marketing to acquire new customers. A customer focus contributes to the success of the organization and ensures that all aspects of the organization put customer satisfaction first. Enhanced customer satisfaction contributes to consequent customer behaviour including purchase loyalty, referrals and customer retention. Williams and Naumann (2011) note that higher satisfaction scores lead to higher levels of customer retention satisfaction levels and which are linked to a variety of financial and market performance metrics at the firm level of analysis.

Beside this, Atikiya *et al.* (2015) recognize that customer satisfaction should aim to create a superior fulfilment of customer needs in one or several product attributes in order to develop customer satisfaction and loyalty which can in turn be used to

charge a minimum price for the product. Hoe and Mansor (2018) aver that while the needs of customers has been recognised as being of crucial importance but that understanding has not yet been fully translated into action in terms of accessing the necessary information. Amar (2015) posit that a competitive company is capable of creating customers and defends itself from competitive market pressures.

d) Employee satisfaction

DGGF (2015) is cognizant that the numbers on size and performance of the sector vary, estimates that MSEs provide jobs to close to 80% of the workforce and that they contribute 20% to the Gross Domestic Product (GDP). Barden (2017) aver that job satisfaction is the extent to which employees like their work. the level of contentment an employee feels with their job and workplace experience, as well as their attitude toward their enterprise. The more a person's work environment fulfils his or her needs, values or personal characteristics, the greater the degree of job satisfaction.

Ezeanyim *et al*. (2019; Nyang'au *et al.* 2014) established that there is a linear relationship between job satisfaction and employee's morale. Sikowo *et al.* (2016, citing Simatwa, 2011) note that job satisfaction is a function which is positively related to the degree to which one's personal needs are fulfilled in the job situation. Likewise, Mutonyi *et al.* (2016) postulate that producer satisfaction leads to the building of trust, eventually achieving producer loyalty.

2.4 Empirical Review of the relevant studies

A number of related empirical studies and theoretical literatures exist globally and within Kenya on MSAEs performance. This chapter reviewed empirical literatures on the determinants influencing firm performance. The discussion was based on each of the variable with an aim to link the current study with the recent studies on MSAEs performance.

2.4.1 Entrepreneurial Finance and Performance

In relevancy to the discussion of entrepreneurial finance, Wamunyu, Bett and Macharia (2017) sought to analyse the characteristics of lending groups in Murang'a County, Kenya. The results of the study showed that the household head's literacy level, primary activity, and market participation positively and significantly contributed to small-scale farmers' access to credit. The majority indicated that they had access to credit, and for those who had accessed credit, their preferred source of credit were savings and credit institutions. The study recommends that small-scale farmers can work together a s a recognized legalized entity in order to improve their bargaining ability and to take advantage of economies of scale.

Further, Bunyasi, Bwisa and Namusonge (2014) on their study on the effect of access to entrepreneurial finance on the growth of Small and Medium Enterprises in Kenya found out that access to entrepreneurial finance had a positive influence on the growth of SMEs. The study recommends that the government should support the legal and regulatory framework that strengthens the financial infrastructure, develop financial information infrastructure for financial accessibility of SMEs in Kenya, improve financial literacy of the entrepreneurs and individuals to take advantage of the available financial services and at the same time build the capacity of the financial institutions to enhance SMEs access to finance.

Comparably, Njangiru, Maingi, and Muathe (2014) carried a study on loan repayment and sustainability issues of government micro-credit initiatives in Murang'a County. The study found that due to problems of high risk and high cost of borrowing, uncertainty of repayment capacity on the rural borrower has been reported high due to irregular income streams. The study recommended that systems should be developed to ensure consistent incomes and expenditure to reduce/remove uncertainty. Nonetheless, in view of this discussion, Nichter and Goldmark (2011) concluded that access to finance may be necessary for small firm growth, but not enough by itself. A randomized study of 225 SMEs producing garments in Nairobi,

Kenya, explicitly tested the link between access to finance and firm growth and found mixed results.

Likewise, in Nigeria, Essien and Arene (2014) analyzed access to credit markets and the performance of small scale agro-based enterprises in the Niger Delta region of Nigeria. The results of the study revealed that the factors that significantly influence informal credit access by small scale agro-based enterprises are Gender, Age and Social Capital, while factors that influence formal credit access are Education, Age, Enterprise size and Collateral. The majority of enterprises accessed informal credit, but the few that accessed formal credit performed better. The study recommended that the Government should ensure easy access to formal finance by small Agro-based enterprises in the region as they are the engine of economic development.

2.4.2 Market Conditions and Performance

In pursuit to add more knowledge on market conditions, Hossain and Osmani (2015) researched on market participation decision of Smallholder farmers and its determinants in Bangladesh. This study explored the market participation decision of smallholder farmers in Bangladesh and tried to sort out the most important factors that influence smallholder farmers' decision to participate in the output market to sell their produce in Bangladesh. It is found that farm size, household labour, income from livestock and farm income might be the main factors that affect the smallholder farmers' decision to participate in the output market.

Comparably, Anim and Mukwevho (2014) studied the factors affecting small scale farmers in accessing markets: A case study of cabbage producers in the Vhembe District, Limpopo Province, South Africa. The results indicated that the independent variables that accounted for most of the differences were, transaction costs, agricultural extension education, level of education of farmers, distance of the farm to market, where farmers sell their produce, and value of equipment owned by farmers. It was recommended that for small scale cabbage farmers to access markets

for their agricultural produce, measures to mitigate the identified constraints need to be in place.

Omiti, Otieno, Nyanamba and Mc Cullough (2011) investigated the factors influencing the intensity of market participation by smallholder farmers: A case study of rural and peri-urban areas of Kenya. They observed that participation in commercial agriculture holds considerable potential for unlocking suitable opportunity sets necessary for providing better incomes and sustainable livelihoods for small-scale farmers. The results showed that farmers in peri-urban areas sold higher proportions of their output than those in rural areas.

The findings also revealed that distance from farm to point of sale is a major constraint to the intensity of market participation. Better output price and market information are key incentives for increased sales. These findings demonstrate the urgent need to strengthen market information delivery systems, upgrade roads in both rural and peri-urban areas, encourage market integration initiatives, and establish more retail outlets with improved market facilities in the remote rural villages in order to promote production and trade in high value commodities by rural farmers.

2.4.3 Technology Integration and Performance

In the context of technology, Kariuki, Kihoro and Iravo (2018) presented an empirical evidence on the extent to which level of technological innovation in relation to product diversification influences performance of Small-Scale Milk Vendors (SSMVs) in Kiambu County, Kenya. The findings of this study revealed that level of technological innovation had a positive linear effect on dairy enterprise performance in the study group. Further, the findings established that technologies add value to raw milk in increasing performance of dairy enterprises.

However, it was noted that very few respondents had embraced the use of modern equipment. The study recommended that the entrepreneurs can be assisted to acquire

advanced equipment to handle their products. Promotion of informal dairy processing ability through innovative and affordable technologies should therefore be promoted by stakeholders in the dairy sector in Kenya.

Likewise, Mlozi and Nyamba (2012) investigated the factors influencing the use of mobile phones in communicating agricultural information: A case of Kilolo District, Iringa, Tanzania. Generally, it's aimed at addressing the following questions: (1) in what ways do farmers make use of mobile phone technologies to meet their agricultural information needs? (2) How the uses of the mobile phones enable farmers to confront the challenges they face in their farming business? (3) What are the farmers' attitudes toward the use of mobile phone technology?

Basically, the study results, can be interpreted that, mobile phone technology acceptance in rural Tanzania was high enough for one to accompany it with a predictable positive economic impact. In terms of access to agricultural information through mobile phones, it was evident that, people in the study area capture the advantages of increased number of mobile phones to access information related to their farming business. Most of the respondents valued mobile phones as easy, fast and convenient way of communicating agricultural information.

Besides, Mutua and Wasike (2011) examined ICT adoption and its impacts on firms in both developing and developed countries and analysed the determinants of ICT adoption and their impact on the firm's performance. Their study provided empirical evidence both on the factors that determine adoption of ICT and the impact of proxies for ICT adoption on the output of SMEs. Findings showed that the main determinants of adoption of ICT are the size of the firm as indicated by firm employment, formal registration, and if a manager has some internet training. The study showed that adoption and use of ICT is a key factor in helping enterprises to raise their productivity and competitiveness.

2.4.4 Entrepreneurial Capabilities and Performance

In advancing this discussion on entrepreneurial capabilities, Hayton and Macchitella (2013) studied Human Resource Management, Organizational culture and entrepreneurial capabilities; the role of individual and collective knowledge processes. The capacities for acquiring, integrating and exploiting new knowledge and capabilities exert significant influence on long run organizational performance and growth. In this study authors develop and tested a theoretical framework that links individual and collective human capital with these capabilities.

The authors hypothesized that HRM and organizational cultural characteristics that emphasize strong individualist values influence entrepreneurial knowledge acquisition, while those that emphasize collectivist values influence cooperative knowledge integration. The study results indicated that a form of behavioral ambidexterity is needed in order for human capital to promote knowledge-based entrepreneurial capabilities. These knowledge flows, promote the renewal and reconfiguration of substantive capabilities, aiding organizational adaptation by creating new sources of competitive advantage (Zahra, Sapienza & Davidsson, 2006).

Likewise, Mbatha (2010) also conducted a study the impact of human capacity building on the performance of small and micro enterprises in Kisumu municipality, Kenya. The findings of the study showed that the main training approaches used by the SMES included; formal training approaches only, on-the job-training approaches only; job specific training approaches only; a combination of formal training approaches and on-the job-training approaches; and a combination of formal training approaches, on-the job training approaches and job specific training approaches.

2.4.5 Entrepreneurial Culture and Performance

In bringing out the discussion on entrepreneurial culture, Naikuru, Gathenya and Waweru (2016) conducted a study on determinants of performance of youth led micro and small agribusiness sector in Kenya and investigated whether

entrepreneurial culture moderates the relationship between these factors and performance. From the results, the presence of entrepreneurial culture was found to be evident from the fact that the majority of the respondents exhibited strong entrepreneurial characteristics such as self-direction, self-esteem, self-confidence, ability to deal with failure and a high inclination towards achievement.

Additionally, the young farmers were able to tackle the perennial problem of lack of access to finance by ploughing back profits into their enterprises and relying on savings and loans from family members to expand their enterprises. The study recommended that the MSEs need to come up with more innovative products and methods of production if they are to survive in this cut throat business environment. Likewise, Olabisi and Olabbemi and Adowale (2013) handled a study on factors affecting small-scale business performance in the informal economy in Lagos State-Nigeria: A gendered based analysis. The study showed that women owned business disclosed that role-model/ advisor significantly affect their business growth. The study also found that the presence of parent entrepreneurial role-model was associated with an individual' business performance. The study was in agreement with social learning theory that postulate that parents must be encouraged to motivate their children, particularly daughters venturing into entrepreneurship. Socialization on entrepreneurial activities was needed to inculcate the spirit of entrepreneurship in their children.

In contributing this discussion on entrepreneurial culture, Waweru, Nyikal and Busienei (2017) analysed risk attitudes and risk management strategies among dairy farmers in Murang'a County, Kenya. The study interviewed 212 households and the certainty equivalent approach to determine the farmers' risk attitudes. Results indicate that 73 percent of the farmers were risk averse, 22 percent were risk loving while 5 percent were risk neutral. The major areas where the dairy farmers took a careful move on risk were income diversification, training and financial interventions.

The choice of training and financial interventions was found to be determined by the membership to a farmer group, credit access, household size, membership to a dairy cooperative, gender of the household head and risk attitude. The study recommends that extension officers together with financial service providers should develop training programs aimed at disseminating information on good financial risk management, income diversification and training strategies within the dairy industry.

Comparably, Yeboah (2014) examined the influence of culture on risk-taking in SMEs in the Sekondi-Takoradi Metropolis, Ghana, which is a key dimension of entrepreneurial orientation. The findings of this study indicated that power distant and masculinity had a significant positive relationship with risk taking. But, uncertainty avoidance and individualism recorded a non-significant positive relationship with risk taking. Hence, this study recommended that the SMEs, owner / manager must encourage input and suggestions from their employees and also seek for business advice from appropriate individuals and institutions instead of relying solely on their judgment.

In advancing this discussion, Wambugu, Gichira, Wanjau and Mung'atu (2015) pursued to establish the influence of entrepreneurial risk taking and firm performance of agro processing small and medium enterprises in Kenya. The findings of this study showed that risk taking had a significant positive effect on firm performance of agro processing SMEs in terms of growth and profitability. The study found that the element of risk taking in entrepreneurial orientation reflects calculated and manageable risks and the higher the risk-taking orientation, the higher a firm's profitability and growth. The findings demonstrate that the ability of SMEs to stay competitive is directly related to the intensity of taking risks. The findings contributed to the resource-based theory by illustrating the important role of risk taking as a strategy that leads to competitive advantage of SMEs.

2.4.6 Regulatory Framework and Performance

While entrepreneurs with the right skills, energy and ambition are the basis for entrepreneurship, it can only flourish if there is an appropriate enabling environment combining supportive macro and micro-economic policies, financial incentives, relevant institutions and infrastructure (Glatzel, Alpert, Brittain & Conway, 2014). To this end, Mohd, Juhary, Ali, Chea, Peou and Shariff (2010) examined the moderating effect of government policy on the relationship between entrepreneurial values, firm financing, management, market practices and growth performance of SMEs in Cambodia. The results of the study showed a positive relationship between entrepreneurial values, firm financing, management, market practices and SME growth performance as hypothesized. The results also confirmed that government policy has an important role as full moderator in such relationships.

Moronge and Mbugua (2016), researched on effects of County Government Policies on the Performance of Small and Medium Enterprise in Kenya: A Case of Kiambu County. The study established that licensing requirements, licensing procedure and business registration influences the performance of SMEs in Kiambu County. Further, the study revealed that financing procedures, financing requirements for capital financing, the amount obtained, duration of payment and interest rates influence the performance of small and medium enterprises to a great extent. The study recommended that the County government of Kiambu should develop a system for tax payment so as to enhance efficiency in tax collection and payment. In addition, it should streamline the licensing procedure and reduce the licensing requirements. Finally, it should increase awareness of the training program for SME owners as well as the SME loans to entrepreneurs.

Along the same discussion, Odame, Musyoka and Kere (2008) pursued a study on how National Public Policies Encourage or Impede Agribusiness Innovation: Cases of Maize, Tomato and Dairy in Kenya. The study findings established that, there have been innovations in financing the dairy sector and this is exemplified by contractual models of financial service delivery like the one between New KCC,

Equity bank and the farmers with Kenya Diary Boards as guarantor. More so, it was found that new banking products, favorable to small-scale producers like Nafaka loan by Family Bank are some of the innovative ways of making agriculture grow. The study established the main sources and drivers of innovation in Kenya included; customer feedbacks, market intelligence, trade shows and networks.

The study revealed that the dairy and financial services sub-sectors have the highest number of innovative ways. The study observed that the media platforms, especially mobile phones facilitated access to finance and markets, but these need more and much spread in the rural areas. In conclusion, the study felt that the collective or business associations play an important role of coordinating linkages between policymakers and agribusiness firms. For this reason, the study recommended that there is need to pay attention to the direct influence of agencies which coordinate linkages of actors in the value chain of the three case studies and the entire agriculture sector.

2.5 Critique of the Existing Literature Relevant to the Study

Various studies have been conducted in the area of MSEs. Based on the studies conducted by various researchers, it was reviewed systematically, and it clearly shows that different researchers used different variables that influence or affect firm performance, and it is based on their case studies. The finding of the articles reviewed varies with some with positive or negative results while others are with both positive and negative results.

In the studies reviewed, internal factors of a firm stand as the major determinants of the operating performance and there are the major drivers for competitive advantage or success which is crucial for surviving economic downturns of any developing country. Some of the empirical studies make use of variables that really capture or influence the performance of MSEs (Essien & Arene, 2014; Naikuru *et al.* 2016; Mbatha, 2010; Mohd *et al.* 2010, Kanyua *et al.* 2015) while others did not use the

suitable variable items that actually capture, influence or affect the performance of MSEs (Mohd *et al.* 2010; Njangiru *et al.* 2014; Omiti *et al.* 2011; Yeboah, 2014).

The reviewed empirical literature brought out this variable as a constraint to MSEs development GOK (2010; IFAD 2010; Kanyua, 2015; Cook & Olafsen; 2016) hitherto, availability of collaterals (Prediger & Gut, 2013; OECD, 2015; Sitharam & Hoque;2016), financiers grace periods (Rigol *et al.*2011), group liability lending (Taiwo *et al.,* 2016; Sharma *et al.,* 2017), interest rates (Njeru *et al*., 2013; Garang 2014; OECD,2019) are among the factors that affect the entrepreneurial finance access to MSAs, however, these studies have not expressly researched on how these enterprises can overcome this constraint. Bunyasi *et al.* (2013; WB, 2013; GEM, 2016; Wamuyu *et al.* 2017) postulate that to meet this challenge, the enterprises plough back earned income in form of saved earnings to support continued operations. Nonetheless, in view of this discussion, Nichter and Goldmark (2011) concluded that access to finance may be necessary for small firm growth, but not enough by itself. Kanyua *et al.* (2015) advocate taking advantage of the available credit facilities to modernize the way agripreneurships is done.

The role of marketing in explaining firms' business performance has received significant attention within the marketing discipline with recent empirical literature showing that the domestic markets have become more important regarding market opportunities than export markets in Africa (Pandya, 2012; Reardon *et al.*2013; Mutonyi,2016). Literature review depict access to markets (GOK, 2012; Vanni, 2014) market competition (Sitham & Hoque, 2016; Nair & Webster, 2012; Mutura *et al.* 2015) product quality (Razak *et al.*2016; Amar 2016; Chigbata & Christian; 2018) and demand and supply (Reardon *et al*. 2013; Wiggins & Keats 2013) as key challenges influencing the performance of MSEs.

Additionally, empirical evidence avers that technology adoption (Zappala & Gray (2010; Romijn & Caniëls, 2011; Moronge & Mbugua, 2016) affordability of technology (Kithae *et al.,* 2012; Muturi, *et al.,* 2013; Kanyua*, et al.,* 2015; Kariuki, *et*

*al.,*2018) training and demonstrations (Jones et al.,2013; WEF,2020) and adoption of electronic business (Olatokun & Bankole, 2011; Kiveu & Ofafa, 2013; Talom & Tengeh, 2020) significantly influence the performance of MSEs. Low technological capabilities hinder and discourage MSEs from fully reaching their potential with countries with high levels of technological growth tend to have high levels of entrepreneurial growth.

Besides, empirical evidence places great emphasis on the link between entrepreneurial skills (Msoka, 2013; Kamunge *et al.,* 2014; Babu *et al.,* 2016; Khamis & Gumawa, 2020) employees' teamwork (Boakye, 2015; Hwang, 2018; Sanya & Hisam,2018) entrepreneurial training (Kithae *et al.,* 2013; Mayuran 2016; Maina & Mukulu,2014; Suminar,2020) and entrepreneurial motivation (Zhao *et al.,* 2010; Grigore, 2012; Tipu & Arain, 2011; Nyang'au *et al.,* 2014) as driving forces for improving firms' performance.

Likewise, the review of empirical evidence depicts the components of entrepreneurial culture namely entrepreneurial mindset (Cooney, 2012; Ntale, 2013; Omwenga & Mukulu, 2015; GEM, 2016) entrepreneurial education (Chiliya & Lombard, 2012; Vakili *et al.,*2016; Ndlovu *et al.,* 2018) risk taking (Wambugu *et al.,* 2015; Olaniran, 2016; Asgary *et al*. 2020; Dvorsky *et al.,* 2020) and entrepreneurial mentoring (Nyang'au *et al.,* 2014; Chebii et al., 2016; Brimah *et al.,*2 020) as some of the most essential and neglected components of entrepreneurship development that impact on MSEs performance.

Along this discussion, several studies have established that across the world agribusiness registration (DGGF, 2015; Sitharam & Hoque, 2016; Cook & Olafsen, 2016; Moronge & Mbugua, 2016) tax policies (Ojeka & Atawali, 2011; Munguya, 2016; Stausholm,2017) tax incentives (Gasheja & Twesige, 2019; Soje *et al.,* 2020; Olayemi & Folajimi, 2021) and labour regulations (Chacaltana, 2009; OECD, 2014; Deakin, 2014) are the government regulations affecting entrepreneurial performance. Moronge and Mbugua (2016) argue that a legal and regulatory framework which

results into excessively complex registration and licensing requirements and demands tedious and costly reporting practices is likely to impose constraints on the business activities in addition to placing a heavy burden on entrepreneurs and their businesses. This confirms that government policy has an important role as full moderator in such relationships.

Generally, it should be noted that although business climates that are conducive to investments in agribusiness are important, they cannot by themselves guarantee that such investments will be forthcoming. In addition to efforts to improve business climates, there is also need to ensure that returns on investments are attractive enough to compensate for perceptions of entrepreneurial determinants on enabling environments that increase risks and add to the costs of doing business. In other words, policies and strategies that aim to increase agro-based investments must not only emphasize business climates, but also consider the elements that affect investment profitability and, in consequence, investors' perceptions of risk-to-return ratios.

The reviewed studies show that future researchers should make use of variables that serves as the determinants of firm performance in developing countries. Theory or theories should also be used by future researchers to support their study and at the same time it gives suitable direction and meaning to a study. The deduction made by this study is that these empirical studies were very insightful considering the various methods adopted to test the research hypotheses.

Basically, most of the studies have concentrated on either objective or subjective measures of MSEs performance rather than a holistic approach. The models that have been adopted by other researchers worldwide and even Kenya have been general in nature and not focusing on a specific framework on influences or determinants of performance, but this study is based on an OECD framework of entrepreneurship determinants on performance. Hitherto, the studies reviewed did not focus on

MSAEs agribusiness practiced by the coffee smallholders in Murang'a County, Kenya.

2.6 Research Gaps

The constraints to MSE performance, as perceived by business owners is a relatively well researched area. The biggest constraints globally are accessing to finance (WB, 2013; GEM, 2016; Sitham & Hoque, 2016) access to infrastructure (ILO, 2015), technology (Romijn & Caniëls 2011; Morange & Mbugua 2016; Zappala and Gray,2010) entrepreneurial culture (WB, 2013; Glatzel et al. 2014; Cook & Olafsen, 2016) market conditions (Pandya, 2012; Indarti & Langenberg, 2010; Mutonyi *et al.* 2016) and government regulations (DGGF, 2015; Dvorsky, 2020).

From the above literature review, we conclude that the performance of MSEs is dependent on a range of internal and external factors. Notably, entrepreneurial determinants namely access to entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework influence performance of the coffee smallholders owned MSAs have not been researched leaving it with a sparse knowledge. It's against this backdrop that this study aspires to abridge the knowledge gap occasioned by these entrepreneurial factors:

The empirical review has established that many firms have limited access to financial capital. Lack of access to external financing is impeded by availability of collaterals, grace periods which allow greater part of loan investment, group liability lending and interest rates are the key business environmental factors affecting the MSEs. Therefore, promoting these firms by providing access to financial capital and basic entrepreneurial skills through microcredit and business-training programs has been considered a   matter of common sense among experts. Reviewed literature on the influence of access and availability of funds on enterprise performance shows that there is a strong link that exists between them. However, recent empirical results

on MSAs have not shown how entrepreneurial finance influence the performance of these establishments. This study aspires to bridge this gap.

Previous studies have established that both domestic and international markets have instrumental role in enhancing the growth and performance of MSAs. Despite this, challenges on access to markets, competition in the markets, market information on product quality which encourages farmers to participate and secure markets and, demand and supply encountered by MSAs have not been adequately addressed by the previous studies. Hence, this study is motivated to fill this gap.

Empirical studies have set forth that technological change has been the major catalyst in increasing agribusinesses and promoting agripreneurships development in all developing countries. The adoption of technologies for sustainable farming systems is a challenging and dynamic issue for agribusinesses. MSAs in are derailed in performance by technological embracement due to limited financial resources, low adoption rates, inadequate training and demonstrations and low adoption of electronic business transactions. The previous studies have not adequately filled this gap and this study strive to fill it.

Most people in developing countries are employed in MSEs and the individual skills and commitment of employees within the enterprise is seen as hugely significant to the success of the enterprises. In order to revamp MSAs performance, several studies demonstrate that majority of the MSAs aren't equipped adequately with entrepreneurial skills and entrepreneurial training. Further these studies observed that MSAs aren't able to stimulate employee's motivation and employee's teamwork which are great driving force to improve a firm's performance. Currently, there is lack of sufficient empirical evidence demonstrating a conclusive link between entrepreneurial capabilities and its impact on MSAs performance.

Culture encourages entrepreneurial activity through its selection of values in an entrepreneurial ecosystem. However, several studies recognise that promoting an

entrepreneurial culture is one of the most essential and neglected components of entrepreneurship development. These studies establish that entrepreneurial mindset, entrepreneurial education, risk taking and entrepreneurial mentoring are some of the challenges impending the MSAs survival, growth and performance. Nonetheless, there is lacuna on how these challenges affect MSAs.

Globally the legal and administrative burdens in the form of taxes and regulation are a critical factor affecting entrepreneurial performance and have been identified as a potential binding constraint to entrepreneurial activity in several studies. GOK (2012) strategy notes that, while much has been achieved in the last 5 years, an outdated and fragmented legal and regulatory framework still remains a challenge to development in the agricultural sector. Muhika *et al.* (2017) denotes that payment of SME tax obligations in Kenya has been hindered by rigid tax administration structures and high tax rates which contribute to tax evasion tendencies among SMEs. Further, the literature review indicates that the MSAs registrations, taxation policies, tax incentives and labour regulations have been perceived to influence the MSAs performance. There is no adequate knowledge from the previous studies on how regulatory framework moderates the influence of entrepreneurial determinants on the performance of MSAs.

2.7 Summary

The chapter consisted of theoretical review, conceptual framework, empirical review, critique of the existing literature and review of research gaps. The analysis of literature was based on study variables namely; entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework to determine the performance of the MSAs owned by coffee smallholders in Kenya.

The study was anchored on the following theories, Resource based theory, Entrepreneurial Marketing theory, Technology acceptance model (TAM), Human capital entrepreneurial theory and Sociological theory of entrepreneurship. Resource

based theory was used to analyze the important of entrepreneurial finance whereas entrepreneurial marketing theory was adopted to study the influence of market conditions of performance of MSAs. The role of technology on performance of MSAs was analyzed as suggested by technology acceptance model while human capital theory guided in understanding the role of entrepreneurial capabilities on performance of MSAs. Finally, the study adopted Sociological theory of entrepreneurship to analyze the important of entrepreneurial culture.

The chapter further presented the conceptual framework which illustrated the hypothesized relationship between independent variables and dependent variable. This conceptual framework brought a different perspective as it has focused on entrepreneurial determinants within the context of the OECD framework of entrepreneurship determinants of the performance of MSAs of the coffee smallholders in Kenya.

In empirical review, the study reviews the findings of related studies and the methodology used by various authors in their studies, bringing out a critique of the existing literature on every variable and highlighting the research gap in the light of every indicator. Nonetheless, there is no clear knowledge to bring an understanding on how the entrepreneurial factors influence the performance of MSAs in Kenya despite scholars having put forward a number of factors concerning the important determinants of the enhancing firms' performance. The literature review avers that MSEs performance has been an area of interest to policy makers, practitioners, and researchers. Many aspects of enterprise performance have been previously studied as demonstrated in the empirical review, however, there is little attention in existing literature on agribusinesses performance in term of success path followed by these MSAs owned by the coffee smallholders.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter described the methodology that was employed in conducting the study to achieve research objectives. It presented the research design and the philosophical thinking behind it, target population, sample size and sampling procedures. It explored data collection instruments and how they were pilot tested, the procedures used in determining the instrument's validity and reliability, data collection procedures and analysis techniques. The chapter further explained ethical considerations during data collection and operational definitions of variables.

3.2 Research Philosophy

A research philosophy is a belief about the way in which data about phenomena is supposed to be gathered, analyzed and utilized. The western tradition of science distinguishes two major research philosophies namely positivist (sometimes called scientific) and interpret visit (also known as anti-positivist). Positivism is based upon values of reason, truth and validity and there is a focus purely on facts, gathered through direct observation and experience and measured empirically using quantitative methods-surveys, and experiments and statistical analysis (Eriksson & Kovalainen, 2008; Lewis & Thornhill, 2009).

Easterby-Smith, Thorpe and Jackson (2009) posit that positivist philosophy is premised on the belief that reality is stable and can be observed and described from an objective view point. Further, authors argue that the philosophy strive not to interfere with the phenomenon being observed, with the role of the observer being limited to data collection and interpretation in an objective way.

In order to gain insight into the ways by which coffee smallholders in alternate agribusiness adopt and strive to the performances of their enterprises the research adopted the positivism approach. The aim was to establish greater understanding of

how the entrepreneurial determinants namely entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework determine the performance of coffee smallholders MSAs in Kenya.

3.3 Research Design

A research design is the logic that links the data to be collected and the conclusions to be drawn on the initial questions of the study (Yin, 2012). Kumar (2011; Golder & Golder, 2013) proffered that the research design presents procedures for collecting, analyzing, and linking both quantitative and qualitative data in a single study used when data is collected to describe persons, organizations, settings or phenomena. Further, Kothari and Garg (2014) noted that research design has enough provision for protection of bias and maximized reliability. Comparably to this study, Bunyasi, Bwisa and Namusonge (2014) adopted a cross sectional descriptive survey design with the aim of determining the relationship between the entrepreneurial factors and the growth of SMEs.

In this study, descriptive and inferential statistics were used with inferential statistics assisting to make predictions from the samples and making generalizations the populations. This study adopted a mixed method research design comprising both qualitative and quantitative approaches examining how the entrepreneurial determinants namely entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework determines the performance of MSAEs of coffee smallholders Murang'a County, in Kenya.

3.4 Target Population

Cooper and Schindler (2008; Polit & Hungler, 2011) define population as the total collection of elements about which one wants to make inferences. Additionally, the authors divulge that all members or subjects that exhibit similar characteristics make up a population. The population of the study was the total number of coffee

smallholders in Kenya, estimated to be about 700,000 farmers (Mugwe, 2014; FAO, 2011).

Target Population refers to the aggregate of all possible elements within a defined space for which results are required. Kothari (2017; Cooper & Schindler, 2011) define it as the objects of interests from which the researcher compiles research information. The target population for this study comprised of coffee smallholder farmers spread out within the eight sub-counties in Murang'a County. The current data available from the department of the cooperatives Murang'a County reveals that there is a total of 146,105 coffee smallholders (see Table 3.1).

Table 3.1: Population Frame of each sub-county coffee smallholders

Sub-County	Total Per Sub-County
Mathioya	20,971
Kangema	17,672
Kiharu	5,591
Kahuro	21,292
Maragwa	5,006
Kandara	29,280
Gatanga	27,497
Kigumo	18,786
Totals	**146,105**

Source: Department of Cooperatives Murang'a County (2020).

3.5 Sampling Frame

Kothari (2017) define sampling frame as a physical representation of the target population and comprises all the units that are potential members of a sample. Hungler (2009) indicates that a sample size of 10% of the target population is large enough so long as it allows for reliable data analysis and allows testing for the significance of differences between estimates.

Bryman and Bell (2011) posit that a sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what will be useful, what will have credibility and what can be done with available time and resources. The sample frame for this study constituted of all the MSAEs practiced by the coffee smallholders in all the eight Sub Counties of Murang'a County.

3.6 Sampling Techniques and Sample Size

3.6.1 Sampling Techniques

This section describes how the sample size was determined and the procedure that was used to identify sample subjects. Kothari and Garg (2014) define sampling design as the technique or procedure the researcher would adopt in selecting items for the sample. Cooper and Schindler (2008) attest that the ultimate test of a sample design is how well it represents the characteristics of the population it purports to represent.

The total area of the researcher's interest was the whole of Murang'a County, which is situated in Central part of Kenya. The county was purposively selected because it aroused interest from its trailing in poverty index performance and GCP in comparison with its immediate neighbouring counties beside agricultural revolutionary programs started by its county government. Stratified sampling was used to sample the eight sub-counties in Murang'a County, namely Mathioya, Kangema, Kahuro, Kiharu, Maragwa, Kandara, Gatanga and Kigumo.

Multistage sampling method was applicable whereby the population was divided into strata for ease the collection of data. During this sampling process the eight sub-Counties were identified to form various stages from the entire region. The respondents have heterogeneous characteristics in each cluster. Under this strategy, for every sampled Sub County, sampling with probability proportional to size was used to get the number of respondents from every Sub County. A simple random sampling method was used to identify the respondents from each of the eight Sub Counties as presented in Table 3.2.

3.6.2 Sample Size

To derive the sample size, Fisher's formula was suitable for this study since the target population was more than 10,000. The most essential indicators when using this formula were confidence or risk level, precision level or the sampling error and degree of variability (Islam, 2014). The author as well observes that the level of precision refers to the range within which the true value in the population lies and, in this case, we considered it to be ±5%.

The confidence level shows the extent to which the value of an attribute is equal to the value in the true population when the population is repeatedly sampled. In this case the confidence level used was 95%. The degree of variability showed the level of distribution of different attributes in the study population. A more heterogeneous population requires a large sample size to obtain the most desired precision level, whereas a homogeneous population requires a small sample size. This study used the maximum variability of 0.5. A large population is one which comprises of 10,000 elements and more. Using the formula below, a sample size is determined as follows:

$$n = \frac{Z^2 * p * (1-p)}{d^2}$$

Where: n = Sample size for large population

Z = Normal distribution Z value score, (1.96)

p = Proportion of units in the sample size possessing the variables under study, where for this study it is set at 50% (0.5)

d = Precision level desired or the significance level, which is 0.05 for the study

The substituted values in determining the sample size for a large population are as follows.

$$n= \frac{(1.96)^2 *(0.5)(0.5)}{(0.05)^2} = 384$$

The 384 potential respondents were selected using random sampling method.

$$n= \frac{Z^2 * p *(1-p)}{d^2}$$

n=384 Sample size

Numbers of coffee smallholders in the selected sub-counties obtained from the department of the cooperatives Murang'a County and using the formula below, the researcher was able to assign each sub-County a proportionate number of sample smallholders as shown in Table 3.2.

Where:

Sample= n/N*384   n=number of strata

N=n_1+n_2+n_3+n_4+……… n_8 N=total population

N=384.

Sample Smallholder at sub-County =   Population Smallholder at sub-County x 384
                                                                Total population of smallholders in sampled
study area

Table 3.2: Sampling Distribution

Sub Counties	Population Stratum	Per Proportion	Sample Size
Mathioya	20,971	0.14	55
Kangema	17,672	0.12	46
Kiharu	5,591	0.04	15
Kahuro	21,292	0.15	56
Maragwa	5,006	0.03	14
Kandara	29,280	0.20	77
Gatanga	27,497	0.19	72
Kigumo	18,786	0.13	49
Total	**146,105**	**1**	**384**

The study conducted mapping of the respondents and allocated numbers for all the households within the study area. The numbers were then written on small pieces of papers and put in container. The papers were randomly selected until all the 384 respondents were selected. Each household had the equal opportunity of being selected to reduce the selection bias. This was conducted independently for all the strata in the study area.

3.7 Data Collection Instruments

A standardized questionnaire was the principal research instrument of data collection in which primary data were collected (see Appendix II). Kothari and Garg (2014) state that a questionnaire gives the respondents' adequate time to give well thought-out answers. In this study, the purpose of measuring instruments was to obtain data to test the hypothesized determinations shown in the hypothesized model. Subsequently, carry out an examination of how entrepreneurial finance, market conditions, research and development, and technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework to determine the performance of MSAEs of coffee smallholders Murang'a County, in Kenya over a period of five years (2015-2019).

The study relied on structured questionnaires since the study sought to collect firsthand information from the coffee smallholders' farmers on how entrepreneurial finance, market conditions, technology integration, entrepreneurial capabilities, entrepreneurial culture affected performance of their agribusinesses. A questionnaire was the most ideal data collection instrument to collect the information required by this study. The questionnaires contained various section with section A covering background information of the respondents while subsequent sections were based on the independent and dependent variables and their respective indicators. The questionnaires comprised of both ended and closed ended questions and used 5-point Likert scale measurement (Kothari & Garg, 2014).

3.7.1 Primary Data

The primary data was collected by the use of questionnaires. Kombo and Tromp (2007) posit that the rationale for choosing a survey questionnaire in data collection is its ability to provide a quick, inexpensive, efficient and accurate means of assessing information about a population. The questionnaire was structured with a fixed set of choices comprising closed questions and open-ended questions with a focus of collection both quantitative and qualitative data. The closed ended questions adopted a five-point Likert scale. Polonsky and Waller (2009) cohere that open ended questions give an opportunity to get the respondents views and opinions or description of experience.

3.8 Data Collection Procedure

The questionnaires were self-administered to respondents. Koponen, Opas and Tolonen (2013; Kothari, 2017; Cooper & Schindler; 2009) opines that questionnaire are cost effective, minimizes interviewer bias, promoting accuracy and high levels of reporting during data collection. To avoid bias, the questionnaires had elaborate instructions, were uniform, and there was room to seek clarification. The study used non probabilistic random sampling to avoid bias in selecting the respondents. The owners and/or managers of MSAs were asked to accurately fill in the questionnaires with guidance where necessary, and then subsequently the researcher collected the questionnaires from the respondents checking for completeness and consistency. This method yielded in capturing quantitative and qualitative data which was easy to analyze.

3.9 Pilot Testing

Pilot testing is critical in a research activity and plays a key role in ensuring that the research instruments used in data collection are reliable and valid. Bordens and Abbott (2014) demonstrate that pilot testing is aimed at ascertaining the reliability and validity of the research instruments. Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials.

Saunders, Lewis and Thornhill (2007) notes that pilot testing provides an opportunity to detect and remedy a wide range of potential problems with an instrument along establishing accuracy and appropriateness of the research design and instrumentation and provides data for selection of a probability sample. Creswell (2012) recommends 10% as adequate for a pilot study. The objective of the test for this study was to test on the flow of the questions with the aim of comprehensively testing various aspects including data collection instruments, methodology and field logistics.

Using simple random sampling, 38 respondents from the eight sub-counties of Murang'a County were selected, making the pilot study sample and which was equivalent to 10% of the sample size of the study population. The study conducted pilot study in Murang'a on the respondents that were not included in the final sample. The respondents for pilot study had similar characteristics as those of the final sample hence they were adequate for piloting of the data collection instrument. Using probability proportional to sample size of each cluster/sub-County the researcher deduced the respondents to be involved in pilot testing for each Sub-County. The test was conducted between January and April 2018.

3.9.1 Reliability of the Research Instrument

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Sekaran & Bougie, 2010). The reliability of a measure indicates the extent to which it is without bias (error free) and hence ensures consistent measurement across time and across the various items in the instruments and helps to assess the goodness of a measure. The Cronbach's alpha (α) test of reliability presented by Burns and Bush (2010) was adopted in providing a pre-test of the reliability of the instrument and a post test of the internal validity of the findings resulting from the adoption of this instrument. It is computed using Statistical Package for Social Science (SPSS) to determine how items correlate among themselves.

The rule of the thumb for Cronbach's alpha is that the closer the alpha is to 1 the higher the reliability (Sekaran, 2008). For research purposes, tests with a reliability score of 0.7 and above are accepted as reliable, whilst for clinical decision making, test scores of between 0.8 and 0.9 are acceptable (Maxwell 2013; Kurpius & Stafford; 2006). However, Kurpius and Stafford (2006) upheld that when the Cronbach alpha is between 0.6 and 0.7 it is considered adequate for a newly developed tool in non-clinical studies. The recommended value of 0.7 was used. Cronbach's alpha is a general form of the Kundera-Richardson (K-R) 20 formulas used to access internal consistency of an instrument based on split-half reliabilities of data from all possible halves of the instrument. It reduces time required to compute a reliability coefficient in other methods.

The Kunder-Richardson (K-R) 20 is based on the following formula (Kothari, 2006).

$$KR_{20} = \frac{(K)(S^2) - \sum s^2}{(S)(K-1)} \dots\dots\dots\dots\dots\dots\dots equation$$

KR^{20} Reliability coefficient of internal consistency

K Number of items used to measure the concept

S^2 Variance of all scores

S^2 Variance of individual items

Reliability test was performed on each variable to determine the degree of consistency in scores due to random error. The main aim of the pilot test was to test the reliability of the research instruments, where reliability refers to the extent to which a measuring instrument contains variable errors, that are errors that appear inconsistently from the observation during any one measurement attempt or that vary each time a given unit is measured by the same instrument (Sekaran & Bougie, 2010).

3.9.2 Validity of the Research Instrument

Validity means the ability to produce accurate results and to measure what is supposed to be measured. It is based on the adequacy with which the items in an instrument measure the attributes of the study. In a general sense, validity refers to the degree to which instruments truly measure the constructs which they are intended to measure (Neuman, 2011). Validity in research encompasses the entire experimental concept and establishes whether the results obtained meet all of the requirements of the scientific research method, for instance, there must be randomization of the sample groups (Shuttleworth, 2008).

In this respect, this study employed right techniques which included expert opinion designing research instruments, pilot study, the principle of triangulation and factor analysis to capture accurate data from the field. Data was collected from the areas of study and finally in ensuring validity of the research instruments expert opinion from other researchers, supervisors and other peers was obtained and included in the instrument.

3.10 Data Analysis and Presentation

Data analysis refers to examining what has been collected in a study and making deductions and inferences. Prior to further analysis, each returned questionnaire was inspected to assess its suitability for use in this research. Furthermore, they were checked for completeness and errors and labeled with the dates to allow for later comparisons. The responses were entered into SPSS for electronic storage and statistical analysis using the pre coding on the questionnaire. Data cleaning was conducted in terms of dealing with elements of missing data, potential non-response bias, and tests for outliers and data normality.

Upon carrying out data organization, analysis was done using ANOVA aided by Statistical Package for Social sciences (SPSS) version 24. To test the hypothesis of the of the multivariate regression model, Analysis of Variance (ANOVA) was used (Cooper & Schindler, 2006). One-way ANOVA was employed to test the

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determination of the independent factor in the performance of MSAEs and to test the goodness of fit of the multivariate regression model which refers to how well the model fits the data (Cooper & Schindler, 2009). The study adopted Pearson Correlation to test the association between independent and dependent variables. Correlation provides the strength of the association and ranges from between -1 to +1 where values greater than 0.50 are considered strong correlation while those below 0.50 are considered weak correlation. The study further used simple linear regression analysis to test the univariate relationship between each independent variables and the dependent variable. Multivariate regression analysis to further determine the strength of the relationship between entrepreneurial determinants jointly and performance of coffee-based MSAs of the coffee small holders in Murang'a County.

3.10.1 Confidence Levels for Statistical Testing

The study took care of the Type I and Type II errors. The Type I error occurs when coming to a decision that something is true when in reality it is not. It may involve concluding that two variables are related when they are not. A Type II error involves the opposite of Type I error occurring (Kothari & Garg, 2014). This means you conclude that something is not true, when in reality it is. This might involve concluding that two variables are not related when they are. To reduce the possibility of making Type I and II errors, the study contained this by spreading the significance level. Type I errors are considered more serious and thus ware avoided.

In terms of testing the null hypotheses for significance, the significance level of 10 percent, or $\alpha = 0.10$ was applied. In respect to this, the probability that a Type I error would not be made whereby a true null hypothesis is rejected in accordance with Creswell (2009) would be equal to: $1 - \alpha = 0.90$. Despite a more stringent level of significance, such as the 5 percent level can be used, the 10 percent level was chosen due to the large range of variables to be tested. The 10 percent level is the minimum threshold level appropriate for including variables for quantitative analysis (Creswell, 2009).

3.10.2 Factor Analysis

The broad purpose of factor analysis is to summarize data so that relationships and patterns can be easily interpreted and understood. The two main factor analysis techniques are Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). CFA attempts to confirm hypotheses and uses path analysis diagrams to represent variables and factors, whereas EFA tries to uncover complex patterns by exploring the dataset and testing predictions (Pearce & Yong, 2013). Exploratory Factor Analysis was applied where components were extracted using principal component analysis. EFA seeks the least number of factors which can account for the common variance (correlation) of a set of variables (Child, 2008).

To get the percent of variance in all the variables accounted for by each factor, the sum of the squared factor loadings is added to that factor (column) and divided by the number of variables. By a rule of thumb in confirmatory factor analysis, loadings should be 0.7 or higher to confirm that independent variable s identified a priori are represented by a particular factor, on the rationale that the 0.7 level corresponds to about half of the variance in the indicator being explained by the factor (Hair, Black & Babin, 2010; Kothari, 2009). While it is generally agreed that loadings from factor analysis 0.7 and above are preferable for analysis, Kurpius and Stanfford (2006) explain that researchers use 0.4 given that 0.7 can be high for real life data to meet this threshold.

Henceforth, those outside this bracket were dropped from the final questionnaire and subsequent analysis. EFA process is pertinent to be carried out to validate scales of items in a questionnaire which were not validated. All the variables and sub-variables were subjected to SPSS Version 21 for factor loading and analysis. Further, to test the adequacy of the data set for factor analysis, both the Kaiser-Meyer-Olkin measure of sampling adequacy (0.738), and Bartlett Test of Sphericity (5914.958, $p < 0.000$) was applied to test whether the relationship among the variables was significant or not.

3.10.3 Statistical Tests and Assumptions of the Study

Since the research utilized multiple regression equations, the data was first being checked for violations of assumptions and help to form requisite analysis and include, autocorrelation, normality test, checking for outliers, multicollinearity and heteroscedasticity.

(a) Tests for outliers

Outliers are extreme data points or values that are far from the rest of the data set that typically occur because of errors in responding or data recording errors and that can seriously impact the results in structural equation modeling (Rumsey, 2009). For example, the parameter estimates and associated standard errors, as well as fit indices, may be biased in the presence of outliers (Thurman, 2011). Agrestic and Finley (2009) posit that an observation is an outlier if **it** falls more than 1.5 (1QR) above the upper quartile or more than 1.5 (1QR) below the lower quartile.

If a dataset has outliers, the median is often a better statistic to use than the mean. The median is less influenced by outlying values; therefore, it may be a better, more reliable descriptive statistics to use. However, if the dataset is a mirror image around its median, also called symmetric, the mean (which will equal the median) is the best statistic to use. Scatter diagram was useful in detecting outliers, which are points that do not appear to follow the pattern of the other data points or the general trend. Having noted the outliers, it was possible to decide whether the data pair is meaningful or is caused by an error in data collection.

(b) Testing for Multicollinearity

Multicollinearity is a phenomenon where   there   is inter-correlation among   the explanatory variables. Runkle, DeFusco, Anson, Pinto and McLeavey (2013) posit that, multicollinearity occurs in statistics, where two or more predictor variables in a multiple regression are highly correlated. The variables or items should be

reasonably correlated to each other, but not to the point of extreme multicollinearity or correlations greater than 0.90 (Tabachnick & Fidell, 2014).

Variance inflation factor (VIF) method was used to test for multicollinearity (Rumsey, 2009). As a rule of thumb, a variable whose VIF values are greater than 10 calls for further investigation. Other researchers use the tolerance to check the degree of multicollinearity. Tolerance is defined as 1/VIF. A tolerance value lower than 0.1 is comparable to a VIF of 10. This indicates that a variable could be considered as a linear combination of other independent variables if the tolerance level is lower than 0.1 or if the VIF is greater 10.

Freeman, Lawley, Svante and Spinks (2009) on their study on Factors Contributing to Successful Export Performance of Regional and Metropolitan SME Exporters established that there was no evidence to suggest extreme multicollinearity in the study variables, as the largest correlation was 0.838 between two items measuring (Relationship Capability). Under this study, a tolerance of less than 0.20 and a VIF of more than 5 which is an indication of a presence of multicollinearity was used as a determination by means of correlation matrix which showed the extent of correlation between entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework.

(c) Test for Normality

Tests of normality were used to determine if the data was well modelled and normally distributed (Gujarati, 2002). One of the multivariate regression analysis assumption is that data must follow a normal distribution hence this test was done to comply to this assumption. According to Ghasemin and zahediasi (2012) the variables are supposed to be roughly normally distributed, especially if the results are to be generalized beyond the sample. The study used Kolmogorov- Simonov normality test. In Kolmogorov- Simonov test, if the tests of normality will yield a statistic of p-value less than 0.05 it will mean that the data is not normally distributed.

(d) Testing for Heteroscedasticity

The presence of heteroscedasticity was tested using Levene's test of homogeneity of variances. Regression assumption dictates that error terms of the regression model must have a constant variance which also referred to as homoscedasticity. This test was conducted to comply with this assumption. If the test is not significant (calculated probability value $\geq .05$), the two variances are not significantly different and thus approximately equal (Gastwirth, Gel & Miao, 2009). The null hypothesis was that the error term was homoscedastic and the alternative hypothesis was that the error term was heteroskedastic. If the null hypothesis was rejected, then it implied that there was a presence of heteroscedasticity.

(e) Linearity test

This is a test to confirm whether there is a multiple linear relationship between Dependent Variable (Y) performance of micro and small agribusinesses and Independent Variables (X's) entrepreneurial finance, market conditions, technology integration, entrepreneurial capabilities and entrepreneurial culture. That is, we need to confirm that $Y = \propto + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_0$. This was achieved using the ANOVA table where F-Statistic was calculated and if it is significant then the linearity assumption holds**.**

3.10.4 Statistical Model Specification

The study adopted a multivariate regression analysis to further determine the strength of the relationship between the independent and dependent variables, as well as determine the combined determination of all the independent variables on the dependent variable (Cooper & Schindler, 2011). Multivariate Regression analysis was utilized to investigate the relationship between a range of variables, these including an error term, whereby a dependent variable is expressed as a combination of independent or explanatory variables, and the unknown parameters in the model are estimated, using observed values of the dependent and explanatory variables

(Saunders, Lewis, & Thornhill, 2009). Multivariate regression analysis technique was used to test the hypotheses. Statistical models in this study were tested at the level of significance of 0.05. The choice of multivariate regression model was adopted since data collected was continuous and the study assumed a linear relationship between independent variables and dependent variable.

The coefficient of determination R^2 was used to measure the goodness of fit of the model being assessed. F –test was carried out to evaluate model significance to predict the relationship between independent and dependent variables of this study. The following represents the regression equation, according to the general model used to represent the relationship between the dependent variable (Y) as a linear function of the independent variables (X's), with $\acute{\varepsilon}$ representing the error term (Creswell, 2009).

Multivariate Regression Analysis

a) $Y = \propto + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_0$……………………. (1)

Where:

Where *a* above is the Multivariate Regression Model (MRM) for dependent variables and independent variable's relationship.

$\qquad$ Y= Performance of MSAEs

$\qquad$ $\propto$=Constant

$\qquad$ B_{ij} = regression coefficients

$\qquad$ X_1= Entrepreneurial Finance

$\qquad$ X_2= Market Conditions

$\qquad$ X_3= Technology

$\qquad$ X_4= Entrepreneurial Capabilities

$\qquad$ X_5= Entrepreneurial Culture

$\qquad$ $\propto$ = Change in performance due to unit change in the independent variables

$\qquad$ $\beta_{1...5}$= Regression Coefficients for independent variables.

ε_0 = Error term; represent the MSAEs performance that does not account for by the independent variables under consideration.

b) $Y = \propto + \beta_1 X + \beta_2 Z + \beta_4 X*Z + \varepsilon_0$……………………. (2)

Where *b* above is the ordinary least squares (OLS) bringing out the relationship between the moderating, dependent and the independent variables.

Where

Y= Performance of MSAEs

$\propto$=Constant

β_1, β_2, β_3 =   Associated Regression Coefficients.

X= Represents various independent variables (Entrepreneurial Finance, Market Conditions, technology, Entrepreneurial Capabilities and Entrepreneurial Culture)

Z= is the moderator variable - Regulatory Framework

Or. A residual variable which incorporates the determination of the other determinants not included in the model. The regression coefficients (β_1) show an existing relation between the dependent variable and the independent one, meaning how much the dependent variable suffers modifications.

β = Correlation Coefficients of independent variables.

ε_0 = Error Term

Moderated multivariate regressions (MMR) statistical tool was used to test whether the regulatory framework moderates the relationship between the entrepreneurial determinants of performance of MSAEs of the coffee smallholders in Kenya. MMR is highly recommended in this study due to its ability to allow the slope of one or more of the independent variables to vary across values of the moderator variable, thereby facilitating the investigation of an extensive range of relationships and function forms (Ndung'u, 2014). MMR also allows the multiple relationships between the endogenous variable and exogenous variables to depend on the levels of the other exogenous variables in the current study.

Estimating interaction effects using moderated multivariate regression usually consists of creating an OLS model and an MMR model equation involving scores for a continuous predictor variable Y, scores for a predictor variable X, and scores for a second predictor variable Z hypothesized to be a moderator (Aguinis & Gottfredson, 2010). To establish the presence of moderating effect, the OLS model was then compared with the MMR model. The first equation which shows the ordinary least squares (OLS) regression equation for a model predicting Y scores from the first-order effects of X and Z observed scores is:

c) $Y = \propto + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 Z + \beta_7 X_1 Z + \beta_8 X_2 Z + \beta_9 X_3 Z + \beta_{10} X_4 Z + \beta_{11} X_5 Z + \varepsilon_0$ .... (3) (Baron & Kenny, 1986)

Where c above is the MMR for the association between the moderator variables, dependent variable and the independent variables

Y= Performance of MSAEs

$\propto$ =Constant

$\beta_{1...11}$= Associated Regression Coefficients.

$X_{1...5}$= Represents various independent variables (Market Conditions, R technology integration, Entrepreneurial Capabilities, Entrepreneurial Culture and Entrepreneurship Finance)

Z= is the moderator variable - Regulatory Framework

ε_0= Error Term

Empirical studies that have used the OLS model and an MMR model to assess the mediation effect include Alabede and Muff (2015) in their studies on the Moderating role of the directors' compensation on board structures and financial performance of UK top firms; and Ndung'u (2014) on the Moderating role of entrepreneurial orientation on the relationship between information security management and firm performance in Kenya.

Data collected from open ended questions in the questionnaires was analysed using content analysis techniques. The recurring themes were identified and triangulated with the quantitative data and presented in narrative form. The results from the qualitative data was presented together with the results from quantitative data.

3.10.5 Hypotheses Testing

Multiple regression analysis was used to test the relationship entrepreneurial determinants of performance of coffee-based MSAs of the coffee small holders in Murang'a County. The moderating effects of the regulatory framework on the relationship entrepreneurial determinants and performance of MSAEs of the coffee smallholders' performance of coffee-based micro and small agribusinesses of the coffee small holders in Murang'a County was tested based on a regression procedure specified by Martz (2013). In respect to this procedure, it must be demonstrated that the regulatory framework is independently related to both entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County.

To prove the moderating effect, it was demonstrated that the regression coefficient associated with the entrepreneurial determinants of performance of MSAs relationship shrinks or goes to zero when the regulatory framework as a moderator is added to the equation. If the effect goes to zero when the moderator is added then full moderation has taken place, however, if the effect only shrinks in the presence of the moderator, then partial moderation has occurred (O'Brien, 2007). F –test was carried out to evaluate model significance to predict the relationship between independent and dependent variables of this study. T- test was also adopted to test the significance of the individual independent variables to the dependent variable.

3.10.6 Operational definition and measurement of Variables

Saunders *et al.* (2009) state the need for operationalization of variables. Operationalized variables enable facts to be measured. The scales used in this study

were developed specifically for this study or adapted from existing scales to suit the context of the present study as presented in table 3.3.

(i) Measurement of enterprise performance

A business organization can measure its performance using the financial and non-financial measures. In this study, MSAEs performance was measured based on a holistic approach which incorporates the financial and non-financial measures as well as time element and, in this respect, the objective was concerned to measure the entrepreneurial determinants of performance of MSAEs. For the purpose of this research, enterprise performance is described as a change in profitability, growth rates, employment satisfaction levels and customer satisfaction levels within a five (5) year period thus from 2013 to 2017. Customer satisfaction and employee satisfaction were applied to measure the non-financial aspect of the MSAEs performance.

(a) Profitability Measures

Profitability measures were applied to measure the performance of MSAEs. This includes average sales turnover and average net income for the last 5 years in line with the independent variables.

(b) Growth Rate Measures

Typical accounting-based growth measures to apply in the context of MSAEs growth as a measure of performance include absolute or percentage change in total assets, market share, net profit growth, revenue growth, net assets and change to number of employees. In this context, the change in number of employees and invention of products was used to measure the MSAEs growth rate.

(ii) Entrepreneurial finance

GEM (2014) described entrepreneurial finance as the availability of financial resources-equity and debt-for small and medium enterprises, including grants and

subsidies and this study used it as an independent variable and measured using five indicators, namely; availability of collaterals, lenders interest rates, group liability lending, grace period by lenders and types of agribusinesses in practice.

(iii) Market Conditions

Market conditions determine the availability of profitable opportunities that foster entrepreneurship (William & Ellis, 2011). This study used it as an independent variable and it was measured using five indicators; access to markets, competition in the market, product quality, demand and supply.

(iv) Entrepreneurial capabilities

Entrepreneurial capabilities are sets of knowledge, skills, behaviors and attitudes that contribute to personal effectiveness (Hellriegel *et al.*2010; Morgan 2012). This study used it as an independent variable and it was measured using five indicators, namely management skills, education and training, motivation and teamwork among staff. GEM (2014) defines entrepreneurial culture as the extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income. Entrepreneurial culture is operationalised as a dynamic process that involves several critical stages and this study used it as an independent variable and it was measured using five indicators, namely entrepreneurial mindset, risk taking, business start-up motives and entrepreneurial mentorship.

(vi) Regulatory framework Regulatory

GEM (2014) defines a regulatory framework as the extent to which government policies support entrepreneurship inclined to the presence and quality of programs directly assisting MSEs at all levels of government; national, regional, municipal. This study used it as a moderating variable and it was measured using five indicators, namely agribusiness registration, tax Policies, Tax incentives, Labour Market regulations and County Government Policies on MSEs. Table 3.2 shows the

operationalization of the independent and dependent variables. It presents the actual parameters that were used to measure of all variables in the study as presented in Table 3.3.

Table 3.3 Operationalization of Variables

Variable	Operationalization	Indicators	Measurement
Performance of Micro and Small Agribusiness Enterprises (dependent variable)	Financial and non-financial performance	• Profitability. • Growth rates. • Employee satisfaction levels. • Customer satisfaction levels.	Interval
Entrepreneurial Determinants (independent variables)	Entrepreneurial finance	• Lenders interest rates • Group liability lending • Grace period by Lenders • Availability of collaterals • Types of agribusinesses	Interval
	Market conditions	• Access to markets. • Competition in the market. • Product quality. • Demand & Supply.	Interval
	Technology	• Adoption • Affordability. • Training & demonstrations • Adoption of digital business	Interval
	Entrepreneurial capabilities	• Entrepreneurial skills. • Entrepreneurial training. • Entrepreneurial Motivation • Entrepreneurial Teamwork	Interval
	Entrepreneurial Culture	• Entrepreneurial mindset. • Entrepreneurial Education. • Risk taking. • Entrepreneurial mentorship	Interval
Moderating Variable	Regulatory Framework	• Agribusiness registration. • Tax Policies. • Tax incentives. • Labour Market regulations.	Interval

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the study's response rate, the outcome of the pilot test and background information of the coffee smallholders' agripreneurships. Further, the data analysis and results of the study have been discussed beside a contextualized reflection of previous studies done in this area. Moreover, the chapter discusses the key research findings and results of hypothesis testing for each specific objective of the study. The statistical analysis in this chapter were conducted at the level of significance of 0.05, therefore hypotheses were rejected for $p > 0.05$.

4.2 Response Rate

The response rate is utilized to find out the statistical authority of a test and the higher the response rate the higher the statistical power. In research and surveys, Mugenda (2010) postulate that a response rate of 50% is considered adequate, 60% and above good, and above 70% very good. Babbie (2004) also concurs that response rate of 50% is acceptable to analyse and publish, 60% is good and 70% is very good.

In this study, a total of 384 questionnaires were administered to the scientifically selected respondents. Out of these, 364 questionnaires were completely filled and returned while the remaining 20 questionnaires were not returned (see Table 4.1). Nevertheless, the response of 95% was recorded by the research study, which surpassed thresholds of about 50% advocated by scholars such as Mugenda (2010; Bryman & Bell, 2011) for this kind of study. This response rate could be attributed to meticulous planning and appropriate techniques used in data collection.

Table 4.1: Response Rate

Category	Frequency	Percentage (%)
Response	364	95
Non-Response	20	5
Total Sample	**384**	**100**

Source: Survey Data (2019)

4.3 Pilot Test Results

This section presents the results of pilot study that was conducted a month before the actual data collection process. The purpose of the pilot study was to ensure the data collection instrument was reliable and could ensure the validity of the data collected.

4.3.1 Summary of the Scale Reliability Results

A summary of the reliability statistics of the data collected during the pilot study is presented in the Table 4.2. The significance of the pilot test was to ensure that data collection tool was reliable and could be used to collect valid data. The results show entrepreneurial finance had a Cronbach's Alpha of 0.827, market conditions had a Cronbach's Alpha of 0.721 technology had a Cronbach's Alpha of 0.515 while entrepreneurial capabilities had Cronbach Alpha of 0.767.

Similarly, entrepreneurial culture had a Cronbach Alpha of 0.725, regulatory framework had a Cronbach Alpha of 0.804 and finally agribusiness performance had a Cronbach's Alpha 0.608. The results show that technology and agribusiness performance had Cronbach's alpha Coefficients below the accepted thresholds of 0.70, the statements used in measuring technology and performance that reduced the overall Cronbach Alpha were deleted from the final questionnaire that was adopted for the actual data collection.

Table 4.2: Reliability Statistics Results

Reliability Statistics				
Variable	No. of Items	Cronbach's Alpha	Criteria	Conclusion
Entrepreneurial finance	4	0.827	>0.7	The scale was reliable
Market Conditions	4	0.721	>0.7	The scale was reliable
Technology	4	0.515	>0.7	The scale was reliable
Entrepreneurial Capabilities	4	0.767	>0.7	The scale was reliable
Entrepreneurial Culture	4	0.725	>0.7	The scale was reliable
Regulatory Framework	4	0.804	>0.7	The scale was reliable
Agribusiness Performance	4	0.608	>0.7	The scale was reliable

4.3.2 Validity of the Research Instrument

The research adopted various techniques to ensure the validity of the research instrument. The study integrated the inputs of university panelists during the proposal and seminar presentations together with inputs from the university supervisors to review the data collection instrument. These reviews provided necessary comments that were used to modify the questionnaire to ensure validity of the information collected. The study further conducted a thorough literature review and all constructs used in the research instrument were based on empirical and theoretical suggestion by scholars in the field of entrepreneurship.

4.4 Background Information for coffee Smallholders

This section presents the background information on the coffee smallholders' agripreneurs. These include number of years the respondents had been involved in coffee farming, any other type of agribusinesses the respondents were involved in and finally the years the respondents have been involved in other agribusiness besides the coffee farming. These findings provided a hint on the significance coffee smallholders attach on the coffee, which is derived from the satisfaction because of the associated benefits.

4.4.1 Number of Years in Coffee Farming

The study revealed that slightly more than half (59.1%) of the respondents had been practicing coffee farming for more than 15 years. Approximately 22% indicated they had been in coffee farming for 7-15 years while 12.9% and 3.8% had been in coffee farming for 3-7 years and less than 3 years respectively (see Figure 4.1). These findings indicated that coffee farming has been a traditional farming for coffee smallholders' farmers in Murang'a County. The finding further implies that farmers in the County value coffee farming since it has been a source of livelihood for many families for many years. Therefore, the performance of this crop is very important to coffee smallholders in the County.

The research findings agreed with Chacha and Mwende (2015) establishment that liberalization of the coffee sector resulted in decreased production of coffee. The

reasons cited by these authors for the decline in coffee production included but not limited to; the mismanagement of cooperative societies, declining farmers' earnings, decline in application of inputs, poor farming practices, and farmers' loss of confidence in management of coffee affairs. Additionally, the authors, observed that the growth of horticultural crops for the export market, especially in the 1990s, provided farmers with an opportunity to dump coffee for produce with higher and more stable prices, the result of which was a reduction in new plantings and reduced production.
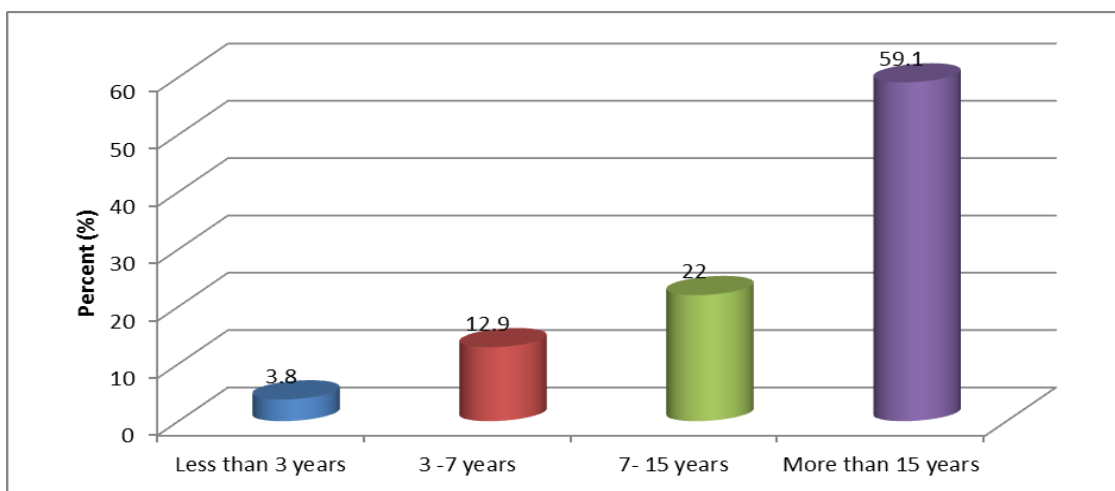
Figure 4.1: Number of years in Coffee Farming

4.5 Entrepreneurial Finance and Performance of MSAs

In this section, the study examined how entrepreneurial finance determined performance of coffee-based MSAs of the coffee small holders in Murang'a County. To measure this variable, availability of collaterals, grace periods, group liability lending, lenders' interest rates and viability of agribusiness in practice were examined.

4.5.1 Descriptive Analysis for Entrepreneurial Finance and Performance of MSAs

The study sought to establish the mode of financing used by a majority of the agribusinesses in the study area. The study revealed that the majority (74%) of farmers relied on own savings to finance their bold ventures while only 26%

financed their enterprises using borrowed funds (see Figure 4.2). These findings affirm the resource-based theory which demonstrated that MSAs need entrepreneurial finance to enhance the performance their enterprises. The findings are consistent with Wamuyu *et al.* (2017) study that established that small-scale maize farmers in Murang'a county preferred source of finance was self-financing through own savings.

Further, in collaboration with these findings GOK (2010) avers that access to bank credit by farmers is still a major challenge despite the fact that Kenya has a relatively well-developed banking system. The findings also concur with Nwimbo and Okorie (2013; Okafor *et al.* 2018) studies in Nigeria, which established that the major source of investment capital for the agripreneurs was from informal sources, mainly from personal savings, friends and relatives, rotational contribution and unregistered cooperative societies.

Additionally, the strategy noted that risks associated with agribusinesses coupled with complicated land laws and tenure systems that limit the use of land as collateral make financing agriculture unattractive to the formal banking industry. In the hindsight of this, the study proved that the coffee smallholders' agribusinesses experience the problem of accessing entrepreneurial finance hence resort to using own saving to finance their agribusiness activities which in most cases are unsatisfactory, resulting into lower returns.
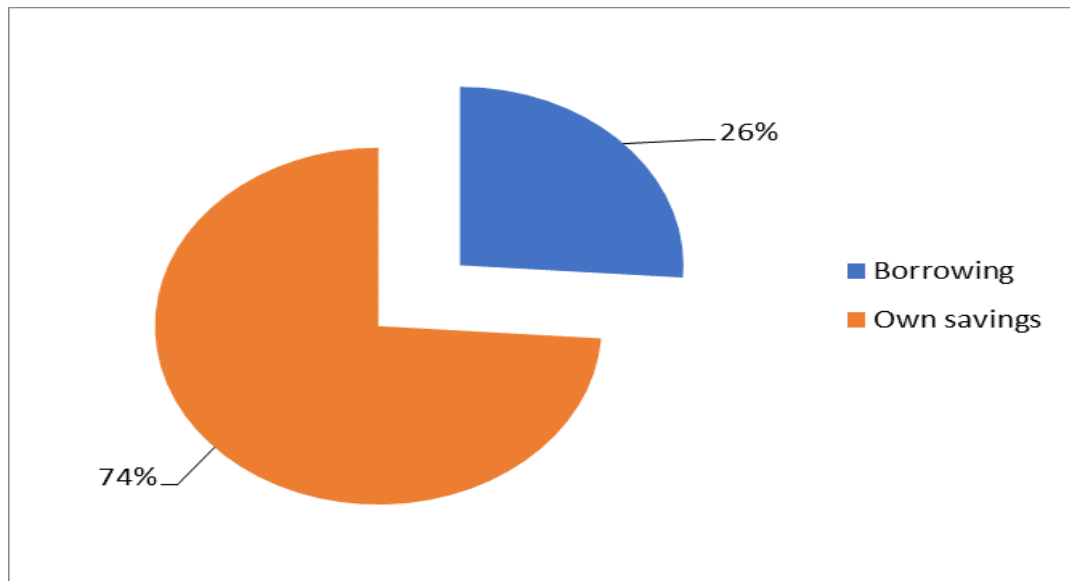
Figure 4.2: Mode of Financing Agribusinesses

The study further sought to establish institutions that provided entrepreneurial finance to coffee smallholder agribusinesses in Kenya. The results revealed that those who relied on borrowed funds accessed them from the Savings and credit cooperatives (SACCOs) followed by relatives and friends and merry go rounds (See Figure 4.3). The findings implied that SACCOs played a significant role in ensuring entrepreneurial finance by coffee smallholder agribusinesses.

These findings agree with WB (2013) which reported that entrepreneurs rely to a great extent on their personal savings to fund their entrepreneurial ventures in all areas of the world. More, so the study of Kariuki *et al.* (2018) collaborates with the findings that, majority of dairy enterprises in Kiambu County financed their product diversification activities using the sales proceeds from other products sold and owner savings. Further, this World Bank report established that, from a global perspective, 95% of entrepreneurs use personal funds when starting a business. The report also noted that, Indian entrepreneurs rely most heavily on their network of family (81%) and friends (52%).

These study findings also concur with the report of GOK (2016) which opined that it was more difficult for MSMEs to access loans from commercial banks than from other small financial institutions. Some entrepreneurs reported of avoiding taking

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loans due to the high interest rates or lack of collateral to support the loan application. This has been revealed further by the World Bank informal enterprise surveys (2013) that lack of access to finance is perceived to be the most pressing hurdle that small firms in developing countries face.

On the other hand, Iraki (2015) noted that high interest rates being experienced in Kenya mean that farmers find it hard to borrow in order to invest in processing machineries which lead to a slowdown in the agricultural economic growth. Moreover, he expounds that MSEs typically lack sufficient collateral or personal guarantors to pledge against formal loans, or they are unfamiliar with the bureaucratic procedures. Similarly, this is supported by Amindu (2013) (as cited in Njeru *et al.* 2013) that the financial requirements of a firm are determined by the nature of the business, goods produced and the technology used.

The survey further reports that 80.6 per cent of establishments reported family/own funds as the main source of start-up capital while 4.2 per cent of business owners got loans from family and/or friends to start their business. This corroborates with Indarti and Langenberg (2010; Nwimbo & Okorie, 2013) establishment that potential sources of capital for SMEs may be formal or informal sources like as personal savings, extended family networks, community saving and credit systems, or financial institutions and banks.
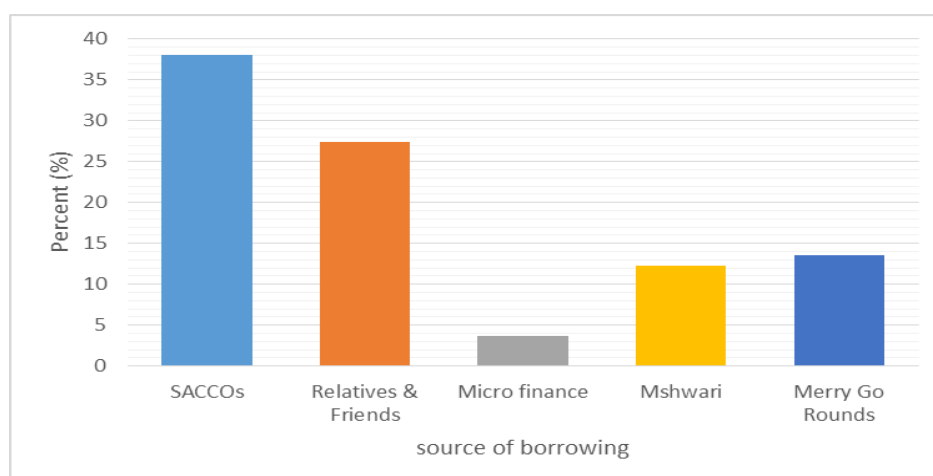
Figure 4.3 Source of Finance for Agribusinesses

This section presents the descriptive results on respondents' feedback on statement used to establish how coffee smallholder agribusinesses accessed finance in the study area. The study sought to establish whether collaterals (title deeds, log books among others) have been available to enable access to finance. On this, it was established that 61.5% and 17.6% of the respondents disagreed and strongly disagreed respectively. These findings were confirmed by the mean response of 2.26 which implied that the majority of the respondents disagreed (see Table 4.3).

The findings demonstrated that respondents lacked adequate collaterals to enable them access credit from financial institutions. This corroborates with GOK (2010) which notes that the risks associated with agribusiness coupled with complicated land laws and tenure systems that limit the use of land as collateral make financing agriculture unattractive to the formal banking industry.

The study findings also showed that 48.4% and 14.0% of the respondents disagreed and strongly disagreed respectively that grace periods given by lenders have enabled respondents to access finance. On the other hand, 31.6% and 3.3% of the respondents agreed and strongly agreed, respectively that grace periods given by lenders have enabled respondents to access finance. On whether, finance access through group liability lending works for their agribusinesses, 50.0% and 5.8% of the respondents disagreed and strongly disagreed respectively, while 36.8% and 4.1% agreed and strongly agreed respectively. On whether lenders interest rates encourage access to finance, 52.5% and 11.5% of the respondents' disagreed and strongly disagreed while 30.2% and 3.6% agreed and strongly agreed. The overall findings in this section implied that the majority of the coffee smallholder agripreneurs in Kenya had low entrepreneurial finance from financial institutions. The factors that contributed to this low entrepreneurial finance include lack of collaterals, unfriendly grace periods and higher interest rates.

The findings concur with a report by GOK (2016) which established that some entrepreneurs reported of avoiding taking loans due to the high interest rates or lack

of collateral to support the loan application. This concurs with Nwimbo and Okorie (2013) study in Nigeria that established that over dependence on informal source of finance was attributed to the high collateral demand and bureaucratic bottleneck that is inherent in the formal sector. On group liability lending, the findings failed to support Thuku and Kalundu (2017) that membership with a group liability lending increases a firm's access to credit impacting on the performance of SMEs.

Table 4.3 Descriptive Results on Entrepreneurial Finance

	SD	D	DNK	A	SA	Mean	Standard Deviation
Collaterals (title deeds, log books) have been available enabling access to finance.	17.6%	61.5%	0.8%	17.6%	2.5%	2.26	1.02
Grace periods given by lenders have enabled me access finance.	14.0%	48.4%	2.7%	31.6%	3.3%	2.62	1.16
Finance access through group liability lending works for my agribusiness.	5.8%	50.0%	3.3%	36.8%	4.1%	2.84	1.11
Lenders interest rates encourage access to finance.	11.5%	52.5%	2.2%	30.2%	3.6%	2.62	1.14
Overall Mean						**2.65**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

The study further asked the respondents to make comments as far as the entrepreneurial finance by the agribusinesses was concerned. The research observed that, the respondents face a plethora of obstacles in accessing finance, which included but not limited to; hidden charges, low returns from MSAs which hinder them from accessing credit from financial institutions, the complex processes

involved in loan applications, financial institutions shying away from MSAs due to their inherent risk. The respondents also expressed that both the county and national governments should be involved in controlling interest rates on loans given to MSAs as it possesses major hindrances to entrepreneurial finance in Kenya.

4.5.2 Pearson's Correlation Analysis of Entrepreneurial Finance and Agribusinesses Performance

The study results revealed that entrepreneurial finance had a weak positive association with the agribusinesses performance of coffee smallholder agribusinesses as shown by r=0.140 and p=0.008 (See Table 4.4). The correlations were significant at the level of significance of 0.05. The results implied that increasing entrepreneurial finance would lead to increase in agribusinesses performance of MSAEs. The study findings are consistent with Kavere and Oloko (2015) establishment that an increase in favourable loan interests in financial institutions leads to an increase in performance of the agribusiness in Nyeri County.

Likewise, the findings concur with Thuku and Kalunda (2017) unfolding that financing credit has a positive effect on business performance and growth of SMEs in agriculture in Nyeri County. Further, Essien and Arene (2014) reported that in the Niger Delta, the majority of small scale agro-based enterprises accessed informal credit but the few that accessed formal credit performed better. The study results are congruent with Global Competitiveness Report (Baller, Dutta, & Lanvin, 2016) that indicated that finance was the fourth most pressing concern for MSEs in advanced economies while it was the number one concern developing countries.

Table 4.4: Pearson's Correlation Analysis of Entrepreneurial Finance

		Entrepreneurial Finance	Agribusiness performance
Entrepreneurial Finance	Pearson Correlation	1	.140[**]
	Sig. (2-tailed)		.008
	N	364	363
Agribusiness performance	Pearson Correlation	.140[**]	1
	Sig. (2-tailed)	.008	
	N	364	364

[**]. Correlation is significant at the 0.05 level (2-tailed).

4.5.3 Univariate Regression Analysis

The study conducted a univariate regression analysis to test the relationship between entrepreneurial finance and MSAEs performance when other factors are held constant. The findings are presented in Tables 4.5 to 4.7.

Table 4.5: Model Summary for Entrepreneurial Finance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.140[a]	.020	.017	.45374

a. Predictors: (Constant), Entrepreneurial Finance

The findings of the model summary indicated that, other factors held constant entrepreneurial finance accounted for only 2% (R-squared=0.020) of the variation in performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.5).

Table 4.6: ANOVA for Entrepreneurial Finance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.485	1	1.485	7.212	.008[b]
	Residual	74.322	361	.206		
	Total	75.807	362			

a. Dependent Variable: Agribusiness performance mean
b. Predictors: Constant, Entrepreneurial Finance

The findings of ANOVA showed F=7.212, p=0.008 which indicated that the model used to link entrepreneurial finance and performance of coffee-based MSAs of the coffee small holders in Murang'a County had a goodness of fit (see Table 4.6). Therefore, entrepreneurial finance significantly predicted performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.7: Regression Coefficient of Entrepreneurial Finance

	β	Std. Error	Beta	t	Sig.
(Constant)	3.821	0.077		49.62	0.000
Entrepreneurial Finance	0.074	0.028	0.14	2.685	0.008

a Dependent Variable: Agribusiness performance

The findings show the regression coefficient of entrepreneurial finance β=0.074, p=0.008 which shows that entrepreneurial finance had a positive and significant determines on performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.7). Other factors held constant; the study failed to reject the research hypothesis that entrepreneurial finance determines performance of coffee-based MSAs of the coffee small holders in Murang'a County.

These findings allude to the report of the WB (2013) that established that informal enterprise surveys established that lack of finance was the most pressing obstacles that MSEs in developing countries face and observed that close to 68% of Kenyan enterprises state finance as a challenge. In the same vein, Prediger and Gut (2013) opined that, in high-income countries' economies, SMEs typically account for over half of all income and added value, yet in developing countries their capacity to spur growth and foster job creation is constrained by their ability to access finance.

4.5.4 Discussions of the Findings

The study established that majority of these agribusinesses had low entrepreneurial finance from financial institutions attributed to lack of collaterals, unfriendly grace periods and higher interest rates hence finance being a significant barrier to

performance. The study established that financiers required collateral in the form of property, and in many cases agripreneurs lacked the appropriate collateral thus being locked out. The findings revealed that the majority of the agribusinesses relied on retained savings to finance their operations while the rest financed their agripreneurships using borrowed funds from financial institutions.

The findings showed that entrepreneurial finance had a positive but the insignificant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings are congruent with Njeru *et al*. (2013) that interest rates incurred in obtaining finance was the cost barrier most often encountered in accessing finance. The findings are consistent with Maindi et*. al.* (2017) establishment that the majority of the avocado farmers in Kenya were not able to access credit services due to the collateral required from the credit service providers. Likewise, GEM (2016; WB, 2013) observed that entrepreneurs rely to a great extent on their personal savings to fund their entrepreneurial ventures globally. For instance, from a global perspective, 95% of entrepreneurs use personal funds when starting a business.

4.6 Market Conditions and Performance of MSAs

The section, examined how market conditions determined performance of coffee-based MSAs of the coffee small holders in Murang'a County. To measure this variable, markets, competition in the market, product quality, demand and supply, terms and conditions of suppliers on the performance of micro and small agribusinesses of the coffee smallholders were analyzed.

4.6.1 Descriptive Analysis of Market Conditions and Performance of MSAs

The study revealed that majority of the farmers (67.6) relied on other farmers to get information on the potential markets. The other respondents mentioned that they relied on radio and television advertisements (23.07%), newspapers (6.04%) and online platforms at (3.2%). The results demonstrated that majority coffee smallholder

agribusinesses in Kenya were dependent on referrals by other farmers for market information (see Figure 4.4).
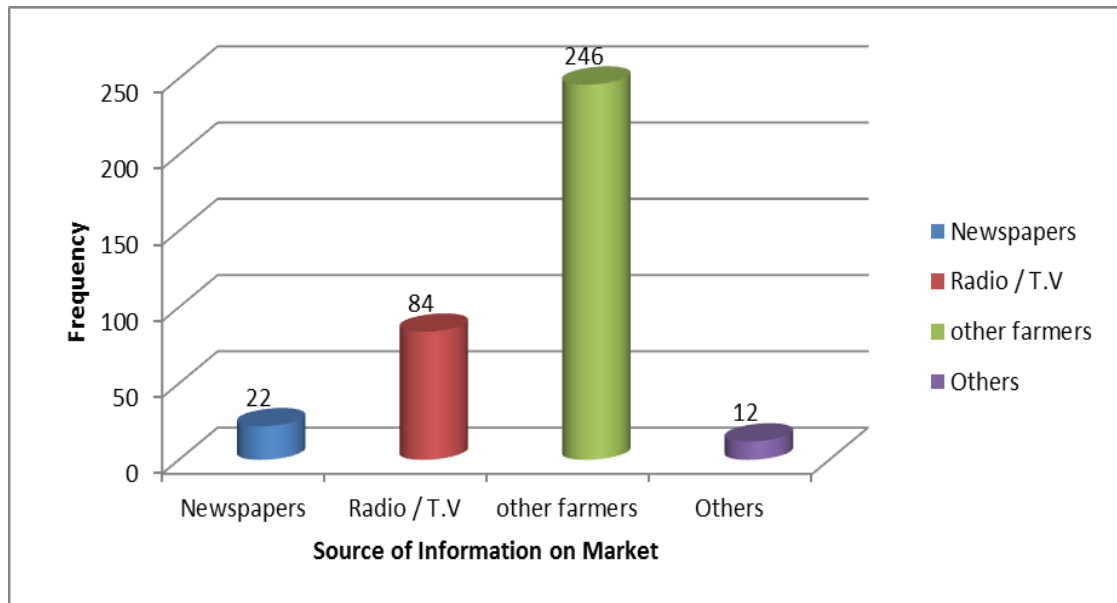
Figure 4.4 Source of Information on Market Conditions

The study similarly sought to establish how coffee smallholder agribusinesses' products reached their markets. The study findings showed that over 90% of the coffee smallholders' agribusinesses relied on customer referrals to sell their products (see Figure 4.5). The findings are consistent with Naikuru *et al.* (2016) study, which observed that satisfied customers would promote or recommend their friends and families to buy the product at the same place they had bought before due to quality.
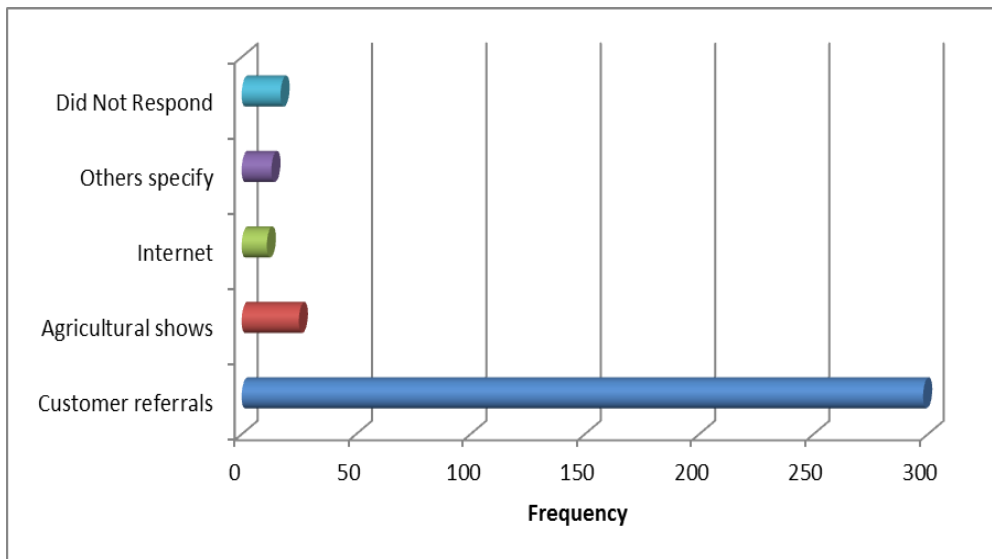
Figure 4.5 Mode of Reaching Potential Customers

The study also aspired to find out whether the farmers were members of any agricultural agribusiness cooperatives, which marketed their produce on their behalf. The findings showed that 71% of the smallholders were not members of any cooperatives, which denoted that they sold their agribusinesses produce on their own (see Figure 4.6). This finding failed to support GOK (2012) report that suggested that, farmer organizations are central in the development of agribusiness. In advancing this discussion, Oduol *et al.* (2017) also found that farmers can easily access training when they belong to a farmer group because many organizations that provide training prefer to work with farmers in a group as it helps minimize their costs.

In contrast, Matere *et al.* (2013) observed that smallholder banana farmers associations in Murang'a South District positively influenced the marketing of their products. In advancing this discussion, Muindi *et al.* (2017) observed that membership to agricultural associations, improved on avocado farmers farming practices access to input and output markets and adoption of new technologies that enhanced productivity. Likewise, Guguyu (2016) noted that the rise in output had lined the pockets of the farmers and milk transporters attached to Murang'a County

Creameries (MCC) with Sh127 million after producers registered high production over the past two years.
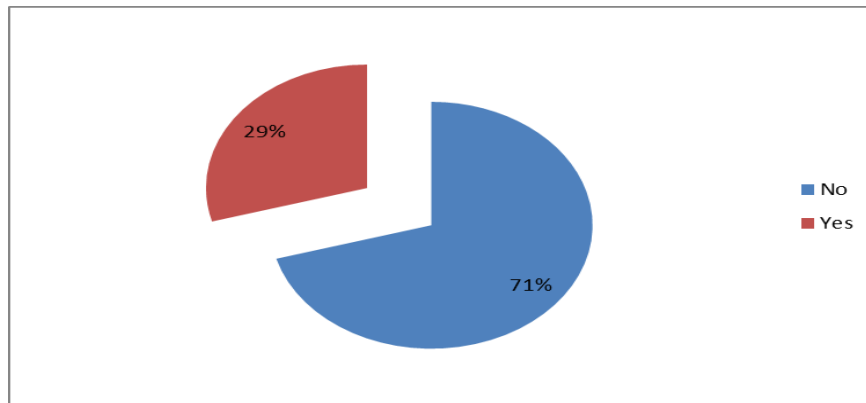
Figure 4.6 Membership to Agricultural Cooperative Societies

This section presents the descriptive results on respondents' feedback on the statement used to assess how market conditions determine the performance of agribusinesses in the study area (see Table 4.8). The first statement sought to establish whether it is easy to access markets to sell their products, the results showed that 64.6% and 8.0% of the respondents agreed and strongly agreed. The findings implied that the majority of the farmers found it easy to access markets for their produce. This further begs the question of whether the availability of the markets provided best and competitive prices for farmers.

On whether competition in the market has reduced sales, similarly, 62.4% and 8.5% of the respondents agreed and strongly agreed. The study also sought to find out from the respondents whether product quality have increased their produce sales, the finding also showed that 74.2% and 13.5% of the respondents agreed and strongly agreed. The findings also showed that the majority 67.9% and 13.5% agreed and strongly agreed, respectively that the demand and supply of commodities affect their sales.

The overall mean of 3.6 revealed that the majority of the respondents in the study agreed and strongly agreed with the statement used to measure market conditions. The findings implied that market conditions for the agribusinesses were favorable.

AAAE (2010) attests that most rural based MSAs depend on local or village markets, which are often saturated or purchases are not backed by effective demand to make sales meaningful for the desired benefits.

Table 4.8: Descriptive Results on Market Conditions

	SD	D	DNK	A	SA	Mean	Standard Deviation
Its easy to access markets to sell my products	2.5%	24.7%	0.3%	64.6%	8.0%	4	1.03
Competition in the market has reduced my sales	3.0%	24.2%	1.9%	62.4%	8.5%	3	1.04
Product quality have increased my sales	1.4%	9.1%	1.9%	74.2%	13.5%	4	0.79
Demand & Supply of commodities affect my sales	1.6%	16.5%	0.5%	67.9%	13.5%	4	0.94
Overall weighted average						**3.6**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

The study gathered that some of the challenges faced by respondents in the study area in endeavour to market their products include and not limited to; high competition, poor and unpredictable pricing in the markets, transportation cost due to bad roads, segmented markets, lack of appropriate preservation techniques of highly perishable products and unreliable customers. Further, the respondents elucidated the benefits obtained from being members of agricultural associations as; efficient and effective marketing, accessibility to soft loans, provision of subsidized farm inputs, provision of trainings on latest farm practices and providing platforms for savings.

4.6.2 Pearson's Correlation Analysis of Market Conditions and Agribusinesses Performance

The correlation findings also showed that market conditions were positively correlated (r=0.274, p=0.000) with performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.9). The findings implied that improving market conditions would result to the increased performance of coffee-based MSAs of the coffee small holders in Murang'a County. The finding is supported by Pandya (2012) who affirmed that superior business performance is therefore achieved by investing in markets, low in competitive rivalry and through gaining positional advantages within these markets that can be sustained through the creation and exploitation of market imperfections that limit competition.

Table 4.9: Pearson's Correlation Results of Market Conditions and Performance

		Market Conditions	Agribusiness performance
Market Conditions	Pearson Correlation	1	.274[**]
	Sig. (2-tailed)		.000
	N	364	363
Agribusiness performance	Pearson Correlation	.274[**]	1
	Sig. (2-tailed)	.000	
	N	364	364

**. Correlation is significant at the 0.05 level (2-tailed).

4.6.3 Univariate Regression Analysis

The study conducted a univariate regression analysis to test the relationship between market conditions and performance of coffee-based MSAs of the coffee small holders in Murang'a County when other factors are held constant. The findings are presented in Tables 4.10 to 4.12.

Table 4.10: Model Summary for Market Conditions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.274[a]	.075	.073	.44070

a. Predictors: (Constant), Market Conditions

The findings of the model summary indicated that other factors held constant market conditions accounted for only 7.5% (R-squared=0.075) of the variation in performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.10).

Table 4.11: ANOVA for Market Conditions

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	5.696	1	5.696	29.328	.000[b]
1	Residual	70.111	361	.194		
	Total	75.807	362			

a. Dependent Variable: Agribusiness performance
b. Predictors: (Constant), Market Conditions

The findings of ANOVA showed F=29.328, p=0.000 which indicated that the model used to link market conditions and performance of these investments had a goodness of fit (see Table 4.11). Therefore, market conditions significantly predicted performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.12: Regression Coefficients of Market Conditions

	B	Std. Error	Beta	t	Sig.
(Constant)	3.201	0.153		20.992	0.000
Market Conditions	0.226	0.042	0.274	5.416	0.000

a Dependent Variable: Agribusiness performance

The findings revealed regression coefficient of market conditions was β=0.226, p=0.000 which shows that market conditions had a positive and significant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.12). Other factors held constant; the study failed to reject the research hypothesis that market conditions determine performance of coffee-based MSAs of the coffee small holders in Murang'a County. Therefore, the study deduced that even though farmers had access to market, these markets were ineffective to offer meaningful sales.

Matere *et el.* (2013) agreed with the findings that access to comprehensive market information is essential for development of agricultural marketing. On the same note, this research endorses Stokes and Wilson (2010) attestation that; in order to have a good chance of survival, a small or micro agribusiness firm need to understand the organization's internal characteristics and the environment in which it operates for realization of better performance. Further, the authors argue, minor fluctuations in markets can topple a newly established small/micro (agribusiness) firms, particularly where it is reliant on a small number of customers.

4.6.4 Discussions of the Findings

The findings of the study established that easy access to markets, customers' preferences, demand and supply factors were among the key market conditions that determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The correlation analysis and regression analysis findings showed that market conditions positively and significantly determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. In support of these findings, Webster (2012) affirmed the premise that marketing as a culture relates to the ability of an organization to assess market attractiveness and potential competitive effectiveness.

Likewise, in the context of agribusinesses, Shafeek (2009; Olatomide & Omowumi, 2015) opines that marketing is the one and only functional area that links the products or services of a business to its customers. He adds on to say, it is vitally important to ensure that this function is properly performed. Muindi *et al.* (2017) recognize that; in spite of low prices, the farmers preferred brokers due to need for immediate and quick cash income as opposed to the exporters who dispatch the returns after some time. Ngare *et al.* (2014) aver that it is important for the traders to form associations that will assist them to participate in various levels of the marketing chain and benefit from economies of scale.

4.7 Technology and Performance of MSAs

The section, evaluated how technology determined performance of coffee-based MSAs of the coffee small holders in Murang'a County. To measure this variable, adoption of technology, affordability of technology, capacity building in technology use and enhanced market access through online business transactions on the performance of coffee-based MSAs of the coffee small holders in Murang'a County were examined.

4.7.1 Descriptive Analysis of Technology and MSAs Performance

The study aimed at finding out whether coffee smallholder agribusinesses in Kenya relied on technology for the performance of these agricultural undertakings (See Table 4.13). First, the study aspired to establish whether adoption of technology has increased efficiency of the respondents' agribusinesses. The findings showed that some of the respondents agreed (41.8%) while others disagreed (41.8%) on whether adoption of technology increased efficiency. These findings ratified that for those agribusinesses that have embraced the use of agricultural technology, their efficiency and productivity had increased.

The study also pursued to find out whether affordability of modern technology hinders efficiency for the agribusiness operations. The findings showed that 45.7% and 6.9% of the respondents disagreed and strongly disagreed respectively, while 35.5% and 6.1% of the respondents agreed and strongly agreed. The findings implied that affordability of modern technology hindered some of the agribusinesses from using modern technology as shown by those who agreed while other farmers found affordability of technology as a non - hindrance. On whether, capacity building through training and demonstrations on technology innovations has benefited respondents' agribusinesses. The findings showed that 67.6% and 6.0% of the respondents agreed and strongly agreed.

Finally, this study purposed to find out whether these agricultural investments had adopted digital business which included; Mpesa, Airtel money, E-Marketing, E-Banking, iShamba and Esoko. The findings disclosed that 17.3% and 39.8% of the

respondents strongly disagreed and disagreed respectively, while those who agreed and strongly agreed were 35.4% and 3.8% respectively. The overall findings demonstrated that there was an average use of technology among the MSAEs within the study area. However, agribusinesses which had embraced this venture increased their efficiency and productivity compared to those yet to embrace.

The findings are congruent with Mutua and Wasike (2011) argument that the main determinants of adoption of the technology are the size of the firm as indicated by firm employment, formal registration, and if a manager has some internet training. Further, these authors attest, registration or formalization of firms is also correlated with a higher probability of adopting the technology. These findings also concur with UNCTAD's recent *IER* (2010) which showed how ICT use by MSAEs has improved not only business performance, but has helped improve livelihoods in some of the world's poorest regions and communities. Further, Wendel (2012) also posits that countries with high levels of technological growth tend to have high levels of entrepreneurial growth.

In advancing this discussion, Ntale (2013; Juma *et al.* 2013) aver that persistent low investment in agricultural research and extension is a limiting factor to the potential of the agricultural sector in Africa. Likewise, in supporting these findings, Gregoratti (2011) noted that, Kenya had been ranked as one of the highest producers of macadamia nuts in the early nineties with a consequent drop in later years. This can only be associated with lack of research on development technologies and innovations to add value in addition to weak marketing systems among many other challenges. The findings also concur with Baloyi (2010) study of the constraints facing smallholder farmers in Limpopo province who argued that technological innovation has long been a chief contributor to progress in agribusiness and will continue to influence the growth and survival of the agribusiness MSEs. The findings corroborate with the findings of Kariuki *et al.* (2018) that that level of technological innovation in the form of machinery and equipment was positively associated with performance of informal dairy enterprises in Kenya.

Table 4.13: Descriptive Results of Technology

	SD	D	DNK	A	SA	Mean	Standard deviation
Adoption of technology use has increased efficiency in my agribusiness	6.0%	41.8%	0.8%	41.8%	9.6%	3	1.21
It is easy to afford modern technology for my agribusiness	6.9%	45.7%	5.8%	35.5%	6.1%	3	1.15
Training and demonstration on technology use on technology use has benefited my agribusiness	2.2%	23.1%	1.1%	67.6%	6.0%	4	0.98
Adoption of digital businesses; Mpesa, Airtel Money, E-Marketing activities E-Banking has benefited my agribusiness	17.3%	39.8%	3.6%	35.4%	3.8%	3	1.23
Overall Weighted Average						**3.2**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

The study further probed the respondents to indicate how they used a mobile phone in their agribusinesses. The most frequently mentioned use of mobile phones includes but are not limited to mobile banking and transfers of funds, ordering of farm inputs, marketing purposes and sharing information with other farmers. These findings established that MSAEs had adopted the use of mobile phones in their agribusinesses to boost the performance.

These findings concur with the study of Mulwa *et al*. (2013) observation that there has been a tremendous increased access to ICTs through the use of mobile phones in rural areas in Kenya. Likewise, using a comprehensive data from Murang'a county Central Kenya, an area which demonstrated purposeful support of dairy farming, Njogu, Njeru and Olweny (2017) study supports these findings with their discovery that mobile banking technology services had been well embraced in the dairy sector.

The results are further supported by Mlozi and Nyamba (2012) study at Kilolo district, Tanzania which established that mobile phones were valued as easy, fast and convenient way of communicating agricultural information. These results were reflective of the findings of WB (2012) report that the benefits for farmers who use mobile phones includes access to agricultural information concerning stock piles and prices, data visibility for value chain efficiency and being able to tap into new and existing markets. In the context of these findings, and the discussion thereof on the related studies, the findings are a reflection of the technology Adoption Theory that helps to understand how adopters come to accept or reject the use of technology in their small businesses.

4.7.2 Pearson's Correlation Analysis of Technology and MSAs Performance

Technology adoption were found to have a very weak correlation (r=0.099, p=0.058) with performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.14). This is because the smallholder agribusinesses have no capacity in terms of extra resources to conduct technology in their agribusinesses. Baloyi (2010) also mentioned that small and micro agribusiness firms in developing countries like Kenya are poor and as such have no access to information technology. It is this lack of access to information technology that also bear a negative effect on the small and micro agribusiness firms' ability to survive and grow and perform.

Further, the findings of the study were in agreement with Rao (2013) who argued that ssmallholder farmers and agribusiness entrepreneurs neither drive nor hardly ever use research. They do not find it easy to access the results of research, or put them to productive use. Agriculture Status Report (2016) also showed that African countries continue to underinvest in agricultural research, despite efforts by governments and development partners in making long-term commitments through regional research initiatives and creating supportive policy environments for agricultural research.

Table 4.14: Pearson's Correlation Results of Technology

		Technology	Agribusiness performance
Technology	Pearson Correlation	1	.099
	Sig. (2-tailed)		.058
	N	364	363
Agribusiness performance	Pearson Correlation	.099	1
	Sig. (2-tailed)	.058	
	N	363	363

**. Correlation is significant at the 0.05 level (2-tailed).

4.7.3 Univariate Regression Analysis of Technology and MSAEs Performance

The study employed univariate regression analysis to test the relationship between technology and performance of coffee-based MSAs of the coffee small holders in Murang'a County holding other factors held constant. The findings are presented in Tables 4.15 to 4.17.

Table 4.15: Model Summary for Technology

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.099[a]	.010	.007	.45598

a. Predictors: (Constant), Technology

The findings of the model summary indicated that other factors held constant technology accounted for only 1% (R-squared=0.010) of the variation in performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.15).

Table 4.16: ANOVA for Technology

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.750	1	.750	3.606	.058[b]
	Residual	75.057	361	.208		
	Total	75.807	362			

a. Dependent Variable: Agribusiness performance

b. Predictors: (Constant), Technology

The findings of ANOVA showed F=3.606, p=0.058 which indicated that the model used to link technology and performance of coffee-based MSAs of the coffee small holders in Murang'a County was not statistically significant (see Table 4.16). Therefore, technology insignificantly predicted performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.17: Regression Coefficients of Technology

	β	Std. Error	Beta	t	Sig.
(Constant)	3.824	0.105		36.511	0.000
Technology Adoption	0.062	0.033	0.099	1.899	0.058

a Dependent Variable: Agribusiness performance

The regression coefficient of technology is β=0.062, p=0.058 which shows that technology positively and insignificantly determines performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.17). Baloyi (2010) study affirms that MSAs in developing countries like Kenya are poor and as such have no access to information technology. It is this lack of access to information technology that also bear a negative effect on the MSAs ability to survive, grow and perform.

4.7.4 Discussions of the Findings

The findings disclosed that there was varied adoption of technology use to improve efficiency within these agribusinesses. The findings as well established that affordability of modern technology wasn't a hiccup to these agribusinesses. The study unraveled that capacity building through trainings and demonstrations had enhanced use of technology within these agricultural ventures. The study established that there was as well average adoption of online business practices with the use of mobile phone services standing out as the most commonly modern technology in running agribusinesses.

The findings affirmed the study of Baloyi (2010) which premised that small and micro agribusiness firms in developing countries like Kenya are poor and as such have no access to information technology. Similarly, in Indarti and Langenberg (2010) in contributing to this, disclosed that, technology has a close relationship with improvement of production processes. Further, the authors noted that agribusiness sector has become an industry that makes production efficiency a priority with changing attitudes and production processes which are changing as the market evolves. Also, Kariuki *et al.* (2018) established that the level of technological innovation had a positive linear effect on dairy enterprise performance in Kiambu County. More so, it was evident from the study of Mlozi and Nyamba (2012) that people in the rural Kololo district in Tanzania captured the advantages of the use of mobile phones to access information related to their daily farming business.

4.8 Entrepreneurial Capabilities (EC) and Performance of MSAs

This section presents the findings on assessment of EC among the coffee smallholder MSAs in Kenya. To measure this variable: entrepreneurial skills, employee teamwork, entrepreneurial training, motivation.

4.8.1 Descriptive Analysis of Entrepreneurial Capabilities and MSAs Performance

The study asked the respondents how they recruited employees in their agribusinesses. The findings showed that 40% hired from friends, 36% recruited based on employee referrals and finally 24% recruited relatives as presented in Table 4.18. The study findings unveiled that MSAs had not adopted competitive hiring process and relied on locally available labour. The findings are in harmony with Naikuru *et al.* (2016) establishment that agribusinesses in Kiambu County were creating employment to the people within their locality.

Table 4.18 How coffee smallholders' agribusinesses recruit employees

	Frequency	Percent
Relatives	88	24%
Friends	145	40%
Employees' referrals	131	36%
Total	**364**	**100**

This section sought to establish whether the MSAs in the study area had proper knowledge acquired through trainings and whether own/managers had attended any trainings pertinent to their day-to-day operations. The study showed that 53% of owners/managers had been properly trained running the operations of their entities while 47% had acquired none. On the other hand, 73% of the employees indicated that they had not attended any relevant trainings with partly 27% reporting they had acquired trainings. This implied that the majority of the employees engaged by these ventures were unskilled or semi-skilled as presented in the Table 4.22. These findings implied that the workforce in the study area lacked the relevant knowledge applied to enhance performance of the MSAs.

This finding supports WB Survey (2013) report that 35% of the firms in Kenya identify inadequately skilled workforce as a constraint. In the same breath Rankhumise and Rugimbana (2010) found that increased management/professional experience improves the quality of an entrepreneur (agribusiness MSAs owner's) hence increasing the chances of the agribusiness MSE's survival and growth.

Table 4.19: Coffee Smallholders farmers and workers' level of training

	Response	Frequency	Percent
Owner/Manager	No	170	47%
	Yes	194	53%
	Total	**364**	**100**
Employees	No	265	73%
	Yes	99	27%
	Total	**364**	**100**

The study further probed the respondents on the relevant skills acquired and the institutions they had acquired. The study established that majority of the agripreneurs

with relevant entrepreneurial skills had been trained by organizations such as Brookside dairy, County Government, IFAD international, agricultural shows platforms, through seminars and field days offered by agricultural cooperative societies. This agrees with Babu *et al.* (2016) observation that to effectively build the necessary capacities, the skills built by agribusiness education and training must correspond to the needs of the agribusiness sector. Moreover, Mungai *et al.* (2013) observed that appropriately timed and designed training programs are likely to have positive effects on business growth.

This section presents the respondents' feedback on the statement used to measure the extent of EC among the MSAs in the study area as presented in the Table 4.24. The study sought to find out whether the respondents had adequate entrepreneurial skills to boost the management of their agribusinesses and the findings showed that 47.8% and 9.4% of the respondents agreed and strongly agreed respectively while 34.7% and 7.8% of the respondents disagreed and strongly disagreed. The findings implied that the majority of the smallholder agripreneurs possessed management skills.

The study further sought to establish whether teamwork among employees increase productivity, 77.2% and 12.4% of the respondents agreed and strongly agreed respectively. On whether employee training to employees has increased productivity, 65.1% and 14.8% of the findings agreed and strongly agreed. The finding also showed that 74% and 9.4% of the respondents who agreed and strongly agreed respectively that motivating employees was practiced in their operations.

In support of this discussion, Hayton and Macchitella (2013) postulated that training that focuses on building individual capacity for understanding and interpreting the environment is expected to enhance knowledge acquisition of the entrepreneur and improve his business performance. Likewise, Tipu and Arain (2011; Ucbasaran, *et al.;* 2010) observed that motivation paves the way for entrepreneurs to acquire certain knowledge, skills, and abilities that are essential for successful outcomes. Furthermore, these results were a reflection of the finding of Nyang'au *et al.* (2014; Oroni *et al.* 2014) observation that motivation of an entrepreneur had a positive

influence on the growth of their enterprises. The general implication of these findings was that the majority of the coffee smallholder farmers agreed that EC positively enhanced the performance of their agribusinesses.

In advancing this discussion, Morgan (2012) affirmed that capabilities develop when individuals and groups within the organization apply their knowledge and skills to acquire, combine, and transform available resources in ways that contribute to achieving the firm's strategic goals. In conclusion, it's important to ratify that the study findings conform to Becker (2008) contribution to human capital theory assertion that the most valuable of all capitals is that investment in human being.

Table 4.20: Descriptive Results on Entrepreneurial Capabilities

	SD	D	DNK	A	SA	Mean	Standard Deviation
I have adequate management skills to boost the management of my agribusiness	7.8%	34.7%	0.3%	47.8%	9.4%	3	1.22
Employees' teamwork increase productivity in my agribusiness	0.50%	9.9%	0.0%	77.2%	12.4%	4	0.75
Employees' training has increased productivity	1.1%	12.6%	6.3%	65.1%	14.8%	4	0.88
Employees' motivation is practiced in my operations	2.8%	12.1%	1.1%	74.7%	9.4%	4	0.89
Overall weighted Average						**3.8**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

4.8.2 Pearson's Correlation Analysis of EC and Performance of MSAs

The EC had the strongest correlation with agribusiness performance (r=0.332, p=0.000) (see Table 4.21). The findings established that EC was the most significant determinant of the agribusiness performance of MSAs in Kenya.

Table 4.21: Pearson's Correlation Analysis of Entrepreneurial Capabilities

		EC	Agribusiness performance
Entrepreneurial Capabilities	Pearson Correlation	1	.332[**]
	Sig. (2-tailed)		.000
	N	364	363
Agribusiness performance	Pearson Correlation	.332[**]	1
	Sig. (2-tailed)	.000	
	N	363	363

**. Correlation is significant at the 0.05 level (2-tailed).

4.8.3 Univariate Regression Analysis of EC and Performance of MSAs

The study employed univariate regression analysis to test the relationship between EC and performance of coffee-based MSAs of the coffee small holders in Murang'a County when other factors are held constant. The findings are presented in Tables 4.22 to 4.24.

Table 4.22: Model Summary for Entrepreneurial Capabilities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.332[a]	.110	.108	.43220

a. Predictors: (Constant), EC

The findings of the model summary indicated when other factors are held constant EC accounted for only 11.0% (R-squared=0.110) of the variation in performance of MSAEs in the study area (see Table 4.22). The findings disclosed that EC was a good predictor variable of MSAs performance when other factors are held constant.

Table 4.23: ANOVA for Entrepreneurial Capabilities

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.374	1	8.374	44.831	.000[b]
	Residual	67.433	361	.187		
	Total	75.807	362			

a. Dependent Variable: Agribusiness performance

b. Predictors: (Constant), EC

The findings of ANOVA showed F=44.831, p=0.000 which indicated that the model used to link EC and performance of MSAs in the study area had a goodness of fit (see Table 4.23). Therefore, EC significantly predicted performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.24: Regression Coefficients for Entrepreneurial Capabilities

	B	Std. Error	Beta	t	Sig.
(Constant)	3.16	0.13		24.287	0.000
EC	0.236	0.035	0.332	6.696	0.000

a Dependent Variable: Agribusiness performance

The regression coefficient of EC is β=0.236, p=0.000 which shows that entrepreneurial capabilities had a positive and significant determines performance of coffee-based MSAs of the coffee small holders in Murang'a County in Kenya (see Table 4.24). Other factors held constant; the study failed to reject the research hypothesis that EC determines performance of coffee-based MSAs of the coffee small holders in Murang'a County.

The findings concur with Gathenya *et al.* (2011) who established that education is vital for the performance of any enterprise since it influences the ability to think critically. Rankhumise and Rugimbana (2010) further posited that education is thought to increase intrinsic motivation and energizer behaviors, and the more enterprise education an individual receives, the greater the possibility of the (agribusiness) MSE's success.

4.8.4 Discussions of the Findings

The study established that majority of the owner managers of the agribusinesses within the study area possessed entrepreneurial skills to run their ventures. The study found out that owner managers of these MSAs had acquired pertinent trainings to boost the running of their agricultural ventures. Beside this, the study established that majority of employees engaged by these undertakings had not secured any relevant

trainings which then bore a challenge in efficiency and productivity to these ventures.

The study also found out that team work was integral fabric in the majority of these enterprises and propelled them to a common goal. The study found that a significant number of these investments had embraced motivating their employees and creates individual commitment to work and output. The study found out that the majority of the owner manager's recruited employees who possessed some form of relevant experience in working in agricultural farms and increasing efficiency and quality of farm output. From this finding, it can be inferred from the outcome that the SMEs in the Sekondi-Takoradi Metropolis operation of their business enterprises in a hierarchical manner with the owner / manager dictating the pace of the business. Also, the authors posit that the SMEs, owner/manager thinks through issues carefully before making bold decisions when confronted with uncertainty in the business environment and occasionally, seeking for business advice from people (Yeboah, 2014).

In support of the findings, *Kenya Vision* (2030) places great emphasis on the link between education, training and the labour market, the need to create entrepreneurial skills and competencies, mainstreaming natural values in education and training and strong public and private partnerships. Further, the Vision advances the argument that literate population is an asset to the agricultural sector as it provides qualified personnel and opportunities for developing and disseminating science and technology, as well as innovation-based solutions to the agricultural sector. The findings conform to Becker (2008) contribution to classical economic theory assertion that the most valuable of all capitals is that investment in human being.

4.9 Entrepreneurial Culture and Performance of MSAs

The study further conducted an assessment on the determination of entrepreneurial culture among the coffee smallholder MSAEs in Kenya. To measure entrepreneurial culture, the following indicators were evaluated: entrepreneurial mindset,

entrepreneurial education, risk taking, entrepreneurial mentorship in determination of performance of these agricultural ventures in this study area.

4.9.1 Descriptive Analysis of Entrepreneurial Culture and MSAs Performance

The study revealed that 51% and 35% of the coffee smallholder farmers indicated they used cultural and family-based beliefs and values, respectively in long term planning of their agribusinesses as presented in the Table 4.25. The study results further show that 4% used religious beliefs and values. The study findings revealed that smallholders' farmers cultivated entrepreneurial culture among their family members which influenced the way they operated their agribusinesses.

The findings were a reflection of the sociological theory whose proponent such as Pawar (2013) argue that personal attitudes, perceived social pressure and intentions influence the decision to start and consequent performance of enterprises. Similarly, Omwenga and Mukulu (2015) observed that attitudes, values and norms determine establishments of entrepreneurships. Further, they noted that the virtue of risk-taking influence business performance. These findings agree as well with Mueller and Thomas (2001; Green *et al.* 2010) whose studies found out that social norms, family values, networks and social value of entrepreneurship play a key role in nurturing the entrepreneurial ecosystem.

Table 4.25: Believes Used by Coffee Smallholders in their Agribusinesses

	Frequency	Percent
Family	129	35%
Cultural	187	51%
Religious	16	4%
Others	32	9%
Total	**364**	**100**

The study also sought to establish the extent to which immediate families were involved in running their agribusinesses by coffee smallholder farmers in Kenya. The result shows that 45% of the respondents always involved family members while

40% occasionally involved family members while 16% rarely involved family members (see Table 4.26). These findings demonstrated that coffee smallholder agribusinesses build a culture of entrepreneurship among their immediate family members. These findings concur with WB Survey (2013) which established that 78% of youth entrepreneurs mentioned that their family is supportive of the idea of starting their own business. From the foregoing discussion, Kelley *et al.* (2010) attested to this discussion by propounding that within any society, it is important to support all people with entrepreneurial mind-sets, not just the entrepreneurs, as they each have the potential to inspire others to start a business.

Table 4.26: Extent of Immediate Family Involvement in Agribusiness

	Frequency	Percent
Always	163	45%
Occasionally	144	40%
Rarely	57	16%
Total	**364**	**100%**

This section presents the descriptive findings on entrepreneurial culture and how it determined performance of MSAEs (see Table 4.27). The study sought to establish whether entrepreneurial mentality motivated coffee smallholders' farmers starting of these ventures. The study findings disclosed that 75.2% and 14.2% of the respondents agreed and strongly agreed. In the context of entrepreneurial education, boosting the running of smallholder agribusinesses, the findings revealed that 49.7% and 8.6% of the agreed and strongly agreed, respectively while 31.8% and 8.3% disagreed and strongly disagreed respectively. The study further worked to establish whether risk taking encouraged respondents' agribusinesses start- up and the findings showed that 66.0% and 22.1% agreed and strongly agreed respectively.

Finally, 67.8% and 21.9% agreed and strongly agree respectively indicated entrepreneurial mentorship encouraged coffee smallholder farmers to start of their agribusiness. These findings are in harmony with *GEM* (2014) observation that in building an entrepreneurial culture, education and media play crucial roles, particularly regarding the education of very young people. The overall mean

response of 3.8 demonstrated that there was a well-grounded entrepreneurial culture among these agripreneurs in Kenya, which determined positively the performance of their agribusinesses.

These findings support Olabisi *et al.* (2013) study in Lagos State, Nigeria, which identified factors influencing business performance as professional background, entrepreneurship capabilities and preferences, cultural and religious beliefs. The findings were consistent with the study of Waweru *et al.* (2017) establishment that the dairy farmers were very careful about taking risks on various ventures. Likewise, Wambugu et al. (2015) attested that a culture of risk taking has a great impact on firm performance of agro processing SMEs in Kenya. Specifically, these previous studies affirmed that risk taking culture has a significant positive effect on firm performance of agro processing SMEs in terms of growth and profitability.

Table 4.27 Descriptive Results on Entrepreneurial Culture

	SD	D	DNK	A	SA	Mean	Standard Deviation
Entrepreneurial mentality motivated my starting of my agribusiness	4.2%	3.9%	2.5%	75.2%	14.2%	4	0.88
Entrepreneurial education boosted the running of my agribusiness	8.3%	31.8%	1.7%	49.7%	8.6%	3	1.21
Risk taking encouraged my start- up of my agribusiness	3.3%	5.8%	2.8%	66.0%	22.1%	4	0.88
Entrepreneurial mentorship encouraged my start of my agribusiness	2.5%	4.7%	3.1%	67.8%	21.9%	4	0.82
Overall weighted Average						**3.8**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

4.9.2 Pearson's Correlation Analysis on Entrepreneurial Culture and MSAs Performance

The findings further revealed that entrepreneurial culture had the positive correlation with performance of coffee-based MSAs of the coffee small holders in Murang'a County (r=0.188, p=0.000) (see Table 4.28). The findings brought out that entrepreneurial culture was also a significant determinant of the agribusiness performance of coffee-based MSAs of the coffee small holders in Murang'a County. Having a good entrepreneurial culture would result in increased performance of coffee smallholder agribusinesses.

The findings are in agreement with Omidyar Network and Monitor Group survey (2014) which established that society-wide perceptions do not only influence the attitudes of the entrepreneur him (her) self, but also those of stakeholders on which the entrepreneur may rely, such as investors, suppliers, customers as well as the support of family and friends.

Table 4.28: Pearson's Correlation Matrix of Entrepreneurial Culture

		Entrepreneurial Culture	Agribusiness performance
Entrepreneurial Culture	Pearson Correlation	1	.188[**]
	Sig. (2-tailed)		.000
	N	363	362
Agribusiness performance	Pearson Correlation	.188[**]	1
	Sig. (2-tailed)	.000	
	N	362	363

**. Correlation is significant at the 0.05 level (2-tailed).

4.9.3   Univariate Regression Analysis of Entrepreneurial Culture

The study employed univariate regression analysis to test the relationship between entrepreneurial culture and MSAEs performance other factors held constant. The findings are presented in Tables 4.29 to 4.31.

Table 4.29: Model Summary for Entrepreneurial Culture

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.188[a]	.035	.033	.44891

a. Predictors: (Constant), Entrepreneurial Culture

The findings indicated that, when other factors are held constant entrepreneurial culture accounted for only 3.5% (R-squared=0.035) of the variation in performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.29). The findings established that entrepreneurial culture was a good predictors variable of MSAs performance other factors held constant. The study results support the WB (2008) report that observes that, promoting an entrepreneurial culture is one of the most essential and neglected components of entrepreneurship development.

Table 4.30: ANOVA for Entrepreneurial Culture

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	2.647	1	2.647	13.137	.000[b]
1	Residual	72.546	360	.202		
	Total	75.193	361			

a. Dependent Variable: Agribusiness performance

b. Predictors: (Constant), Entrepreneurial Culture

The findings of ANOVA showed F=13.137, p=0.000 which indicated that the model used to link entrepreneurial culture and performance of coffee-based MSAs of the coffee small holders in Murang'a County had a goodness of fit (see Table 4.30). Therefore, entrepreneurial culture significantly predicted performance of these ventures in Kenya.

Table 4.31: Regression Coefficients of Entrepreneurial Culture

	β	Std. Error	Beta	t	Sig.
(Constant)	3.412	0.168		20.309	0.000
Entrepreneurial Culture	0.158	0.044	0.188	3.624	0.000

a Dependent Variable: Agribusiness performance

The regression coefficient of Entrepreneurial Culture is β=0.158, p=0.000 which shows that it had a positive and significant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.31). Other factors held constant; the study failed to reject the research hypothesis that entrepreneurial culture had a significant determination on performance of MSAEs in Kenya. Schoof (2006) also suggested that higher levels of entrepreneurship are therefore likely to be found in an environment where entrepreneurship is respected and valued and where entrepreneurs enjoy greater levels of legitimacy.

4.9.4 Discussions of the Findings

The study assessed entrepreneurial mindset, entrepreneurial education, risk taking, entrepreneurial mentorship, and their determination on performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study rejected this hypothesis, since the results of regression analysis revealed that entrepreneurial culture had insignificant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County.

However, the study found out that entrepreneurial mentality, risk taking among agripreneurs, farming lessons from televisions and radios, agripreneurs entrepreneurial mentorship and entrepreneurial motivation were among the factors of entrepreneurial culture that determined the performance of these agripreneurships. *GEM* (2014) collaborated with these findings by arguing that, in building an entrepreneurial culture and mentorship play crucial roles, particularly regarding the education of very young people. Likewise, Wambugu *et al.* (2015) revealed that risk taking has a positive impact on firm performance of agro processing SMEs in Kenya.

In advancing this discussion, Omidyar Network and Monitor Group survey (2014) established that in Kenya, believe that becoming an entrepreneur is seen as a desirable career choice by most people, indicating a positive entrepreneurial culture that rewards risk-takers. The study findings revealed that smallholders' farmers cultivated entrepreneurial culture among their family members which influenced the way they operated their agribusinesses. The findings were a reflection of the theory

of sociological theory as posited by Pawar (2013) that personal attitudes, perceived social pressure and intentions influence the decision to start and consequent performance of enterprises.

4.10 Regulatory Framework Affecting Performance of MSAs

This section brings out the findings on the moderation of regulatory framework for the determination of entrepreneurial determinants on the performance of coffee-based MSAs of the coffee small holders in Murang'a County. To measure this variable, agribusiness registration regulations, tax policies, tax incentives, labour market regulations and county government policies on MSEs were examined.

The study sought to establish how many of agribusiness owned by coffee small holder farmers were registered by government. The study findings established that 52% of the agribusinesses had not been registered while remaining 48% indicated they were formally registered (see Table 4.32). The findings made evident that on average, the smallholder agribusinesses in Kenya were informal. Lack of formalization of the smallholder agribusinesses implies that such small business lacks the necessary documentation to obtain credit from formal financial institutions and could not benefit from the government subsidies and incentives targeting the small businesses.

Table 4.32: Agribusiness Registration by Government

	Frequency	Percent
No	191	52%
Yes	173	48%
Total	**364**	**100**

Some of the reasons cited by the respondents impeding the formal registration of their agribusinesses included and not limited to: fear of taxation, lack of required documentations, and complex regulations involved. While others considered it not a necessity since they thought having registered initially with coffee cooperative

societies, there was no need to register again and which is not the case. The findings are congruent with GOK (2016) report establishing that there is a high number of undocumented businesses operating informally in Kenya. The findings concur with Muhika *et al.* (2017) observation that rigorous tax administration systems stimulate tax evasion among SMEs hence hindering the formalization process.

Table 4.33 brought out the descriptive results for regulatory framework showing how the respondents responded to indicators measuring how the regulatory framework affected the performance of coffee smallholder agribusinesses (see Table 4.33). The study worked to find out whether government registration regulations are understandable and easy to enhance registration of the agribusiness entities. The study findings showed that 67.6% and 14.7% of the respondents disagreed and strongly disagreed respectively, which justify why majority of the coffee smallholder farmers had not registered their agribusiness enterprises.

The study further aspired to establish whether government taxation policies affected operations of these agricultural investments. The study found out that 59.8% and 15.5% agreed and strongly disagreed respectively. On whether government incentives (subsidized inputs, e.g. fertilizers, waivers of credit) boost productivity of the respondents' agribusinesses, the finding showed that 48.5% and 4.4% of the respondents agreed and strongly agreed, respectively, while 33.8% and 6.9% of the respondents disagreed and strongly disagreed respectively as well.

The findings concur with the GOK (2010) report that while smallholder farmers in many countries get subsidy by as much as 100 per cent sometimes, Kenyan farmers face numerous direct and indirect taxes, which make agriculture uncompetitive internationally. Similarly, Odame, Musyoka and Kere (2008) further attested that policies on taxation like the zero rating of agricultural inputs, quality standards are good but bureaucracy cause delays.

The findings also revealed that 60.9% of the respondents disagreed with the government that; labour market regulations affect recruitment of workers in their

agribusiness. Finally, the study pursued to establish whether county government policies on MSEs have boosted the start-up and performance of their agribusinesses. The study findings similarly indicated that the majority (57.1% and 15.3%) disagreed and strongly disagreed respectively.

The overall mean of 2.6 indicated that the majority of the respondents disagreed with statements regarding the effectiveness of the regulatory framework for performance of coffee-based MSAs of the coffee small holders in Murang'a County. The farmers found the registration process unfriendly and also indicated that available policies do not provide room for the growth of smallholder farmers. In contributing to this discussion, Cook and Olafsen (2016) opines that governmental regulation is an important aspect of any vibrant firm, but overly burdensome regulatory frameworks often serve as binding constraints to firm growth.

Likewise, Jahanshahi *et al.* (2011; DGGF, 2015) reports that it's a commonplace for governments to have policies to encourage the growth of local MSMEs as they can help to directly alleviate poverty by increasing income levels and creating jobs. Similarly, Indarti and Langenberg (2010) noted that nowadays many governments are paying a more attention to developing entrepreneurship by promoting agribusinesses in order to strengthen the national economy.

Table 4.33: Descriptive results on the regulatory framework

	SD	D	DNK	A	SA	Mean	Standard Deviation
Government registration regulations are understandable and easy enhancing registering my agribusiness entity	14.7%	67.6%	6.1%	8.0%	3.6%	2	0.91
Government taxation policies affect my operations	5.0%	16.6%	3.0%	59.8%	15.5%	4	1.08
Government incentives (Subsidized inputs e.g. fertilizers, waivers of credit) boost productivity of my agribusiness	6.9%	33.8%	6.4%	48.5%	4.4%	3	1.13
Government labour market regulations affect recruitment of workers in my agribusiness	9.7%	60.9%	7.5%	19.1%	2.8%	2	1.07
Overall weighted Average						**2.6**	

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

4.11 Performance of coffee-based MSAs of the coffee small holders in Murang'a County

This section provides the assessment of the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study analyzed the performance of MSAEs in terms of profitability, growth rates, employee satisfaction levels and customer satisfaction levels.

4.11.1 Profitability of the Coffee Smallholder Agribusinesses in Murang'a County

The findings showed that the majority of the coffee smallholder agribusinesses made less than kshs 5,000 in sales and income per month. The findings showed that very few smallholder agribusinesses made above kshs 10,000 in a month from their coffee agribusinesses (see Figure 4.7). The findings demonstrate the argument of Oumo and

Rombo (2013) (cited in Onyonyi *et al*. (2016) that net profits provide a natural way through which SMEs build their financial base and replenish working capital and as net profits increase, so is the likelihood that an SME is experiencing growth.

These findings are consistent with Maigua *et al*. (2017) observation that though macadamia nuts are a very promising high-value crop, the benefit does not always reach the farmer as the supply chain is long, with many brokers and subagents intervening, each squeezing a margin from the final price. In advancing the same argument, Mutonyi *et al.* (2016) attested that buyer exploit the lack of market information, market trends, alternative markets and prices, and offer mango smallholders low prices.
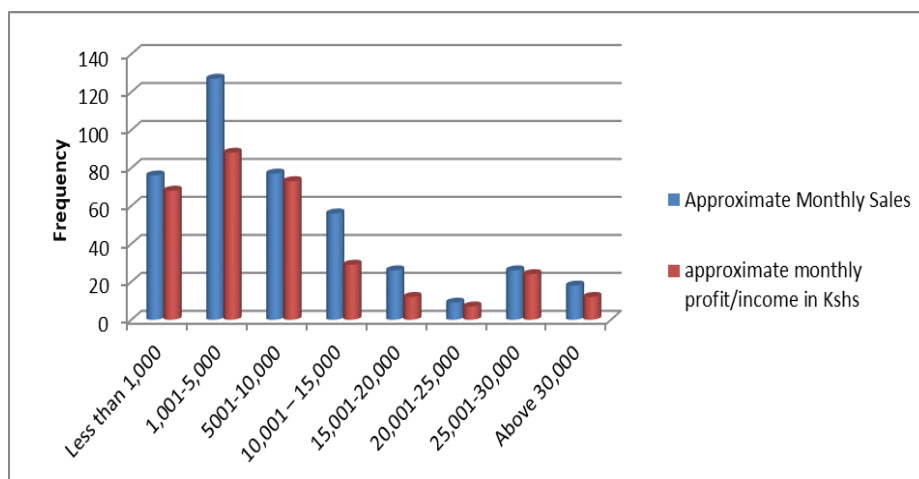
Figure 4.7 Approximate Monthly Sales and Monthly Income

The study results revealed that annual sales and income for the majority of the coffee smallholder agribusinesses were less than kshs 50,000 followed by those that earn between kshs 50,000 and 100,000 (see Figures 4.8 and 4.9). The findings also showed that the trend has been similar for the past 5 years with the majority of the coffee smallholder agribusinesses earning less than kshs 50,000 between 2013 and 2017. The findings are reflection of Namwaya (2010) establishment that avocado farming in Central Kenya, and which is a key agribusiness activity has gone through ups and downs over the years, with rogue agents taking advantage of desperate

farmers, collecting the produce, selling it, giving painfully low prices and in extreme disappearing without paying.
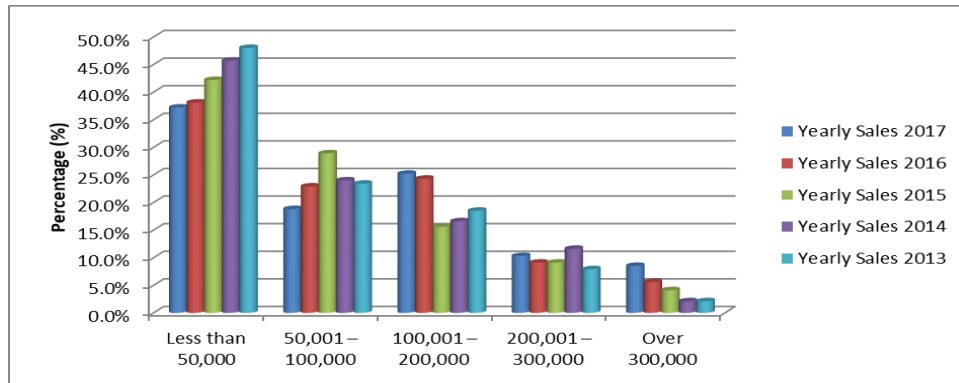
Figure 4.8 Yearly Sales Resulting from Agribusinesses for the Last 5 Years
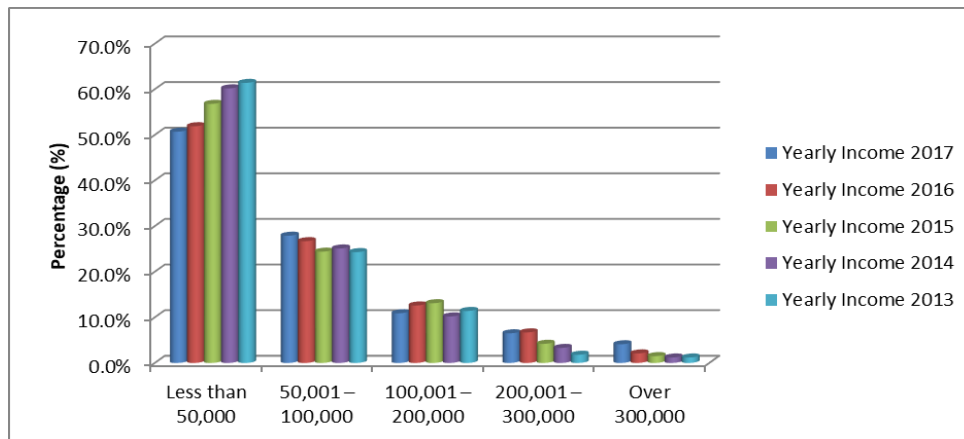
Figure 4.9 Yearly Income Resulting from Agribusinesses for the Last 5 Years

The study asked the respondents to rate the performance of their agribusinesses using the scale; excellent, good, bad to no idea. The findings showed that majority (279) of the respondents indicated that their agribusiness performance was good, 42 indicated bad while 29 indicated excellent (see Figure 4.10). The findings implied that even though the coffee farming was facing challenges, the farmer's agribusinesses were generally good. These findings are consistent with Nyawira (2018) revelation that farmers in the central Kenya are spurred on by the seemingly insatiable demands of a

thriving macadamia nut export market that have benefitted them from prompt payments and lucrative returns uncommon in the coffee sector.
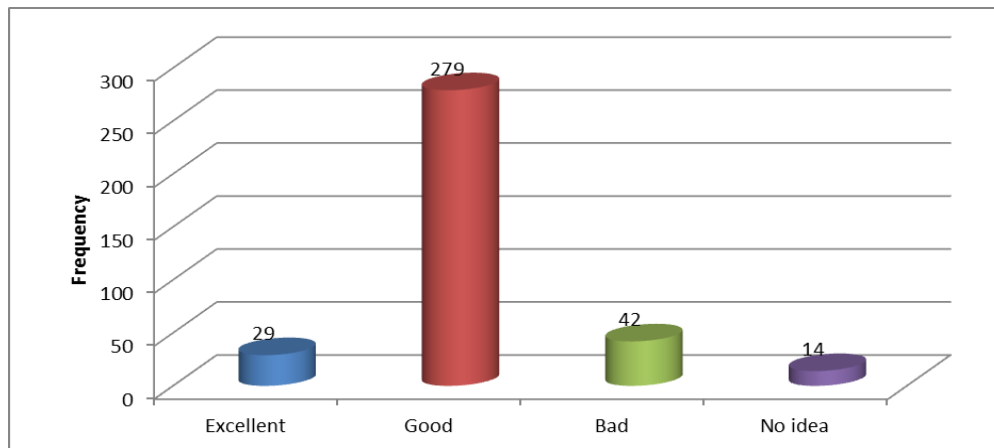
Figure 4.10: Coffee Smallholder Agribusinesses Performance

These study findings demonstrated a sector which is characterized by low performance due to limited entrepreneurial finance to acquire the relevant inputs. More so, the limited use of modern technologies that would unlock their potential in the sector further exacerbates the problem. The study further established that weak farmer organizations into agricultural cooperatives to boost performance and incentives for quality agricultural products from key stakeholders have strained these enterprises making them less profitable.

4.11.2 Growth Rates of the Coffee Smallholder Agribusinesses in Murang'a County

The findings show that there was growth in the average number of casual employees employed by coffee smallholder agribusinesses while the number of permanent employees remained constant between 2014 and 2016 then reduced in 2017 (see Figure 4.11). Engaging employees in casual and contract basis gave the farmers flexibility to plan their work and thus have these employees on hand only when they really required them, thus cutting down on costs and eliminating wastage. At the

same time, some of the farmers did not require to hire many employees as they themselves were part of the workforce on their enterprises.
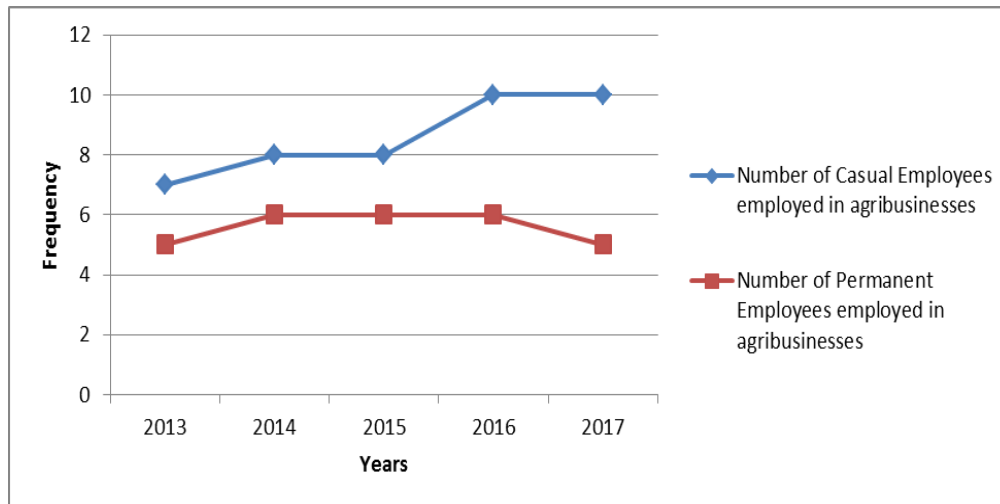
Figure 4.11 Number of Employees Employed in Agribusinesses

The findings of the study established causal employees left MSAEs more often compared to permanent employees (see Figure 4.12). The study findings further show the rate of growth of permanent employees was very slow indicating slow performance of coffee-based MSAs of the coffee small holders in Murang'a County. From these results, it can be seen that the agribusinesses are creating employment to the people within its locality, however, it is difficult for the farmers to maintain many employees on a permanent basis, and thus they opted to engage contract and casual employees as well. In contributing to this discussion, Cook and Olafsen (2016) found positive relationships between total entrepreneurial activity and overall job growth.
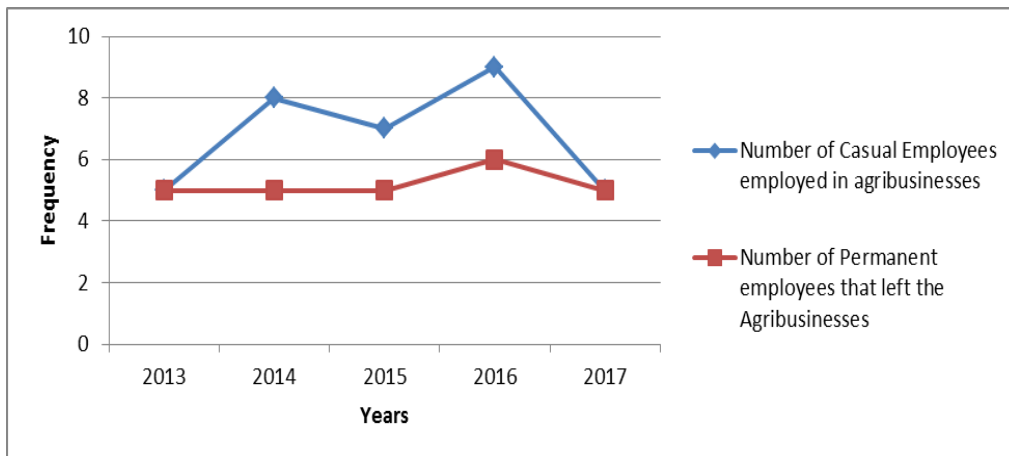
Figure 4.12 Number of Employees that left the Agribusinesses

The majority of the farmers that were interviewed served an average of less than 5 customers per day, followed by those who served between 5 and 10 customers (see Figure 4.13). The study established that the low number of the customers served per day pointed to poor performance of these agribusinesses.
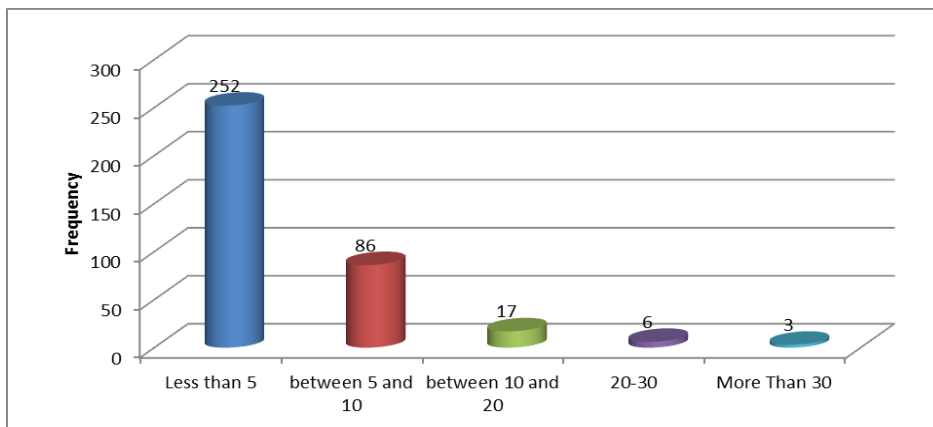
Figure 4.13 Number of Customers Served Per Day by the Agribusinesses

The study sought to establish the number of products, coffee smallholder agribusinesses in the study area offered in the market. The study established that 155 and 154 of the respondents indicated they had less than 2 and less 4 products respectively. Those who had above 4 and less than 6 were only 55 (see Figure 4.14). The findings indicated low product diversification among coffee smallholder

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farmers. This overreliance on two or few products in the market implied that unreliable markets in these products would lead to a massive reduction in revenue for the farmer. The diversification being experienced by coffee smallholder farmers engaging in other type of agribusinesses could be as a result of frustration caused by unstable revenue generated from the sale of one or two products obtained from coffee farming.
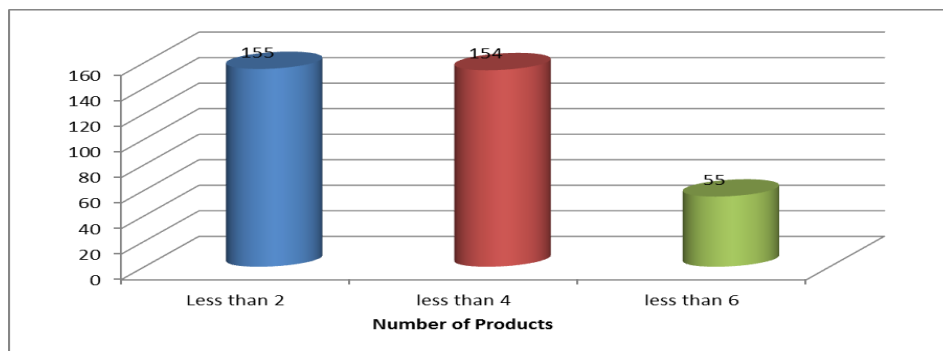
Figure 4.14 Number of Products Being Offered to the Market by Agribusinesses

The study further strived to establish whether coffee smallholder agribusinesses had in the past 5 years introduced new products or improved the quality of the value of the already existing products. The study findings showed that 52% of the respondents agreed they had introduced/improved products while 48% of the respondents disagreed (see figure 4.15). The findings concur with Onyonyi *et al.* (2016) observation that low amounts capitalization had been identified as contributing to SMEs inability to develop new products.

The findings are in harmony with Kiwara *et al*. (2016) establishment that introduction of new products in comparison to the revenues of the enterprise is a major significance to MSEs growth and competitiveness. The study findings were as well consistent with Mbataru (2010) study on farmers in socioeconomic diversification in Nyeri county disclosure that all farms in Nyeri County were diversified. On average, a farm had about five productions. The author established

that the underlying strategy was to spread risks and getting some income from as diverse on farm sources as possible.
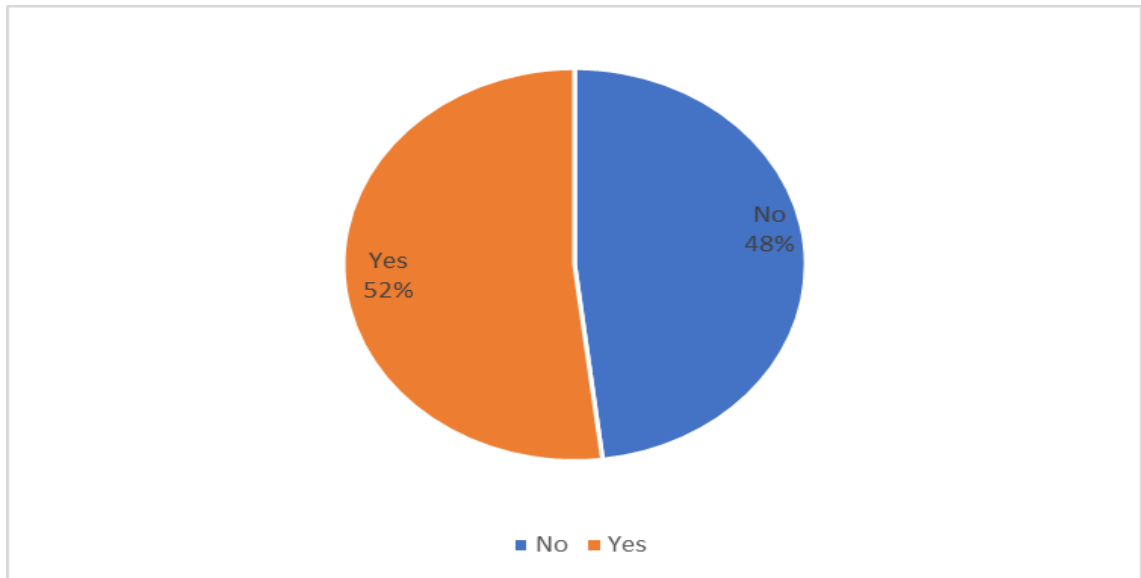
Figure 4.15 New or Improved Products in the Past 5 Years by Agribusinesses

4.11.3 Employee Satisfaction Levels of the Coffee Smallholder Agribusinesses in Murang'a County

The study asked the respondents whether low turnover of employees was an indicator of high agribusiness performance. The findings also indicated that 61.3% and 14.4% of the respondents agreed and strongly agreed, respectively that low turnover of workers was an indicator of the agribusiness performance (see Table 4.34). KNBS (2016) report also found out that the MSME sector engaged about 14.9 million persons and therefore, arguably provide the highest employment opportunities in Kenya.

Table 4.34: Descriptive Results on Employee Satisfaction Levels

	SD	D	DNK	A	SA	Mean	Standard Deviation
Low turnover of workers is an indicator of the agribusiness performance	6.4%	11.9%	6.1%	61.3%	14.4%	4	1.07

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

4.11.4 Customer Satisfaction Levels of the Coffee Smallholder Agribusinesses in Murang'a County

This section examined customer satisfaction with quality of products, customer loyalty and retention, customer repeat buying and turnover of workers as a measure of agribusinesses performance (see Table 4.35). The findings revealed that 71.5% and 17.7% of the respondents agreed and strongly agreed, respectively that their customers' feedback on their products are listened to and analyzed to improve on performance. On whether, they measured customer satisfaction in quality of products through increased customer referrals, 77.9% and 16.9% of the respondents agreed and strongly agreed respectively.

The finding further disclosed that 75.1% and 23.8% of the respondents agreed and strongly agreed that customer loyalty and retention was an indicator of quality products and performance and whether customer repeat buying is an indicator of our improved quality of goods and performance. The overall findings on the coffee smallholder agribusinesses performance brought out that the majority of the farmers recorded very low performance in terms of actual monthly and annual sales and income. Similarly, agribusinesses revealed that they had fewer number of products offered in the market, few numbers of customers served per day and a small number of employees engaged in their agribusinesses.

The findings concur with WB Group (2013) report that established that firms in Kenya added jobs at an annual rate of 2.4%, which is below the average of 6.3% for countries with a similar income level with small firms reporting slower annual growth of 1.5%. Likewise, in supporting these findings, Atikiya *et al.* (2015) recognized that customer satisfaction should aim to create a superior fulfilment of customer needs in one or several product attributes in order to develop customer satisfaction and loyalty which can in turn be used to charge a minimum price for the product.

Table 4.35: Descriptive Results on Customer Satisfaction Levels

	SD	D	DNK	A	SA	Mean	Standard Deviation
Our customers feedback on our commodities is listened to and analyzed to improve on performance	1.7%	8.0%	1.1%	71.5%	17.7%	4	0.81
We measure our customer satisfaction on quality of our products through increased customer referrals	0.3%	4.4%	0.6%	77.9%	16.9%	4	0.61
Customer royalty and retention is an indicator of our quality products and performance	0.6%	0.0%	0.6%	75.1%	23.8%	4	0.50
Customer repeat buying is an indicator of our improved quality of goods and performance	0.6%	0.6%	1.4%	73.8%	23.7%	4	0.53

SD-Strongly Disagree**, D-**Disagree**, DNK-**Do not know**, A-**Agree**, SA-**Strongly Agree

4.12 Tests of Assumptions for the Study

This section presents the diagnostic tests conducted by the study to test whether the data adhered to all assumptions of regression analysis. The tests analyzed include; test for normality, test for multicollinearity, linearity test and test for homogeneity of the variance.

4.12.1 Factors Analysis

The study conducted an analysis, to determine the factor loading of the all the constructs used to measure independent variables and the dependent variable. The main purpose of conducting factor analysis was to summarize the information contained in a number of original variables into a smaller number of factors without losing much information. Hair *et.al.* (2010) highlighted that Factor Analysis is necessary in research to test for construct validity and highlight variability among observed variables and to also check for any correlated variables in order to reduce redundancy in data.

The factor analysis found out that none of the variables used to measure entrepreneurial finance were removed because all of them had a factor loading greater than 0.4 as shown in Table 4.36. These factor loadings exceeded the criterion of 0.4 adopted by this study (Kurpius & Stanford, 2006; Kumar, 2013).

Table 4.36: Factors Analysis for Entrepreneurial Finance

Factors of Entrepreneurial Finance	Factor Loadings
Collaterals (title deeds, log books) have been available, enabling access to finance	0.462
Grace periods given by lenders have enabled me to access finance	0.748
Finance access through group liability lending works for my agribusiness	0.698
Lenders interest rates encourage access to finance	0.752

Extraction Method: Principal Component Analysis

The results revealed that the extracted communalities values of this study were ranging from 0.587 to 0.743 which indicates satisfactory factorability for all items of the variables (see Table 4.9). The factor analysis found out that none of the variables used to measure market conditions was removed because all of them had a coefficient of greater than 0.4 exceeding the criterion of 0.4 (Kurpius & Stanford, 2006; Kumar, 2013).

Table 4.37: Factor Analysis of the Market Condition indicators

Factors of Access to Market Conditions	Factor Loadings
It's easy to access markets to sell my products	0.587
Competitiveness in the market has reduced my sales	0.713
Product quality have increased my sales	0.636
Demand & Supply of commodities affect my sales	0.672

Extraction Method: Principal Component Analysis.

The results show that the extracted communalities values of this study were ranging from 0.599 to 0.792 which indicates satisfactory factorability for all items of the variables (see Table 4.38). The factor analysis found out that none of the variables used to measure technology was removed because all of them had a coefficient of greater than 0.4 which was the threshold adopted by the study.

Table 4.38: Factor Analysis of Technology

Technology Indicators	Factor Loadings
Adoption of technology has increased efficiency of my agribusiness	0.622
It's easy to afford modern technology for my agribusiness	0.599
Training and demonstration on technology use on technology use has benefited my agribusiness	0.731
Adoption of digital businesses like M-pesa, Airtel Money, E-Banking, E Marketing, iShamba, Esoko has benefited my agribusiness	0.615

Extraction Method: Principal Component Analysis.

The results of factor analysis show that the extracted communalities values of this study were ranging from 0.599 to 0.789 which indicates satisfactory factorability for all items of the variables as shown in Table 4.39. The factor analysis found out that none of the variables used to measure EC were removed because all of them had a coefficient of greater than 0.4 which was the threshold (Kurpius & Stanford, 2006; Kumar, 2013).

Table 4.39: Factor Analysis of Entrepreneurial Capabilities

EC Indicators	Factor Analysis
I have adequate entrepreneurial skills to boost the management of my agribusiness	0.679
Employees team work increase productivity in my agribusiness	0.599
Entrepreneurial training has increased productivity in my agribusiness	0.789
Entrepreneurial motivation is practiced in my enterprises operations	0.76

Extraction Method: Principal Component Analysis.

The results of factor analysis show that the extracted communalities values of this study were ranging from 0.552 to 0.782 which indicates satisfactory factorability for all items of the variables. The factor loading was found to be within the thresholds of 0.4 adopted in this study (see Table 4.40).

Table 4.40: Factor Analysis of Entrepreneurial Culture

Entrepreneurial Culture Indicators	Factors Analysis
Entrepreneurial mentality motivated my starting of my agribusiness	0.714
Entrepreneurial education boosted the running of my agribusiness	0.552
Risk taking encouraged my start- up of my agribusiness	0.782
Entrepreneurial mentorship encouraged my start of my agribusiness	0.713

Extraction Method: Principal Component Analysis.

The results show that the extracted communalities values of this study were ranging from 0.543 to 0.749 which indicates satisfactory factorability for all items of the variables (see Table 4.41). The factor analysis found out that none of the variables used to measure Regulatory Framework were removed because all of them had a coefficient of greater than 0.4 exceeded the criterion of 0.4 (Kurpius & Stanford, 2006; Kumar, 2013).

Table 4.41: Factor analysis of regulatory framework indicators

Regulatory Framework Indicators	Factor Loadings
Government registration regulations are understandable and easy enhancing registering my agribusiness entity	0.735
Government taxation policies affect my operations	0.543
Government incentives (Subsidized inputs e.g. fertilizers, waivers of credit) boost productivity of my agribusiness	0.749
Government labour market regulations affect recruitment of workers in my agribusiness	0.682

Extraction Method: Principal Component Analysis.

The study conducted factor analysis to determine the factor loading of the all the constructs used to measure independent variables and dependent variable. The results exhibited that the extracted communalities values of this study were ranging from 0.607 to 0.760 which indicates satisfactory factorability for all items of the variables (see Table 4.42). This means that the variables fitted well with other variables in their factors (Pallant, 2010). The factor analysis found out that none of the variables were removed because all of them had a coefficient of greater than 0.4 which was the threshold adopted in this study (Kurpius & Stanford, 2006; Kumar, 2013).

Table 4.42: Factor Loadings of agribusiness

Factors of Agribusiness Performance	Factor Loadings
Our customer feedback on our commodities is listened to and analyzed to improve on performance	0.700
We measure our customer satisfaction on quality of our products through increased customer referrals	0.696
Customer royalty and retention is an indicator of our quality products and performance	0.760
Customer repeat buying is an indicator of our improved quality of goods and performance	0.740
Low turnover of workers is an indicator of the agribusiness performance	0.607

Extraction Method: Principal Component Analysis

4.12.2 Test of Normality

The study used Kolmogorov- Simonov normality test. In Kolmogorov- Simonov test, if the tests of normality will yield a figure of less than 0.05 it will mean that the data is not normally distributed (see Table 4.43). The results obtained established that Kolmogorov-Smirnov statistic for all the variables was less than the critical value of 1.96 with a p-value of less than 0.05 which was the level of significance of 0.05. Thus, the study concluded that the data for all the variables was normally distributed and therefore fit for linear regression analysis.

Table 4.43: Kolmogorov-Smirnov Test of Normality

One-Sample Kolmogorov-Smirnov Test

		Entrepreneurial Finance	Market Conditions	Technology integration	Entrepreneurial Capabilities	Entrepreneurial Culture	Regulatory Framework	Agribusiness performance
N		364	364	364	364	363	361	363
Normal Parameters a,b	Mean	2.6505	3.6033	3.1115	3.6324	3.8222	2.7546	4.0176
	Std. Deviation	0.86325	0.55585	0.73028	0.64342	0.54208	0.57343	0.45762
Most Extreme Differences	Absolute	0.211	0.171	0.111	0.189	0.189	0.144	0.232
	Positive	0.211	0.084	0.076	0.125	0.146	0.144	0.232
	Negative	-0.098	-0.171	-0.111	-0.189	-0.189	-0.085	-0.182
Kolmogorov-Smirnov Z		0.031	1.257	1.125	1.6	0.609	1.742	0.413
Asymp. Sig. (2-tailed)		0.121	0.097	0.09	0.073	0.102	0.061	0.109

a Test distribution is Normal.
b Calculated from data.

The results obtained indicate that Kolmogorov-Smirnov statistic for all the variables was less than the critical value of 1.96 with a p value of less than 0.05 which was the level of significance of 0.05, thus the study concluded that the data for all the variables was normally distributed and therefore fit for linear regression analysis. These findings led to the conclusion that data for all the variables were normally

distributed, hence adequate for further analysis to establish the effect of independent variables on the dependent variable.

These findings are supported by Ghasemin and Zahediasi (2012) who argued that the variables are supposed to be roughly normally distributed, especially if the results are to be generalized beyond the sample. The study further used normality plot to test the whether the performance of coffee smallholder agribusinesses followed a normal distribution. The finding presented showed that agribusinesses performance of coffee smallholder agribusinesses was normally distributed. Hence this data was adequate for further analysis and generalization of the results to the entire population (see figure 4.18).
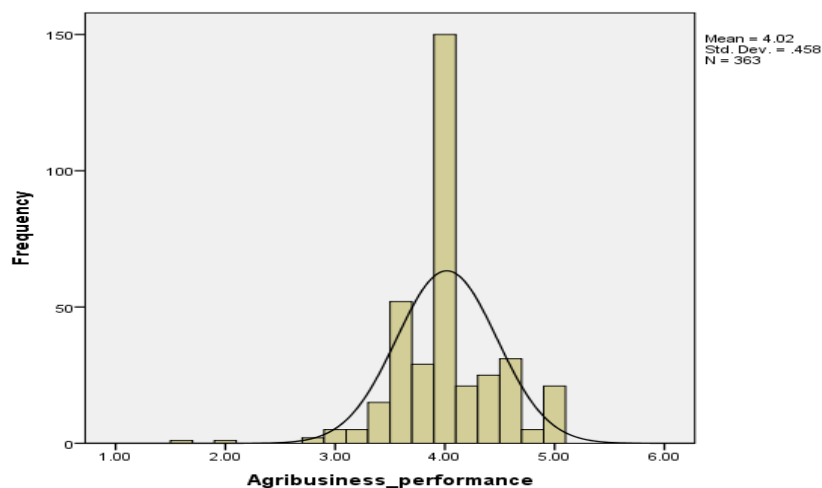
Figure 4.18 Normaltiy Plot for Dependent Variable

4.12.4 Linearity Test

The scatter plot established an upward sloping relationship for both the relationship between entrepreneurial determinants and the dependent variable agribusiness performance of coffee smallholder agribusinesses in Murang'a County. The results show the data adheres to the linearity assumption of regression modelling (see figure 4.19).
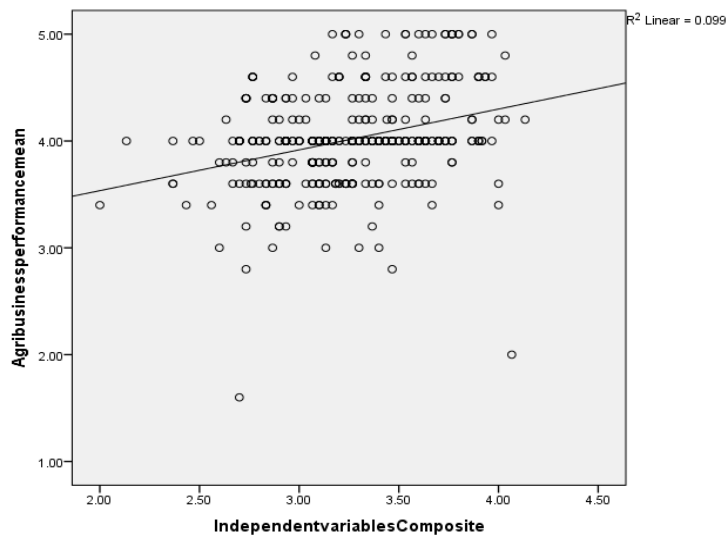
Figure 4.19 Scatter Plot

4.12.3 Test of Multicollinearity

This study, carried out a test for multicollinearity by computing the variance inflation factors (VIF) and its reciprocal, tolerance. A variance inflation factor value greater than 10 is a sign of multicollinearity or tolerance value less than 1 indicates the presence of multicollinearity among the explanatory variable. The findings revealed that entrepreneurial finance had a VIF of 1.356, market conditions had a VIF of 1.169, technology integration had a VIF of 1.422, entrepreneurial capabilities had a VIF of 1.265, entrepreneurial culture had a VIF of 1.211 and regulatory framework had a VIF of 1.147 as shown in Table 4.44.

These results indicated that the VIF values of the variables were within the threshold of 10. This indicated that there was no significant threat of multicollinearity and therefore, the study could include all the variables in linear regression analysis because there was no independent variable with a strong linear relationship with any other independent variable (s).

Table 4.44: Test of Multicollinearity

	Collinearity Statistics	
	Tolerance	**VIF**
Entrepreneurial finance	0.738	1.356
Market Conditions	0.856	1.169
Technology	0.703	1.422
Entrepreneurial Capabilities	0.790	1.265
Entrepreneurial Culture	0.826	1.211
Regulatory Framework	0.872	1.147

a Dependent Variable: Agribusiness performance

4.12.5 Homoscedastic Test

The presence of heteroscedasticity was tested using Levene's test of homogeneity of variances. If the test is not significant (calculated probability value ≥. 05), the two variances are not significantly different and thus approximately equal (Gastwirth, Gel & Miao, 2009). The null hypothesis was that the error term was homoscedastic and the alternative hypothesis was that the error term was heteroscedastic. If the null hypothesis was rejected, then it implied that there was a presence of heteroscedasticity. The study results revealed that the levene statistics of the variables were small with the p-values greater than 0.05, the null hypothesis that the error term was homoscedastic was not rejected which satisfies the assumption of regression analysis as presented in Table 4.45.

Table 4.45: Test of Homogeneity of Variances

Test of Homogeneity of Variances		
	Levene Statistic	Sig.
entrepreneurial finance	0.015	0.997
Market Conditions	1.466	0.223
Technology	0.811	0.489
Entrepreneurial Capabilities	0.327	0.806
Entrepreneurial Culture	1.484	0.219
Regulatory Framework	1.224	0.245
Agribusiness performance	0.738	0.530

4.13 Hypotheses Testing

In this study, they were the basis for hypothesis testing since they provided the significance of the relationship entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study conducted a multiple regression analysis to test the relationship between entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study findings are presented in Tables 4.46 and 4.48. The testing was based on the findings of multiple regression analysis and was tested at the level of significance of 0.05.

Table 4.46: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.407[a]	.166	.154	.41970

a. Predictors: (Constant), Entrepreneurial Culture, entrepreneurial finance, Market Conditions, Entrepreneurial Capabilities, technology.

The model summary shows R-squared=0.166 which implied that entrepreneurial finance, market conditions, technology, entrepreneurial capabilities and entrepreneurial culture explained 16.6% of the variation of performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.46). The findings implied that independent variables explain a small percentage of the variation in performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.47: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.486	5	2.497	14.177	.000[b]
	Residual	62.708	356	.176		
	Total	75.193	361			

a. Dependent Variable: Agribusiness performance
b. Predictors: (Constant), Entrepreneurial Culture, entrepreneurial finance, Market Conditions, Entrepreneurial Capabilities, Technology

The findings of ANOVA revealed F-statistics =14.177 p-value = 0.000 which was less than significance level of 0.05 for the model linking entrepreneurial finance, market conditions, technology integration, entrepreneurial capabilities and entrepreneurial culture and performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.47). The findings demonstrated that, the model had better fitness and concluded that entrepreneurial finance; market conditions, technology, entrepreneurial capabilities and entrepreneurial culture were good predictors of performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Table 4.48: Regression Coefficients

	β	Std. Error	Beta	t	Sig.
(Constant)	2.527	0.209		12.068	0.000
entrepreneurial finance	0.056	0.029	0.106	1.912	0.057
Market Conditions	0.164	0.043	0.199	3.817	**0.000**
Technology	-0.014	0.036	-0.022	-0.382	0.703
Entrepreneurial Capabilities	0.196	0.038	0.277	5.130	**0.000**
Entrepreneurial Culture	0.021	0.045	0.025	0.459	0.646

a. Dependent Variable: Agribusiness performance

H_{A1}: entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County

The study sought to test the research hypothesis that entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County. The regression analysis showed that entrepreneurial finance had a beta coefficient of 0.056 with a corresponding p-value of 0.057; meaning entrepreneurial finance had a positive but the insignificant determination of performance of micro and small agribusinesses of the coffee smallholders in Murang'a County. Based on these findings the study rejected H_{A1}: entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.48).

These findings agree with Njangiru, Maingi, and Muathe (2014) who found that due to problems of high risk and high cost of borrowing, uncertainty of repayment capacity on the rural borrower has been reported high due to irregular income streams. Further, the study of Mazanai and Fatoki (2012) supports that finance is directly related to the performance of MSAEs. Thus, the lack of finance upset the full potential of MSAEs as an economic driver. Pettit and Singer (1985) also argue, business firms of all sizes, select their financial structure in view of the cost, nature, and availability of financial alternatives.

The research also confirmed the ICC (2015) report that despite the importance of agricultural enterprise in the African economy, its funding has been marginalized as the banking sector has traditionally shied away from lending to agriculture enterprise due to the perceived and real inherent risks. In many countries, the agricultural sector enterprise receives less than 4% of bank financing compared to the secondary and tertiary sectors which absorb over 30% and 60% respectively. Therefore, because of the lack of the entrepreneurial finance, the study observed that the majority of the coffee smallholder agribusinesses rely on their own savings to enhance performance of their agribusinesses.

H_{A2}: **Market conditions positively determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County**

The second study hypothesis sought to test whether market conditions positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The regression analysis showed that market conditions had a beta coefficient of 0.164 with a corresponding p-value of 0.000 which was less than significance level of 0.05, meaning market conditions had a positive and significant determination on performance of coffee-based MSAs of the coffee small holders in Murang'a County. Based on these findings the study failed to reject H_{A2}: Market conditions positively determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.48).

The study findings agree with those of Indarti and Langenberg (2010) who affirmed that access to market, new market opportunities (findings new products or services to offer existing customers and obtaining new customers), market stability (high proportion of regular customers) are, crucial for preserving high growth in the business. Similarly, Shafeek (2009) opined that marketing is the one and only functional area that links the products or services of a business to its customers. He adds on to say, it is vitally important to ensure that this function is properly performed.

The findings also concur with Omiti, Otieno, Nyanamba and Mc Cullough (2011) who established that better market information is key incentive for increased sales. The authors further demonstrated that strengthening market information delivery systems, upgrading roads in both rural and peri-urban areas, encouraging market integration initiatives, and establishing more retail outlets with improved market facilities promote production and trade in high value commodities by rural farmers.

H$_{A3}$: Technology positively determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County

The third study hypothesis sought to test whether technology positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study rejected this hypothesis, since the results of regression analysis revealed that technology had a negative and insignificant effect (β=-0.014, p=0.703 >0.05) on performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.48).

The findings affirmed the study of Baloyi (2010) which premised that small and micro agribusiness firms in developing countries like Kenya are poor and as such have no access to information technology. It is this lack of access to information technology that also bear a negative effect on the small and micro agribusiness firms' ability to survive and grow and perform. Further, the findings of the study were in agreement with Rao (2013) who argued that ssmallholder farmers and agribusiness

entrepreneurs neither drive nor (hardly ever) use research. They do not find it easy to access the results of research, or put them to productive use. Romijn and Caniëls (2011) study also confirms that low technological capabilities hinder and discourage MSEs from fully reaching their potential.

H$_{A4}$: Entrepreneurial capabilities positively determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County

The fourth study hypothesis sought to test whether entrepreneurial capabilities positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study failed to reject this hypothesis, since the multiple regression analysis results showed that entrepreneurial capabilities significantly determined performance of coffee-based MSAs of the coffee small holders in Murang'a County (β=0.196, p=0.000 <0.05). The findings implied that having entrepreneurial capabilities resulted to increase performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.48). In advancing this discussion, Hayton and Macchitella (2013) postulated that training that focuses on building individual capacity for understanding and interpreting the environment is expected to enhance knowledge acquisition of the entrepreneur and improve his business performance.

Likewise, Bunyasi, Bwisa and Namusonge (2014) also found that improved literacy of the entrepreneurs and individuals enhance SMEs access to finance and performance. The study findings also support Kenya Vision (2030) that places great emphasis on the link between education, training and the labour market, the need to create entrepreneurial skills and competencies, mainstreaming natural values in education and training and strong public and private partnerships. Entrepreneurs cite inadequately educated workforce and a crunch at mid-level management level as major constraints faced by them. The study further concurs with Gathenya *et al.* (2012) established that education is vital for the performance of any enterprise since it influences the ability to think critically.

Hₐ₅: **Entrepreneurial culture positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County**

The fifth study hypothesis sought to test whether entrepreneurial culture positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study also rejected this hypothesis, since the results of regression analysis revealed that entrepreneurial culture had a positive and insignificant effect (β=0.021, p=0.646 >0.05) on performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.48).

These findings disagree with WB (2008) that observed that promoting an entrepreneurial culture is one of the most essential and neglected components of entrepreneurship development. The study also failed to agree with the findings of Mueller and Thomas (2001) and Mordi, Simpson, Singh, and Okafor (2010) who found that social norms, family values, networks and social value of entrepreneurship, play a key role in nurturing the entrepreneurial ecosystem.

DGGF (2015) also noted that two thirds of Kenyan respondents from a recently conducted survey believe that becoming an agripreneur is seen as a desirable career choice by most people, indicating a positive entrepreneurial culture that rewards risk-takers. Omidyar Network and Monitor Group survey (2014) believes that becoming an entrepreneur is seen as a desirable career choice by most people, indicating a positive entrepreneurial culture that rewards risk-takers. 63% of Kenyans responding in that same survey, see an entrepreneurial career as more respected than a corporate job.

4.13.3 Test for Moderating of Regulatory Framework

The study sought to test the research hypothesis that the regulatory framework positively moderates the relationship between entrepreneurial determinants and the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study adopted a moderated multiple regression analysis to test the moderating determination of the regulatory framework of the relationship between

entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study computed the interaction variables (see Table 4.49).

Table 4.49: Computation of the Interaction Variable

	Entrepreneurial Finance (X_1)	Market Conditions (X_2)	Technology integration (X_3)	Entrepreneurial Capabilities (X_4)	Entrepreneurial Culture (X_5)
Regulatory Framework (Z)	X_1*Z	X_2*Z	X_3*Z	X_4*Z	X_5*Z

The study included all the independent variables and interaction variables in one multiple regression analysis and observed the changes of R-squared and significance of the interaction variables to make a conclusion on the moderating effect of the regulatory framework on the relationship between individual independent variables and the dependent variables.

Table 4.50: Model Summary for Moderated Multiple Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449[a]	.202	.179	.41363

a. Predictors: (Constant), entrepreneurial finance (X_1), Market Conditions (X_2), Technology (X_3), Entrepreneurial Capabilities (X_4), Entrepreneurial Culture (X_5), X_1*Z, X_2*Z, X_3*Z, X_4*Z, X_5*Z,

The model summary shows that R-squared improved from 0.16 to 0.20 with the inclusion of the interaction variables in the model. The findings implied that the regulatory framework, enhanced the relationship between entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.50).

Table 4.51: ANOVA for Moderated Multiple Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	15.069	10	1.507	8.807	.000[b]
1	Residual	59.711	349	.171		
	Total	74.780	359			

a. Dependent Variable: Agribusinesses performance
b. Predictors: (Constant), entrepreneurial finance (X_1), Market Conditions (X_2), Technology (X_3), Entrepreneurial Capabilities (X_4), Entrepreneurial Culture (X_5), X_1*Z, X_2*Z, X_3*Z, X_4*Z, X_5*Z,

The findings of ANOVA revealed F-statistics =8.807 p-value = 0.000 which was less than significance level of 0.05 for the model linking entrepreneurial finance, market conditions, technology, entrepreneurial capabilities, entrepreneurial culture, X_1*Z, X_2*Z, X_3*Z, X_4*Z, and X_5*Z and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings implied that the model had better fitness and concluded that entrepreneurial finance, market conditions, Technology Integration, entrepreneurial capabilities, entrepreneurial culture, X_1*Z, X_2*Z, X_3*Z, X_4*Z, and X_5*Z were good predictors of performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.51).

Table 4.52: Coefficients for Moderated Multiple Regression Analysis

	β	Std. Error	Beta	T	Sig.
(Constant)	2.531	0.215		11.748	0.000
entrepreneurial finance (X_1)	0.323	0.133	0.61	2.428	**0.016**
Market Conditions (X_2)	0.13	0.176	0.158	0.740	0.460
Technology (X_3)	-0.062	0.157	-0.100	-0.397	0.692
Entrepreneurial Capabilities (X_4)	-0.331	0.167	-0.464	-1.984	**0.048**
Entrepreneurial Culture (X_5)	0.413	0.215	0.474	1.917	0.056
X_1*Z	-0.093	0.046	-0.661	-2.022	**0.044**
X_2*Z	0.007	0.06	0.041	0.121	0.904
X_3*Z	0.017	0.054	0.117	0.314	0.753
X_4*Z	0.202	0.062	1.347	3.254	**0.001**
X_5*Z	0.227	0.077	0.921	2.948	**0.006**

a. Dependent Variable: Agribusinesses performance

The findings showed with the inclusion with regulatory framework, entrepreneurial finance was found to have a significant effect on performance of coffee-based MSAs of the coffee small holders in Murang'a County. However, the finding showed that the regulatory framework significantly moderated the relationship between entrepreneurial finance, entrepreneurial capabilities (X_4) entrepreneurial culture (X_5) and performance of micro and small agribusinesses owned by coffee smallholder agribusinesses in Kenya (see Table 4.52). This is because the interaction variables X_1*Z, X_4*Z and X_5*Z were found to have a significant effect on performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study failed to reject the following sub hypotheses;

H$_{A6}$ (a): Regulatory framework positively moderates the relationship between entrepreneurial finance and the performance of coffee-based MSAs of the coffee small holders in Murang'a County

H$_{A6}$ (d): Regulatory framework positively moderates the relationship between entrepreneurial capabilities and the performance of coffee-based MSAs of the coffee small holders in Murang'a County

H$_{A6}$ (e): Regulatory framework positively moderates the relationship between entrepreneurial culture and the performance of coffee-based MSAs of the coffee small holders in Murang'a County

On the other hand, the study rejected the following sub hypotheses:

H$_{A6}$ (b): Regulatory framework positively moderates the relationship between market conditions and the performance of coffee-based MSAs of the coffee small holders in Murang'a County,

H$_{A6}$ (c): Regulatory framework positively moderates the relationship between technology and the performance of coffee-based MSAs of the coffee small holders in Murang'a County

This study concurs with Mohd, Juhary, Ali, Chea, Peou and Shariff (2010) who also confirm that government policy has an important role as full moderator in such relationships. In addition, implications to growth theory and practice, limitations, and

suggestions for future research were also discussed. Similarly, Moronge and Mbugua (2016) study further established that high tax rates, tax complicity, tax compliance and bureaucratic tax payment procedures influence the performance of SMEs businesses.

Furthermore, the moderating effect of regulatory framework on the influence of independent variables on the dependent variables was also tested by the study. Independent Variables Composite (X) was computed using the geometric mean of X_1, X_2, X_3, X_4, and X_5. The interaction variable (X*Z) was computed using product of Independent Variables Composite (X) and regulatory framework (Z). The study then computed a regression analysis for using Independent Variables Composite (X), regulatory framework (Z) and interaction variable (X*Z) as predictor variables and performance of coffee-based MSAs of the coffee small holders in Murang'a County as the dependent variables. The study then observed the changes in R-squared and significance of the interaction variable (X*Z).

Table 4.53 Model Summary of OLS Test for Moderation

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.331[a]	.110	.102	.43361

a. Predictors: (Constant), X*Z, Independent variables Composite (X), Regulatory Framework (Z)

The findings showed a regulatory framework reduced the effect of entrepreneurial determinants combined with performance of coffee-based MSAs of the coffee small holders in Murang'a County since it reduces the R-squared from 0.16 to 0.11 (see Table 4.53).

Table 4.54 ANOVA of OLS Test for Moderation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.271	3	2.757	14.663	.000[b]
	Residual	67.121	357	.188		
	Total	75.392	360			

a. Dependent Variable: Agribusinesses performance

b. Predictors: (Constant), X*Z, Independent variables Composite (X) , Regulatory Framework (Z)

This model had a goodness of fit as is shown by f=14.663, p=0.000 which implied that X*Z, Independent variables Composite (X), Regulatory Framework (Z) predicted performance of coffee-based MSAs of the coffee small holders in Murang'a County (see Table 4.54).

Table 4.55 Regression Coefficients of OLS Test for Moderation

	B	Std. Error	Beta	t	Sig.
(Constant)	1.378	0.93		1.483	0.139
Independent Variables Composite (X)	0.861	0.275	0.706	3.129	0.002
Regulatory Framework (Z)	0.466	0.355	0.583	1.311	0.191
X*Z	-0.16	0.102	-0.921	-1.564	0.119

a. Dependent Variable: Agribusinesses performance

Since the interaction variable (X*Z,) had insignificant the study concluded regulatory framework does not significantly moderate the relationship between entrepreneurial determinants combined and performance of coffee-based MSAs of the coffee small holders in Murang'a County. H_{A6}: regulatory framework moderates the relationship between entrepreneurial determinants and the performance of coffee-based MSAs of the coffee small holders in Murang'a County was rejected (see Table 4.55).

At this point study finding disagrees with Mohd, Juhary, Ali, Chea, Peou and Shariff (2010) who also confirm that government policy has an important role as full moderator in such relationships. In addition, implications to growth theory and practice, limitations, and suggestions for future research were also discussed.

Similarly, the study disagrees with Moronge and Mbugua (2016) study further established that high tax rates, tax complicity, tax compliance and bureaucratic tax payment procedures influence the performance of SMEs businesses.

DGGF (2015) also attested that many areas of Government policy affect levels of entrepreneurial activity - regulatory policies, trade policies, labor market policies, regional development policies, social policies, and even gender policies. The mix of policy options depends on a number of factors, including the prevailing attitudes of the population towards entrepreneurship, the structure of the labor force, the size and role of Government, the prevalence of the existing level of entrepreneurial activity and the existing MSMEs.

The results presented in Table 4.56 show the summary of the all hypothesis, results and decision made whether to reject or fail to reject the hypothesis.

Table 4.56: Summary of the test of hypotheses

Hypotheses	Results	Decision
H_{A1}: entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County.	p=0.057> 0.05)	Rejected HA1
H_{A2}: Market conditions significantly determine performance of coffee-based MSAs of the coffee small holders in Murang'a County.	p=0.000 < 0.05)	Fail to Reject HA2
H_{A3}: Technology positively determine performance of micro and small agribusinesses of the coffee smallholders in Murang'a County.	p=0.703 > 0.05)	Rejected HA3
H_{A4}: Entrepreneurial capabilities positively determine performance of coffee-based MSAs of the coffee small holders in Murang'a County.	p=0.000 < 0.05)	Fail to Reject HA4
H_{A5}: Entrepreneurial culture positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.646 >0.05)	Rejected HA5
H_{A6} (a): Regulatory framework positively moderates the relationship between entrepreneurial finance and the performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.044< 0.05)	Fail to Reject HA6 (a)
H_{A6} (b): Regulatory framework positively moderates the relationship between market conditions and the performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.904>0.05)	Rejected HA6 (b)

Hypotheses	Results	Decision
H$_{A6}$ (c): Regulatory framework positively moderates the relationship between technology and the performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.753>0.05)	Rejected HA6 (c)
H$_{A6}$ (d): Regulatory framework positively moderates the relationship between entrepreneurial capabilities and the performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.001< 0.05)	Fail to Reject HA6 (d)
H$_{A6}$ (e): Regulatory framework positively moderates the relationship between entrepreneurial culture and the performance of coffee-based MSAs of the coffee small holders in Murang'a County	p=0.006< 0.05)	Fail to Reject HA6 (e)

4.13.4 Optimal Model

This section presents the model optimization and the revised conceptual framework. In the optimal model and revised only variables that were found to have a significant determinant of performance of coffee-based MSAs of the coffee small holders in Murang'a County based on multivariate regression analysis were included. Based on the study results market conditions and entrepreneurial capabilities were found to have a positive and significant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County. Hence, the proposed model;

a) $Y = \propto + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_0$………………….…. (1)

Model (1) was condensed to;

$Y = 2.527 + 0.164 X_2 + 0.196 X_4 + \varepsilon_0$ …………………………………… (2)

Y= Agribusiness Performance

X$_2$ $_=$ Market Conditions

X$_4$ $=$ Entrepreneurial Capabilities

Based on the study findings the study was able to identify the independent variables along the moderating effect on determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County. Conversely, the revised conceptual framework as shown in Figure 4.20 depicted that market conditions and

entrepreneurial capabilities were significant in determining the performance of coffee-based MSAs of the coffee small holders in Murang'a County. Regulatory framework was found to have a significant moderating determination of the relationship between entrepreneurial capabilities and performance of coffee-based MSAs of the coffee small holders in Murang'a County.

The indictors of market conditions that significantly influenced performance of coffee-based MSAs of the coffee small holders in Murang'a County included access to markets and market competition. Similarly, entrepreneurial skills and trainings were the main significant factors of entrepreneurial capabilities that influenced the performance of coffee-based MSAs of the coffee small holders in Murang'a County.

Market Conditions
- Access to Markets
- Market Competition
- Product Quality
- Demand & Supply

+ve, sig

Entrepreneurial Capabilities
- Entrepreneurial skills
- Entrepreneurial training
- Employee's teamwork
- Entrepreneurial motivation

+ve, sig

Performance of Micro and Small Agribusinesses in Murang'a

Regulatory Framework
- Agribusiness registration
- Tax Policies
- Tax incentives
- Labour Market
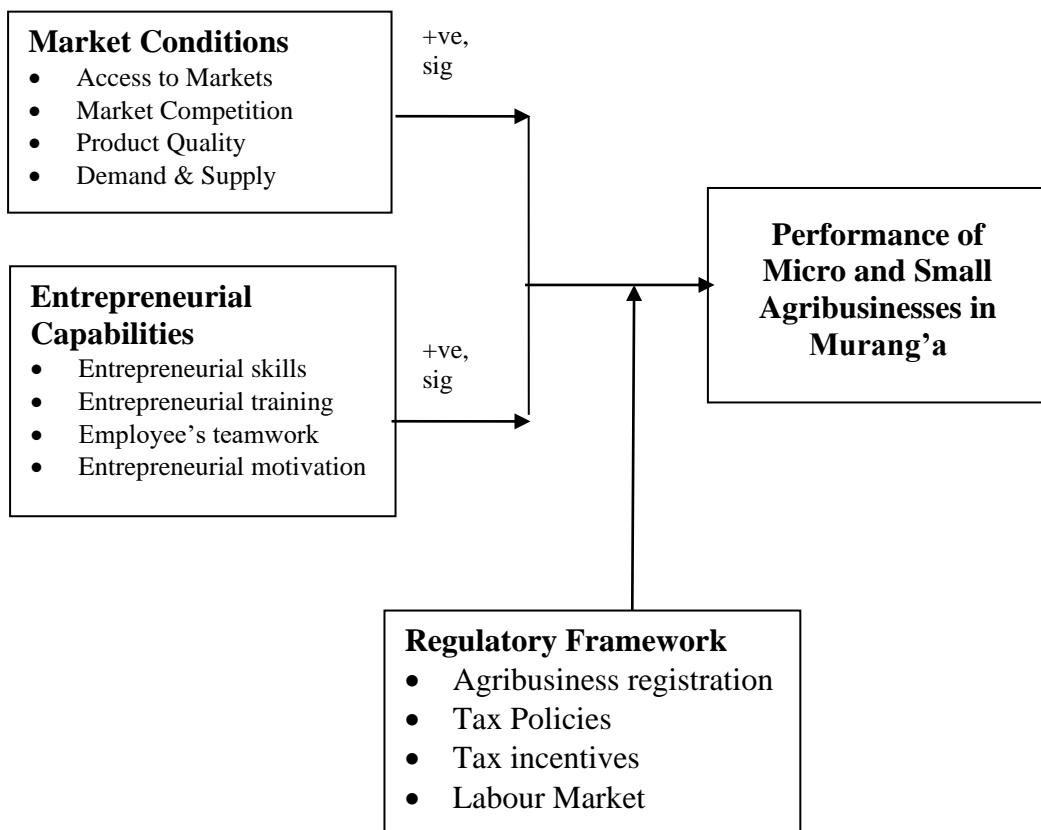
Figure 4.20: Revised Conceptual Framework

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to examine the entrepreneurial determinants of performance of coffee-based MSAs of the coffee small holders in Murang'a County. This chapter presents the summary of the findings, conclusions and recommendations on the research results based on the objectives of the study. The section looks at the implications of the findings to the existing body of knowledge and its wider application in the field of entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings are discussed, conclusions drawn and recommendations made. Finally, the chapter outlines directions for future research.

5.2 Summary

The study was guided by six specific objectives focusing on investigating how entrepreneurial finance, marketing conditions, technology, entrepreneurial capabilities, entrepreneurial culture and regulatory framework all determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The target population of this study was 146,105 comprising of the coffee smallholders affiliated to cooperative sector within eight sub counties of Murang'a County. Sampling with probability proportionate to size was used to get a sample size of 384 respondents drawn from the eight Sub Counties of the County.

5.2.1 Entrepreneurial Finance and Performance of Micro and Small Agribusinesses

The study sought to test the research hypothesis that entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study established that majority of these agribusinesses had low entrepreneurial finance from financial institutions attributed to lack of

collaterals, unfriendly grace periods and higher interest rates hence finance being a significant barrier to performance. The study established that financiers required collateral in the form of property, and in many cases Agripreneurs lacked the appropriate collateral thus being locked out. The findings revealed that the majority of the agribusinesses relied on retained savings to finance their operations while the rest financed their agripreneurships using borrowed funds from financial institutions. The regression analysis, on the other hand, showed that entrepreneurial finance had a positive but the insignificant determination of performance of coffee smallholder agribusinesses in Murang'a. Based on these findings, the study rejected H_{A1}: entrepreneurial finance positively determines performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.2.2 Market Conditions and Performance of Micro and Small Agribusinesses

The second research hypothesis aspired to test whether market conditions positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings of the study established that easy access to markets, customers' preferences, demand and supply factors were among the key market conditions that determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County in the study area. The correlation analysis and regression analysis findings showed that market conditions positively and significantly determined the performance of these agribusinesses. Based on these findings, the study failed to reject H_{A2}: Market conditions positively determine the performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.2.3 Technology and Performance of Micro and Small Agribusinesses

The third study hypothesis pursued to test whether technology positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings disclosed that there was an average adoption of technology use to improve efficiency within these agribusinesses. The findings as well established that affordability of modern technology wasn't a hiccup to these agribusinesses. The study unraveled that capacity building through trainings and demonstrations had enhanced use of technology within these agricultural ventures.

The study established that there was as well average adoption of online business practices with the use of mobile phone services standing out as the most commonly modern technology in running agribusinesses. The results of the study revealed that technology had a negative and insignificant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County. Based on these findings the study rejected H_{A3}: technology positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study findings revealed that the agribusinesses have considerable capacity for technology, but have limited ability to fully translate science and technology into new products and processes that would spur growth.

5.2.4 Entrepreneurial Capabilities and Performance of Micro and Small Agribusinesses

The study hypothesis worked to test whether entrepreneurial capabilities positively determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. To satisfy this; entrepreneurial skills, employee teamwork, employee training, employees' motivation were analyzed. The study established that majority of the owner managers of the agribusinesses within the study area possessed entrepreneurial skills to run their ventures. The study found out that owner managers of these MSAs had acquired pertinent trainings to boost the running of their agricultural ventures.

Beside this, the study established that majority of employees engaged by these undertakings had not secured any relevant trainings which then bore a challenge in efficiency and productivity to these ventures. The study also found out that team work was integral fabric in the majority of these enterprises and propelled them to a common goal.

The study found that a significant number of these investments had embraced motivating their employees and creates individual commitment to work and output. The study found out that the majority of the owner manager's recruited employees who possessed some form of relevant experience in working in agricultural farms

and increasing efficiency and quality of farm output. Based on these findings, the study failed to reject H_{A4}: that entrepreneurial capability positively determined performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.2.5 Entrepreneurial Culture and Performance of Micro and Small Agribusinesses

The objective of this research hypothesis was to evaluate how entrepreneurial culture determines performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study assessed entrepreneurial mindset, entrepreneurial education, risk taking, entrepreneurial mentorship, and their determination on performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study rejected this hypothesis, since the results of regression analysis revealed that entrepreneurial culture had insignificant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.2.6 Moderating determination of Regulatory Framework

The study finally moved to test how the regulatory framework moderates the relationship between entrepreneurial determinants and performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study observed that government taxation policies, government incentives, government's labour market regulations and county government policies on MSAs determined the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The findings revealed that the regulatory framework significantly moderated the relationship between entrepreneurial finance, entrepreneurial capabilities, entrepreneurial culture and performance of coffee-based MSAs of the coffee small holders in Murang'a County. Regulatory framework did not significantly moderate the relationship between market conditions, technology integration and performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.3 Conclusions

Based on the above findings, the study drew key conclusions arising from each of the specific objectives of the study.

5.3.1 Entrepreneurial Finance and Performance of Micro and Small Agribusinesses

First, the study concludes that entrepreneurial finance had a positive but insignificant determination of performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study observed that because of the many hindrances and challenges experienced in accessing credit from financial institutions among the coffee smallholders' agribusinesses, hence concluding that this is why the majority have resorted to different means available for financing notably self-financing from personal savings. WB (2013; GEM 2016; Wamuyu *et al.* 2017) studies aver that entrepreneurs rely to a great extent on their personal savings to fund their entrepreneurial ventures in all areas of the world. Notwithstanding, ensuring entrepreneurial finance by MSAs is likely to increase agribusinesses performance.

5.3.2 Market Conditions and Performance of Micro and Small Agribusinesses

The study concludes that MSAs owned by coffee smallholder entrepreneurs had readily available markets for their products. The study further concludes that agribusinesses that have access to better market conditions perform better in terms of higher sales and revenue. From findings, another significant conclusion is that the majority of the farmers are not members of agricultural co-operatives societies that would be effective in delivering economic liberation of the smallholder agribusinesses.

Vanni (2014; Mutura *et al.* 2015; Chagwiza *et al.*2016) behold that households in collective action in marketing gain more income from their agribusinesses than those who doesn't. More so, there is a great possibility to organize farmers into clusters that can mobilize their individual members to centralized places. The study concludes that buyers take advantage of farmers' ignorance to offer very low prices, especially for some products like macadamia and avocado.

The study also concludes that presence of middlemen and unscrupulous businessmen made market conditions unfavourable for these agribusinesses. Nonetheless, middlemen or rather agents in the agribusinesses production and marketing value

chain are important. However, exploitation of the farmers with the same is rampant. Farmers do not have the information on the market prices for the crop. The farm gate prices offered by the agents sometimes are much lower resulting in farmer exploitation which may result in some abandoning the crop. The study concludes that enabling access to market information can be enhanced by leveraging on online services and use of local vernacular media services. This is supported by the investigations of Mutura *et a.l* 2015; Mutonyi *et al* 2016). With regard to market conditions, it was observed that they play a significant role in contributing to the expansion of the agribusiness sector in Murang'a County.

5.3.3 Technology Integration and Performance of Micro and Small Agribusinesses

The study concludes that there is an average adoption of the use of technology in running the agribusiness sector in Kenya. This concurs with (Muturi *et al.* 2013; Chairoel *et al.* 2015; Kariuki et al.2018) studies on MSEs technology integration. The study concludes that inadequate resources, notably limited access to finance have hindered MSAs employing better technology in their bold undertakings. The limited finance has been affirmed by (Baumüller, 2015; UN,2015; Ndesaulwa & Kikula, 2016).

Subsequently, the study concludes that this has significantly limited these agricultural ventures abilities to utilize technologies and modern innovations in producing high quality products that would attract best prices in the market. The study concludes that farmers, including those with internet enabled mobile phones do not have adequate information on best practices and trends to escalate their businesses executions. However, the study concludes that with proper utilization of technology by MSAs, would bear viable potential in enhancing development and consequent performance of these agribusinesses.

5.3.4 Entrepreneurial Capabilities and Performance of Micro and Small Agribusinesses

The study concludes that the components of entrepreneurial capabilities, namely, entrepreneurial skills, employee teamwork, entrepreneurial training, entrepreneurial motivation contributed significantly to the performance of coffee-based MSAs of the coffee small holders in Murang'a County. The study concludes that the owner/ managers of these agricultural enterprise value investments in human resource with higher levels of individual competence achieved through training, and this underscores the performance registered by them. Further, the study concludes that agribusinesses owned by trained agripreneurs have a high probability of success or high performance compared to those that are owned by less trained owners.

The study concludes that entrepreneurial motivation being largely embraced by these MSAs stimulate the desire and energy in people to be continually getting interested and committed to a job. This is in harmony with Oroni *et al*. (2014; Nyang'au *et al.* 2014; Machmud & Sidharta, 2016) studies that entrepreneurial motivation result in increased enterprises performance. The study concludes that team work was a fabric that collaborated the effort among a greater number of these entities in an effort to achieve a common agenda. This coheres with Boakye (2015; Sanyal & Hisam, 2018; Hwang, 2018) observation that the success of any enterprise requires the positive force of teamwork, to empower and develop their potentials. The study concludes that trained agripreneurs can access information which is critical in marketing of produce, using effective production technologies and are generally more prepared to handle all the aspects of the agribusinesses better than less trained agribusiness owners.

The study concludes that recruiting experienced workforce help connect between the workforce and performance of these commercial establishments. Further, the study concludes that smallholders' benefits more from a collective action being carried out by a sound cooperative society through increased marginal returns. This is achieved via increased human capital attained through training which improves their production capabilities and management of their agribusinesses. The findings

implied that the adoption of entrepreneurial capabilities is directly related to increase in performance of coffee-based MSAs of the coffee small holders in Murang'a County.

5.3.5 Entrepreneurial Culture and Performance of Micro and Small Agribusinesses

The study concluded that entrepreneurial culture played a role starting and owning micro and small agribusinesses in Kenya but does not significantly determine the performance of the micro and small agribusinesses. The study concludes that entrepreneurial mindset was a significant trait that motivated the agripreneurs create, pursue and develop economic ventures. This is supported by GEM (2016; Omwenga & Mukulu, 2015) observation that entrepreneurial mindset stimulates MSEs performance.

The study concluded that these ventures valued continuous acquisition of knowledge and skills by an individual's learning activities to increase output. This is in agreement with Vakili *et al.* (2016; Ndlovu *et al.* 2018; Chiliya & Lombard, 2012) that entrepreneurial training has a great impact on MSAs performance. Further, the study concluded that many farmers are risk averse and tend to be more receptive to less risky farming activities and considering the risk nature of these ventures. This coheres with Wambugu *et al.* (2015; Asgary *et al.* 2020; Dvorsky *et al.* 2020) risk this remains one of the impediments to expansive growth of these agricultural undertakings.

5.3.6 Moderating determination of Regulatory Framework of the relationship between entrepreneurial determinants and performance of micro and small agribusinesses

The study concluded that the existing regulatory framework, especially in regard to micro and small business determines the how agribusiness use the factors of production to enhance their performance. This is supported by Cepel *et al.* (2016; Sitharam & Hope,2016; Musyoka & Odame,2012) that globally the legal and

administrative burdens are a critical factor affecting entrepreneurial performance and have been identified as a potential binding constraint to entrepreneurial activity.

The study found out that lack of formalization of the smallholder agribusinesses implies that such small business lacks the necessary documentation to obtain credit from formal financial institutions. This is consistent with the establishments of DGGF (2015; Cook & Olafsen, 2016) that lack of registration impede MSEs benefit from the government subsidies and incentives targeting the small businesses. Agribusiness-enabling environments are very instrumental and the return on investment is high in emerging markets when governments invest in basic infrastructure and business services.

The study concludes that despite the county government having taken up the aspects of agriculture development   responsibilities such as extension services and farmer training with devolution the agripreneurs were yet to benefit from this and which would have an effect on a whole agribusiness value chain. Market players in agribusinesses help create competitive, sustainable agribusiness environments by partnering with governments and pursuing market opportunities. In conclusion, comprehensive government, entrepreneurship programs can greatly enhance and facilitate entrepreneurial activity in agribusinesses. This will come from providing the services required to support entrepreneurs in MSAs emanating from all levels of government including national and county levels.

5.3.7 Contribution of the Study to Knowledge

This study contributed to both theoretical and empirical knowledge in the field of entrepreneurship and especially agribusiness. The study expounded the importance of entrepreneurship theories such Resource-based theory of entrepreneurial finance, Entrepreneurial Marketing theory, Technology Acceptance Model (TAM), Human capital entrepreneurial theory and Sociological theory of entrepreneurship and their relationship with performance of small and medium size enterprises.

The study further contributed to existing knowledge by demonstrating that in a context where there is low access to external entrepreneurial finance or access is subject to short grace periods, high interests and strict conditions, the effect of such finance is insignificant to the performance of micro and small agribusinesses as agribusinesses shy from borrowed funds from financial institutions and opt for own savings. The research further showed that despite significance effect of technology integration on performance of businesses, as shown by existing theories and empirical studies, this is not usually the case in the context of MSAEs as technology integration has not been fully utilized leading to reduced performance of these enterprises.

This research expands on the growing literature on performance of MSAEs by providing new evidence that market conditions and entrepreneurial capabilities were found to have a positive and significant determination of performance of micro and small agribusinesses. The research has also established that half of the agribusinesses have not been formally registered with either the county government or the central government and this is detrimental to them in accessing external resources. Finally, the entrepreneurial capabilities tested comprising of teamwork among workers, knowledge and trainings, workers' motivation and engaging experienced workers was the most significant determinant of the performance of coffee smallholder agribusinesses.

5.4 Recommendations

Since the study focused on the influence of entrepreneurial determinants on performance of coffee-based MSAs of the coffee small holders in Murang'a County, the following recommendations are made as a way of addressing these entrepreneurial determinants and which are based on study conclusions.

5.4.1 Recommendation for Practice Improvement

1. The study recommends that management of financial institutions should revise their policies in regard to collaterals demanded, loans grace periods

and interest rates attached to credit applications by smallholder agribusiness farmers. The financial entities shouldn't peg the provision of finance to the movable collaterals but rethink other factors such as viability of the agribusiness in practice and recommendations on credit worthiness of a particular farmer from other organizations that this farmer have had past dealings. Along this, the study recommends financiers should design products that are appropriate for these agricultural enterprises, which is a high cash industry, with tailor made innovative products for start-up and for working capital in a way that fits both micro and small agribusinesses. These quick fixes will address the agripreneurs woes and go a long way in ensuring access to entrepreneurial finance by MSAEs not only in Murang'a County but Kenya at large.

2. The study recommends that the county government should steer the establishment of strong farmers' associations' right from the village level, ward, Sub County, County and National level with linkages to private sector players to enhance solidarity among smallholder farmers in order to buffer market dynamics as well as for social and economic gains. The study recommends that farmers associations in collaboration with the line ministries at the county governments to continuously conduct market research on how to package and present the produce besides identifying sales opportunities, identifying risks and developing plans of action.

3. The study recommends facilitation of capacity building for farmers within market associations through the line agricultural ministries at county and national governments. This could take place through business skill training courses as well as visits to other markets to enable individual farmers and as well leaders to exchange ideas. The farmer associations will also benefit from capacity building to enhance their management and governance issues with their members. Further, to navigate the problem of oppressive middlemen and cartels, the study recommends agripreneurs to work together with their

respective agricultural associations to lock out unscrupulous middlemen from the markets systems with an aim to increase profitability.

4. The study further recommends that both county and national governments through concerned ministry and agencies should work together to make market conditions favourable. This includes and not limited to, building roads to ease access to markets, building markets, providing security and fighting corruption to make market conditions favorable to small businesses. The study recommends the county government to develop information portals through internet, notice boards and even radio for accessing market information at the grassroots level. This will prevent buyers taking advantage of farmers' ignorance to offer very low prices for their produce. The study recommends that for the individual farmer, it calls for working with various levels of farmer organizations from farmers' groups to cooperatives—in areas of market analysis, financing, sales and building business opportunities for farming clientele.

5. The study recommends that owners of micro and small agribusinesses in Kenya should embrace the use of technological innovations in production and marketing of their produce to increase performance. In achieving this, the study recommends that the county governments and the national government through their line ministries and with linkages to the private sector should create provision for comprehensive input subsidy programs to ensure technologies are available and affordable. The study recommends that agribusiness associations may contribute to the affordability of technologies as well through bulk buying of the modern technologies and directly leasing the same to the individual members in appropriate quantities and need basis.

6. The study recommends that in endeavour towards accelerating farm technology adoption, the county governments in collaboration with like-minded agencies like African Women in Agribusiness Network-Kenya

(AWAN-Kenya) in the private sector should establish smallholder credit schemes, inclined to assisting in purchasing of pertinent agricultural technologies. In this regard, the study further recommends that the government through its line ministry should come in as a guarantor in securing finance from these financial institutions because in many instances these financial entities shy away from these agricultural pursuits due to their risky nature of their undertakings.

7. The study recommends that an alternative approach to securing modern technology could be used to mobilize the smallholders to form organizations through which resources are pooled and/or obtain additional funding from the government, NGOs or financial institutions. Whichever approach is chosen, the study recommends that the funds should be low-interest and easily accessible. In this, the study recommends that strategies must focus on identification of the constraints which may be responsible for the lack of adoption or under-utilization of proven technologies by farmers in various areas. This study recommends that management of agricultural co-operatives should spearhead technology integration and disseminating up to date information on relevant technologies on behalf of their members. The study recommends for more participatory research between the county governments and other liked minded institutions like JKUAT and KARI and which is based on identified needs and disseminating the results through common mode and in understandable language.

8. On the entrepreneurial capabilities, the study recommends public-private partnerships on the training the smallholder agribusiness farmers on the best agripreneurships practices. In accomplishing this, the study recommends that since agriculture sector is among the functions that are coordinated by both county and national governments, these institutions should hire professionals to train smallholder farmers through seminars, agricultural field awareness days, agricultural shows and other forums to equip them with entrepreneurial

capabilities that help them steer performance of these ventures to higher scales. The study recommends mobile trainings on technology and this should be executed by the line ministries within the county governments in collaboration with the private sector, research institutions like JKUAT, KARI and the farmers. The study recommends that the county governments in linkage with the Ministry of labour should regulate motivation policies in public institutions in order to address some of the inadequacies in employee motivation and performance.

9. The study recommends that due to the risky nature of the agribusiness undertakings, the county governments and donor agencies should come in to facilitate in the provision of insurance schemes to these agricultural practices. This will assist to sustain these agricultural ventures in situations where these entrepreneurs my encounter unforeseen calamities. The study recommends for a public-private partnership that brings on board the learning institutions to create platforms for nurturing human characteristic traits like entrepreneurial mindset, the capacity to take risks, ability to innovate and identify profit opportunities that are highly associated with having business ideas.

10. The study recommends promotion of entrepreneurship education by adapting education curricula and skills training in rural areas to particular needs would be an important step in supporting the rural youth in becoming entrepreneurs along the agribusiness value chain. Besides this, the study recommends the curriculum within our current curriculum and the one that the government has started rolling out should produce technically trained personnel. The study recommends that the curriculum content and development targeting all levels of education, including primary, secondary and tertiary levels should be linked to harnessing the entrepreneurial spirit of young budding farmers, and has greater relevance to a diverse and evolving agricultural sector, with a focus on agribusiness education. On providing information to farmers and

entrepreneurs on existing opportunities, the study recommends working with both print and audio media to create awareness, documenting best practices, profiling success stories of various successful micro and small agribusiness ventures within the county and the rest of the world. Besides, having interactive radio programs supported by the county governments, private sector, civil society and the media fraternity enable small holder farmers to learn about interventions that are going on through radio programs and are proving to be successful.

5.4.2 Policy Recommendations

The study recommends the need for the national government to safeguard domestic markets putting laws and regulations in place to prevent these agribusinesses from exploitation by agents and brokers. The study recommends that, for a successful agribusiness sector to thrive, both the county and national government should create a social, economic and political environments supportive to these bold ventures. The study recommends that the County and national governments should institute favorable policies to facilitate access to formal financing for these entrepreneurs.

In view of agriculture being a devolved function of the county governments under the 4th schedule of the 2010 Kenyan constitution, the study recommends that county governments should support and oversee successful agribusiness sector through facilitation in research, farm inputs and other extensive services to farmers in order to improve the efficiency of their production and marketing. The study recommends that the county government and the registrar of business entities should facilitate the process to be done at the county levels and should be less complex to encourage informal agribusinesses to register their businesses.

5.5 Areas for Further Research

This study proposes various areas of study as follows;
1. This study established that entrepreneurial finance, technology, and entrepreneurial culture had insignificant determination of performance of

coffee-based MSAs of the coffee small holders in Murang'a County. Therefore, further research should be conducted in these areas on a different sample in different regions to test whether the contextual difference will determine the results.

2. The study further established that the contribution of access to finance, market conditions, technology, entrepreneurial capabilities and entrepreneurial culture on performance of MSAEs was very small, hence further studies should focus on establishing other determinants that explain the large variation in performance of micro and small agribusiness in Kenya.

3. The study proposes further studies on vertical diversification where farmers through their co-operatives have an opportunity to add value to their crops through processing and packaging.

4. The study also recommends that further studies should test whether entrepreneurial culture moderates the relationship between entrepreneurial determinants and performance of micro and small agribusinesses in Kenya since entrepreneurial culture was found to have insignificant effects as predictor variable.

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APPENDICES

Appendix I: Introduction Letter

JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY
P.O. BOX 62000-00200 NAIROBI, KENYA. TELEPHONE: (020) – 221306

Nairobi CBD Campus

Entrepreneurship & Procurement Department

Our Ref: JKU/6/EPD/17a   DATE: 8th March, 2018

To Whom It May Concern;

SUBJECT: MACHARIA GICHICHI S. – HD413-C004-1113/2015

This is to introduce to you Mr. Macharia Gichichi who is a student pursuing Doctor of Philosophy (PhD) Entreprenuership Programme at Jomo Kenyatta University of Agriculture and Technology, Nairobi CBD Campus. The student is currently undertaking a Thesis entitled: *Entrepreneurial Determinantson Performance of Micro and Small Agribusinesses of Coffee Smallholders in Kenya* - in partial fulfillment of the requirement for the degree programme.

The purpose of this letter is to request you to give the student the necessary support and assistance to enable him obtain necessary data for the project. Please note that the information given is purely for academic purpose and will be treated with strict confidence.

Thank you

Yours faithfully,

Mary Kamaara (Ph. D)

ASSOCIATE CHAIRMAN, EPD

/mn

JKUAT is ISO 9001:2008 and 14001:2004 Certified.
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Appendix II: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 726933

Date of Issue:15/May/2018

RESEARCH LICENSE

This is to Certify that Mr. GICHICHI SAMUEL MACHARIA of Jomo Kenyatta University of Agriculture and Technology, has been licensed to conduct research in Muranga on the topic: ENTREPRENEURIAL DETERMINANTS OF PERFORMANCE OF MICRO AND SMALL AGRIBUSINESSES OF THE COFFEE SMALLHOLDERS IN KENYA for the period ending : 15/May/2022.

License No NACOSTI/P/21/10525

726933
Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
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Appendix III: Questionnaire

Introduction

Kindly fill your response in the space provided or tick **(√)** as appropriate. All the information provided here will be considered private and confidential for the purpose of this research **ONLY**.

Declaration by Respondent

I hereby agree to participate in the completion of this questionnaire.

Date of interview (dd/mm/yyyy)…………………………

Telephone Number……………………………

Sub- County of respondent ……………………..

SECTION A

BACKGROUND INFORMATION:(Tick as appropriate (√)

1) How many years of experience do you have in the coffee farming?

Less than 3 years [   ]   3 -7 years [   ]   7- 15 years [   ]   More than 15 years [   ]

2) What other type(s) of agribusiness are you undertaking?

Dairy farming [   ]   Avocado farming [   ] Banana farming [   ] Poultry farming [   ]   French beans farming [   ] Pig farming [   ]   Macadamia farming [   ] Fruits [   ]

(Please specify)…………Vegetables   [   ]   (Please specify …………………….

Other agribusiness

(specify)…..…………………………………………………….

3) How many years have you been in this other(s) agribusiness?

Less than 3 years [   ] 3 -5 years [   ] 5-10 years [   ]   More than 10 years [   ]

4) What are the reasons that made you move/diversify from coffee farming?

  i. …………………………………………………………………………

  ii. …………………………………………………………………………

  iii. …………………………………………………………………………

<div align="center">SECTION B</div>

How do you finance your agribusiness?

   Borrowing [   ]   Own savings [   ]

 If borrowing, indicate the source

 SACCOs   [   ]   Relatives & friends   [   ]   Micro finance [   ] Mshwari [   ]

   Merry go round   [   ] others…………………………………………

6) To what extent are the following elements of *access to finance* an obstacle to current operations of your agribusiness?

		Strongly Disagree	Disagree	Do Not	Agree	Strongly Agree
	Collaterals (title deeds, log books) have been available enabling access to finance					
	Grace periods given by lenders have enabled me access finance					
	Finance access through group liability lending works for my agribusiness					

		Strongly Disagree	Disagree	Do Not	Agree	Strongly Agree
	Lenders interest rates encourage access to finance					

What are your comments on access to finance?

a. …………………………………………………………….....................
......

b. ……………………………………………………………

c. ………………………………………………………………………

SECTION C

7) To what extent are the following elements of the *market conditions* an obstacle to operations of your agribusiness?

		STRONGLY DISAGREE	DISAGREE	DO NOT KNOW	AGREE	STRONGLY AGREE
a)	Its easy to access markets to sell my products					
b)	Competitiveness in the market has reduced my sales					
c)	Product quality has increased my sales					
d)	Demand & Supply of commodities affect my sales					

(i) How do you get information on prospective markets for your agribusiness products?

Newspapers [   ]   Radio [   ] Television [ ]   other farmers [   ]

Online platforms [   ]   Others (please specify)……….

(ii) Specify how your prospective customers get to know about your agribusiness products.

Customer referrals [   ] open field days [   ] Online Marketing [   ]

Personal contacts   [   ]   Others (specify)…………………………………

iii) What key problems do you encounter in selling your agribusiness produce?

a.   ……………………………………………………………………………

b.   ……………………………………………………………………………

c.   …………………………………………………………………………….

iv) Indicate whether you a member of any farmers' agribusiness association?

YES [   ]   NO [   ]

If yes, how have you benefited from this agribusiness association membership?

a.   …………………………………………………

b.   …………………………………………………

c.   ………………………………………………….

8)   To what extent are the following elements of the *Technology* an obstacle to current operations of this agribusiness?

		Strongly Disagree	Disagree	Do Not Know	Agree	Strongly Agree
	Adoption of technology use has increased efficiency in my agribusiness					
	It's easy to afford modern technology for my agribusiness					
	Training and demonstration on technology use benefited my agribusiness					
	Adoption of digital businesses like M-pesa, Airtel money, E-Banking, E-marketing among others has benefited my agribusiness					

How does owning a mobile phone assist you in running your business?

a.   …………………………………………………….

b.   …………………………………………………..

c.   ………………………………………………….

SECTION D

9) To what extent are the following elements of the *entrepreneurial capabilities* an obstacle to current operations of your agribusiness?

	Strongly Disagree	Disagree	Do Not Know	Agree	Strongly Agree
a) I have adequate entrepreneurial skills to boost the management of my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]
b) Employees' teamwork increase productivity in my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]
c) Employee's training offered increase productivity in my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]
d) Employee's motivation is practiced in my enterprise operations	[ ]	[ ]	[ ]	[ ]	[ ]

(i) How do you recruit your workers?
    Relatives [   ] Friends [   ]   Employees referrals [   ] others
(specify)…………

(ii) Mention whether you and your workers have been trained on any relevant skills
        to operate your agribusiness enterprise
    Owner/Manager: YES [   ]   NO [   ]
If yes, which organisation offered training? ....
Workers: YES [   ]   NO [   ]

If yes, which organisation offered training? ....

SECTION F

10) To what extent are the following elements of the entrepreneurial culture an obstacle to current operations of this agribusiness?

	Strongly disagree	Disagree	Do Not Know	Agree	Strongly Agree

		Strongly disagree	Disagree	Do Not Know	Agree	Strongly Agree
a	Entrepreneurial mentality motivated my starting of my	[ ]	[ ]	[ ]	[ ]	[ ]
b	Entrepreneurial education boosted the running of my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]
c	Risk taking encouraged my start- up of my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]
d	Entrepreneurial mentorship encouraged my start of my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]

(i) What are the values that helped in the long-term planning of the agribusiness?

Family [　] Cultural [　] Religious [　] others (Please specify)………

(ii) How often are the members of your immediate family (spouse,

sons/daughters) involved in your daily activities in the business?

Always [　] Occasionally [　] Rarely [　]

SECTION G

11) To what extent are the following elements of the *Regulatory framework an* obstacle to operations of this agribusiness?

		Strongly Disagree	Disagree	Do Not Know	Agree	Strongly Agree
a	Government registration regulations are understandable and easy enhancing registering my agribusiness entity	[ ]	[ ]	[ ]	[ ]	[ ]
b	Government taxation policies affect my operations	[ ]	[ ]	[ ]	[ ]	[ ]
c	Government incentives (Subsidized inputs e.g fertilizers, waivers of credit) boost productivity of my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]

	Strongly Disagree	Disagree	Do Not Know	Agree	Strongly Agree
d Government labour market regulations affect recruitment of workers in my agribusiness	[ ]	[ ]	[ ]	[ ]	[ ]

(a) (i) Is your business registered by government?   YES   [   ] NO [   ]

If   yes,   state   the   year   of   registration   of enterprise………………………………….

If not, why has it not been registered?

ii)………………………………………………………………………………….

iii)……………………………………………………………………………….......

12) (a) Performance of the Agribusiness Enterprise.

i) Indicate your Approximate Monthly Sales;

Less than 1,000 [   ]   1,001-5,000 [   ]   5001-10,000 [   ]   10,001–15,000   [   ]

15,001-20,000 [   ]   20,001-25,000 [   ] 25,001-30,000 [   ] Above 30,000 [   ]

ii) Indicate your yearly sales resulting from your agribusiness for the last 5 years.

YEAR	Less than 50,000	50,001 – 100,000	100,001 – 200,000	200,001 – 300,000	Over 300,000
2017	[ ]	[ ]	[ ]	[ ]	[ ]
2016	[ ]	[ ]	[ ]	[ ]	[ ]
2015	[ ]	[ ]	[ ]	[ ]	[ ]
2014	[ ]	[ ]	[ ]	[ ]	[ ]
2013	[ ]	[ ]	[ ]	[ ]	[ ]

11(b) Performance of the Agribusiness Enterprise

(i) Indicate your approximate monthly profit/income in Kshs;

Less than 1,000 [   ] 1,001-5,000   [   ]   5001-10,000 [   ] 10,001 – 15,000 [   ]

15,001-20,000 [   ] 20,001-25,000 [   ]   25,001-30,000 [   ] Above 30,000[   ]

(ii) Indicate your yearly profit/income (Ksh) resulting from your agribusiness enterprise(s) for the last 5 years.

YEAR	Less than 50,000	50,001 – 100,000	100,001 – 200,000	200,001 – 300,000	Over 300,000
2017	[ ]	[ ]	[ ]	[ ]	[ ]
2016	[ ]	[ ]	[ ]	[ ]	[ ]
2015	[ ]	[ ]	[ ]	[ ]	[ ]
2014	[ ]	[ ]	[ ]	[ ]	[ ]
2013	[ ]	[ ]	[ ]	[ ]	[ ]

iii) Indicate the number of products that your agribusiness is currently offering to the market

Less than 2[   ]   less than 4 [   ]   less than 6 [   ]

iv) Has your farm business introduced any new or improved products in the past 5 years? YES [   ] NO [   ]

If yes, please provide a brief description…………………………………….

v) In your own opinion, how do you estimate your Agribusiness Performance?

Excellent [   ] Good [   ] Bad [   ]   No idea [   ]

Explain the things that have made it to be so

a) ………………………………………………………

b) ………………………………………………………

c) ………………………………………………………

V) Rate the following as regards your *agribusiness performance*

		Strongly Disagree	Disagree	Do Not Know	Agree	Strongly Agree
a	Our customers feedback on our commodities is listened to and analyzed to improve on performance					
b	We measure our customer satisfaction on quality of our products through increased customer referrals					
c	Customer royalty and retention is an indicator of our quality products and performance					
d	Customer repeat buying is an indicator of our improved quality of goods and performance					
e	Low turnover of workers is an indicator of the agribusiness performance					

i) How many customers do you serve approximately per day?

Less than 5 [   ]   5-10 [   ]   10-20 [   ] 20-30 [   ] more than 30[   ]

ii) Employment Growth for the last five (5) years

a) How many workers did you start with?

None [   ]   1-5 [   ] 5-10 [   ] 10-20 [   ] 20-30 [   ] 30-40 [   ] 40-50 [   ]

Year	Number Of Employees employed		Number of employees that left farm	
	Permanent	**Casuals**	**Permanent**	**Casuals**
2017	[ ]	[ ]	[ ]	[ ]
2016	[ ]	[ ]	[ ]	[ ]
2015	[ ]	[ ]	[ ]	[ ]
2014	[ ]	[ ]	[ ]	[ ]
2013	[ ]	[ ]	[ ]	[ ]

iii) Do you discuss and agree on the expected performance with your workers?

YES [   ]   NO [   ]

iv) If yes, how do you see it (the discussion you have with them) improving on your business performance?

a) …………………………………………………………………………………

b) …………………………………………………………………………………

c) …………………………………………………………………………………

Thank you for participating in the research

Appendix IV: Kenya MSME Bill 2009 & MSE Act 2012

FIGURES					MSME DEFINITIONS		
Kenya MSME Bill 2009 & MSE Act 2012					World Bank Enterprise Survey, 2013	Chase Bank	KCB
Type of enterprise	No. of employees	Annual turnover limit	Investment in P&M+Capital	Equipment investment +Capital	No. of employees	Monthly turnover	Monthly turnover
Micro	1-9	<US$ 5000	Up to US$ 0.1 mn	Up to US$ 52000	<5	<US$ 250	Up to US$ 10 mn
Small	10-49	US$ 5000 to <52000	More than US$ 0.1 mn but less than 0.5 mn	More than US$ 52000 but less than 0.21 mn	5-19	<US$ 250 to 1030	
Medium	50-99	US$ 52000 to 8.25 mn	Not specified	Not specified	20-99		

Source: Dutch Good Growth Fund (2015). Government of Kenya, Chase Bank and Kenya Commercial Bank (primary research).

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Appendix IV: Summary of Objectives, Hypotheses and Analytical Methods

Objective	Hypothesis	Analysis Method	Model Estimation	Interpretation of results
To establish how entrepreneurial finance determine the performance of micro and small agribusiness of coffee smallholders in Kenya	**H01:** entrepreneurial finance does not determine performance of micro and small agribusiness of coffee smallholders in Kenya.	Karl Pearson's correlation coefficient & simple linear regression analysis	$Y_i = \beta_o + \beta_1(EF) + \varepsilon_o$ EF= entrepreneurial finance	Pearson product moment correlation coefficient (r) will measure linear association. Regression analysis will provide nature of the relationship and significance level at 95 confidence level.
To evaluate how market conditions determine performance of micro and small agribusiness of coffee smallholders in Kenya	**H02:** Market conditions does not determine performance of micro and small agribusiness of coffee smallholders in Kenya	Karl Pearson's correlation coefficient & simple linear regression analysis	$Y_i = \beta_o + \beta_2(MC) + \varepsilon_o$ MC= market conditions	Pearson product moment correlation coefficient (r) will measure linear association. Regression analysis will provide nature of the relationship and significance level at 95 confidence level.
To examine how technology determine performance of micro and	**H03:** technology does not determine and performance of micro and	Karl Pearson's correlation coefficient & simple	$Y_i = \beta_o + \beta_3(T) + \varepsilon_o$ T = technology	Pearson product moment correlation coefficient (r) will measure

Objective	Hypothesis	Analysis Method	Model Estimation	Interpretation of results
small agribusiness of coffee smallholders in Kenya.	small agribusiness of coffee smallholders in Kenya	linear regression analysis		linear association. Regression analysis will provide nature of the relationship and significance level at 95 confidence level.
To find out how entrepreneurial capabilities determine performance of micro and small agribusiness of coffee smallholders in Kenya.	**H_{04}:** Entrepreneurial does not determine capabilities and performance of micro and small agribusiness of coffee smallholders in Kenya	Karl Pearson's correlation coefficient & simple linear regression analysis	$Y_i = \beta_o + \beta_4(EC) + \varepsilon_o$ EC= Entrepreneurial Capabilities	Pearson product moment correlation coefficient (r) will measure linear association. Regression analysis will provide nature of the relationship and significance level at 95 confidence level.
To find out how entrepreneurial culture determine performance of micro and small agribusiness of coffee smallholders in Murang'a County,	**H_{05}:** Entrepreneurial culture does not and performance of micro and small agribusiness of coffee smallholders in Kenya	Karl Pearson's correlation coefficient & simple linear regression analysis	$Y_i = \beta_o + \beta_4(EC) + \varepsilon_o$ EC= Entrepreneurial Culture	Pearson product moment correlation coefficient (r) will measure linear association. Regression analysis will provide nature of the

Objective	Hypothesis	Analysis Method	Model Estimation	Interpretation of results
Kenya				relationship and significance level at 95 confidence level.
To establish the moderating determination of regulatory framework on performance of micro and small agribusiness of coffee smallholders in Kenya	H_{06}: Regulatory framework does not have a moderating determination on performance of micro and small agribusiness of coffee smallholders in Kenya.	simple linear regression analysis	$Y=\propto+\beta_1(EF)Z+\beta_2(MC)Z+\beta_3(TC)Z+\beta_4(MC)Z+e_0$	Regression analysis will provide nature of the relationship and significance level at 95 confidence level. The R-Squared will be compared with and without the moderating variable

Appendix IV: The EIP framework; OECD/ Eurostat model, 2012.

Determinants	Entrepreneurial	Impact

Regulatory framewo	R&D and Technol	Entrepreneurial capabilities

Firm-Based indicators	Job Creation

Culture	Access to finance	Market conditions

Employment – based indicators	Economic growth

Other indicators of entrepreneurial	Poverty reduction
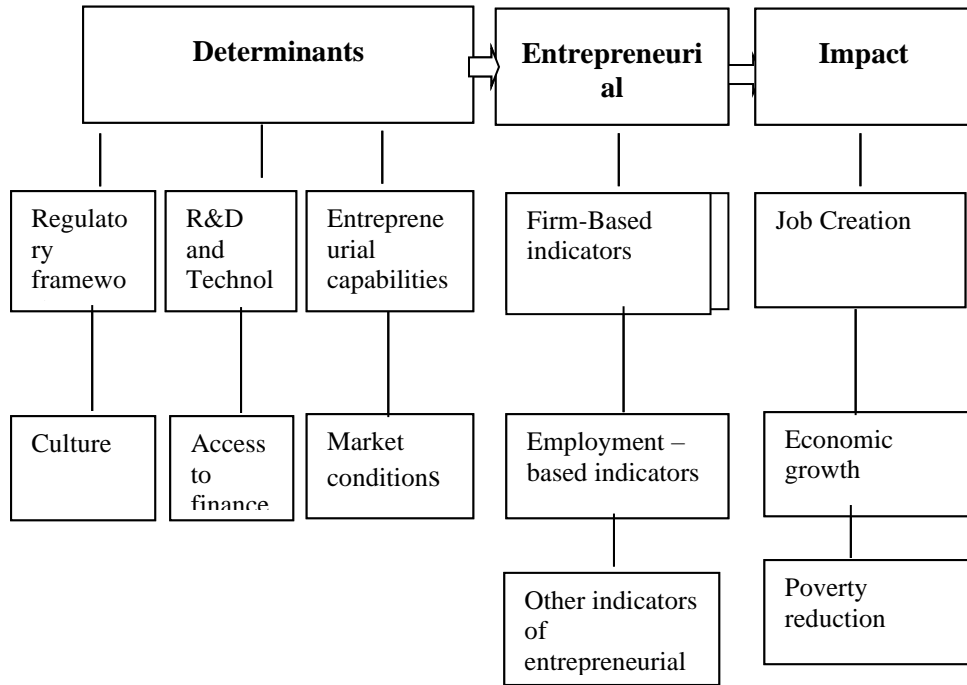
Appendix V: The OECD / Eurostat framework for entrepreneurship indicators

Determinants						Entrepreneurial Performance	Impact
Regulatory Framework	Market Conditions	Access to Finance	Technology	Entrepreneurial Capabilities	Culture	Firms	Job Creation
Administrative Burdens for Entry	Anti-Trust Laws	Access to Debt Financing	Investment	Training and experience of entrepreneurs	Risk Attitude in Society	Employment	Economic Growth
Administrative Burdens for Growth	Competition	Business Angels	University / Industry Interface	Business and Entrepreneurship Education (skills)	Attitudes Towards Entrepreneurs	Wealth	Poverty Reduction
Bankruptcy Regulations	Access to the Domestic Market	Access to VC	Technological Cooperation Between Firms	Entrepreneurship Infrastructure	Desire for Business Ownership		Formalising the Informal Sector
Safety, Health and Environmental Regulations	Access to Foreign Markets	Access to Other Types of Equity	Technology Diffusion	Immigration	Entrepreneurship Education (mindset)		
Product Regulation	Degree of Public Involvement	Stock Markets	Broadband Access				
Labour Market Regulation	Public Procurement		Patent System; Standards				
Court & Legal Framework							
Social and Health Security							
Income taxes; Wealth/Bequest Taxes							
Business and Capital Taxes							

Appendix VI: Murang'a County map

A Detailed General Map of Muranga County
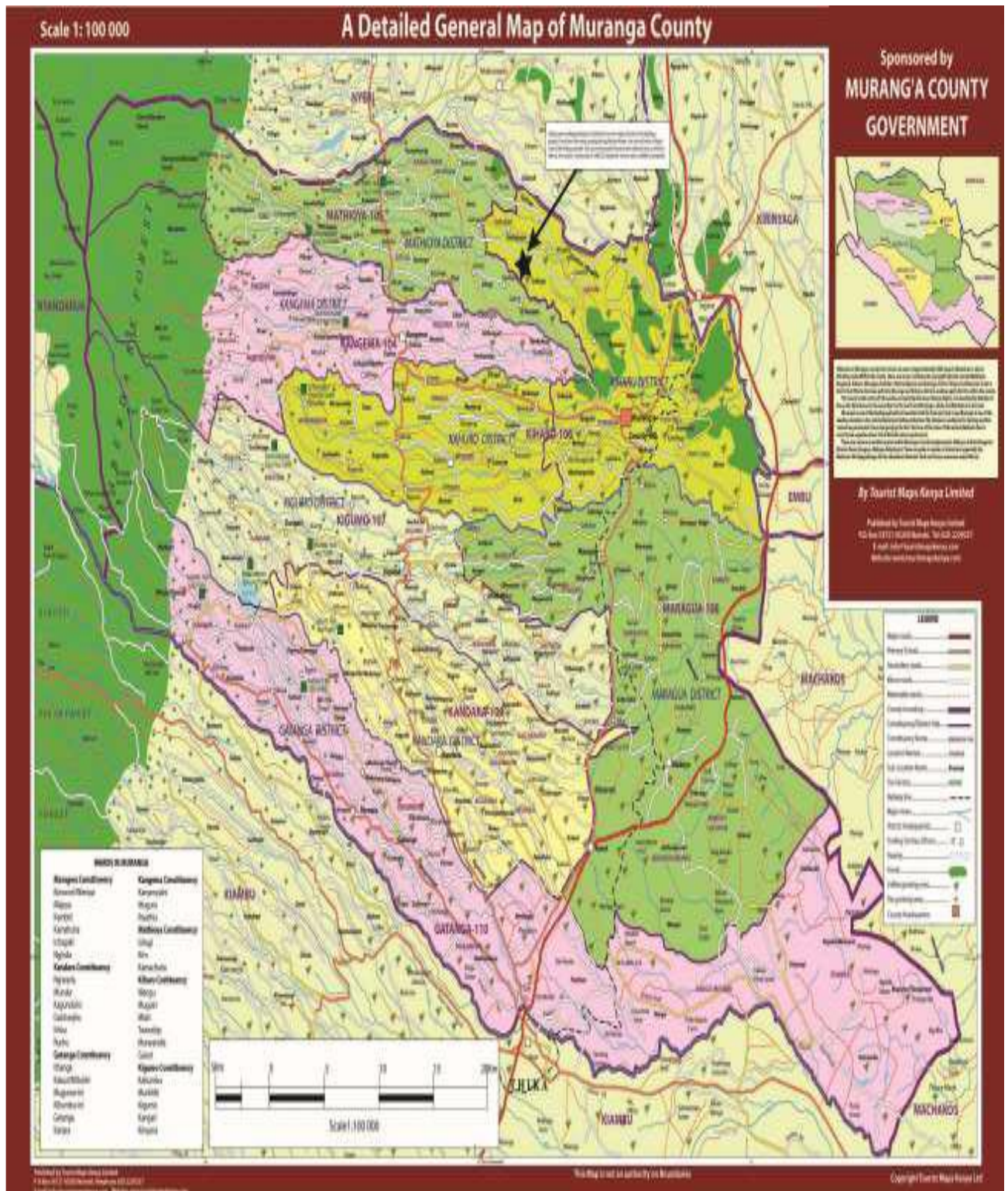
Appendix VII: List of the Respondents

S/No	MATHIOYA	TEL NUMBER		KIHARU	TEL NUMBER
1	HouseHold_1	727357273	121	Household_1	741630750
2	HouseHold_2	721537433	122	Household_2	720461781
3	HouseHold_3	723509952	123	Household_3	726992762
4	HouseHold_4	724065983	124	Household_4	704310109
5	HouseHold_5	718275775	125	Household_5	702794020
6	HouseHold_6	725748881	126	Household_6	714863823
7	HouseHold_7	727158147	127	Household_7	712073061
8	HouseHold_8	712667380	128	Household_8	717092826
9	HouseHold_9	727930252	129	Household_9	710837017
10	HouseHold_10	728070540	130	Household_10	712773938
11	HouseHold_11	791561383	131	Household_11	720465672
12	HouseHold_12	729843272	132	Household_12	724425503
13	HouseHold_13	726919333	133	Household_13	700402863
14	HouseHold_14	714299172	134	Household_14	703474768
15	HouseHold_15	722458380	135	Household_15	702613813
16	HouseHold_16	700093508	136	Household_16	720396871
17	HouseHold_17	706657240	137	Household_17	740370439
18	HouseHold_18	723757740	138	Household_18	726247378
19	HouseHold_19	721124375	139	Household_19	724473792
20	HouseHold_20	728781598	140	Household_20	723375793
21	HouseHold_21	728566987	141	Household_21	721953469
22	HouseHold_22	722117389	142	Household_22	728345814
23	HouseHold_23	728511807	143	Household_23	716614678
24	HouseHold_24	765540822	144	Household_24	746482339
25	HouseHold_25	727909449	145	Household_25	738237485
26	HouseHold_26	7228742298	146	Household_26	729008926
27	HouseHold_27	715380405	147	Household_27	722991547
28	HouseHold_28	723710626	148	Household_28	725689970
29	HouseHold_29	727383138	149	Household_29	723331144
30	HouseHold_30	741495206	150	Household_30	713587119
31	HouseHold_31	707906887	151	Household_31	703835213
32	HouseHold_32	728123694	152	Household_32	724705908
33	HouseHold_33	727939501	153	Household_33	727978833
34	HouseHold_34	726036439	154	Household_34	724292794
35	HouseHold_35	723027379		**KAHURO**	
36	HouseHold_36	795006848	155	Household_1	707840058
37	HouseHold_37	723956038	156	Household_2	720038605
38	HouseHold_38	728965448	157	Household_3	700402863

39	HouseHold_39	702714791	158	Household_4	728493029
40	HouseHold_40	725873869	159	Household_5	721702046
41	HouseHold_41	729962878	160	Household_6	723140467
42	HouseHold_42	729551532	161	Household_7	713395718
43	HouseHold_43	721967437	162	Household_8	726303894
44	HouseHold_44	713311469	163	Household_9	719440939
45	HouseHold_45	726503726	164	Household_10	719229848
46	HouseHold_46	717683208	165	Household_11	711256234
47	HouseHold_47	799278374	166	Household_12	711256234
48	HouseHold_48	705940775	167	Household_13	720405672
49	HouseHold_49	725049262	168	Household_14	723803410
50	HouseHold_50	728243751	169	Household_15	757007526
51	HouseHold_51	722959571	170	Household_16	726962817
52	HouseHold_52	714716443	171	Household_17	724031860
53	HouseHold_53	716209298		**MARAGWA**	
54	HouseHold_54	713021109	172	HouseHold_1	723478019
55	HouseHold_55	720216346	173	HouseHold_2	726404293
56	HouseHold_56	729739207	174	HouseHold_3	
57	HouseHold_57	728770719	175	HouseHold_4	728627910
58	HouseHold_58	729739220	176	HouseHold_5	
59	HouseHold_59	725807817	177	HouseHold_6	723143262
60	HouseHold_60	718237825	178	HouseHold_7	719268100
61	HouseHold_61	714425784	179	HouseHold_8	722489602
62	**KANGEMA**		180	HouseHold_9	798313028
63	Household_1	717007387	181	HouseHold_10	722606492
64	Household_2	716673033	182	HouseHold_11	
65	Household_3	721576829	183	HouseHold_12	71577470
66	Household_4	728290298	184	HouseHold_13	765887203
67	Household_5	717529258	185	HouseHold_14	714250605
68	Household_6	724642432	186	HouseHold_15	720309493
69	Household_7	718624125	187	HouseHold_16	713760846
70	Household_8	797041058	188	HouseHold_17	723766306
71	Household_9	723839311	189	HouseHold_18	708709723
72	Household_10	728818307	190	HouseHold_19	723313697
73	Household_11	727360216	191	HouseHold_20	726947744
74	Household_12	725918531	192	HouseHold_21	715756993
75	Household_13	722532724	193	HouseHold_22	
76	Household_14	720381955	194	HouseHold_23	705635796
77	Household_15	704860747	195	HouseHold_24	700123930
78	Household_16	723753407	196	HouseHold_25	713122101
79	Household_17	724140564	197	HouseHold_26	701507398

80	Household_18	723814368	198	HouseHold_27	723790956
81	Household_19	727876884	199	HouseHold_28	716017284
82	Household_20	723862993	200	HouseHold_29	728795544
83	Household_21	725851311	201	HouseHold_30	727910184
84	Household_22	723827337	202	HouseHold_31	724800002
85	Household_23	700113887	203	HouseHold_32	705127118
86	Household_24	714121285	204	HouseHold_33	710035794
87	Household_25	706155447	205	HouseHold_34	726045952
88	Household_26	729802685	206	HouseHold_35	715879871
89	Household_27	712301768	207	HouseHold_36	718245911
90	Household_28	726163945	208	HouseHold_37	706688927
91	Household_29	710537357	209	HouseHold_38	706226547
92	Household_30	701603031	210	HouseHold_39	720728505
93	Household_31	728058882	211	HouseHold_40	713904543
94	Household_32	712766366	212	HouseHold_41	740217814
95	Household_33	723237506	213	HouseHold_42	710828325
96	Household_34	723513898	214	HouseHold_43	723553192
97	Household_35	724468711	215	HouseHold_44	703206111
98	Household_36	711119999	216	HouseHold_45	702089353
99	Household_37	729523673	217	HouseHold_46	702448024
100	Household_38	719590699	218	HouseHold_47	
101	Household_39	708688473	219	HouseHold_48	7207722214
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105	Household_43	725329121	223	HouseHold_52	728038614
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108	Household_46	727660039	226	HouseHold_55	714912811
109	Household_47	725613631	227	HouseHold_56	726911466
110	Household_48	710758450	228	HouseHold_57	724892481
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112	Household_50	720609876	230	HouseHold_59	727244848
113	Household_51	715267154		**KANDARA**	
114	Household_52	726781964	231	HouseHold_1	716411097
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117	Household_55	705816028	234	HouseHold_4	723621219
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120	Household_58	705483809	237	HouseHold_7	724237218

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	KIGUMO				
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