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**MEDIATING ROLE OF ENTREPRENEURIAL ORIENTATION  
ON THE RELATIONSHIP BETWEEN KEY FIRM FACTORS  
AND THE PERFORMANCE OF COFFEE COOPERATIVE  
SOCIETIES IN KENYA**

# **MEDIATING ROLE OF ENTREPRENEURIAL ORIENTATION ON THE RELATIONSHIP BETWEEN KEY FIRM FACTORS AND THE PERFORMANCE OF COFFEE COOPERATIVE SOCIETIES IN KENYA**

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## **Abstract**

**Purpose:** To evaluate the mediating role of entrepreneurial orientation on the relationship between key firm factors and the performance of coffee cooperative societies in Kenya.

**Methodology:** This study adopted a descriptive research design. The population of the study was 1052 small holder coffee factories in Kenya. The research was done in the entire country which was divided into 18 strata from where 283 factories were sampled and studied. The sampling was multistage sampling which combined simple random sampling and stratified sampling methods.

**Results:** The regression results revealed that firm level factors had a positive and significant effect on entrepreneurial orientation. In addition, entrepreneurial orientation had a positive and significant effect on performance of coffee cooperative societies in Kenya. The influence of the firm level factors on performance was insignificant in the presence of the mediating variable, entrepreneurial orientation. The hypothesis results revealed that entrepreneurial orientation affect the relationship between firm level factors and performance

**Unique contribution to theory, practice and policy:** The study recommends that factories should be proactive in business practices. They should also be risk takers and be innovative. They should practice autonomy and be competitively aggressive in business. This would serve to improve their performance.

**Keywords:** *entrepreneurial orientation, firm factors, performance, cooperative society*

## 1.0 INTRODUCTION

### 1.1 Background of the Study

World population is expected to grow by a third or by 2.3 billion people by year 2050, (Food and Agriculture Organization FAO, 2009). As such the globe must produce food and fibre to feed its population of over 9 billion people. Agriculture plays a major task in the development of economy as well as poverty reduction in the world. The agriculture sector was the basis of industrial revolutions in America and Europe and more recently China, Korea and Taiwan, (FAO, 2009). In the developing countries 3 out of 4 people depend on agriculture. According to the World Bank (2008) what requires to be done in agriculture is to get better asset position of the rural poor, make the small holder extra competitive as well as diversify the rural income sources. The performance of the agricultural organizations should also be improved. Sustainable development as well as growth is more probable to be as a result of agriculture (Xinshen, Peter & James, 2010). Agriculture is the background of the economy of Kenya contributing 24% of Gross Domestic Product (GDP) directly and 27% indirectly (Gachanja, Obere & Thuku, 2013). It is among the main sectors supporting the pillar of economy of Kenya's economic blue print, The Vision 2030. More than 65% of Kenyans live in the rural areas where they are mainly engaged in agricultural activities. Among the main cash crops grown in Kenya are tea, coffee and horticultural crops

Coffee is a widely traded commodity in the world where it is grown in over 50 countries (International Coffee Organization, ICO, 2010). Coffee is produced in three regions; America, Africa and Asia and consumed mainly in Europe and America (ICO, 2014). South America is the biggest producer of coffee globally and produces 56% of the coffee (ICO 2014).

In Africa coffee is mainly grown in Ethiopia, Uganda, Ivory Coast, Tanzania, Rwanda and Kenya. The continent used to produce 33% of all the global coffee produced annually in 1970s (ICO, 2013). This decreased to an average of 16% in 1990s and further to 13.1% in the 2000s. The continent's coffee production has decreased from 19.7 million bags per year within the regulated period to 15.7 million bags in the free market (ICO, 2015). This decrease in production has resulted in decline in the performance of farmers' organizations (ICO, 2015).

The global coffee prices used to be favourable until 1980s when the ICO quota system collapsed (Gachanja et al, 2013). With the collapse of the quota system, Kenya's small scale farmer absorbed the full shock of the plummeting world prices (Gachanja *et al*, 2013). The clean coffee production decreased from an annual average of 2.1 million bags (or 126000 tonnes) in 1987 to 900, 000 bags (or 54000 tonnes) in 2007. The productivity has decreased from 892 kgs of clean coffee per hectare (1980) to 284 kgs per hectare. This is far too low from the Arabica average of 698 Kgs per hectare. Kenya has since changed from being the lead export crop that contributed 40% of exports to a crop that contributes a mere 9% of the export value (Kabura & Doppler, 2009). These happenings in the industry have led to serious decline in cooperative societies performance over the years

Efforts to revitalize the coffee sector have been coming from various stakeholders. Coffee production is likely to increase to over 100, 000 tonnes per year, where it was in 1980s, if the farmer gets an income she deems to be fair. Strategies must, therefore, be formulated to increase the income earned by the farmers. This income is the principal measure of the performance of a cooperative society. Various researchers have suggested ways of improving cooperative societies

mainly through improving the coffee production, improving management practices and governance and aggressive marketing. This study will focus on the mediating role of entrepreneurial orientation on the relationship between firm level factors and performance. These factors are the coffee production level, coffee quality, diversification to non-coffee businesses, integration along the coffee value chain and entry into non-traditional coffee markets. In Nigeria, for example, studies show that there is a positive relationship between two dimensions of entrepreneurship (proactiveness and positive aggressiveness) and an organization's return on assets and return on equity (Olawoye, 2016). Entrepreneurial orientation was also found to have a mediating effect on the relationship between an organizational culture and government policy and business performance in Indonesia (Korry, 2013). In Kenya, Karanja and Mwangi (2014) also found proactiveness and managerial competence to have a strong relationship with the growth of the Small and medium enterprises (SMEs). This positive growth is what is needed to reverse the negative growth of coffee cooperatives since 1989. A study conducted in Iraq on the agricultural cooperatives concluded that entrepreneurial orientation has a great potential in improving the living conditions of the rural masses through their agricultural cooperatives (Hosseini, 2012).

## **1.2 Problem Statement**

Coffee is an important global commodity that is grown in over 50 countries (ICO, 2010). It is the source of livelihood for over 25 million families globally. As such it supports over 100 million people. It is a major foreign exchange earner in many developing countries (Ponte, 2002). Coffee sector may be categorized into two; Large estates and small holder farmers. The large estates wet mill their coffee whereas the small holder farmers form cooperatives where they pool their coffee and wet mill it jointly.

In Kenya, the coffee cooperatives' performance have had decline in performance due to two scenarios; the collapse of coffee quota system that depressed prices and the introduction of structural adjustment programmes by the International Monetary Fund, IMF and the World Bank. Fluctuations of commodity prices usually cause sharp variation in export earnings of many developing countries (Pichop & Kemegue, 2006). The common solution for this is usually the formation of International multilateral agreements like International Coffee Agreement (ICA) (Pichop & Kemegue, 2006). The formal ICA coffee price stabilization agreement was signed in 1962 by producer and consumer countries. The quota system stabilized the coffee prices by allocating quotas to the member producing countries based on their history of production. The quota system was highly successful (ICO, 2013). However the ICA quota system still faced various challenges like conflicts between member producers over the quotas allocation and trading with non- ICA members, mostly at lower prices. It eventually collapsed.

With the collapse of the quota system, the Kenyan coffee farmer absorbed the full shock of the plummeting world prices. The production of coffee in Kenya decreased from 130, 000 metric tonnes in 1988 down to 37, 000 metric tonnes in the next 25 years (KIPPRA 2014). This greatly

affected the coffee farmers' cooperatives performance. The cooperatives got the biggest shock as a result of the collapse of the quota system compared with the large estates. The decline in earnings was made even worse by the poorly implemented Structural Adjustment Programs (SAPs) championed by the International Monetary Fund and the World Bank in 1980s and 1990s. The structural adjustment programmes had been introduced in Africa after organizations performance started declining after independence (Franz, 2011). The SAPs removed the control of cooperative societies, parastatals and other organizations from the state and were privatized. The leadership in these organizations lacked entrepreneurial and business skills (Franz, 2011). This saw the cooperatives split and others merge into uneconomical units. The end result was collapse of coffee cooperatives which made coffee farmers abandon coffee farming. According to the Institute of Economic Affairs (2000) in the period 1994 to 1998 the percentage of coffee marketed through the cooperatives declined from 68% in 1994 to 48.3% in 1998. The coffee productivity per hectare in the estates was more than double that of cooperatives, (Nyoro & Karanja, 2002). According to Nyoro and Karanja (2002), the average throughput per society (average tonnage of clean coffee produced by a society) also decreased tremendously from 248 (in 1990) to 60 (in 2002). The throughput per society for 2015/2016 was 106 (AFFA, 2017). Innovative ways are urgently required to take back the Kenya coffee cooperatives to the performance that they had.

This study seeks to evaluate the role of entrepreneurial orientation as a mediator to improve the performance of small scale coffee farmers in Kenya.

### **1.3 Objective of the Study**

To examine the mediating role of entrepreneurial orientation on the relationship between key firm factors (level of production, coffee quality, integration along the coffee value chain and entry into nontraditional market) and the performance of coffee cooperative societies in Kenya.

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical Framework**

#### **2.1.1 Theories of Entrepreneurship**

According to Schumpeter, entrepreneurship is about combining different and relevant resources in new ways such as introduction of new products, new processes, new markets, new raw materials, to alter the status quo market arrangements through innovation (Olawoye, 2016). Entrepreneurship involves either taking advantage of a situation to create a new venture or revitalizing an already existing venture. An entrepreneur is a person who is able to see an opportunity and take advantage of it by organizing resources and risking the same resources to create value out of the opportunity. Several theories of entrepreneurship have been advanced. Each of the theories may be classified

into one of the five main categories (Dontigney, 2011); Economic theory, Exposure theory, Resource based theory, psychological theory, sociological theory or opportunity – based theory.

### **2.1.2 Economic Theory of Entrepreneurship**

Entrepreneurship will take place where particular economic conditions are favorable (Papanek & Harris, 1999). This theory considers economic incentives to be the key drivers of entrepreneurship. Examples of aspects of economic drivers are capital availability, availability of credit, human capital, productive resources, transport and communication facilities and others. In Kenya there are economic opportunities for entrepreneurs to invest in diversification to other non-coffee businesses, integration along the coffee value chain. Globalization has given opportunities for the coffee cooperatives to operate in the international economy through seeking non-traditional markets.

### **2.2.2 Opportunity Based Theory of Entrepreneurship**

Social, technological and cultural environment that people exist in offers opportunities which people take advantage of to benefit. Schumpeter views entrepreneurs from their pursuit of economic opportunities (Bula, 2012). An opportunity is a means which new goods and services are introduced and implemented into the marketing system (Shane & Venkataraman, 2000). Entrepreneurs do not cause change but exploit opportunities that come with change (Drucker, 1985). An entrepreneur is always in search of change, takes it positively and exploits it to benefit. In change, an entrepreneur sees more opportunities than problems. Opportunities are infinite and endless, just like the waves of the sea (Dangote, 2005). The misfortunes that the coffee cooperatives have faced are an opportunity for them to create value for the benefit of members. The decline in coffee prices offers opportunity for the cooperatives to engage in innovative non-coffee initiatives such as diversification to other businesses such as transport, real estate or even non-coffee agriculture. They could also integrate either horizontally or vertically to maximize their profits. Innovation on cheaper ways to improve production and quality are also opportunities to improve income of the cooperatives. This research will be rooted on the opportunity and economic theories of entrepreneurship as they best explain the Kenya's coffee cooperatives scenario. Kenya's economy has improved since the 1980s and the coffee cooperatives may take advantage of this fact to improve. This improvement in economic aspects offers opportunities for the coffee cooperatives to do better.

## **2.2 Empirical Studies**

### **2.2.1 Factors that influence the Performance of Cooperatives**

The factors identified through literature were: Coffee production level, coffee quality, diversification to non-coffee businesses, integration along the value chain and entry into non-traditional coffee markets. In this study they are referred to as 'firm level factors'. The success of



any cooperative is known to have a positive correlation with the quantity of the cooperative products that it offers at the market place (Azadi, 2010). The quantity of coffee produced may be measured in terms of quantity of cherry produced or the clean coffee. The quality of coffee is also important in determining the performance of the cooperative as it determines the price fetched at the market place. Quality of coffee produced is mainly a function of the topographical conditions of an area, the variety of coffee grown, weather condition and the care taken on the crop at farm, in processing and in storage (International Trade Centre, 2002). Diversification to non coffee businesses is also important as it cushions the cooperative at the time of poor prices and adverse weather. Diversification is a known tool for risk management (Lyandres, 2004). Managers diversify to earn higher returns for their firms (Athar, 2015). A firm may also integrate forward or backwards to take charge of its inputs and products' distribution processes to earn a competitive advantage (Fernandes & Tang, 2012). Kenya has witnessed changes in the marketing side of the coffee. Channeling of the coffee to some non-traditional markets may give the cooperative an advantage. Such markets include direct sales, certified coffee markets and also domestic market that has grown due to growth of the middle class.

### **2.2.2 Entrepreneurial Orientation**

Enhancement of entrepreneurship is one way that the coffee sector can be given back its life. This study proposes to evaluate the importance of entrepreneurial orientation in mediating the factors of success of coffee cooperatives and their performance. Entrepreneurship is the practice of starting a new organization or revitalizing a mature organization in response to an opportunity (Eroglu & Piçak, 2011). Entrepreneurship will therefore be used by the Kenya's coffee cooperatives to bring them back to high performance. Entrepreneurial orientation is strategy making processes and practices that firms engage in entrepreneurial activities (Lumpkin & Dess, 2001). This study will look into how the entrepreneurial orientation can be used as a mediating variable in the relationship between factors that influence the performance of coffee cooperatives and their performance.

Entrepreneurial orientation is a process which includes methods, practices, decision making style a person or a firm uses to act entrepreneurially (Ejdys, 2016). Entrepreneurial orientation is characterized by frequent and extensive technological and product innovation, aggressive competitive orientation and strong risk taking propensity by the organization and the top management (Covin & Slevin, 1989). Entrepreneurial orientation can be expressed in terms of three dimensions; innovation, proactiveness and risk taking (Covin & Slevin, 1989 and Miller, 1983). It has four dimensions namely innovativeness, risk taking, proactiveness and aggressiveness, (Wang, 2008). Entrepreneurial orientation can be expressed in terms of five dimensions; proactiveness, innovativeness, risk taking, Competitive aggressiveness and autonomy (Lumpkin & Dess, 2005). The Entrepreneurial Dimensions may vary independently in organizations, (Lumpkin & Dess, 1996). Each of the entrepreneurial orientation dimensions have its own influence on the performance of the firm (Kreiser et al, 2002).

A mediating variable explains the relation between an independent variable and the dependent variable in a relationship in such a way that when the mediator is removed the effect of the relationship between independent and dependent variables may go away. The relationship variable is said to be mediating when the causal effect of an independent variable (X) on dependent variable (Y) is transmitted through a mediating variable (M) (Preacher *et al.*, 2007).

Studies on mediators have been carried out in business and the role of mediating variables highlighted. A study in Malaysia found that market orientation mediates the relationship between entrepreneurial orientation and SME performance (Amin *et al.*, 2016). The study found out that the higher the entrepreneurial orientation implemented in an SME the more it is willing to implement market orientation which in turn improves performance. A firm's competitive advantage mediates the relationship between entrepreneurial orientation and the business performance of women enterprises in Malaysia (Mahmoud & Hanafi, 2013). In the study of mediation it must be demonstrated that the independent variable is related independently to both mediator and outcome variable (Baron & Kenny, 1986). The regression coefficient associated with the independent and dependent variables' relationship shrinks or goes to zero when the mediator is introduced into the equation. If it goes to zero when the mediator is added then full mediation has taken place, if it shrinks then partial mediation has taken place (Baron & Kenny, 1986).

### **3.0 RESEARCH METHODOLOGY**

This study adopted a descriptive research design. The population of the study was 1052 small holder coffee factories in Kenya. The research was done in the entire country which was divided into 18 strata from where 283 factories were sampled and studied. A study questionnaire was used to collect data from the respondents. A pilot study was carried out to test the reliability of the questionnaire and the necessary amendments done. Data was analyzed using descriptive statistics as well as regression analysis. Regression assumption tests were carried out on the data for example heteroscedasticity, multicollinearity and autocorrelation and tests of normality and linearity.

### **4.0 RESULTS AND DISCUSSIONS**

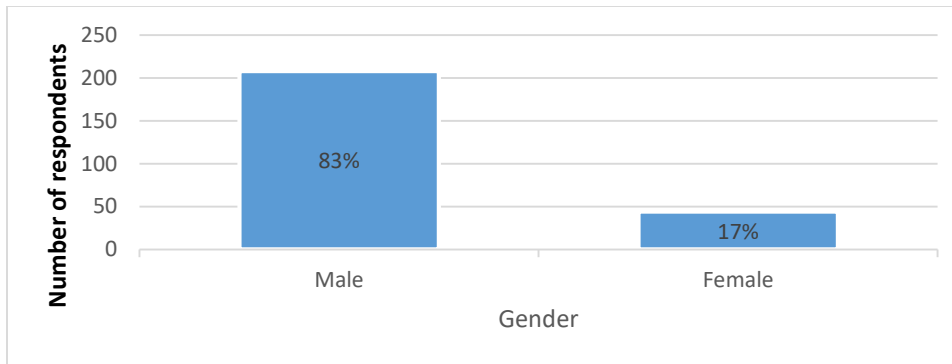
#### **4.1 Demographic Characteristics**

This section consists of information that describes the basic characteristics such as gender, age and marital status.

##### **4.1.1 Gender**

The results are as shown in Figure 1 below.



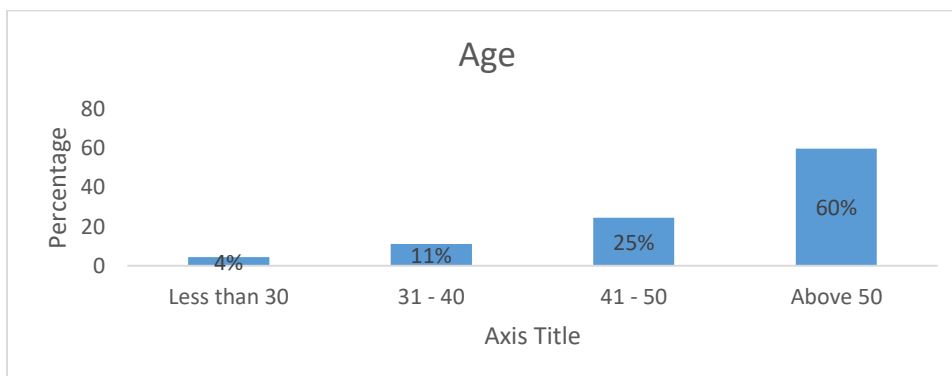


**Figure 1: Gender of the Respondents**

The results in Figure 1 revealed that majority of the respondents (83%) were male while only 17% of respondents were female. This implies that most coffee factory managers in Kenya are men. This clearly indicated that there was gender imbalance in the management of the coffee factories in Kenya. Gender imbalance in the management of the coffee factories may not have any effect on performance of the factories since no manual work is involved that may disadvantage women.

#### 4.1.2 Age

The results are shown in Figure 2 below.

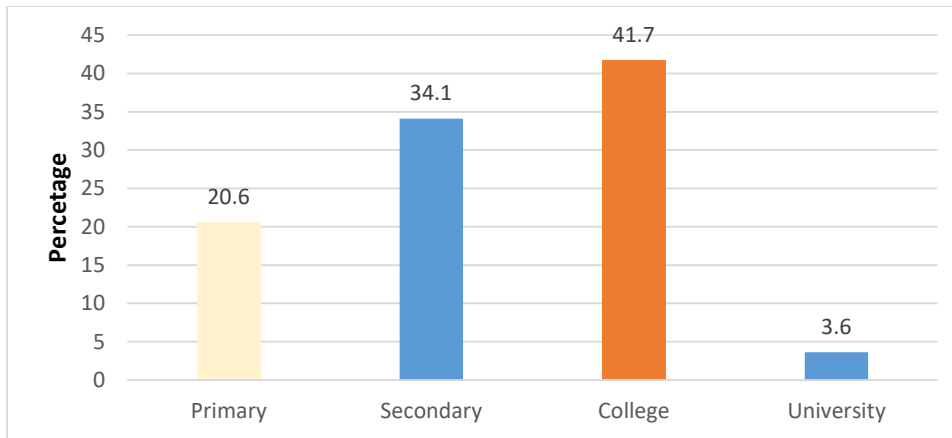


**Figure 2: Age of the Respondents**

The results in Figure 2 revealed that majority of the respondents (60%) were above 50 years. 25% of the respondents were between 41 – 50 years, 11% were between 31 – 40 years while only 4% of the respondents were less than 30 years. This implies that most managers were above 50 years and thus slightly elderly. This may negatively affect the performance of the factories since old people may not be as productive as younger ones.

#### 4.1.3 Level of Education

The results are shown in Figure 3 below.

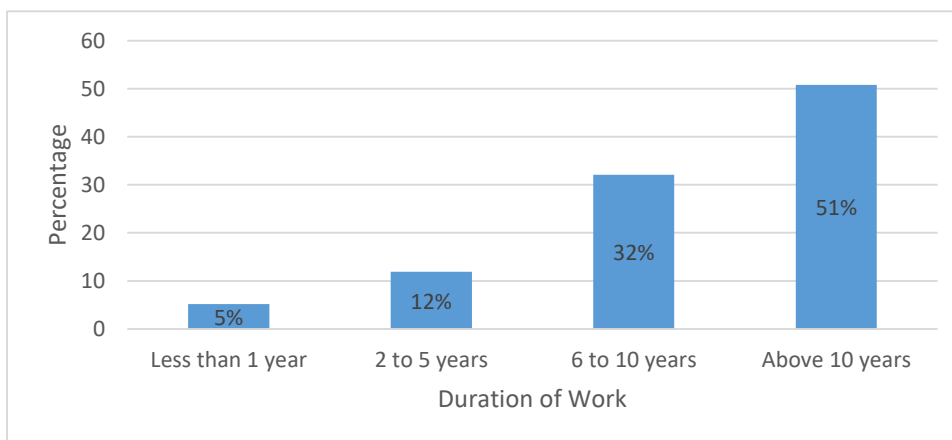


**Figure 3: Level of Education of respondents**

The results showed that majority of the respondents (41.7%) had college education, (34.1%) had up to secondary school education, (20.6%) had gone up to primary school while (3.6%) had university education. This implies that the performance may be affected negatively since over 50% of the managers had not received specialized training at college level.

#### 4.1.4 Duration of Work in the Factory

The results of the duration of time they had worked for the factory are shown below;

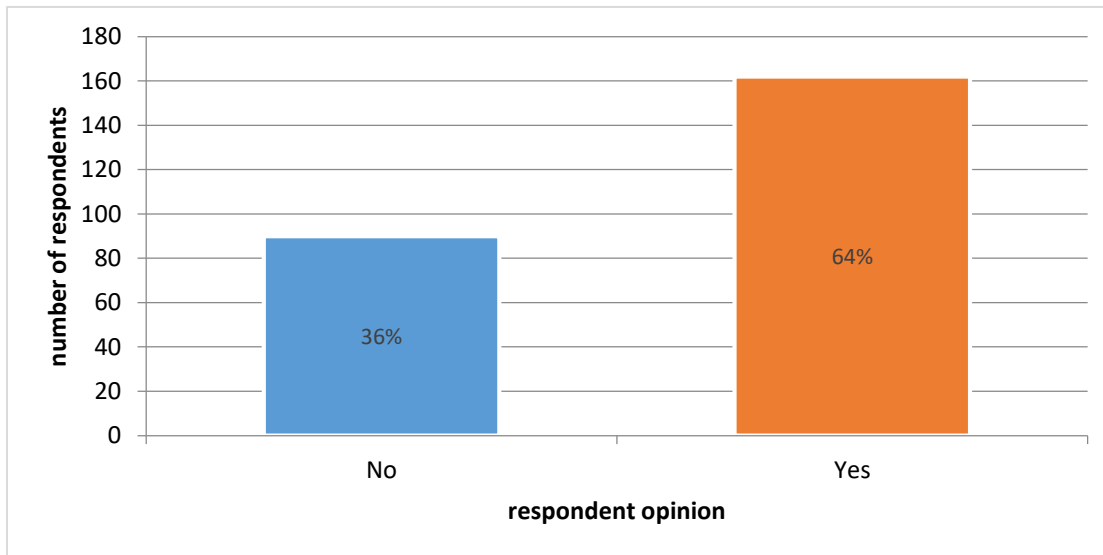


**Figure 4: Duration respondents had worked in the Factory**

The results in Figure 4 showed that majority of the respondents (51%) had worked for the factory for more than 10 years, (32%) had worked in the factory for 6 to 10 years, (12%) had worked for 2 to 5 years while only 5% who had worked for less than 1 year. This was an indicator that most had the relevant experience and thus had the capacity to improve the performance of their coffee factories.

## 4.2 Entrepreneurial Orientation

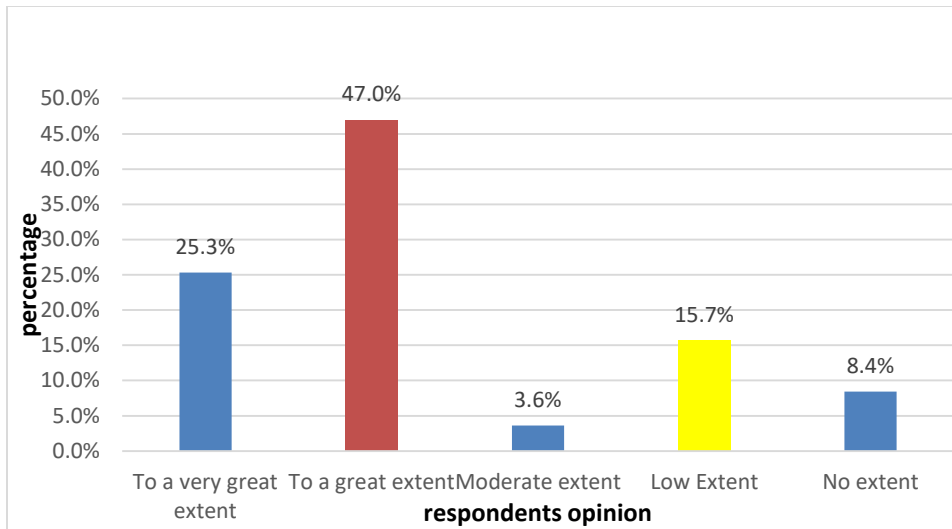
The respondents were asked to indicate their opinion on the relationship between entrepreneurial orientation and performance of coffee cooperative societies. The results are indicated in Figure 5 below.



**Figure 5: Entrepreneurial Orientation and Performance**

The results revealed that majority of the respondents (64%) indicated that entrepreneurial orientation affects performance of coffee cooperative societies. This implies that entrepreneurial orientation dimensions would affect the level of performance of the coffee cooperative societies.

The respondents were further asked to indicate to what extent entrepreneurial orientation affected performance of coffee cooperative societies. The results are presented graphically below.



**Figure 6: Entrepreneurial orientation and Performance**

The results revealed that many respondents (47.0%) indicated that entrepreneurial orientation affects performance of coffee cooperative societies to a great extent. The results further revealed that (25.3%) indicated that entrepreneurial orientation affects performance of coffee cooperative societies to a very great extent. This implies that majority of the respondents believed that entrepreneurial orientation affected the performance of coffee cooperative societies.

Entrepreneurial orientation has five dimensions. Each of the dimensions was subjected to a Likert scale evaluation. The results are presented in the tables below;

**Table 1: Proactiveness and Performance**

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
My factory is proactive in business practices	14.3%	31.0%	8.3%	28.6%	17.9%	3.1	1.4
My factory anticipates changes in the industry before they occur	10.7%	16.7%	11.9%	45.2%	15.5%	3.4	1.2
My factory encourages use of latest coffee production methods and processes	21.4%	25.0%	2.4%	35.7%	15.5%	3.0	1.5
My factory is the market leader in the introduction of new products/ services/ technology/processes	40.5%	15.5%	6.0%	26.2%	11.9%	2.5	1.5
My factory has a unit/person for monitoring opportunities in the market	36.9%	23.8%	13.1%	17.9%	8.3%	2.4	1.4
<b>Total</b>						<b>2.9</b>	<b>1.4</b>

The results revealed that many respondents (46.4%) agreed with the statement that their factory was proactive in business practices. The results also showed that majority of the respondents (60.7%) agreed with the statement that their factory anticipated changes in the industry before they occur. In addition the results revealed that majority of the respondents (51.2%) agreed with the statement that their factory encouraged use of latest coffee production methods and processes. This could lead to higher performance of cooperative societies. The results also showed that majority of the respondents (56.6%) disagreed with the statement that their factory was the market leader in the introduction of new products/services/technology/process. The Majority of the respondents (60.7%) disagreed with the statement that their factory had a unit/person for monitoring opportunities in the market. The designated person or unit could lead to a higher performance. The results also showed that majority of the respondents (59.6%) disagreed with the statement that factory has the best machinery/technology in the area. The mean of 2.9 showed that factories were only slightly proactive which negatively affect their performance.

**Table 2: Risk Taking and Performance**

<b>Statement</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Mean</b>	<b>Std. Dev</b>
Our factory management are good in risk taking	26.2%	32.1%	11.9%	22.6%	7.1%	2.5	1.3
My factory commits large resources on new projects with uncertain outcome	33.3%	26.2%	10.7%	23.8%	6.0%	2.4	1.3
My factory takes loans for projects	21.4%	21.4%	20.2%	28.6%	8.3%	2.8	1.3
My factory takes business risks	28.6%	28.6%	8.3%	26.2%	8.3%	2.6	1.4
My factory does not shy away from funding new methods and processes even if they have not been tested in the market and could be risky	39.3%	19.0%	10.7%	23.8%	7.1%	2.4	1.4
<b>Average</b>						<b>2.7</b>	<b>1.5</b>

Majority of the respondents (58.3%) disagreed with the statement that their factory management was good in risk taking. Risk taking affects the performance of the factories. The results also showed that majority of the respondents (59.5%) disagreed with the statement that their factory commits large resources on new projects with uncertain outcome. The results also showed that majority of the respondents (42.8%) disagreed with the statement that their factory takes loans for projects. In addition the results revealed that majority of the respondents (57.2%) disagreed with

the statement that their factory took business risks. The mean score of 2.7 implied that factories were not good in risk taking which could affect their performance negatively.

**Table 3: Innovativeness and Performance**

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
My factory has introduced new products in the last 3 years	9.2%	6.2%	16.7%	22.6%	44.8%	3.6	1.3
My factory management is creative business wise	10.9%	20.0%	4.5%	62.6%	12.0%	3.8	1.3
Our factory has a research and development section	8.9%	11.1%	20.5%	38.3%	21.2%	3.6	1.2
My factory has adequate resources for R & D	9.8%	19.6%	14.3%	33.3%	23.0%	3.8	1.2
My factory is able to convert ideas into products and processes	3.8%	17.9%	16.7%	23.3%	29.4%	3.5	1.3
My factory is able to convert ideas into wealth	3.9%	17.8%	16.4%	39.3%	22.7%	3.9	1.2
My factory support employees ideas/creativity and innovativeness	3.8%	17.9%	6.7%	49.3%	32.4%	3.7	1.0
<b>Average</b>						<b>3.7</b>	<b>1.2</b>

The results revealed that majority of the respondents (67.4%) agreed with the statement that their factory had introduced new products in the last 3 years. This could improve their performance. The results also revealed that majority of the respondents (78.6%) agreed with the statement that their factory management was creative business wise. The results also revealed that majority of the respondents (69.5%) agreed with the statement that their factory had a research and development section. In addition the results revealed that majority of the respondents (56.3%) agreed with the statement factory has adequate resources for R & D. In addition, the results revealed that majority of the respondents (56.3%) agreed with the statement that their factory was able to convert ideas into products and processes. The results also revealed that majority of the respondents (62.0%) agreed with the statement that factory was able to convert ideas into wealth. The results also revealed that majority of the respondents (81.7%) agreed with the statement that their factory supported employees' ideas/creativity and innovativeness. The high mean score of 3.7 implied that quite a number of factories were innovative which could positively affect their performance.



**Table 4: Competitive Aggressiveness and Performance**

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
There is stiff competition in the business	29.2%	26.2%	16.70%	22.6%	4.8%	2.5	1.22
Our factory is able to outshine our competitors	40.5%	20.2%	14.30%	22.6%	2.4%	2.3	1.23
Our factory is the best in the area	28.9%	18.1%	20.50%	31.3%	1.2%	2.6	1.2
<b>Average</b>						<b>2.4</b>	<b>1.5</b>

The results also revealed that majority of the respondents (55.4%) disagreed with the statement that there was stiff competition in the business. The results also revealed that majority of the respondents (60.7%) disagreed with the statement that their factory was able to outshine their competitors. This implied that most of the factory managers believed that their factories had weak competitive aggressiveness. In addition, the results revealed that majority of the respondents (47.0%) disagreed with the statement that their factories were the best in the area.

**Table 5: Autonomy and Performance**

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
Our factory makes independent decisions in the industry	29.8%	19.0%	14.3%	33.3%	3.6%	2.9	1.1
There is no interference in the business	23.8%	17.9%	16.7%	39.3%	2.4%	2.8	1.3
Our teams have independence in the job	3.8%	17.9%	19.7%	36.3%	22.4%	3.5	1.1
Individuals have independence in the jobs	13.4%	37.9%	6.0%	40.0%	2.8%	3.2	1.0
<b>Average</b>						<b>3.1</b>	<b>1.1</b>

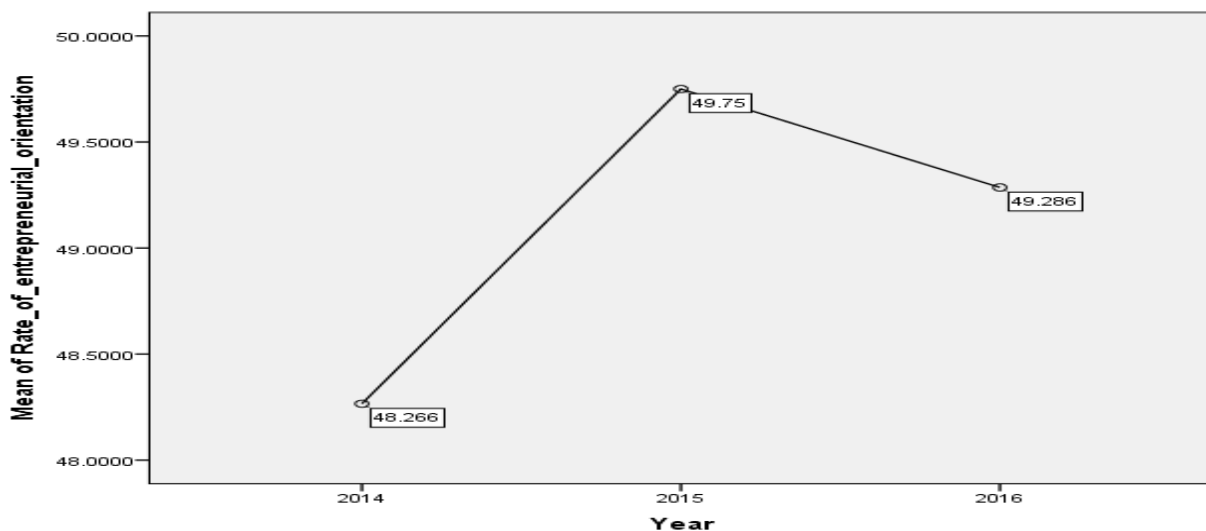
The results revealed that majority of the respondents (48.8%) disagreed with the statement that their factory makes independent decisions in the industry. This implies that most coffee factories do not make independent decisions in the industry and this may affect the performance of the coffee cooperative society. The results also revealed that majority of the respondents (41.7%) disagreed with the statement that there is no interference in the business. The results also revealed that majority of the respondents (58.7%) agreed with the statement that their teams have

independence in the job. Majority of the respondents (42.8%) agreed with the statement that their individuals have independence in the jobs.

### **Entrepreneurial Orientation.**

The respondents were tasked to rate the level of entrepreneurial orientation of their factories. This was on a percentage scale. The results are shown in the graph below.

#### **Trend results**



**Figure 7. Level of Entrepreneurial Orientation**

The trend analysis results showed that the level of entrepreneurial orientation in the year 2014 was 48.27. However, the level of entrepreneurial orientation activities increased to 49.75 in the year 2015 but decreased to 49.29 the year 2016. This implies that the level of entrepreneurial orientation in the coffee cooperative societies is quite low which could affect the level of performance negatively.

### **4.3 Mediating effect of Entrepreneurial orientation on the relationship between key firm factors and the performance of coffee cooperative societies in Kenya**

The Baron and Kenny approach on testing for mediation was employed for the purpose of testing this hypothesis. For mediation to be confirmed, four conditions should be fulfilled:

1. The independent variable is significantly related to the dependent variable in the absence of the mediating variable.

2. The independent variable is significantly related to the mediator variable.
3. The mediator variable is significantly related to the dependent variable.
4. When controlling for the effect of the mediating variable on the dependent variable, the effect of the independent variable on the dependent variable is not significant in the presence of the mediating variable.

The outcome of the regression analyses yielded results that are presented in Tables 6 to 9.

Step One: The influence of firm level factors (level of production, coffee quality, integration along the coffee value chain and entry into nontraditional market) and performance.

**Table 6: Regression Analysis for firm level factors and performance**

	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	1.084	0.298	0.628	0.531
firm level factors	0.56	0.089	3.633	0.000

The results in Table 6 show that the effect of firm level factors on performance is significant ( $\beta = 0.56$ ,  $p < 0.05$ ) implying that 0.56 of a unit change in performance is attributable to one unit change in entrepreneurial orientation. The first mediation condition which states that the independent variable should be significantly related to the dependent variable in the absence of the mediating variable is thus satisfied.

Step Two: The influence of firm level factor and entrepreneurial orientation.

**Table 7: Regression Analysis for firm level factors and Entrepreneurial Orientation**

	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	-2.101	0.271	-7.744	0
Firm level factors	1.45	0.081	17.916	0.000

The second step as presented in Table 7 indicates that the influence of firm level factors on entrepreneurial orientation is significant ( $\beta = 1.45$ ,  $p < 0.05$ ) thus satisfying the second condition which states that the independent variable should be significantly related to the mediator variable.

Step Three: The influence of entrepreneurial orientation and performance

**Table 8: Regression Analysis for Entrepreneurial Orientation and Performance**

	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	1.066	0.134	1.641	0.102
Entrepreneurial Orientation	0.075	0.046	7.7979	0.000

The third step as presented in Table 8 revealed that the influence of entrepreneurial orientation and performance was significant ( $\beta=0.075$ ,  $p<0.05$ ) thus satisfying the third condition which states that the mediator variable should be significantly related to the dependent variable.

Step Four: The influence of firm level factors, entrepreneurial orientation and performance

**Table 9: Regression Analysis for firm level factors, Entrepreneurial Orientation and Performance**

	<b>B</b>	<b>Std. Error</b>	<b>t</b>	<b>Sig.</b>
(Constant)	1.341	0.331	4.053	0.000
firm level factors	-0.122	0.134	2.907	0.110
	2			
Entrepreneurial orientation		0.069	1.965	0.009

The fourth step as presented in Table 9 revealed that the influence of the independent variable (firm level factors) on the dependent variable (performance) was insignificant in the presence of the mediating variable, entrepreneurial orientation ( $\beta=0.110$ ,  $p>0.05$ ) and thus satisfying the fourth condition which states that the effect of the independent variable on the dependent variable should be insignificant in the presence of the mediating variable.

The mediation test thus satisfied all the four conditions that should be met for a mediation relationship to be confirmed and therefore it can be concluded that entrepreneurial orientation mediate the influence of firm level factors on performance. Hence the hypothesis that entrepreneurial orientation does not affect the relationship between firm level factors and performance was rejected.

## **5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Summary**

The objective was to examine the mediating role of entrepreneurial orientation on the relationship between key firm level factors and the performance of coffee cooperative societies in Kenya. The regression results revealed that firm level factors had a positive and significant effect on entrepreneurial orientation. In addition the results revealed that entrepreneurial orientation had a positive and significant effect on performance of coffee cooperative societies in Kenya. However the results revealed that the influence of the firm level factors on performance was insignificant in the presence of the mediating variable, entrepreneurial orientation.

The hypothesis results revealed that entrepreneurial orientation mediates the relationship between firm level factors and performance

## 5.2 Conclusions

The study concluded that entrepreneurial orientation mediates the relationship between level of production, coffee quality, integration along the coffee value chain and entry into nontraditional market and performance.

## 5.3 Recommendations

The study recommends that the coffee factories should be entrepreneurial in their business practices so as to maximize their performance.

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