



EFFECT OF ENTREPRENEURIAL ATTRIBUTES ON PERFORMANCE OF SELECTED MACADAMIA FIRMS IN KENYA

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ABSTRACT

The purpose of this study was to find out the effect of entrepreneurial attributes on the performance of selected macadamia firms in Kenya. The study was guided by the following objectives; procativeness and resourcefulness. The study adopted descriptive survey design. The target population was 202 respondents. The firms having established structures in place and they are the fastest growing macadamia firms in Kenya, it is easy to trace their performance for a given period of time. A simple and random sampling was used to select a sample of 133 respondents from Macadamia firms which was drawn from the stratum. The study was limited to survey variables of entrepreneur resorcefulness and pro-activeness. Further, questionnaires were administered as the research instrument to the Macadamia firms. In addition, pretesting of the questionnaires was done to determine validity and reliability. Further, Statistical Package for Social Science version 21 (SPSS) was used to analyze the data. Both qualitative and quantitative data was collected. Quantitative data was analyzed by descriptive and inferential analysis. Moreover, use graphs, tables, and pie charts presented Quantitative analysis. Further, descriptive design involved was measured of central tendency, which included the mode, mean and median. Also, involved was measures of dispersion which included range, standard deviation and variance. Finally, inferential design was analyzed through multiple regression analysis to determine the relationship between the selected variables. Basing on the study results of the ANOVA Test or F-test in obtaining results. A good response rate of 96% was experienced and the study found that there is positive relationship between resourcefulness, proactiveness and performance of macadamia firms. R squared was 0.682 implying that there was 68.2% variation of performance of macadamia firms, due to the changes of resourcefulness and proactiveness. The remaining 31.8% implied that there are other factors that affect performance of Macadamia firms, which were not discussed in the study.

Key Words; Resourcefulness, Pro-Activeness, Performance

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INTRODUCTION

Macadamia firms are increasingly seen as playing an important role in the economies of many countries. Thus, governments throughout the world focus on the development of the macadamia firms sector to promote economic growth (Finlayson, 2003). In Kenya, the government has been reforming policies, building and developing the multi-sector market economy. United Nations Industrial Development Organisation (UNIDO) estimates that macadamia firms represent over 60 per cent of private entrepreneurs and contribute to more than 30 per cent of employment and of gross domestic product (GDP) in most African countries. The macadamia firms and informal sector in Kenya is estimated to be providing employment to 2,900 and 2,400 persons in the urban and rural areas respectively with an estimated 25 enterprises (UNDP, 2015). In terms of the sector's contribution to the GDP, in 2014 the macadamia firms contributed 44% to the GDP. According to Lipinge (2010), macadamia firms in Africa face several constraints during their developmental phase, thus experiencing a failure rate of 25 per cent. Knowledge about leadership and its impact on entrepreneur performance is still lacking especially leadership behaviour within the entrepreneur (Idris, Wahab & Jaapar, 2015).

Mitchelmore and Rowley (2010), the entrepreneurial competency concept has its foundation on both attributes and entrepreneurship. This maybe expounded more when identifying outstanding and publicly visible figures such as Bill Gates and Steve Jobs as entrepreneurs who have become more successful in the entrepreneur industry. Assessment tools and indicators for entrepreneurship education (2014), defines entrepreneurial attributes to cover both cognitive and non-cognitive skills required in the different phases of an entrepreneurial venture. A number of constructs are used to capture these skills such as; risk taking, marshalling resources, creativity, self-confidence, long term involvement, persistence, problem solving, learning from failure,

taking initiative, seeking personal responsibility and decision-making (Bird, 1995). Attributes are exhibited in individuals, who begin to transform and add value to organizations through organizing resources and exploiting of opportunities. Attributes are conceived as a baseline in launching and planning an entrepreneur venture.

As a way of studying entrepreneurial attributes, the competency approach has become popular since the attributes are seen as the baseline for entrepreneur start-up, survival and growth (Bird, 1995). The nature of entrepreneurial attributes is indicated as an important concept for improving entrepreneurship (Ahmad, Halim & Zainal, 2010).

Entrepreneurial attributes are one of the driving forces for the success of the macadamia firms in the future, and evidences suggests that lack of entrepreneur attributes and management skills are primary factors contributing towards the factors of the failure of macadamia firms (Ghosh & Dutta, 2016). An enterprise requires entrepreneurship, but what is needed to maintain the operation and guide an enterprise to success are the entrepreneurial attributes that exists within the organization. Apart from organization performance, organization success also relates to employee basic and specific knowledge, skill levels, personal development, motives, traits, self-image, quality of strategic planning and the ability to understand and adapt to the nature and dynamic of the entrepreneur environment (Calvalhoel *et al.*, 2016). Tehsen and Ramyah (2015), resource base view claims that entrepreneurial attributes are valuable and intangible resources that lead towards the success of the entrepreneur. Mitchelmore and Rowley (2010), human capital is an intangible asset that enable a firm to more successful in its performance. Valuable skills, knowledge and abilities of an entrepreneur may lead to sustainable competitive advantage of the firm since entrepreneurial competencies are usually rarely and difficult for rivals to develop. However, organization performance is arguably the most important indicator of organizational success.

In India, both management thinkers and other observers have written much recently about the uniquely Indian characteristics of successful entrepreneur leaders operating in India. These characteristics include commitment to inclusive growth (Jayaram, Dixit & Motwani, 2014). Macadamia firms contribute to 15% of industrial units, 45% of the industrial output and 40 % of India's exports. This sector employs highest number of people becoming the second largest employment generator in India in the agriculture sector. More than 30 thousand macadamia firms in India contribute 10% to India's GDP and the sector is growing strongly at a growth rate of 8% per year.

In a collective culture, especially in a country like India, paternal attributes in an individual are very much prevalent. Here the entrepreneurs/leaders see themselves as heads of the family, caring and responsible for the wellness of their employees. In discharging their duties, they adopt benevolent, authoritative and benevolent-authoritative style in managing their organizations depending on the situations (Jayaram, Dixit & Motwani, 2014).

Macadamia firms in Malaysia are considered as the prime mover of the economy. They contribute 99.2% of total entrepreneur establishments in Malaysia, with a 32% share of GDP, share of employment and 19% of total exports (macadamia firm's master plan 2012-2020). These figures demonstrate the importance of macadamia firms in shaping Malaysian economic landscape. Though it is considered as a good performance, it has not reached the stage of full potential. In fact, macadamia firms have been very fragile and more vulnerable to the external environment (NSDC, 2012). In addition, the literature also found that failure rate of macadamia firms is extremely high (Rahim *et al.* 2015).

Over the past 30 years, the United States has witnessed a powerful emergence of macadamia firms and entrepreneurs. America's macadamia firms and entrepreneurs generated more than half of the nation's GDP, served as the principle source of new jobs in the U.S. economy, and employed

more than 50% of the private workforce, which grew to 51% (Rahim, Zainal, Mohtar & Ramli, 2015). The increase of macadamia entrepreneurs aided economic growth and created new employment. Macadamia entrepreneur growth is associated with target markets, increased sales, profitability, achieving organizational goals and competition.

Macadamia firms in Africa suffer from weak financial performance and high failure rate. Sha and Jingsheng (2010) and Carey and Tanewski (2016) argue that judging by the poor performance of the informal sector, not much progress seems to have been achieved, despite government efforts to promote macadamia firms activity. Given the significant role of macadamia firms in the Nigerian economic development, the need for this sub-sector to catch up with the counterparts in the globalized world cannot be overemphasized. Entrepreneurial attributes are some of the internal challenges facing macadamia firms (Arham, 2014), the extent to which members of the organization contribute in harnessing resources equally on how well the leaders of the organization understand and adopt appropriate management style in performing their roles as entrepreneur and leaders (Gbandi & Amisah, 2014).

In Kenya, Macadamia firms contribute 21 percent of the Gross Domestic Product (GDP) and employ 12 percent of the labour force (Government of Kenya, 2014). The Macadamia firms sector is very volatile and experiences a high degree of entrepreneur closure and shrinkage. As a result, Government have been making numerous efforts to assist the development of the Macadamia firms sector. The high mortality rate implies that Macadamia firms are limited in their ability to create long-term sustainable employment and may be responsible for the greatest number of job and wealth losses. Despite the many challenges and difficulties of the Macadamia firms, the sector has great potential for increased employment creation. Some studies carried out indicate that most Macadamia firms fail due to lack of appropriate entrepreneurial

competencies that steer the firms through hard times (Ochanda, 2014).

Ardjouman (2014) noted that effective entrepreneurial attributes are important to the attainment of organizational success and the Macadamia firms' growth. The vision 2030 for this sector is to move to the formal, efficient, multi-tiered, diversified in product range and innovative through the development of producer entrepreneur groups and large wholesale hubs (Government of Kenya, 2015). Entrepreneurial attributes are thought to be crucial in the attainment of the firm's success and more importantly in the sustainability and success of such Macadamia firms.

Statement of the Problem

According to the Economic Survey (2006), the macadamia firms contributed over 25 percent of new jobs created in the year 2005. In addition to its importance in creating jobs, the Macadamia firms sector contributes 33% of the value-added in manufacturing and the retail trade in Kenya (KNBS, 2007). According to Ministry of Agriculture (2011) survey done showed that macadamia nut industry contributed 38% of overall nut value produced in Kenya and employed more than 100,000 people at the time of that survey. This is vital in the Kenya Vision 2030 (GOK, 2007). However, it is also a sector that faces challenges day in day out. According to the Kenya National Bureau of statistics (KNBS) survey (2016), approximately five Macadamia firms did not get to celebrate their second anniversary in the last five years, 2016 inclusive, raising concern over sustainability of this critical sector. This represents a significant 46 percent of the Macadamia firms surveyed that died in their first year of establishment. The performance of Macadamia firms in Kenya is still a challenge, despite of various financial assistance from government and NGOs and other non-financial incentives and facilities, favourable government policies and now MSE Act of 2012. The high rate of Macadamia firms' failure in the country shows poor

performance and lack of ability to remain competitive.

According to Robertson (2002), entrepreneurial attributes such as visionary leadership provide a clear and compelling sense of entrepreneur direction in terms of goals and period; Crossan and Apaydin (2010) emphasized the importance of ability to innovate that is development of new ways of working and product improvement for better performance. According to Gerli, Gubitta, and Tognazzo (2011), entrepreneurial competencies determines both personal and entrepreneur performances. Given the high failure rate of Macadamia firms in Kenya, as revealed in the statistics, there is perhaps a need to establish the entrepreneurial attributes being exemplified by enterprises and link it to performance. This study therefore sought to establish the effect of entrepreneurial attributes on the performance of macadamia firms in Kenya.

Study Objectives

The general objective was to establish the effect of entrepreneurial attributes on performance of macadamia firms in Kenya. The specific objectives guiding the study were:

- To assess the effect of resourcefulness on the performance of Macadamia firms in Kenya.
- To find out the effect of pro-activeness on the performance of Macadamia firms in Kenya.

LITERATURE REVIEW

Theoretical Review

The Theory of Pro-Activeness

Israel Kirzner's theory of entrepreneurial alertness has added value to the research on opportunity identification. Kirzner (1973) was the first to define the role played by entrepreneurial alertness in helping entrepreneurs become more aware of new opportunities and use limited clues in different ways. In further research, Kirzner (1979) has defined entrepreneurial alertness as an individual's ability to perceive new opportunities that have hitherto been overlooked by others; more

specifically, alertness can be described as: “a motivated propensity of man to formulate an image of the future” (Kirzner, 1985).

In accordance with Kirzner’s research, Baron and Ensley (2006) have argued that alert individuals “identify new solutions to market and customer needs in existing information, and to imagine new products and services that do not currently exist” (Baron and Ensley, 2006). A central study by McMullen and Shepherd (2006) has confirmed that, “To act on the possibility that one has identified an opportunity worth pursuing” is the heart of being an entrepreneur (McMullen and Shepherd, 2006). Gaglio and Katz (2001) have asserted that a high level of entrepreneurial alertness leads to acute sensitivity to one’s surroundings, a mental framework that helps entrepreneurs adjust to the current situation.

Based on previous research, Tang *et al.* (2012) have produced a 13-item model, which theoretically and empirically divides entrepreneurial alertness into three distinct factors: (a) “scanning and search,” (b) “association and connection,” and (c) “evaluation and judgment.” Tang’s instrument is well validated and has strong reliability, providing researchers with a valuable tool for probing the entire entrepreneurial opportunity-development process, including antecedents and outcomes.

Pro-activeness is related to initiative and first-mover advantages and to ‘taking initiative by anticipating and pursuing new opportunities (Lumpkin & Dess, 1996). This is the acting in anticipation of future problem, needs, or changes. Lumpkin and Dess argue that proactive may be crucial to an entrepreneurial attributes because it suggests a forward- looking perspective that is accompanied by ‘innovative’ entrepreneurial activity in terms of this, proactive is considered according to the range of conception and the implications of these according to predicted associations are outlined.

Pro-activeness is associated with leadership, and not following, as a proactive enterprise ‘has the will

and foresight to seize new opportunities even if it is not always the first to do so’, according to Lumpkin and Dess (1996). However, being a first entrant into a market is not necessary a guarantee of a durable competitive pioneer advantage, according to Cahill (1996), but is associated with mixed results. According to the conception of Cahill (1996), increased earnings might not necessarily be predictably associated with higher levels of perceptiveness.

This would depend on whether specific context is appropriate to pro-activeness as a dimension of entrepreneurial attribute (Lumpkin & Dess, 1996). In terms of a specific conception, Lumpkin and Dess (1996) suggest a conceptualization of pro-activeness as a continuum, whereby the opposite extreme of pro-activeness is regarded as a passiveness rather than reactivity.

According to this, passiveness is the “indifference or an inability to seize opportunities or lead in the market place” (Lumpkin & Dess, 1996). Pro-activeness, however, is associated to competitors, and is therefore different from passiveness (Lumpkin & Dess, 1996). Passiveness is therefore expected to be associated with lower gross earnings due to there being less commitment on the part of a less entrepreneurial, less pro-active individual to the development of market share. The development of market share is therefore considered to represent proactive in this work. Following this line of reasoning, it is predicted that pro-activeness will, to some degree, be positively and significantly associated with increased earnings.

High levels of entrepreneurial attributes support opportunity recognition and opportunity creation according to Jantunen *et al.* (2005). Therefore, the reconfiguration of an asset to match the requirements of changing environments should enhance performance, yet being active may not necessarily imply efficiency (Jantunen *et al.* 2005). An interpretation could that pro-active changes might not be necessarily be efficient, or that earnings might not always be improved through proactive reconfigurations of resources if efficiency is not

increased. In certain context, therefore, pro-active might not be associated with increased earning if specific context does not allow for pro-active to have an effect on efficiency. According to this pro-active attribute might not necessary be associated with increased earnings or performance.

This theory is associated with the entrepreneurial attributes on performance as pro-activeness and competition are some of the major factor affecting performance of Macadamia firms. This is because pro-activeness may be crucial to an entrepreneurial attribute since it a forward-looking perspective that is accompanied by innovative and entrepreneurial activity. Further, pro-activeness affects the earnings depending on its efficiency.

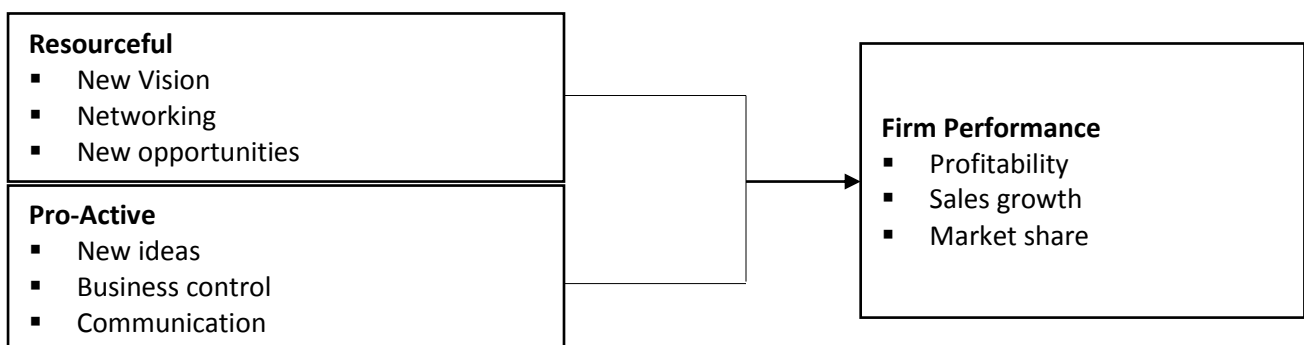
Resource - Based Entrepreneurship Theory

Davis and Cobb developed the Resource Dependency theory in the 1970s. The theory was based on the premise that the organization acquires power when they possess resources that are valued by other organizations. The resource dependency and emphasizes the resources that firms have developed to compete in the environment.

Researchers subscribing to the resource dependency theory argue that only strategically important and useful resources and competencies should be viewed as sources of competitive

advantage (Hessels & Terjesen, 2010). Previously scholars such as Bryant and Davis (2012) have used terms such as core competences, distinctive competencies and strategic assets to indicate the strategically importance resources and competencies, which provide a firm with a potential competitive edge. Strategic assets are ‘the set of difficult to trade and imitate, scarce, appropriable and specialized resources and capabilities that bestow the firm’s competitive advantage. Distinctive competencies refer to all the things that make the entrepreneur a success in the market place (Gitau, Mukulu & Kihoro, 2015).

According to the theory, resources generally include various assets, capabilities, organized processes, information knowledge and skills that contribute to improved organizational efficiency and effectiveness (Hofer, Jin, Swanson, Walter & Williams, 2012). The overall concept of entrepreneurial attributes refers to a valuable resource, which is in form of a capability. This resource is linked to better performance through ensuring competitive advantage. A good workforce, which is a capability, according to the theory, plays a significant role in ensuring that there is competitive advantage and better performance of a firm.



Independent Variables

Dependent variable

Figure 1: Conceptual Framework

Empirical Literature Review

In a study on entrepreneurial opportunity as the potential to create value, Levin (2013) established that unpacking the concept of entrepreneurial

opportunity to include three categories of essential ingredients provides a fruitful framework for applying Kirzner approach to entrepreneurship bridging the entrepreneur as someone alert to

opportunities to create value, to real world situations requiring the entrepreneur's evaluation of resources inputs and prospective outputs, and his perception of what actions are necessary and need to be coordinated in an environment of sufficient mutual understanding.

In Sweden, Berglund (2007) carried out a study on opportunities as existing, created in Sweden mobile internet industry, and established that the opportunity had been discovered and deemed worthwhile; the entrepreneur undertakes a series of exploitation activities. These include raising financial and other resources, protecting information about the opportunity from competitors, and designing appropriate organizations and entrepreneur models. The world is unpredictable with the respect to technology, markets and competitors. Therefore, the entrepreneur will often construct strategies to deal with these uncertainties by introducing slack, identifying niche markets and forming strategic alliances. Careful planning is thus vital for exploitation of an opportunity, especially under conditions of high uncertainty (Cowling & Liu, 2013). Constructing a solid entrepreneur plan helps the venture by evaluating conjectures about future events, focusing attention on bottlenecks and additional resource requirements, clarifying goal and objectives, and facilitating communication and increasing legitimacy in interaction with external stakeholders.

Bangesi, (2013) carried a study on strategic entrepreneurial response of Macadamia firms. The study examined three constructs namely: Market Orientation (MO), Entrepreneurial Orientation (EO), and Networking Capability (NWC), which are collectively referred to as dimensions of Strategic Entrepreneurial Response (SER) as appropriate constructs to enhance simultaneous opportunity seeking and advantage seeking behaviours. In the course of the study, a cross-section research design will used to collect data from Macadamia firms in Tanzania of which 291 SME owners/entrepreneur were randomly selected and interviewed in three

types of industries namely: manufacturing, service and retail.

The study findings confirmed a relationship between dimensions of SER and SME performance suggesting that emphasis on market orientation, entrepreneurial orientation and networking capability enhance SME performance. Lim and Xavier (2015) conducted a study on opportunity Recognition framework among technology entrepreneurs in Malaysia. Using a descriptive research design, the study found out that for entrepreneurship to happen, opportunity recognition through resourcefulness must have first happen as an entrepreneurial attribute.

Nengo (2004) researched on proactiveness of the operations management function: the case of Kenya Power and Lighting Company (KPLC). Descriptive statistics were used in the study. It will noted that on the overall, the contributions by the operations management (OM) function will considered significant on most aspects of strategy development at KPLC. However, findings revealed that the role of the OM function in aspects of strategy development such as identification of customer requirement and performance priorities is markedly lower than the role played by the OM function in strategy implementation. On investigating, the status of the performance priorities, which are necessary for success, top management support for these priorities, is generally considered high, while coordination between various functions, for the purpose of operational success, is considered relatively wanting.

Makombe (2014) researched on an analysis of the environmental proactivity strategies in use in the Zimbabwe poultry value chain. Descriptive statistics will used in this study. One factor that statistically significantly contributes towards environmental proactivity is the amount of focus placed on the management of certain environmental aspects. The presence of other operational systems and the presence of a sufficient environmental budget also influence the adoption of a particular proactivity

strategy. The most influencing stakeholders in pushing for environmental action in the poultry industry are the regulatory stakeholders and shareholders. These can push for better environmental practices within the industry.

Tuppura, Toppinen and Jantunen (2013) researched on proactiveness and corporate social performance in the global forest industry. Descriptive statistics were used. A positive impact of a company's proactiveness on CSP will be found using regression analysis. Results also show that employee and entrepreneur in a proactive company more often take the initiative to improve their CSP compared to the employees and entrepreneur in less proactive companies.

Another study by Stuetzer, (2014) in assessing the relentless pursuit of opportunities, all entrepreneurial activities originate in the creativity acts of individuals. This places significance importance of the individuals within an entrepreneurial firm. Entrepreneurial firms need individuals who are alert to opportunities. Individuals are more susceptible to identify opportunities through their opportunity recognition capabilities (ORC), defined and outlined as; the individual's prior knowledge of industries, markets, or customers (Stuetzer, 2014).

Brundin, Nordqvist and Meli (2011) studied entrepreneurial orientation across generations in family firms to find out the role of owner-centric culture for pro-activeness and autonomy in Sweden and found that pro-activeness is related to initiative and first-mover advantages and to taking initiative by anticipating and pursuing new opportunities. They established that pro-activeness is crucial to an entrepreneurial orientation activity. They assert that proactive is associated with leadership, and not following, as a proactive enterprise has the determination and anticipation to get hold of new opportunities, even if it is not always the first to do so.

METHODOLOGY

The study adopted descriptive survey design. The study population proposed comprised of the listed macadamia firms in Kenya some. The unit of analysis for the study selected were the Macadamia firms in central Kenya Highlands while the unit of observation were management team in the Macadamia enterprises. The sampling frame included the Top-level management, Middle level management and Lower level management employees. The study used stratified random sampling technique in choosing the sample size from the target population. A sample size of 66.5% of the total population was considered using Slovene's formula which arrived at a sample size of 133 respondents. Primary data was collected using structured and unstructured questionnaires. The questionnaires gathered data were analyzed using SPSS. The data analysis mainly involved the use of descriptive analysis, inferential analysis, and correlation and regression analysis.

DATA ANALYSIS AND PRESENTATION

Response Rate

The study targeted 133 employees in the Macadamia firms, 128 of the respondents filled and returned the questionnaire, forming a response rate of 96%. A response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent (Mugenda & Mugenda, 2013).

Descriptive Statistics

Effect of Resourcefulness on Macadamia Firms Performance

The researcher asked the respondents to indicate the extent to which they agree with the listed statements about the effect of resourcefulness in performance of macadamia firms in Kenya. According to the findings the respondents agreed that the entrepreneur directs the organization in achieving its vision effectively and efficiently as shown by a mean of 3.688 and standard deviation of 0.737, the organizational entrepreneurs exploit new opportunities in the external environment as

shown by a mean of 3.883 and standard deviation of 0.855, the entrepreneurs communicate business vision to enable the firm meet higher goals as shown by a mean of 3.922 and standard deviation of 0.848.

According to the findings the respondents agreed that entrepreneurs create enterprise vision and enable it meet its objective as shown by a mean of 3.961 and standard deviation of 0.894,

entrepreneurs' network with the external environment to learn the new competitive environment as shown by a mean of 3.734 and standard deviation of 0.829. The findings are related to Christensen, Germain and Birou (2007) who established that resourcefulness enhances performance. From the results, the mean scores were above average.

Table 1: Effect of Resourcefulness on Macadamia Firm Performance

Statements	Mean	Std. Deviation
The entrepreneur directs the organization in achieving its vision effectively and efficiently	3.688	0.737
The organizational entrepreneurs exploit new opportunities in the external environment	3.883	0.855
The entrepreneurs communicate business vision to enable the firm meet higher goals	3.922	0.848
The entrepreneurs create enterprise vision and enable it meet its objective	3.961	0.894
The entrepreneurs networks with the external environment to learn the new competitive environment	3.734	0.829

Effect of Pro Activeness on Macadamia Firms Performance

The study sought to indicate the extent to which the respondents agree with the list of statements about the effect of pro activeness on the performance of macadamia firms in Kenya. According to the findings, the respondents agreed that the business anticipates future demand increases due to value addition as shown by a mean of 3.805 and standard deviation of 0.795. There is forward-looking perspective of an entrepreneur as shown by a mean of 3.844 and standard deviation of 0.828. The organization entrepreneurs evaluates new opportunities, monitors market trends to increase market base of the business as shown by a mean of 4.070 and standard deviation of 0.945.

According to the findings the respondents agreed that the organization entrepreneurs evaluates new opportunities, monitors market trends to increase market base of the business as shown by a mean of 3.820 and standard deviation of 0.837. In the organization, entrepreneurs are a head of the rest in finding new market opportunities as shown by a mean of 3.914 and standard deviation of 0.866. The organization entrepreneurs initiate actions that were taken up by competitors as shown by a mean of 3.805 and standard deviation of 0.795. The findings concur with the findings of Karungani and Ochiri (2017) who noted that the pro activeness is effective in enhancing performance of the firms.

Table 2: Effect of Pro Activeness on Macadamia Firms Performance

Statements	Mean	Std. Deviation
The business anticipates future demand increases due to value addition	3.805	0.795
There is forward looking perspective of an entrepreneur	3.844	0.828
The organization entrepreneurs evaluates new opportunities, monitors market trends to increase market base of the business	4.070	0.945
In the organization entrepreneurs are a head of the rest in finding new market opportunities	3.820	0.837
The organization entrepreneurs initiate actions that ate taken up by competitors	3.914	0.866

Inferential Analysis

Inferential analysis was conducted using correlation and multi linear regressions to determine the extent and direction of relationship between resourcefulness and pro activeness on performance of macadamia firms in Kenya.

Correlation Analysis

The study used Pearson Moment correlation analysis to establish the strength of the relationship between independent and dependent variables.

The results revealed that there was a strong positive correlation between resourcefulness and

performance of macadamia firms as shown by $r=0.810$, statistically significant $p=0.001<0.01$; There was a positive correlation between pro activeness support and performance of macadamia as shown by $r = 0.798$, statistically significant $P=0.002$.

This implied that resourcefulness and proactiveness significantly influence the performance of macadamia firms. The findings concurred with Angus and Noor (2013) who established that entrepreneurial attributes on the performance of macadamia firms in Kenya.

Table 3: Correlation Coefficients

Performance of macadamia firms	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	128	
Resourcefulness	Pearson Correlation	.810**	1
	Sig. (2-tailed)	0.001	
	N	128	128
Proactiveness	Pearson Correlation	.798**	1
	Sig. (2-tailed)	0.002	
	N	128	128

** . Correlation is significant at the 0.01 level.

Model Summary

Model summary is used to analyses the variation of dependent variable due to the changes of independent variables. The study analyzed the variations of performance of macadamia firms due to the changes of resources and pro actives. R squared was 0.682 implying that there was 68.2% variation of performance of macadamia firms, due to the changes of resourcefulness, and proactiveness. The remaining 31.8% implied that

there are other factors that influence the performance of macadamia firms which were not discussed in the study. R is the correlation coefficient, which shows the relationship between the study variables. From the findings, the study found out that there was a strong positive relationship between the study variables as shown by 0.682. The findings concur with Munster and Vestin (2012) who established that entrepreneurial attributes enables the firms to perform better.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826 ^a	0.682	0.657	0.009

Analysis of Variance

The analysis of variance (ANOVA) is used to determine whether the data used in the study is significant. From the ANOVA statistics, the processed data (population parameters) had a significance level of 0.001. This shows that the data

is ideal for making conclusions on the population's parameter, as the value of significance (p-value) is less than 5%. The F calculated was greater than F critical (59.501 >3.069). This shows that resourcefulness and pro-activeness significantly affect the performance of macadamia firms. The

findings concur with Kader and Akter (2014) who established that entrepreneurial attributes enhance

effective performance of macadamia firms.

Table 5: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.494	2	4.747	59.501	.001 ^b
	Residual	10	125	0.080		
	Total	19.494	127			

Regression Analysis

Regression analysis was used to determine the extent of the effect of entrepreneurial attributes on performance of macadamia firms in Nairobi, Kenya. The study ran the procedure of obtaining the coefficients and the results were as shown on the table below. According to Stewart (2015), regression analysis is a statistics process of

estimating the relationship between variables. Regression analysis helps in generating equation that describes the statistics relationship between one or more predictor variables and the response variable: Multiple regression analysis was to determine the effect of entrepreneurial attributes on performance of macadamia firms in Kenya.

Table 6: Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.114	.215		.181	.005
Resourcefulness	.652	.101	.567	6.455	.000
Pro activeness	.626	.108	.549	5.796	.002

The regression equation was:

$$Y = 1.114 + 0.652 X_1 + 0.626 X_2$$

The equation above revealed that holding resourcefulness and proactiveness constant performance of macadamia in Kenya would be at constant 1.114.

Resourcefulness is statistically significant to performance of macadamia firms as shown by ($\beta=.652$, $P=0.000$). This showed that resourcefulness had significant positive relationship on performance of macadamia firms. This implies that a unit increase in resourcefulness was result to increase in performance of macadamia firms. The findings concurred with Smaros *et al.*, (2013) who established that resourcefulness enabled the firms to perform better.

Proactiveness is statistically significant to performance of macadamia firms as shown by ($\beta=.626$, $P=0.002$). This indicates that Proactiveness support had significant positive relationship with

performance of macadamia firms. This implies that a unit increase in Proactiveness was result to increase in performance of macadamia firms. The findings concur with Ryan *et al.*, (2013) who established that Proactiveness could be used improve performance of macadamia firms.

CONCLUSIONS AND RECOMMENDATIONS

This study concluded that resourcefulness is positively related to performance of macadamia firms in Kenya, business anticipates future demand increases due to value addition, there is forward-looking perspective of an entrepreneur, the macadamia firms evaluate new opportunities, monitor market trends to increase market base of the business.

This study concluded that proactiveness is positively related to performance of macadamia firms. The organization entrepreneurs seizes new opportunities, monitors market trends to increase market base of the business. In the organization,

managers are ahead of the rest in finding new market opportunities.

There is need for the industry stakeholders to evaluate the pertinent factors that adversely hinder this growth. From this study, it shows that the entrepreneurs behind the macadamia firms need to be pro-active in identifying opportunities and understanding the market trends, innovative in the way they address market opportunities, resourceful in networking with relevant sector players that add value to the firm.

Industry players such as development organizations, financial institutions, government agencies, etc. should play a vital role in engaging entrepreneurs in the macadamia sector in offering support that builds on their capability to drive their

firms towards sustainability. This support should also be focused on ensuring the entrepreneurs are more resourceful in identifying opportunities, proactive in leading the business to a growth path, take risks in building the firms and innovative in their processes.

Areas for Further Research

The study proposed that further research should be done on the effects of entrepreneurial attributes using different variables. Existing literature indicates that there is need to undertake similar research in other sectors in Kenya and other countries in order to establish whether the explored practices herein can be generalized to affect performance in the macadamia firms.

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