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ROLE OF ENTREPRENEURIAL CAPABILITY IN THE PERFORMANCE OF PRIVATE UNIVERSITIES IN KENYA

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Abstract

The purpose of this study is to establish the effects of entrepreneurial capability (unbundled as market orientation, entrepreneurial orientation, marketing capability, and competitive orientation) on private universities performance in Kenya. It seeks to understand how private universities in Kenya adopt entrepreneurial capability as a strategy to assist them maintain good performance. The unit of analysis of the study are the private universities within Nairobi County. The study used a survey design. The quantitative data was collected from a sample size of 329 respondents stratified into the academic and non-academic staff. Structural Equation Model (SEM) was used to test the model. The analysis of the relationship between entrepreneurial capability and university performance revealed β = .92 and R = .84. The findings indicate that entrepreneurial capability significantly affects the performance of the private university positively. This study has practical implications for the theoretical advancement of university entrepreneurial capability. Additionally, the outcomes of the study provide insights into universities' management on the strategic choices they can make to enhance their performance in the fast changing environment.

Keywords: Dynamic capabilities, Entrepreneurial capability, Market orientation, Competitive orientation, Entrepreneurial orientation

INTRODUCTION

Kenyan university environment is fast-changing and increasingly becoming competitive. Consequently, universities have to adopt strategies that enable them to respond effectively to the external environment Onsongo (2007) note that Kenya has the fastest-growing universities in East-Africa.Private universities have increased remarkably over the years. At present, there are 30 chartered public universities with five constituent colleges, 18 chartered private universities with five private constituent colleges, 13 universities with a letter of interim authority, and one private institution (CUE, 2017). It is clear that university sector will continue to grow, but few will survive in the future (Okech, 2003). With devolution and the plan of having universities in each county, the trend of university proliferation is sure to continue. This changing environment has grave consequences for the competitiveness and survival of private universities. In this dynamic and competitive environment, the biggest challenges of private universities are how to increase the student's population, remain financially viable, create sustainable revenue streams, staff retention, and to provide quality service which includes the development of relevant programs, teaching, and efficiency in service delivery. Due to resource constraint and stiff competition, the need for adaptation is ever more urgent (Wangenge-Ouma & Nafukho, 2011). The universities are required to understand and develop dynamic capabilities to be able to adapt to the changing universities environment.

Like any business organization operating in a changing environment, dynamic capabilities are essentials for universities. Teece (2009) argues that dynamic environment demand a continual changing and revamping of what firms do to match with the changing environment. In this context, creating and sustaining a competitive advantage is an uphill challenge for organizations. Similar views are echoed by Wildavsky (2012) who argues that globalisation forces that affect all business sectors have also increased competition amongst universities. Thus, in a global education environment, competitiveness is crucial for the existence and relevance of universities. Consequently, universities have to identify and invest in capabilities and strategies that provides them with a competitive advantage.

Nowadays, universities operate in a global context, and Kenyan universities are part of the continental and global universities system. Consequently, they are affected by the global trends. The major global trends are high competition, constant change in customers' preferences, unprecedented technological changes, knowledge-driven economy, and the fast changing business environment. In such volatile global environment, universities must change (De Wit, 2010). Thus, for universities, achieving competitive advantage is a major challenge in the unpredictable changing environment. In a fast changing environment, the survival of universities depends on their capabilities to respond to the challenges of competition, build new

revenue streams, adapt and keep pace with the innovation that is disrupting the academic arena. Leisyte and Dee (2012) argue that, in a globally competitive environment, universities have to compete vigorously for students, grant and industry partnership.

The geographical characteristic of Kenyan universities is their high concentration in Nairobi County. Even if some universities have established campuses in other parts of Kenya, Nairobi remains a crucial centre of attraction for universities. Consequently, this creates a high competition for students. Wangenge-Ouma and Langa (2010) observe that the universities environment is overcrowded. In the recent past, many constituent colleges and middle-level colleges have moved into fully fledged universities. This growth in the number aggravates the existing competition and threatens the survival of private universities. The survival of private universities greatly depends on a sound strategy to cope with the competition and the changing environment (Bradmore & Smyrnios, 2009).

Analysing how universities cope with the changing and competitive environment, De Wit (2010) suggests that the model of the entrepreneurial university is best suited for the universities adaptation to a changing environment. This implies universities behave entrepreneurially and develop the ability of sense and exploit opportunities. Furthermore, Ma and Todorovic (2011) argue that market orientation approach is the most adapted strategy that universities should adopt to cope with the changing environment. In the same vein, Leisyte and Dee (2012) note that European universities mostly adopt market orientation approach as a response to competition for resources. The university that is market oriented is in tune with the demand of the market and develops a program that is market driven. It involves focusing on the customers, gathering information, coordination of marketing activities and responding to customers' needs (Ahmed & Goodwin, 2012). Market orientation is part of the entrepreneurial capability of universities. Subsequently, universities that possess entrepreneurial capability are market oriented and better place to survive in the competitive environment.

The puzzling issue is understanding the dynamic capabilities that universities are utilizing in the changing environment and the critical capabilities that affect their performance. There is no information about the role of entrepreneurial capability in the strategy of academic institutions in Kenya. In light of the challenges posed by the dynamic environment of universities in Kenya, the primary objective of this study was to establish the effects of entrepreneurial capability on university performance in changing environment. To do so, this study adopts the view that market orientation, entrepreneurial capabilities, and competitive orientation as vital dimensions of entrepreneurial capability.

Prior studies have stressed the important role of entrepreneurial capability in firm performance (Li, Huang, & Tsai, 2009). Aramand and Valliere (2012) support that the long-term

success of firms depends on the improvement in entrepreneurial capability. Entrepreneurial capability suggests that firms should use market orientated approach (Kumar, Subramanian, & Strandholm, 2011), have a competitive orientation towards their competitor (Eibe, 2009) and adopt entrepreneurial orientation (Kraus, 2013; Jantunen, Puumalainen, Saarenketo, & Kyläheiko, 2005) to enhance their performance. The study hypothesized that:

$H_{1:}$ Market orientation has a positive relationship with university performance

H_2: Entrepreneurial orientation has a positive relationship with university performance.

H_3: Competitive orientation is positively related university performance

H_4: Entrepreneurial capability has positive effects on university performance

LITERATURE REVIEW

Evolution of Dynamic Capabilities

In the late 1990s, the concept of dynamic capabilities was advanced by many scholars as a strategy to aid organizations to adapt to the changing environment (Barreto, 2010; Eisenhart & Martin, 2000; Teece, 1997). Dynamic Capabilities refer to the strategic capabilities of the firm to change (Johnson, Whittington, Scholes, Angwin & Regner, 2014) and adapt to a rapidly changing environment. McKelvie and Davidsson (2009) describe dynamic capabilities as organization's ability to alter its resources base to respond to rapidly changing environments. Barreto (2010) suggests that for managers and scholars, dynamic capabilities are part of a solution to the puzzle of the firms' adaptation to volatile environment.

The introduction of the concept of dynamic capabilities opens a new chapter in the debates on how firms gain competitive advantage and sustain a superior performance in an unpredictable environment. The scholarly discussion has revolved essentially around the meaning, role, scope and outcomes of the dynamic capabilities. Teece (1997) introduced the dynamic capabilities as the firm's abilities to build, integrate, and reconfigure firms' resource base in response to the rapidly changing environment. This definition sparked disagreements which resulted in different understanding and definition of dynamic capabilities, how they come to be developed and what they do to firms. Other authors tend to define dynamic capabilities by its outcomes which add up to the misunderstanding (Helfat & Peteraf, 2009). The plethora of the definitions that have emerged shows the lack of consensus on the meaning of dynamic capabilities (Barreto, 2010). This lack of consensus on the definition is considered a major challenge for the advancement of the field of dynamic capabilities. Nevertheless, the inconsistencies in the definition do not diminish the importance of dynamic capabilities for firms operating in a volatile environment. Helfat and Peteraf (2009) remark that recent attempts have offered a noticeable improvement in the definition of dynamic capabilities. Drawing from the past

and present criticism of the definition, Barreto (2010, p. 271) defines dynamic capabilities as "The firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base". The core of dynamic capabilities is the renewal and the reconfiguration of the firm resources. Pavlou and El Sawy (2011) assert that dynamic capabilities are essentially about resource renewal. Similarly, Winter (2003) notes that it is agreeable that the chief concern of dynamic capabilities is change. The dynamic capabilities focus on resources renewal and development (Protogerou et al., 2012). In conclusion, the core of the dynamic capabilities view is the renewal of the firm's tangible and intangible resources.

Studies have generated some leading schools of thoughts in the debate of dynamic capabilities. Peteraf, Di Stefano and Verona (2013) conducted a pathfinder analysis of the scholarly writings on dynamic capabilities. The analysis revealed that there are two schools of thoughts; one led by Teece and the other by Eisenhardt. They note that scholars falling under each of the schools hold a different worldview. Teece School supports that dynamic capabilities lead to sustainable competitive advantage while Eisenhardt and Martin (2000) hold the view that they cannot be a source of sustainable competitive advantage. While the former defends the application of the dynamic capabilities only in a dynamic environment, the latter insists they are also relevant in a static environment. Galvin et al. (2014) explain that the point of divergence is on dynamic capabilities as a source of competitive advantage and the context in which they are relevant. Actually, dynamic capability was introduced to assist the firms to respond to the changing environment and provide them with a competitive advantage and higher performance.
The main focus of the studies of dynamic capabilities has been on the effects of dynamic capabilities on performance. The bulk of the empirical research has tested the direct or mediated effects of dynamic capabilities on performance. Many studies found that dynamic capabilities contribute to enhance firms' performance. However, recently Teece (2014) stresses the importance of good strategy. He argues that a strong dynamic capability requires a good strategy to influence performance. This implies that dynamic capabilities alone will not result in an improved performance. The firms will have to develop a strategy that will enable them to deploy effectively their dynamic capabilities. The current trend is to combine the deployment of dynamic capabilities with a good strategy.

Entrepreneurial Capability and Firm Performance

The development of dynamic capabilities necessitates that firms behave entrepreneurially. Entrepreneurial firms are constantly changing, embracing new things and continually innovate. Entrepreneurial firms are more in tune with the environmental dynamism and understand better

the need to configure their resource base as the external environment keeps changing. Kyrgidou and Spyropoulou (2013) explain organization entrepreneurial capability as the propensity to spot new ideas and constantly pursue new opportunity while managerial capability refers to managers' ability to identify viable opportunities and avail resources for exploiting them. Aramand and Valliere (2012) posit that the long term success of firms depends on the improvement of entrepreneurial capability.

Jantunen, Puumalainen, Saarenketo, and Kyläheiko (2005) argue that the combination of the firm entrepreneurial behaviour coupled with the resources configuration of the firm is a source of competitive advance. They further claim that entrepreneurial firms are sensitive to opportunity identification and exploitation. A firm that possesses entrepreneurial capabilities adopt market oriented behaviour and are constantly pursuing market opportunities. The market orientation gives them a competitive advantage over those that are not permanently seeking market opportunities.

The entrepreneurial behaviour of the firm is important for good performance in a changing environment. The entrepreneurial firms are more proactive and likely to seize market opportunities than others (Li, Huang, & Tsai, 2009). Several empirical studies have attempted to established direct or indirect effects of entrepreneurial capability on firm performance. Jiménez, Cegarra-Navarro, Perin, Sampaio, and Lengler (2014) in a study carried out about Brazilian firms, investigated the effect of entrepreneurial capabilities on firm's performance. Analysing data from 361 different firms CEOs, using structural equation model, they found that there is no significant direct relationship between entrepreneurial capability and firm performance. However, the result indicates that entrepreneurial capabilities enable firms to develop learning and innovation which in turn affect performance. This suggests that there is an indirect relationship between entrepreneurial capability and performance. On the other hand, Gruber-Muecke and Hofer (2015) studied firm entrepreneurial orientation and market orientation to establish their effect on performance. Analysing data from 170 Australian exporters firms, which were collected from CEOs through a questionnaire, the study revealed that market orientation has a positive effect on performance. The result also shows that some constructs of entrepreneurship such as management professionalism, opportunity risk behaviour have a moderate effect on performance. However, they did not explain plainly if the entrepreneurial capability actually affects firm's performance.

Strategies for University Performance

In an era of great competition amongst universities, the pursuit of excellent performance is paramount to the survival of universities. Universities performance is a crucial factor in attracting

students and essential in building a good reputation in the education sector. Duque, (2014) notes that nowadays, measuring the performance of educational institutions is becoming a common practice. Universities have to prove their viability. This implies that universities understand the performance drivers in a dynamic environment. It is also a prerequisite for attracting students and funding (Chen et al., 2009). University performance enhances universities' image and reputation in the society. Chen et al. (2009) argue that university performance is determining factors that influence parents' choice of the university for the children. In a dynamic environment, universities should pursue academic excellence to remain competitive. The academic excellence entails knowledge transfer, patents, enrollment and prestige in the academic community **(**Wangenge-Ouma & Langa, 2010).

In assessing university performance, consideration should be made to the contribution of teaching and research to the realization of the university strategic goal (Zangoueinezhad & Moshabaki, 2011). Guthrie and Neumann (2007) argue that efficiency in productivity, an increase in revenue and responsiveness to the market are key determinants of the university performance. The ability of private universities to attract more students and increase their market share depends on their reputation, the quality of their output and the satisfaction of the clients. The measurement of performance can be based on financial, focus on productivity, quality or time (Edgar & Geare, 2013). University performance measurement focuses more on productivity and quality. The fundamental and challenging question for the university management is where they need to focus and invest resources to enhance their performance (Kok & McDonald, 2015). As universities are faced with resources constraint, an important role of management is the effective resource allocation and maximisation in resource utilisation. The poor allocation of resources represents a major risk for the universities. The operational capabilities influence the quality of the output and satisfaction of the students. Asif and Searcy (2014) argue that in universities operational capabilities and dynamic capabilities are critical for the survival of universities.

Entrepreneurial orientation

Entrepreneurial orientation is a key concept that is receiving increasing attention in entrepreneurship literature (Wales, Gupta, & Mousa, 2013) and it is used to measure the entrepreneurial behaviour of firm (Kraus, 2013).Entrepreneurial orientation has been intensively discussed and linked to the organizational performance. It is a core characteristic of entrepreneurship and explains the entrepreneurial behaviour and practices of firms. It enables organizations to discover and exploit market opportunities (Li, Huang, & Tsai, 2009). Eibe (2009) observes that the discussion on the role of market orientation on performance is dividing

scholars. An organization possesses entrepreneurial orientation when it is inclined to seek and seize opportunities. Entrepreneurial orientation is the propensity of the organization of the take risk, to be innovative and aggressive towards competitors as well as active in seizing market opportunities (Lumpkin & Dess, 1996). It is argued there is not a general consensus among the scholars on what constitutes the dimensions of entrepreneurial orientation (Rauch, Wiklund, Lumpkin, & Frese, 2009). However, Wales, Gupta, and Mousa (2013) observed that innovativeness, risk taking and proactiveness are the most discussed dimensions of entrepreneurial orientation.

There is enough evidence from the literature that highlight the positive relationship between entrepreneurial orientation and firm performance (Van Doorn, Jansen, Van den Bosch, & Volberda, 2013; Lechner, & Gudmundsson, 2014). However, there are mixed findings on the kind of relationship that exists between entrepreneurial capability and performance (Sok, Snell, Lee, & Sok, 2017)). Most of the empirical research have adopted a contingency approach measuring entrepreneurial orientation (Wales, Gupta, & Mousa, 2013). Several studies found that the relations between entrepreneurial orientation and performance are mediated or moderated (Sok et., 2017; Lechner, & Gudmundsson, 2014), while other suggest a direct positive relationship (Jantunen, Puumalainen, Saarenketo, & Kyläheiko, 2005). These conflicting findings suggest that there is a lot to understand about the entrepreneurial orientation and firm performance. A better understanding of entrepreneurial orientation in a specific context will provide managers with insights on competitive strategies (Waleset., 2013).Entrepreneurial orientation is firm strategic orientation that can be used to compete in fast changing environments (Li, Huang, and Tsai, 2009).

Market Orientation

The success of organizations depends on the fit of their strategy with the market in which they operate. Therefore, it is fundamental for an organization to have a profound understanding of the market dynamic, to respond customers' needs adequately. Market orientation stresses the need for profound understanding of the market to create superiour values for consumers. Market orientation implies gathering analysing, and disseminating within the organization information about the market and the customers' needs (Renko, Carsrud, Brannback, 2009). Market orientation provides organizations with the critical information about the market gaps that they can respond to. Market oriented organization constantly gather information from the market, which is used to develop product or services that fit the market needs. In a dynamic market, the needs of the customers are continually changing. Hence, an organization can only create values for customers if they are constantly in touch with their needs. It is argued that

market orientation results in organization higher performance (Ahmed & Goodwin, 2012). Ahmed and Goodwin (2012) observed that studieshave established a positive relationship between market orientation and organizational financial performance. Similarly, Ma and Todorovic, (2011) argue that in a competitive environment, market orientation play a vital role in universities performance.

Competitive orientation

Competitors matters for any business performance in dynamic environment. Organization are constantly searching for ways to beat their competitors. This will require them to adopt competitive orientation. There is no universal definition of competitive orientation (Wong & Tong, 2011). Essentially, with competitive orientation firms seeks to understand the strengths, limitations and strategies of competitors (Julian, Mohamad, Ahmed, & Sefnedi, 2014). The competitive orientation is the behaviour of an organization that seeks to be ahead of the competition. This requires that an organization understands its competitive environment, the strengths, weaknesses and the strategy of its competitors. Therefore, competitive orientation provides firms with better insights about the competitors which can be used to provide better solutions to customers' problems.

However, Eibe (2009) assert that too much focus on competitors and competitive intelligence can be detrimental to the performance of organizations. Armstrong, & Collopy (1996) found that competitive orientation can be detrimental for the performance of the firm. They argue that when firm objective is to be better than competitors, this will not necessary lead to the improvement of performance, and suggest that firm should ignore competitors when setting business objectives. This concern make sense if an organization is overly concern with beating their competitors but fail to deliver greater values to customers. The competitive orientation should enable firm to deliver greater values to the customers than other competitors. Contrary to the finding of Armstrong and Collopy, the study of the Eibe (2009) of Danish SMEs, manufacturing firms found that competitive orientation helped firm to increase their market share and enhance their dominant position. Firms can exploit their dominance position to enhance their performance.

An organization will adopt a competitive orientation in view of gaining a competitive advantage over the other operating in the same industry. As competition intensifies, the needs to adopt competitive orientation become critical for the performance of the organization. This require

RESEARCH METHODOLOGY

Study Population and Sampling Frame

This study used multi-stage sampling technique. The first stage was the selection of the universities that were part of the study, while the second stage was concerned with the selection of the actual respondents. This study focused on private universities as the unit of analysis and included private universities that have been in for operation as chartered universities for more than five years have their main campuses in Nairobi and have a student population of above 3000. Out of the 17 chartered universities, seven are located in Nairobi County. There are four universities that meet the set criteria namely, Catholic University of Eastern Africa, Strathmore University, Day Star University and United States International University. The study used purposive sampling to determine the universities that are included. This method is appropriate when the researcher uses some criteria in the selection of the subjects (Cooper et al., 2012). Eriksson (2013) recommends that due to the difficulties related to measuring dynamic capabilities, a purposive sampling is the appropriate method. The target population of this study were the academic and non-academic staff within the private chartered universities in Kenya. The academic staff included full time and part time lectures, dean of faculties and heads of departments while non-academic staff included, registrars, human resource managers and lecturers. The staff population the research was addressing is 2,575.

Sample Size and Data Collection

For this study data was collected from those in management positions, academic staff and non-academic staff. The non-academic staff include the top and middle management but excludes the subordinate staff. To ensure that the sample was representative of each stratum of the population, a stratified random sampling technique was used. The sample was stratified into academic staff and non-academic staff. Stratified random sampling has the advantage of ensuring that the sample is distributed in the same way as the population is (Bryman & Bell, 2007). The total sample size of the study is 460 comprising of staff and non-academic staff. Out of 460 questionnaires administered, 329 were returned, giving a response rate of 71.8 %, which is a very good response rate. These results suggest that there was a good response rate in all the universities and there is no major discrepancy in the number of the respondents between the universities.

Research Instruments

This survey contained questions aimed at collecting data concerning different aspects of university entrepreneurial capability which encompasses competitive orientation, market

orientation and entrepreneurial orientation. The research instrument that was used for data collection is a structured questionnaire. In survey design, the questionnaire is used as an instrument purposively made to obtain information for analysis (Babbie, 2007). The questionnaire is divided into three sections: i. The demographic of the respondents; ii entrepreneurial capability; and iii. Performance. The entrepreneurial capability was measured through entrepreneurial, competitive orientation and market orientation. The research output, student numbers, staff retention and financial performance, were used to measure the university performance. Entrepreneurial capability and performance were measures using a five-point Likert scale that ranged from 1= agree to 5= disagree.

Profiles of the respondents

The preliminary analysis looked characteristics of the respondents and the data. The demographic data provides background information about the respondents and the characteristics of the aggregated responses. The information collected is covered the areas of age, gender, the level of education, years of service in the university, and the department or faculty.The results show that out of 329 respondents; both genders are fairly represented in the sample: 59% were males, and 41% were female. These results show that the entrepreneurial capability was captured from both genders perspectives. Further, there is 54% of academic staff and 46% non-academic that were included.

Measurement of Variables

Entrepreneurial capability is measured with three latent variables that are market orientation, entrepreneurial orientation, and competitive orientation. The observed variables were adapted from previous studies (Kajalo & Lindblom, 2015; Kyrgidou & Spyropoulou, 2012; Gruber-Mueke & Hofer 2015). Market orientation is measured by five observed indicators, competitive orientation by four measurement indicators and finally entrepreneurial orientation by eight observed variables. The performance is measured with three latent variables that research, staff retention, and finance which are measured with three, four and two observed variables respectively.

Reliability and Validity

Reliability was conducted to ascertain that the measurements are effectively measuring the constructs that they are meant to measure. The Cronbach Alpha was used to test the reliability. The Cronbach's alpha measures the degree the internal consistency of the responses to a measured construct (Kline, 2013). Kline (2013) suggests that a value of Cronchach's Alpha of

0.9 is excellent, and .80 is good. First, the internal consistency of the constructs was assessed by Cronbach's Alpha. The test of the reliability yielded a Cronchach's Alpha of .968, which indicates an excellent internal reliability. See Appendix 2 for details.

The convergent validity assesses how closely related are the observed variables, which measure the same construct, while the discriminant validity is the degree to which observed variables do not measure other constructs they are not meant to measure (Bhattacherjee, 2012). The construct validity is achieved through convergent validity and discriminant validity. In this study convergent and validity sought to establish if the observed variables that are used entrepreneurial capability. Using confirmatory factor analysis, the strength of the loading of the indicators on each factor demonstrated the convergent validity. Any value equal or greater than .7 indicated good construct validity (Hair, Black, Babin, & Anderson, 2014). Similarly, the Average Variance Extracted, (AVE) was used to confirm the construct validity. AVE measures the convergence of items on the same factor, and the value of .5 or higher shows a good construct validity (Hair et al., 2014). Therefore, this study tested internal reliability using Cronbach's Alpha. Additionally, the Composite Reliability (CR) was assessed. CR value of .7 or greater shows good reliability (Hair et al., 2014). See Table 1 for details of reliability, AVE, and CR.

Table 1: Summary of value of AVE and MSV

Factors	CR	AVE	MSV
Competitive orientation	0.895	0.781	0.707
Entrepreneurial orientation	0.910	0.772	0.518
Market orientation	0.913	0.840	0.707
Finance	0.730	0.575	0.558
Research	0.888	0.725	0.507
Staff retention	0.894	0.679	0.558

Univariate and Multivariate Normality Test

The descriptive statistic was done to understand the characteristics of the sampled institutions the respondents, and variables were analysed. The test of univariate and multivariate analysis was carried out to identify possible outliers in the data. Assessing the univariate data normality is essential in any multivariate analysis (Tabchnick & Fidell, 2013). A test skewness and kurtosis can be used to assess the univariate normality of the data (Weston & Gove, 2006; Tabchnick & Fidell, 2013; Ho, 2014). Thus, for the univariate analysis of normality was carried to ascertain that the data is normally distributed. Firstly kurtosis and skewness of the dependent and

independent variables were checked. According to Ho (2014) the values of kurtosis and skewness should be between -2.58 and +2.58. Kline (2016) proposes that the values of skewness < 3 and kurtosis < 10. The result of the analysis of the measurement variables shows there are nine indicators that have values greater than 2.58 for both the skewness and kurtosis. Following the suggestion of Ho (2014), these outliers were deleted. Multivariate normality serves to assess the normality of combined variables (Hair et al., 2014). The multivariate normality can evaluated through Mardia coefficient (Ullman, 2006). The multivariate normality of the nine indicators was assessed using Mardia's test. The result shows that critical ratios of Mardia's coefficient are between 1.3 and -1.7 for kurtosis. Blentler (2006) suggests that values > 5 show that data are not normally distributed. These results suggest that data meet multivariate normality assumption.

Multicollinearity

Another important assumption of the SEM that need to be checked is the multicollinearity. The problem of multicollinearity emerges when variables are highly correlated (Tabachnick, & Fidell, 2007). Norris, Qureshi, Howitt, and Cramer, (2014) assert that multicollinearity is to be avoided in any regression analysis as it distorts the result. The correlation value of 0.9 signals the problem of multicollinearity (Hair, 2014). Ho (2014) suggests that multicollinearity can be verified using tolerance and VIF values. A tolerance value less than 0.1 and a VIF value greater than 10 indicates a problem with multicollinearity. Thus, the study adopted the tolerance and VIF approach to the check for multicollinearity. The analysis of the measurement variables gives tolerance values between 0.150 and 0.684 while the VIF values are ranging between 1.46 and 6.64. Considering that none of the tolerance value is < 0.1 and none of the VIF is > 10, it is concluded that data is free from any problem of multicollinearity.

Difference in Dynamic Capabilities among Universities

The test of One Way ANOVA was carried out to compare the mean of the responses of entrepreneurial capability. The test used the composite mean responses. The results indicate that there is a difference in mean of the responses of the four universities, namely, CUEA (69), USIU (68), Daystar (65), and Strathmore (83) to entrepreneurial (3, 281) = 20.22 and performance F (3, 281) = 20.43. This difference was statistically significant at $p < 0.05$. Post hoc comparison using Scheffe Test was done to identify if the differences observed among the four universities are statistically significant and where this significance lied between universities. The mean score of entrepreneurial capability indicates statistically significant difference among three groups. CUEA (M = 3.10, SD = .839), different from USIU (M = 3.53, SD =.777) and Daystar (M

=3.60, SD=.763), and Strathmore (M = 4.03, SD = .559) different from the former two sub groups.

Table 2: Summary of One Way ANOVA

Capabilities		Sum of Squares	df	Mean Square	F	Sig.
Entrepreneurial Capability	Between Groups	32.67	3	10.89	20.22	.000
	Within Groups	151.30	281	.53		
Performance	Between Groups	33.84	3	11.28	20.43	.000
	Within Groups	155.09	281	.55		

ANALYSIS

Initially, the model hypothesised that entrepreneurial capability has four dimensions. Each dimension is measured by multiple observed indicators. Exploratory Factor Analysis (EFA) was carried out to determine which indicators should load on which construct. The EFA allows the reduction of large numbers of data into more representative data (Ho, 2014). The EFA was necessary to get the right indicator loading on the constructs. Exploratory factor analysis using Promax rotation was performed on each of the factors. The EFA was used to determine how indicators load on the factors. Any loading with a value less than .6 was deleted, as well as indicators that load heavily on more than one factors. The pattern matrix results show 11 factors were retained, which load on three factors. Finally, nine measurement indicators were extracted and load on three factors for performance. In sum, the EFA helped to eliminate the indicators that load poorly on the factors, or factors that are explained by weak indicators.

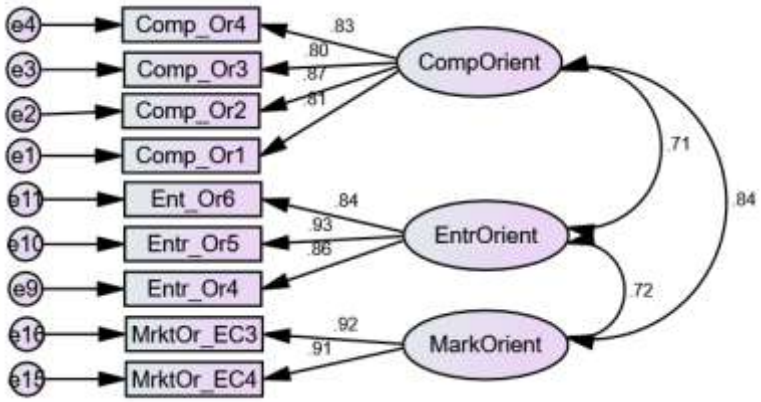
Confirmatory Factor Analysis (CFA) was used to assess the measurements models using AMOS 21. The focus of the measurement models was to assess the weight of the indicators on the factors. SEM starts with the specification of the model which implies estimation, estimation and possibly the modification of the model (Ullman, 2007). Therefore, in the first instance, the measurement models were tested to ensure that the data collected fit the model by analyzing the loading and various fit indices. Williams, Vandenberg and Edwards, (2009) recommend the assessment of goodness of fit measures. In this study, the goodness of fit of the model was assessed using, chi-square (χ^2) comparative fit index (CFI), and the root means square error approximation (RMSEA). The value of 0.90 for CFI and 0.08 for RMSEA was considered for the goodness of fit. Then, the study employed Structural Equation Model (SEM) to test the relationship between the competitive orientation, market orientation, and entrepreneurial orientation on performance. Then the effects entrepreneurial capability and

performance. SEM has the advantage of estimating and testing the multivariate complex models, and study the indirect and directs effects of variables (Raykov & Marcoulides, 2006).

Measurement models

The CFA was used to test first-order and the second-order models. The aim of the CFA is to test the hypothesized model, ascertain the data collected fit the proposed model (Weston & Gove, 2006; Schumacker & Lomax, 2010). This model has two levels, refer to as the first-order level and second order level (Byrne, 2011). The second-order factors represent the dimensions of the first order constructs. There are three first order factors that measure entrepreneurship capability which is considered as a second-order. The standardized coefficients estimate show the importance each variable against the others. (Schumacker, & Lomax, 2004). Kline (2011) suggests that for a good model the standardized factor loading should be greater than .7. The indicators of the three-factor first order model were assessed. The results show that standardized weights ranged from .80 to .93. All the nine indicators load positively on the latent variables, and the loading are all significant with p <.001 (See Figure 1).

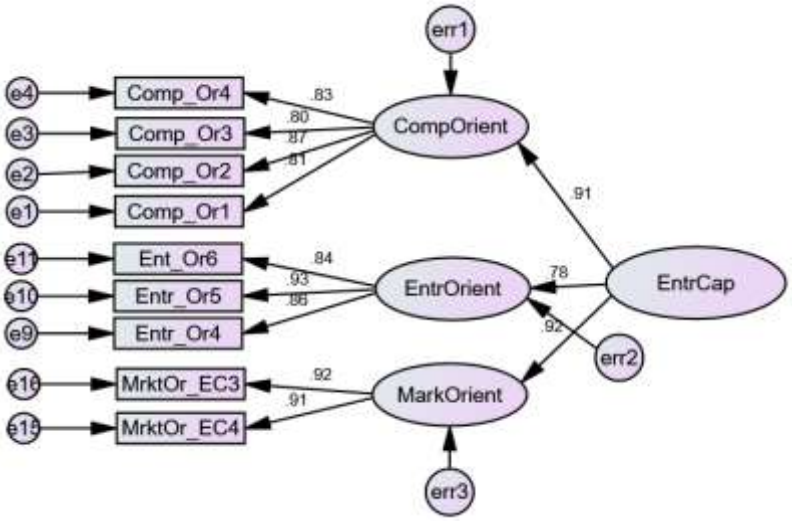
Figure 1: First order Factors CFA



The analysis of the second order factor of entrepreneurial capability yielded positive loadings with market orientation β = .92 and competitive orientation β = .91. Entrepreneurial orientation is moderately strong with β = .78. All the loadings are significant with *p*< .001. This result shows that entrepreneurial capability is a multidimensional construct. Further, entrepreneurial orientation, competitive orientation and market orientation are good predictors of the entrepreneurial capability. Market orientation and competitive orientation emerged as better predictors of entrepreneurial capability. The R^2 of the second order level, the competitive orientation, entrepreneurial orientation, and market orientation account for 83%, 61% and 84%

of the variation in entrepreneurial capability respectively. The values are statistically significant with $p < .001$. Competitive orientation and market orientation highly drive entrepreneurial capability of the universities. The three factors model of entrepreneurial capability model fit was assessed. The model assumed a correlation between market orientation, entrepreneurial capabilities, and competitive orientation. The analysis of the model fit produced χ^2 =53.96, df = 24, CFI = .985, RMSEA = .066. These values suggest that the model has a good fit.

Figure 2: Second order factors CFA



The three-factor model namely finance, staff retention and research have strong and positive loading on their constructs. Staff retention has the highest loading with β =.95 and β = .79 respectively, while research has a β =.75. The results provide strong support to the hypothesis that research capability, staff retention and financial ability are good predictors of university performance. The indicators of the three factor of performance produced R^2 ranging between .56 and .90. The model fit gave χ^2 = 49.92, df = 22, χ^2/df = 3.66, CFI = .98, and RMSEA = .067 with significant $p < .001$. These values suggested that model has a good fit. Hence, this result provides adequate support for a good fit between the data and the model.

Structural model and Hypothesis testing

There were four hypotheses that were tested in the study. First, structural models tested the direct relationship between the entrepreneurial orientation, market orientation, competitive orientation and performance. Second structural model assessed the direct relationship between entrepreneurial capability and performance.

H_1: hypothesized that there is a positive relationship between competitive orientation and performance. The standardized path coefficient is used to determine the strength and the direction of this relationship. The assessment of the relationship between competitive orientation and performance resulted in a path coefficient β = .81, at *p*< .001. The result indicates that there is a positive relationship between competitive orientation and performance. Furthermore, the result which shows that competitive orientation accounts for 66% variance in performance. This finding is in line with prior studies of Julian, Mohamad, Ahmed, and Sefnedi (2014) that found that competitive orientation has a significant positive affects the firms export performance. The study of Eibe (2009) also found that competitive orientation influence the performance of manufacturing positively. The assessment of the model fit shows, χ^2 = 117.56, df = 59, χ^2 /df = 1.99, CFI = .976, RMSEA = .056. These values meet the recommended threshold values, which suggest that the model has a very good fit. Therefore the hypothesis that competitive orientation affect performance is supported by the data. The model provided evidence that competitive orientation has positive effects on performance.

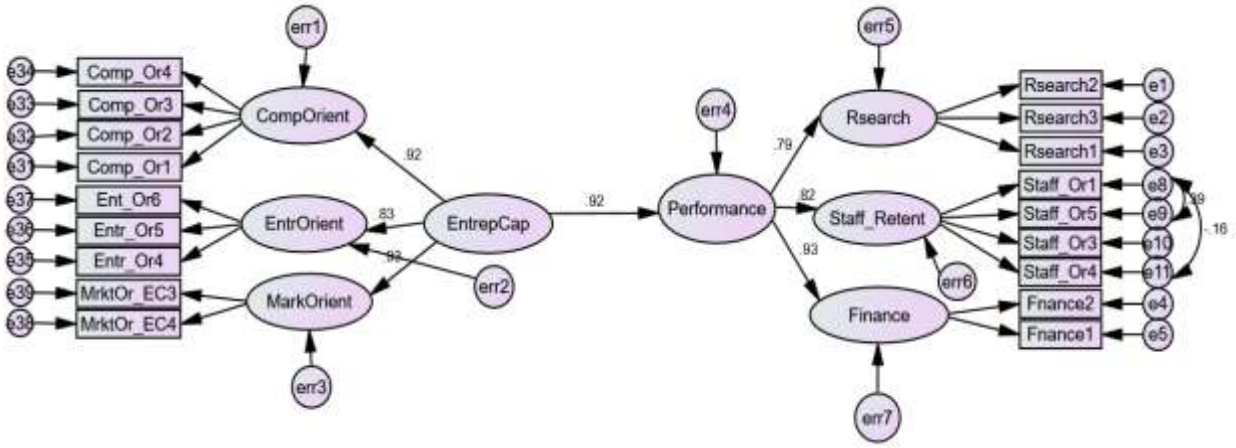
H_2 postulated market orientation positively affects university performance. This relationship was tested and result gave standardized β = .81 and R^2 = .65 at *p*< .001. Thus, this model supports the hypothesis that market orientation positively affects performance. Further, the model suggests that market orientation explains 65% variance in performance. The study is in line with the findings of a prior study (Kumar, Subramanian, & Strandholm, 2011).The analysis of the model goodness of fit, gave χ^2 = 65.38, df = 38, χ2/df = 1.72, CFI = .981 and RMSEA = .065. These results indicate that the model has a good fit.

H_3 predicted that entrepreneurial orientation positively effects performance. This relationship was assessed and the result gives standardized loading β = .78 and R^2 = .61 with a significant of *p*< .001. The results show that entrepreneurial orientation has a positive and strong effect on performance. The model accounts for 61% changes in performance outcome. This result concurs with the prior study that entrepreneurial orientation positively influences firms' performance in a dynamic environments (Van Doorn, Jansen, Van den Bosch, & Volberda, 2013; Jantunenet al., 2005). The model fit was analysed, and the goodness of fit of the model gave χ^2 = 85.63, df = 48, χ2/df = 1.78, CFI = .981 and RMSEA = .054, which suggests that the model has achieved sufficient goodness of fit.

H_4 Hypothesized that entrepreneurial capability has positive effects on performance. The assessment of the path coefficient showed that standardized β = .92 and R^2 = .84. This result provides evidence that the entrepreneurial capability has a positive and strong affects university performance. In addition, it noted that the model explains 84% of the variation in performance. The analysis of the model fit shows χ^2 = 239.64, df = 127, χ2/df = 1.88, CFI = .971 and RMSEA

= .056, which indicates a good model fit. This finding agree with the findings of Gruber-Mucke and Hofer (2015) on the positive influence of entrepreneurial capability on performance (See Figure 3).

Figure 3: Structural Model of relationship between entrepreneurial capability and performance



DISCUSSIONS OF THE FINDINGS

This paper investigated the effects of entrepreneurial capability on private universities' performance in Kenya. Three dimensions of the entrepreneurial capability namely competitive orientation, entrepreneurial orientation and marketing orientation were identified, and their individual effects on performance were tested. The findings confirmed that these three factors are correlated and highly load on entrepreneurial capability (β> 7), suggesting that entrepreneurial capability is higher order capability that is manifested through market orientation, competitive orientation and entrepreneurial orientation. Summarily, the finding indicates that university research capability, financial performance and staff retention are key predictors of university performance.

Models Analysis

In this study, entrepreneurial capability is unbundled as market orientation, competitive orientation and entrepreneurial orientation. Entrepreneurial capability is considered second order construct. Hence first order and second order CFA were used to assess the measurement models. In the first order measurement model, there are nine indicators that measure the three-factor entrepreneurial capability and the result shows a strong and positive standardized coefficient (with β >.7). The results demonstrate that the nine indicators measured the three factors (entrepreneurial orientation, competitive orientation and market orientation) adequately.

The analysis of the correlation between factors of every construct confirmed that the three factors are positively related. The three factors are intertwined and positively influence each other as suggested by the positive correlation between them. Another important observation is that the proposed model produced good fit indices indicating that the model is reliable.

The assessment of the second-order factor measurement model shows that market orientation, entrepreneurial orientation, and competitive orientation are good predictors of entrepreneurial capability. The three factors yield positive and high beta weights (β =.78, .91 and .92) which provide evidence that they form different dimensions of entrepreneurial capability. Therefore, this study shows that market orientation, entrepreneurial orientation, and competitive orientation are good predictors of universities entrepreneurial capability. But market orientation emerged as the strongest predictor with β =.92. This result suggests that universities that are entrepreneurial are highly also market-oriented. Market-oriented universities are highly connected to their external environment and gather information that helps them to understand the dynamic of the university environment to respond appropriately. These results suggest that entrepreneurial capability is an outcome of universities' effort be ahead of competitions, align themselves to the need to the market and encourage and support entrepreneurial practices and behaviour. This result concurs with earlier studies that analysed some dimensions and of entrepreneurial capability and found that they positively affect performance. Gruber-Mucke and Hofer (2015) analysed the effect of market orientation and entrepreneurial orientation on performance and found that the two have a positive effect on performance.

The results of this study support that entrepreneurial capability is a multi-dimensional construct. Market orientation, entrepreneurial orientation, and competitive orientation effectively measured entrepreneurial capability. The three factors are positively correlated, confirming further they represent the dimension of the same construct. Each of the three dimensions is positively related to the performance of the university.

The results of the four hypotheses shows that each of the individual dimension of entrepreneurial capability has positive effect on performance. All the models used for the assessing the relationships yields good fits indices. A very important observation of the results indicates that the individual factor explains about 60% variation in performance. However, entrepreneurial capability exerts and very strong effects on performance and account for more than 80% variation in performance. This suggests that the three factors are important for the strategic orientation of universities, but individually they have a moderate influence on performance. Hence, entrepreneurial orientation, market orientation and competitive orientation on their own do not suffice to give a firm competitive advantage (Sok, Snell, Lee, & Sok, 2017). But entrepreneurial capability clearly has the highest explanatory power on university

performance. Therefore, entrepreneurial capability is what universities require to thrive in a competitive and dynamic environment. Entrepreneurial capability depends on university ability to be market oriented, adopt competitive orientation and behave entrepreneurially.

The finding of this study agrees with the argument of Zaidi, and Othman (2014) who assert that dynamic capability is entrepreneurial in nature. Further, these results support the views that if a firm creates an entrepreneurial culture within, this will positively contribute operating in dynamic environment and performance (Jantunen, et al., 2005). Similarly, Aramand, and Valliere (2012) support that the long-term success of these firms depend on the improvement in entrepreneurial capability. The entrepreneurial capability of university enables firms to search, identify and exploit the opportunity that arises in the environment. This continual search of opportunity and capability to exploit these opportunities will influence the firm's performance.

The first outcome of the studies is the vital role of entrepreneurial capability in the aiding university performance. The results confirmed that entrepreneurial capability has positive and statistically significant effects on universities. This implies that the universities that possess entrepreneurial capability outperform those that do not possess it. Adopting an entrepreneurial capability can provide universities with a competitive strategy in a dynamic environment.

The second observation of the study is that the market orientation, entrepreneurial orientation and competitive orientation play equally a significant role in influence university performance. However, the strength of their individual effects on performance is moderate. But, then they are combined, they exert a very strong and significant influence on performance and explain a greater proportion of variance in performance. The entrepreneurial capability is achieved through a combination of entrepreneurial orientation, competitive orientation and marketing orientation**.** This suggests that universities should not focus only on one dimension but endeavour to develop and deploy all the three.

CONTRIBUTION OF THE STUDY

The studies of dynamic capabilities have shown less interest to the academic institutions and focused more on manufacturing and other service industry. This study takes the first step in applying the dynamic capabilities framework to private universities in Kenya. It focused on entrepreneurial capability roles in a university ever challenging and competitive environment. The study has contributed to the understanding of the dynamic capabilities that are deployed by the university.

This study stresses the need for the university to make the deliberate strategic choice to invest in dynamic capabilities particularly on entrepreneurial capabilities. It suggests strongly

that the future of the success of universities is to become more entrepreneurial organizations. This study lay the foundation and provide the framework for the more studies on the entrepreneurial capability of academic institutions. It has made a significant contribution to the discussion on entrepreneurial capability, particularly in the academic context. Additionally, it has provided a better understanding of the dimensions of the entrepreneurial capability.

MANAGERIAL IMPLICATIONS

The first assumption of the study is that university environment is rapidly changing and becoming ever more competitive, and the survival of university depends on their ability to adapt to changing environment. To develop of dynamic capabilities is essential for universities to face the changing environment and thrive. This study evidence that entrepreneurial capability affects positively the performance of universities in Kenya. Therefore universities will enhance their performance by developing market orientation, entrepreneurial orientation, and competitive orientation.

The results of this study have important strategic implications for management. The question on which dynamic capabilities universities should invest and develop is answered by this study. The entrepreneurial capability is a dynamic capability that influences performance. First, that management should deliberately invest in building into their university entrepreneurial capability which implies being market orientated, competitive oriented, develop and entrepreneurial orientation. These three dimensions critical determinants an entrepreneurial university. Market orientation should enable university to identify the market gap that they have to respond to. Competitive orientation is essential for understanding and responding to the behaviour of the competitors. Entrepreneurial orientation should assist the managers to continually seek and seize opportunities for universities. It is important to infer from the study that universities require manager entrepreneurs who are able to create the entrepreneurial universities that are needed today's competitive environment.

CONCLUSION

The study set out to measure the effects of the entrepreneurial capabilities on the performance of private universities. The study confirmed that entrepreneurial capability is critical universities to enhance their performance. Entrepreneurial capability three dimensions entrepreneurial orientation, market orientation and competitive orientation all play a critical role in enhancing university performance. The question adaption to changing environment is a crucial strategic management issue. It is a question of survival and the future of universities. The competition in the university environment will put more strain on the universities to adapt to internal and

external forces. Therefore development dynamic capabilities is not optional but a necessary condition for the future of the universities institution in Kenya.

LIMITATIONS OF THE STUDY AND FUTURE ORIENTATION

The analysis used a combined data from the four different universities and assuming that the four universities have the same characteristic and have the same intensity of entrepreneurial capability. The university included in this study have approximately the same students' population and staff population. The other limitation is the cross-sectional data that was used. This might not be able to capture with accuracy all dimensions of entrepreneurial orientation. This similar study can include age and size of the university to see if they have any moderating or mediating effects on the relationship between entrepreneurial capability and performance. Secondly, the study focused on private universities. Future study can explore the difference between private and public university deployment of entrepreneurial capability and its effects on performance. The geographical location of the future can include other counties. This study identified only three dimensions of the entrepreneurial capability. Future studies could include more dimensions of entrepreneurial capability, and this will enrich the study.

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APPENDICES

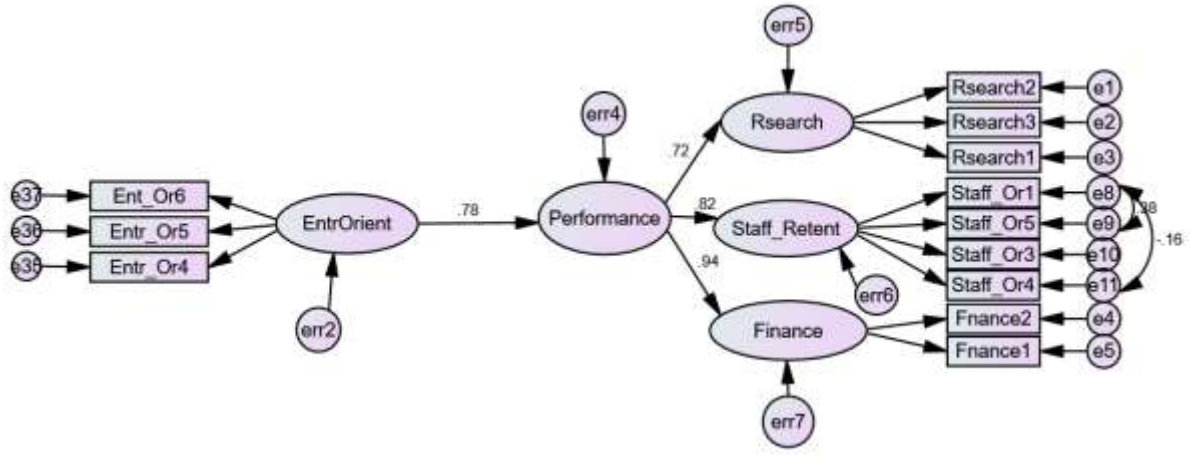
Appendix 1: Factor loading

Entrepreneurial	1	2	3
University studies competitors' behaviour.	.898		
University endeavours to be ahead of competitors.	.780		
University studies students' behaviour.	.725		
Uni. assesses the behaviour of the competitors	.692		
Uni. has reward system to encourage entrepreneurial practices.		.967	
Uni. deliberately supports entrepreneurial practices among staff		.839	
An entrepreneurial culture exists in the university.		.742	
University Systematically collects information from the market.			.802
University invests in market analysis.			.801

Appendix 2: Cronbach Alpha

Variables	**Cronbach's Alpha**	**N of items**
Market orientation	.91	7
Entrepreneurial Orientation	.90	3
Market orientation	.91	2
Competitive orientation	.90	3
Research	.88	2
Staff Retention	.93	6
Finance	.88	3

Appendix 3: Relationship between factors and performance



Appendix 4: Mean, and standard deviation, of variables measuring performance

Performance	N	Minimum	Maximum	Mean	Std. Deviation
Research1	328	1	5	3.92	1.08
Research2	328	1	5	3.81	1.13
Research3	328	1	5	3.80	1.13
Staff retention1	328	1	5	3.60	1.21
Staff retention2	328	1	5	3.57	1.17
Staff retention3	328	1	5	3.62	1.07
Staff retention4	328	1	5	3.68	1.10
Staff retention5	328	1	5	3.55	1.15
Staff retention6	328	1	5	3.56	1.13
Finance1	328	1	5	3.49	1.26
Finance2	328	1	5	3.42	1.25

Appendix 5: Mean, and standard deviation, of variables measuring entrepreneurial capability

Entrepreneurial capability	N	Minimum	Maximum	Mean	Std. Deviation
Entrepreneurial orientation 1	328	1	5	3.23	1.06
Entrepreneurial orientation 1	328	1	5	3.60	1.03
Entrepreneurial orientation 1	328	1	5	3.81	1.02
Entrepreneurial orientation 1	328	1	5	3.38	1.16
Entrepreneurial orientation 1	328	1	5	3.25	1.16
Entrepreneurial orientation 1	328	1	5	3.27	1.15
Marketing capability 1	328	1	5	3.47	1.10
Marketing capability 1	328	1	5	3.58	1.11
Marketing capability 1	328	1	5	3.46	1.07
Marketing capability 1	328	1	5	3.35	1.15
Marketing capability 1	328	1	5	3.61	1.03
Competitive orientation1	328	1	5	3.67	1.09
Competitive orientation2	328	1	5	3.49	1.02
Competitive orientation3	328	1	5	3.70	1.05
Competitive orientation4	328	1	5	3.49	1.13

Appendix 6: Response rate per university

University	Distributed	Returned	% Rate of response
CUEA	120	83	69.0
Daystar	120	81	67.5
USIU	115	78	67.8
Strathmore	105	87	82.8
Total	460	329	71.8