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Corporate Entrepreneurship, Organization Learning Capability, External Environment Condition and Financial Performance of Public Universities in Kenya

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Abstract:- In most developing countries universities play a role not only in providing knowledge but also contributes to economic growth and development. In order to supplement financial support from the government, most public universities have embraced entrepreneurship as part of their mission besides teaching, learning, research and community service. As a result basing on resource based theory, the study examined the moderating role of external environment condition in the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya. Descriptive survey was conducted targeting 42 accredited public universities in Kenya. Structured questionnaires were issued to 84 respondents from the 21 sampled public universities which was later subjected to factor, correlation and hierarchical multiple regression analysis. From the findings, there was a positive (β = .487) and significant (p<.001) relationship between corporate entrepreneurship and financial performance. Organizational learning capability was found to positively and significantly (β = .487, p<.05) partially mediate the relationship between corporate entrepreneurship and financial performance. On the other hand, external environment condition positively and significantly (β = .562, p<.01) moderated relationship between corporate entrepreneurship and financial performance. Further, external environment condition had a positive and significant (β = .0968, p<.05) moderating effect in the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya. The study thus concluded that given the existence of external environment condition, financial performance arising from corporate entrepreneurship and through organizational learning capability is enhanced. The study recommends future studies to analyze the mediating and moderating effect of each dimension under organizational learning capability and external environment condition. Moreover, quantitative financial performance measures and other constructs as the corporate governance could be incorporated.

Keywords:- *Corporate Entrepreneurship; Organization Learning Capability; External Environment Condition; Financial Performance.*

I. INTRODUCTION

Management of most organizations are facing the reality in this modern times given the several aspects that handicap their performance and growth. The current business environment is experiencing hyper competition, globalization (Morris, Kuratko, & Covin, 2010), ever changing technology and customer demands (Mokua & Ngugi, 2013). In order to survive this unpredictable environment, state owned corporations have been privatized through introduction of new owners (Romero-Martínez, Fernández-Rodríguez, & Vázquez-Inchausti, 2010) that will go a long way in opening markets for competition (De Castro & Uhlenbruck, 2003) as well as revamping the firm's level of entrepreneurship through innovation and creativity. Other firms of opted for turnaround remedies as reengineering, decentralization, downscaling, restructuring, outsourcing among others (Mokua & Ngugi, 2013). As pointed out by Lassen (2007), management of change and enhancing flexibility in the firm's strategic management and entrepreneurship are vital for the survival. More importantly, most organizations have found the need to embrace the concept of classical entrepreneurial under the seminal work of Fama and Jensen (1983). As a classical entrepreneurial firm, decisions considering the element of risk. According to Anderson, Kreiser, Kuratko, Hornsby, and Eshima (2015), entrepreneurial orientation is key and characterized by firm's ability to innovate, take risks, be autonomous, proactive and possess behavior that is competitive in nature. Indeed, Covin and Miles (1999) the overriding feature regardless of the kind of corporate entrepreneurship the firm opts for is innovation.

Universities drive the knowledge economy thus contribute immensely to economic growth and competitiveness. However, in higher education under which universities fall, revenue diversification is seen as the perfect means to restore sustainability (World Bank, 2017). This is due to the fact that most governments are shortage of fiscal resources to address them especially with the financial

model prevailing. Riechi (2012) too resounds that financial crisis is rampant in most public universities situated in developing countries, more so Africa. This is attributed to the fact that governments are unable to raise enough financial resources due to disparaging economic conditions. Vorley and Nelles (2010) posit that government and institutions policies, most universities have adopted entrepreneurial role as a 'third mission'. As noted by Behzadi, Razavi, and Hosseini (2014), entrepreneurship have led to emergence of the third generation universities that not only undertake their mission but also focus on the country's social development. Hence, institutions under the higher education (universities included) are expected to be more entrepreneurial, able to commercialize research as well as creation of enterprises that are knowledge based (Kirby, 2006). In Kenya, public universities' income is dwindling given the only two mains revenue streams, that is, student fees and government grants (Manyali, 2023). As a result, these institutions have opted for new revenue streams so as to remain self-reliant amidst the skyrocketing costs due to rise in student numbers. According to Riechi (2012), revenue diversification initiatives have been undertaken by Kenya's public universities in the efforts of supplementing funds received from the government.

The concept of entrepreneurial orientation, public entrepreneurship and corporate entrepreneurship have been used interchangeably. This key concept has been found as key to any firm that seeks to navigate through the current competitive and financially constraint environments (Phan, Wright, Ucbasaran, & Tan, 2009). From strategic point of view, corporate entrepreneurship entails the firm's efforts in the identification and exploitation of opportunities that would create sustainable competitive advantage (Donald F Kuratko & Audretsch, 2013). Corporate entrepreneurship involve strategic commitment and actions that focus more on entrepreneurial behavior (Wiklund & Shepherd, 2005) and that utilizes firm's core resources and skills (Luke, Kearins, & Verreynne, 2011). Moving into the popularity aspect within the research done, more attention has been directed toward the concept of corporate entrepreneurship (Anderson et al., 2015; Glinyanova, Bouncken, Tiberius, & Cuenca Ballester, 2021). Since the first publication done in 1986, a lot of interest among researchers especially given public sector entrepreneurship has continued to increase but found to be more in the last 7 years as pointed out by Funko, Vlačić, and Dabić (2023). In the same breadth, corporate entrepreneurship has been found to evolve overtime whereby 1970's focus was on development of entrepreneurship within the existing organization (Donald F Kuratko, 2010). Furthermore, 1980's saw corporate entrepreneurship as a process an organization can utilize to enhance its renewal. On the other hand, corporate entrepreneurship in the 1990's was seen as a reenergizer and enabler for a firm to gain skills that can lead to innovations. Lastly, the 21st century, corporate entrepreneurship is a conduit to establish sustainable competitive advantage within the firm that will in turn nurture fruitful growth in the firm.

As such, corporate entrepreneurship has been lauded as a paramount growth strategy (Zahra, Nielsen, & Bogner, 1999), a channel to create value in the firm (Phan et al., 2009), rejuvenate and shape operations' scope (Ireland, Covin, & Kuratko, 2009) and other firms within the existing firm (Donald F Kuratko & Audretsch, 2009). Through corporate entrepreneurship, firms are able to gather and pull its resources (Floyd & Wooldridge, 1999) that will build both current and future competitive advantage (Covin & Miles, 1999; Marques, Ferreira, Kraus, & Mahto, 2022). In addition, corporate entrepreneurship helps to progress performance (Kazanjian, Drazin, & Glynn, 2017; Zahra, 2015; Zahra et al., 1999), innovation (Marques et al., 2022; McGrath, Keil, & Tukiainen, 2006; Morris et al., 2010), firm's liveliness and wealth generation (Dess et al., 2003). To attain this, success need to precede financial reward (Urban & Nikolov, 2013) in the entire task of corporate entrepreneurship in order to fulfil sustainability theme. Also, there should be simultaneous creation of value to the firm and society at large (Atiq & Karatas-Ozkan, 2013). Entrepreneurial mindset needs to be vibrant so as to direct the human responsiveness towards innovation, opportunities as well as value creation in the firm (De Winnaar & Scholtz, 2020; Jabeen, Faisal, & I. Katsioloudes, 2017; Lindberg, Bohman, & Hultén, 2017). From organization learning theory perspective, learning stands out as it enables the firm create, grow and exploit knowledge which is necessary as far as all kinds of innovation (organizational, product or process) is concerned. This learning can either be through action or memory as pointed out way back by Marvin (1984) and Nelson (1985) respectively. To some, organizational learning can either be acquisitive or experimental (Dess et al., 2003; Matusik, 2002; Zahra et al., 1999). The former form of organizational learning involves access of knowledge from external environment while the latter is from within the firm. All in all, through organizational learning, the firm has an upper hand in building knowledge that will drive its performance (Hitt & Duane Ireland, 2017). As a consequence, organizational learning capability mediates the relationship between corporate entrepreneurship and the firm's performance.

Basing on the empirical research, external environment influences the corporate's entrepreneurship initiatives (Joao Ferreira, 2009; Guth & Ginsberg, 1990; Nath & Rayudu, 2014; Zahra, 1993). Consequently, innovation, risk taking and proactiveness in the firm come as a result of external environment variables. These external environmental conditions include hostility (Joao Ferreira, 2002; Joao Ferreira, 2009; Zahra, 1993), environmental dynamism (Antoncic & Hisrich, 2004; Zahra, 1993) and environmental heterogeneity (Joao Ferreira, 2002; Joao Ferreira, 2009). From Guth and Ginsberg (1990) point of view, environmental dynamism, hostility, industry structure and major environmental shifts influences the corporate entrepreneurship. Mohamad, Ramayah, Puspowarsito, Natalisa, and Saerang (2011) affirms that environmental behaviors need to be incorporated so as to respond to changes in the market place as well as enhancing firm value. From their study, external environment does moderates the relationship between corporate entrepreneurship and firm

performance. In the recent times, most governments have urged the universities to diversify their revenue streams. Accordingly, universities have found relief on entrepreneurial orientation whereby they have engaged in commercialization of research and creation of spin off companies (Wright, 2007). It is thus against this backdrop that the study was conceived to assess the moderating effect of external environment condition on the indirect relationship between corporate entrepreneurship and financial performance via organizational learning capability of public universities in Kenya.

➢ *The Public Universities in Kenya*

In general, the education sector in Kenya plays a key role of facilitating the process of inculcating knowledge, attitudes and skills necessary for catapulting the a country to a globally competitive country (Republic of Kenya, Education Sector Report, 2017). Education generally improves the quality of lives which leads to broad socio-economic benefits to individuals and society hence critical role in human development (Republic of Kenya, Education Sector Report, 2022). This is because it enriches people's understanding of themselves and the world in which they live. Knowledge created through education promotes creativity and innovation that enables people to resolve numerous challenges facing society such as poverty, hunger, diseases and conflicts. Further the Education Sector Report (2022) report outlines that Kenya has formulated policies that value and emphasize educating her people. The right to free and compulsory basic education for all is enshrined in the Constitution of Kenya 2010 and obligates State agencies to ensure all children of school going age are in school. The Constitution 2010 also provides for the development, protection, and application of science, technology, and intellectual assets including indigenous knowledge and technologies across all sectors. In line with the aspirations of United Nations 2030 Agenda for Sustainable Development Goals, the Kenya's Vision 2030, the country's long-term national development blueprint, targets to achieve 100 per cent universal basic education with 100 percent transition from primary to secondary education. In Kenya, the education sector is categorized as four sub-sectors namely Basic Education, Technical, Vocational Education and Training, Higher Education and Research and Teachers Service Commission. Looking into the higher education and research, the Sub-sector as outlined in the Education Sector Report (2022) is responsible for university education policy and standards, university education management, management of continuing education (excluding Technical, Vocational Education and Training (TVET), public universities management, education research and policy as well as policy and standards on Science and Technology.

➢ *Problem Statement*

The number of universities operating in Kenya increased from 74 in financial year 2019/20 to 78 in financial year 2021/22 (Republic of Kenya, Education Sector Report, 2022). By extension, the total enrolment in both public and private universities increased from 568,653 in financial year 2019/20 to 620,480 in financial year 2021/22 representing a 9% growth during the period. Despite this tremendous achievement, education sector with no exception to universities are faced with numerous challenges. For university education, the report listed challenges as undertaking of mandate is handicapped by inadequate resources and infrastructure, aging faculty, shortage of qualified lecturers and slow pace to information communication technology (ICT) integration. Moreover, public universities in Kenya are facing uncountable challenges as decreasing trend of government funding, post Covid-19 effects, economic meltdown, technology changes and ballooning education costs (Manyali, 2023). To avert these challenges, one of the recommendations made in the report include mobilization of resources from donors and development partners to finance establishment of more institutions that will cater for ever increasing demand for education and training. Through corporate entrepreneurship, a firm can increase its performance levels (Morris et al., 2010) besides gaining essential knowledge that will see to it that future revenue streams are developed (McGrath et al., 2006). However, it is worth noting that entrepreneurship exercise in public enterprises are not smooth due to barriers emanating from within the enterprise (supervisory boards to be specific) and from external environment (Tremml, 2021). Therefore, with concerns to organizational learning capability and environment condition, this study therefore sought to provide insights given corporate entrepreneurship aspect which is one of the alternatives used in diversifying sources of revenue among most public universities.

From the systematic review of literature between 2010 and 2019, Mohammed, Zubairu, and Oni (2021) concluded that most public entrepreneurship publications relate to North America and Europe while Africa this list has scanty. Within the public sector, its leaders have turned out to be strategists (Ongaro & Ferlie, 2020) that have search for new funding sources thereby acting as public entrepreneurs (Zehavi & Zer, 2013). Within the university context, entrepreneurial domain has been enhanced (Woods, Woods, & Gunter, 2007). For instance, entrepreneurial universities focus on high quality inventions and research activities (Graf & Menter, 2021) while others form university spin offs whose innovations base on basic research and raw Science (Wright, 2007). There exists a positive relationship between corporate entrepreneurship and firm performance under diverse categories as manufacturing (Karacaoğlu, Bayrakdaroğlu, & San, 2013; Lee, Zhuang, Joo, & Bae, 2019; Lwamba, Bwisa, & Sakwa, 2014), insurance (Ndungi, 2016), service firms (Oladimeji, Abosede, & Eze, 2019), mobile phone providers (Ashitava, 2010), health care units (Mumaraki, 2020), financial technology (Ziyae & Sadeghi, 2020), small and medium enterprises (Abdissa, Ayalew, Illés, & Dunay, 2021; Kraus, Rigtering, Hughes, & Hosman, 2012) and state owned corporation (Entebang, 2010; Linyiru, 2015). Other studies exists that have linked corporate entrepreneurship and organizational learning capability (Ahmed, Sabir, Sohail, & Mumtaz, 2011; Banumathi & Samudhrarajakumar, 2019), organizational learning capability and firm performance (Pham & Hoang, 2019; Škerlavaj, Štemberger, & Dimovski, 2007). Moreover, research has been conducted that linked environmental condition (Covin & Slevin, 1991; Zahra,

1993) and corporate entrepreneurship as well as firm performance (Antoncic & Hisrich, 2004). In order to fill the gap, the study examined the moderating effect of external environment condition on the indirect relationship between corporate entrepreneurship and financial performance via organizational learning capability of public universities in Kenya.

II. THEORETICAL FRAMEWORK

Resource based theory asserts that firms are dissimilar given that they own diverse resources (Jay Barney, 1991). According to this theory, a firm can derive sustained competitive advantage from its resources and capabilities that are valuable, rare, imperfectly imitable, and not substitutable. Further, the theory outlines the resources and capabilities to include assets (tangible and intangible), management skills, processes and routines, information and knowledge. According to Jay Barney, Wright, and Ketchen Jr (2001), the management of the firm bears the sole responsibility of identifying, evaluate if they meet the criteria required, develop and protect the potential key resources. Entrepreneurs possess unique resource that enables the firm to recognize new opportunities and assemble resources that creates a venture (Alvarez & Busenitz, 2001). From the individual specific resources of the respective entrepreneurs, that is, information, knowledge, skills and other intangible assets, corporate entrepreneurship is advanced. Ideally, entrepreneurial behavior helps a firm to be responsive to market place changes (Mohamad et al., 2011). Through corporate entrepreneurship, a firm is better placed in converting its resources for competitive positions (Brous, Janssen, & Herder, 2019). Resource based theory thus formed the basis of conceptualizing the study variables that comprised of corporate entrepreneurship, organizational learning capability, external environment condition in view of financial performance under the public university context.

III. EMPIRICAL REVIEW

- *Corporate Entrepreneurship and Financial Performance*

Corporate entrepreneurship entails the establishment of new organization within the prevailing one or undertaking of rebirth or innovation (Sharma & Chrisman, 1999). Moreover, new organizations within existing ones are created through strategic rejuvenation (Dess et al., 2003; Guth & Ginsberg, 1990), domain redefinition, sustained regeneration, organizational rejuvenation (Dess et al., 2003), acquisition and in-house innovations (Guth & Ginsberg, 1990). As a result, the entire corporate entrepreneurship process is crucial not only to the profitability and survival but also on growth of a firm (Shamsuddin, Othman, Shahadan, & Zakaria, 2012). To attain this, the firm's board of directors are expected to lend a hand and guide the managers among them suggesting of innovative initiatives (Zahra, 2015). In support of this view, top level of management align the structural organization to support corporate entrepreneurship (Dess et al., 2003). On the contrary, Kelley, Peters, and O'Connor (2009) put forth that all managerial members of the organization regardless of their divisions or levels contribute jointly towards the effectiveness of corporate entrepreneurship.

In view of corporate entrepreneurship and financial performance nexus, several studies have been conducted in different sectors across the world. To begin with the manufacturing sector, Zahra and Covin (1995) sampled 24 medium sized firms under Fortune 500 industrial firms in United States of America (USA) so as to assess the effect of corporate entrepreneurship on financial performance. The findings indicated a positive relationship between financial performance and the corporate entrepreneurship dimensions as risk taking, innovation and aggressive completive action. Goosen, De Coning, and Smit (2002) documented a significant influence of corporate entrepreneurship (innovation and proactiveness) on financial performance of listed companies under industrial sector in South Africa. Using 23 Likert corporate entrepreneurship items given the dimensions as new business venturing, innovations, proactiveness and self-renewal, Lekmat and Selvarajah (2008) analyzed them in view of firm performance of 400 auto-parts manufacturing firms in Thailand. From the findings, there was a positive relationship with innovativeness having the highest effect. In Turkey, Karacaoğlu et al. (2013) analyzed data from 140 industrial manufacturing firms using structural equation modally and found a positive relationship corporate entrepreneurship dimensions as innovation, risk taking, autonomy and competitive aggressiveness and financial performance. Within the manufacturing sector, Lwamba et al. (2014) narrowed down only to the effect of innovations dimension under corporate entrepreneurship in relation to financial performance of 186 manufacturing firms operating in Kenya. From the findings, there was a positive relationship between all constructs of innovation, that is process, product and organizational given financial performance. In Kenya too, Moige, Mukulu, and Orwa (2016) reported increase in financial performance as a result of corporate entrepreneurship in food fortification companies. Lee et al. (2019) too concluded that under the hostile environment, entrepreneurial orientation impacts positively firm performance of the sampled 161 manufacturing firms in USA.

In Malaysia, Ambad and Wahab (2016) sought to establish the effect of entrepreneurial orientation on performance of 130 large sized firms listed. From the findings analyzed using the partial least squares and structural equation modelling approach, all the entrepreneurial orientation dimensions (innovativeness, proactiveness and risk taking) were found to positively link with profitability as opposed to firm's growth. Under the service sector, Oladimeji et al. (2019) purposed to establish the effect of corporate entrepreneurship on both financial and non-financial performance indicators of 21 firms in Nigeria. From the analyzed data collected via questionnaires from 636 employees, all dimensions of corporate entrepreneurship, that is, innovation, proactiveness, risk taking and corporate venturing except strategic renewal positively and significantly affected financial performance. Under mobile service providers sector in Kenya, cross

sectional survey by Ashitava (2010) outlined the increase of financial performance as a result of the corporate entrepreneurship dimensions as market diversification, even business strategies, new product venturing, research and development efforts. Ndungi (2016) from the findings of data collected from 49 senior executives showed that corporate entrepreneurship (risk taking, innovation and proactiveness) positively affect financial performance of insurance companies in Kenya's Nairobi County. Within the location in Kenya, there exist positive effect of proactiveness, risk taking, innovation and competitive aggressiveness on performance of health care units as reported by Mumaraki (2020).

Under state owned corporations, studies have been conducted as to establish the nexus between corporate entrepreneurship and firm performance. For instance, government owned corporations in Malaysia were analyzed by Entebang (2010). From the findings, there was a high positive behavior given entrepreneurial orientation dimensions as innovation, proactiveness and aggressiveness but low given risk taking. In Kenya, Linyiru (2015) evaluated corporate entrepreneurship and performance of 187 state corporations. From the data collected from a sample size of 55, there was a positive relationship between performance and all dimensions of corporate entrepreneurship (proactiveness, risk taking, innovation and competitive aggressiveness). Moving away into the small and medium enterprises (SME) sector, significant number of studies have directed their attention to corporate entrepreneurship aspect. To begin with, Wiklund and Shepherd (2005) based on data analyzed from 808 respondents that small business performance in Sweden is influenced positively entrepreneurial orientation dimensions as risk taking, innovativeness and proactiveness. The same finding given these entrepreneurial orientation dimension was documented in Netherlands using data from 164 SMEs by Kraus et al. (2012) as well as in Ethiopia by Abdissa et al. (2021) given a sample size of 173 respondents.

Like others, entrepreneurship in the education has been incorporated. As much as this is encouraged, the higher educational institutions there exist the same barriers faced by firms under the private sector (Kirby, 2006). In Kenya, public universities are expected to have alternative sources of revenue through consultancy fees, asset monetization, technology transfer, endowment and provision of short courses (Manyali, 2023). Through diversification strategies, sustainability is enhanced as the university is able to generate revenue through provision of customized courses, commercialization and consultancies (Kariuki, Ombaka, & Mburu, 2021). Their study further found a positive relationship between sustainable strategies and performance of public universities in Kenya. However, it was noted that most universities are yet to implement these strategies on cost reduction, collaborations and diversifications. In order to understand the principles of an entrepreneurial university, Behzadi et al. (2014) reviewed the literature. From the findings, the entrepreneurial university from the corporate entrepreneurship model comprises of elements as creating of spinoffs, research contracts, learners' quality, release of scientific findings, absorption of financial resources, patents, establishment of technology parks, entrepreneurial organizational culture, entrepreneurial approach of university professors, macro managing, course contents and students' characteristics. From the literature therefore, it is evident that corporate entrepreneurship does affect the firm's performance regardless of the sector. Consequently, the study sought to test hypothesis.

- *H_{01}; There is no significant relationship between corporate entrepreneurship and financial performance of public universities in Kenya.*

➢ *Mediating Role of Organizational Learning Capability*

In order to have product, process or organizational innovations, knowledge that is created and exploited through learning is essential (Kazanjian et al., 2017). On the contrary, knowledge according to Donald F Kuratko (2010) arises due to effective corporate entrepreneurship while Zahra (2015) puts forth the corporate entrepreneurship's formal and informal activities. Through corporate entrepreneurship therefore, a firm is in a better position to create different types of knowledge that include technical, integrative and exploitative (Dess et al., 2003). Organizational learning has been defined as the capability of a firm to create knowledge (Hitt & Duane Ireland, 2017). From another perspective, organizational learning is a process that comprises of the ability to build upon the firm's former experiences and core competencies (Kollmann & Stöckmann, 2014). This organizational learning can comprise of acquisitive learning involves the internalization of prior knowledge from external environment while experimental occurs with the firm (Dess et al., 2003; Matusik, 2002). All in all, organization learning process has been termed as being sustainable (Garratt, 1999), combines internal change mechanism (DiBella, 2001) that enable a firm to facilitate innovative creations and activities (Saki, Shakiba, & Savari, 2013; Wang, Hermens, Huang, & Chelliah, 2015). Moreover in view of intraprenuership, this process is vital as it improves and changes firm's behavior and morals (Haase, Franco, & Felix, 2015). On the other hand, organizational learning capability entails both the features or factors of the management team and organization at large which facilitate the organizational learning process (Chiva, Alegre, & Lapiedra, 2007). Ideally, organizational learning capability is crucial in creating new skills, behaviors and abilities that enhances change adaptations in the environment the firm operates in (Berghman, Matthyssens, Streukens, & Vandenbempt, 2013).

There exist studies that have linked organizational learning capability and corporate entrepreneurship. In Pakistan, a study by Ahmed et al. (2011) investigated the relationship between corporate entrepreneurship and organizational learning capability in textile industry. Using the data obtained from 240 middle level managers, the study found a positive relationship between this study variables. It concluded therefore that innovative and risk taking organizations tend to have more learning capabilities. Another study was conducted in Chennai whereby Banumathi and Samudhrarajakumar (2019) conducted a

survey among 250 middle level managers working in Chemical Engineering manufacturing industries. In line with the findings by Ahmed et al. (2011), there was appositive relationship between corporate entrepreneurship and organizational learning capability. Within the SME sector, a study was conducted by Hooi (2023) to assess the effect of organizational learning capability and human resource practices on corporate entrepreneurship. From the findings collected from a sample size of 271 managerial staff, both the organizational learning capability and human resource practices partially influenced corporate entrepreneurship.

Among other benefits in the firm, organizational learning capability has been lauded as it direct the performance of the firm (Wang et al., 2015). In Spain, organizational learning capability was found to positively affect the both financial and non-financial performance of 111 firms sampled (Prieto & Revilla, 2006). On the contrary in Slovenia, Škerlavaj et al. (2007) found organizational learning capability to directly and positively affect non-financial performance while having positive though indirect effect on financial performance of the 203 firms. In support of the findings in Spain and Slovenia, Pham and Hoang (2019) established a positive relationship between organizational learning capability and business performance in Vietnam. Other studies have used organizational learning capability as a moderator between entrepreneurial orientation and SME's innovation (Wang et al., 2015). Likewise, organizational learning capability has been found to mediate the relationship between high performance work systems and corporate entrepreneurship of manufacturing firms in India (Rajakumar & Banumathi, 2017) as well as between innovation and firm performance (Kalmuk & Acar, 2015). In Thailand, Kittikunchotiwut (2020) analyzed the mediating effect of organizational learning capability and innovation in the interconnection between entrepreneurial orientation and firm performance. A total of 388 executives of gem and jewelry, textile, clothing, leather and accessories, fashion apparel industries were sampled. From the findings, both organizational learning capability and innovation mediated the relationship. From the empirical review, the study pursued to test the following hypotheses;

- *H_{02}; There is no significant relationship between corporate entrepreneurship and organizational learning capability of public universities in Kenya.*
- *H_{03}; There is no significant relationship between organizational learning capability and financial performance of public universities in Kenya.*
- *H_{04}; Organizational learning capability does not significantly mediates the relationship between corporate entrepreneurship and financial performance of public universities in Kenya.*

➢ *Moderating Role of External Environment Condition*

Organization's operations are not only influenced by internal but also external environment. In terms of corporate entrepreneurship, environment has an impact (Nath & Rayudu, 2014). Consequently, there exist three key environmental conditions that influences the firm's strategic decisions (Joao Ferreira, 2002; Joao Ferreira, 2009). First, hostile environment threatens firm's mission due to rise in industry rivalry and depressing demand for firm's products. This in turn stimulates the pursuit of corporate entrepreneurship. Secondly, environmental dynamism whereby perceived instability of firms' market as a result continuous change leads to emphasize on corporate entrepreneurship. Lastly, environmental heterogeneity whereby a certain firm may perceive environment as manageable while the other firm perceives it as complex and uncontrollable. According to Guth and Ginsberg (1990), environmental key aspects as dynamism, hostility, industry structures and major environmental shifts does affect corporate entrepreneurship. In line with this, corporate entrepreneurship initiatives have been found to be influenced by environmental hostility (Zahra, 1993) and dynamism (Antoncic & Hisrich, 2004; Covin & Slevin, 1991).

In the conceptual modelled by Lumpkin and Dess (1996), organizational and environmental factors have been outlined to moderate the relationship between entrepreneurial orientation and firm performance. Under environmental factors, there are elements as dynamism, munificence, complexity and industry characteristics. In Indonesia, Mohamad et al. (2011) established the moderating effect of business environment in the relationship between corporate entrepreneurship and performance of medium sized firms. From the findings, business environment that comprised of the economy and government policies was found to have the moderating effect. In Malaysia, a study by Ambad and Wahab (2016) found out that environmental dynamism does moderate the relationship between corporate entrepreneurship and performance of 130 large sized firms. Rodríguez-Peña (2021) basing on cross sectional analysis and structural equation modelling found that environmental dynamism does moderate the corporate entrepreneurship-financial performance linkage of 87 subsidiaries of Colombian business groups. Rodríguez-Peña (2023) utilized a sample size of 857 large firms, cross sectional analysis and multivariate second order hierarchical component model. Contrary to findings in the year 2021, environmental dynamism did not moderate the relationship between corporate entrepreneurship and firm performance. Therefore using the context of public universities, the study tested hypotheses;

- *H_{05a}; External environment condition does not significantly moderate the relationship between corporate entrepreneurship and financial performance of public universities in Kenya.*
- *H_{05b}; External environment condition does not significantly moderate the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya.*

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IV. THE CONCEPTUAL FRAMEWORK

Based on the empirical review of literature, Figure 1 presents the corporate entrepreneurship (independent variable), organizational learning capability (mediating variable), external environment condition (moderating variable) and financial performance (dependent variable).

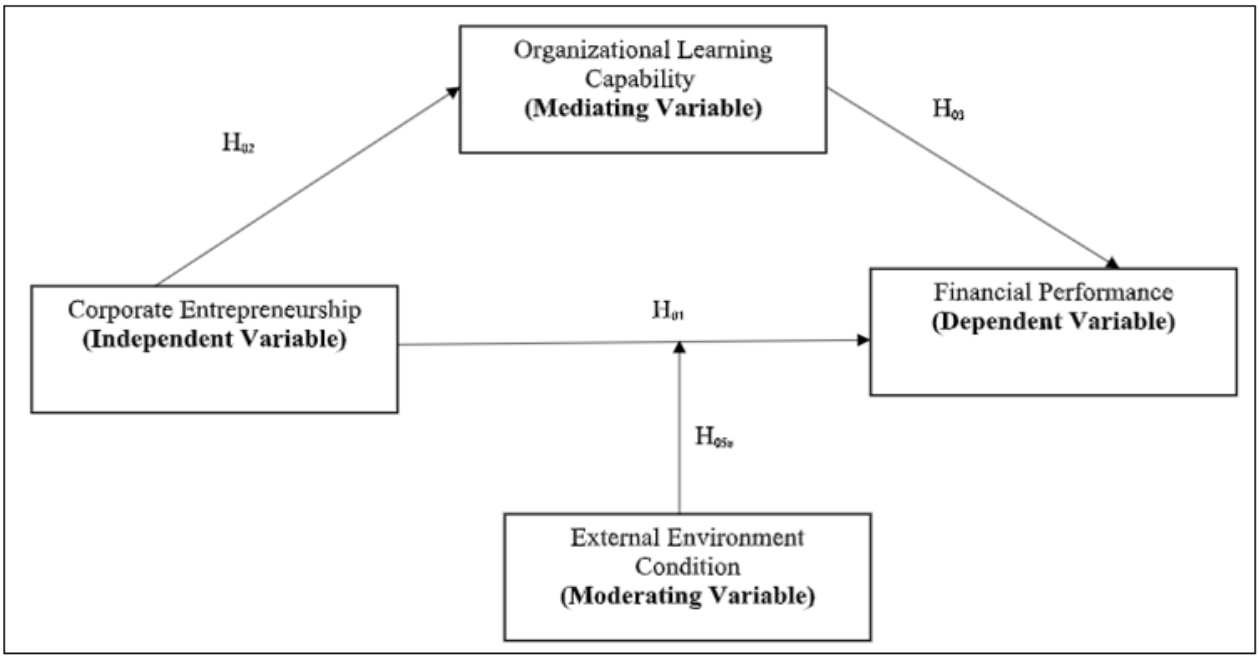

Fig 1 Conceptual Framework of the Study
Source: Researchers (2023)

V. RESEARCH METHODOLOGY

In order to attain the objective of the study, positivist research philosophy was adopted given that the research was scientific in nature. Moreover, descriptive survey research design was appropriate as it enables researcher to gather data via pre-designed questionnaires (Rahi, 2017). Moreover, this design is non-experimental and used to collect information about the relationships that exist between variables in a pre-determined population (Coughlan, Cronin, & Ryan, 2009). In Kenya, the state corporations are categorized based on the functionality. These therefore comprises of public universities, financial, regulatory, regional development authority, service, training and research, commercial or manufacturing. There are 42 accredited public universities distributed across the country (Commission of University Education, 2022). Among the 42, there is one specialized degree awarding University College, two specialized degree awarding universities and four public university colleges. As per Mugenda and Mugenda (2006), the appropriate sample size for a descriptive research is between 10 to 50%. Thus, from the target population, 50 % of the targeted public universities giving a sample size of 21. The total number of respondents given the sample was 84. This was based on the fact that four representative from the university management, finance, academic and students sections in each university were targeted. Structured questionnaires were used to gather data which was later subjected to correlation and hierarchical multiple regression analysis. Reliability test using Cronbach alpha was conducted so as to test the consistency and dependability of the research instrument. On the other hand, factor analysis was conducted to cluster the constructs for various study variables in the questionnaire.

- *Measurement of Study Variables*

Five point Likert scale items were adopted given the related researchers. However in the statements under each dimension, the 'firm' was changed to 'university' while the 'chief executive (CEO)' refer to the top management position that held by the chancellor, vice chancellor and other top managers within the Kenya's university context. At the outset, the five point nineteen (19) Likert scale items to measure corporate entrepreneurship dimensions were adopted from Karacaoğlu et al. (2013) and Linyiru (2015). These comprised of autonomy (4 items), competitive aggressiveness (3 items), innovativeness (6 items), proactiveness (3 items) and risk taking (3 items). Organizational learning capability was measured using the sixteen (16) five point Likert scale items by Jerez-Gomez, Céspedes-Lorente, and Valle-Cabrera (2005). These include managerial commitment (5 items), systems perspective (3 items), openness and experimentation (4 items), knowledge and integration (4 items). The seven (7) five point Likert scale items used by Behram and Özdemirci (2014) was used to measure external environment condition. These measures comprises of five point Likert scale items relating to ambiguity (3 items), munificence and dynamism (2 items each). Lastly, financial performance indicators were the six (6) Likert scale items drawn from (Linyiru, 2015).

➢ *Mediation Analysis and Models*

In Figure 2, the statistical diagram for mediation analysis adopted from Model 4 by Hayes (2018) summarized the mediating effect of organizational learning capability in the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. According to the statistical mediation analysis by Hayes (2018), *X→M→Y* is a causal chain of events. According to MacKinnon, Cheong, and Pirlott (2012), mediation analysis is procedural whereby three models must be tested before concluding the results. In Figure 2 therefore, path a_1 ($M = a_0 + C + a_1X + \varepsilon$) is tested first so as to establish the relationship between the independent variable (corporate entrepreneurship) and the mediator (organizational learning capability). Secondly, path b_1 ($Y = b_0 + C + b_1M + \varepsilon$) is tested in order to establish the relationship between the mediator (organizational learning capability) and dependent variable (financial performance). In the third step, there is need to test for path c' ($Y = C_0 + C + b_1M + c'X + \varepsilon$) that give the relationship between independent variables (corporate entrepreneurship) and dependent variable (financial performance). Lastly, mediation is tested whereby result of path a_1 is multiplied with path b_1 as pointed out by Hayes (2018). In this case, the total effect is the sum of direct (effect of independent on dependent variable) and indirect effect (effect of independent on dependent through mediating variable). The proportion of mediation is computed as the ratio of the indirect to total effect.

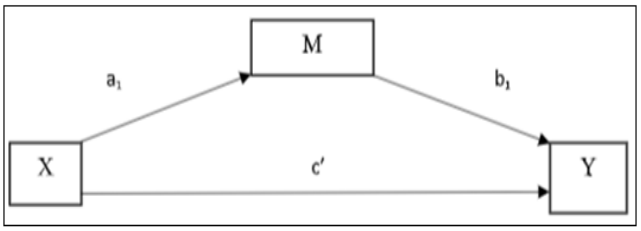

Fig 2 Mediation Analysis Statistical Diagram
Source: Hayes (2018)

- *Note: X (Corporate Entrepreneurship- Independent Variable); M (Organizational Learning Capability – Mediating Variable); Y (Financial Performance – Dependent Variable).*

➢ *Moderated Mediation Analysis and Models*

In Figure 3, the statistical diagram for moderated mediation analysis adopted from Model 5 by Hayes (2018) summarized the moderating effect of external environment condition on the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya. Under this, the indirect effect of X on M through Y is given as a_1b_1 . On the other hand, the conditional effect of X on Y is given as $c'_1 + c'_3W$.

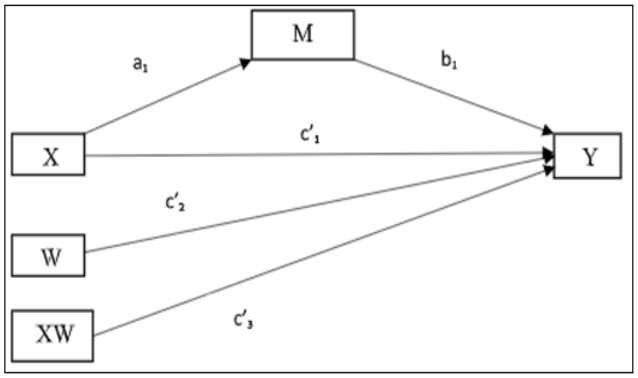

Fig 3 Moderated Mediation Analysis Statistical Diagram
Source: Hayes (2018)

- *Note: X (Corporate Entrepreneurship – Independent Variable); M (Organizational Learning Capability – Mediating Variable); W (External Environment Condition – Moderating Variable); Y (Financial Performance – Dependent Variable); Parameter estimates (a_1, b_1, and c'_1 to c'_3)*

VI. FINDINGS AND DISCUSSIONS

In the survey, 80 given the 84 surveys were completed representing 95.23% response rate. In order to test the reliability of the research instrument, Cronbach's alpha values were used. From the findings, all the study variables were found to be consistent and dependable given the alpha value above 0.70 as stated by (Tavakol & Dennick, 2011). In this regard, corporate entrepreneurship (16 items), organizational learning capability (16 items), external environment condition (7 items), financial performance (6 items) had Cronbach alpha values of 0.816, 0.923, 0.909 and of 0.896 respectively.

➢ *Pearson Correlation Analysis Findings*

The analysis was vital in determine the direction and strength of relationship between the study variables. In Table 1, the Pearson Correlation coefficients are presented. In this finding, there is a positive and significant between corporate entrepreneurship, organizational learning capability, external environment condition and financial performance as indicated by correlation Pearson correlation coefficient (r) of .698, .529 and .312 respectively.

Table 1 Pearson Correlation Analysis Findings

		FP	CE	OLC	EEC
FP	Pearson Correlation	1			
CE	Pearson Correlation	.698**	1		
OLC	Pearson Correlation	.529*	.017**	1	
EEC	Pearson Correlation	.312**	.116*	.365**	1

Source: Researchers (2023)
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

- *Key: FP (Financial Performance); CE (Corporate Entrepreneurship); OLC (Organizational Learning Capability); EEC (External Environment Condition).*

Moreover, Table 1 indicates that there was a weak positive but significant correlation (r = .017) between organizational learning capability and corporate entrepreneurship. Similarly, external environment condition was found to positively but weakly correlate with organizational learning capability as indicated by $r = .116$. Lastly, there was a significant positive correlation (r = .365) between external environment condition and organizational learning capability of public universities in Kenya.

➢ *Factor Analysis Findings*

The study variables were measured using the five point Likert scale items adopted from different researchers. In order to reduce the large set of variables into few composite ones, principal component analysis (PCA) was used whereby the factors were extracted. The results given the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's Test of sphericity were analyzed for each study variable. KMO values ranges between 0 and 1 as stated by Kaiser (1974). In this case, the values found to be close zero indicates that large partial correlation exists given the sum of correlations. All in all, the recommended factor loadings according to Kaiser (1974) are those with KMO values above 0.70 while Hair (2009) recommends values above 0.50. The factor loading for financial performance, corporate entrepreneurship, organizational learning capability and external environment condition are presented in Appendix I, II, III and IV respectively. From these findings, it is evident that he KMO measure of sampling adequacy were above the threshold of 0.50 while the Bartlett's Test of sphericity were significant given the probability (p-values). This therefore reveals that data was adequate for extraction using principal components analysis. More importantly, the construct's factor loading met the threshold of 0.50 hence all were included in measuring the respective study variables.

➢ *Direct Effect and Mediation Analysis Findings*

As shown in Table 2, the study tested under the first hypothesis the direct relationship between corporate entrepreneurship and financial performance of public universities in Kenya. Further as guided by model 4 by Hayes (2018) and MacKinnon et al. (2012), the mediating effect of organizational learning capability in the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. Thus bootstrapping method that estimates the estimator's sampling distribution by resampling data was used given the indirect effect, that is, effect of corporate entrepreneurship on financial performance that is mediated by organizational learning capability. In Model 1, corporate entrepreneurship explains 34.25% of the variance in the mediating variable as shown by R-squared (R^2) value of .3425. Furthermore under Model 2, the R^2 value was .6912 implying that both corporate entrepreneurship and organizational learning capability explains 69.12% of variance in financial performance. To begin with, direct effect test (path c' in mediation statistical diagram) was estimated by the first hypothesis H_{01}; there is no significant relationship between corporate entrepreneurship and financial performance of public universities in Kenya. In Table 2, there was a positive and significant relationship between corporate entrepreneurship and financial performance as indicated by (β = .487, p <.001). For every one unit increase in corporate entrepreneurship, there is increase in financial performance by 0.487 units. This led to rejection of H_{01} and concluded that there exist a significant relationship between corporate entrepreneurship and financial performance of public universities in Kenya. The finding thus support those by Karacaoğlu et al. (2013), Linyiru (2015) and (Mumaraki, 2020).

Table 2 Results for the Direct Effect and Mediation Analysis

	M(Organizational Learning Capability)		**Y(Financial Performance)**
	Model 1		**Model 2**
Study Variables	Beta	Coefficient. (SE)	Coefficient (SE)
X(Corporate Entrepreneurship)	β_1	.612** (.029)	.487*** (.041)
M(Organizational Learning Capability)	β_2	-	.343***(.031)
Constant	β_0	3.109***(.265)	2.117***(.198)
		$R^2 = .3425$ F=216.315 P> F= .000	$R^2 = .6912$ F=294.017 P> F= .000
	Index	SE (boot LLCI)	(boot ULCI) 95% CI
Mediation	.124*	.061 .083	.192

Source: Researchers (2023)

*p <0.05; **p <0.01; ***p <0.001.

- *Key: SE (Standard Error); CI (Confidence Interval); Bootstrap Lower Limit Confidence Interval (boot LLCI); Bootstrap Upper Limit Confidence Interval (boot LLCI).*

Secondly, the study tested path 'a' of the mediation analysis statistical model whereby findings indicate that there is a positive (β = .612) and significant (p <.01) relationship between corporate entrepreneurship and organizational learning capability. The result implies that organizational learning capability increases by 0.612 unites for every increase in one unit of corporate entrepreneurship. Thus, hypothesis H_{02} was rejected and concluded that there is significant relationship between corporate entrepreneurship and organizational learning capability of

public universities in Kenya. This results therefore support those by Ahmed et al. (2011), Banumathi and Samudhrarajakumar (2019). The third test was 'path b' and that hypothesis H_{03} was rejected since the findings indicate a positive and significant (β = .343, p <.001) relationship between organizational learning capability and financial performance. In public universities therefore, there is a rise in financial performance by 0.343 units as a result of one unit increase in organizational learning capability. More importantly, the same finding has been documented by Wang et al. (2015), Pham and Hoang (2019).

Lastly, the findings in Table 2 presents that the indirect (mediation) effect of corporate entrepreneurship on financial performance through organizational learning capability positive as shown by the index of 0.124. The bootstrap lower limit confidence interval (boot LLCI) and bootstrap upper limit confidence interval (boot ULCI) were .083 and .192 respectively. As a result, the mediation effect found to be significant since the bootstrap confidence intervals did not contain zero. The total effect is therefore .611 (.487 + .124) while the mediation proportion is 20.29% (.124/.611 *100%). The later implies that a total of 20.29% of corporate entrepreneurship on financial performance is mediated by organizational learning capability. Therefore, since the product of paths a, b and c' is positive as indicated by .1022, there exist a partial mediating effect of organizational learning capability in the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. Consequently, hypothesis H_{04} was rejected and concluded that organizational learning capability partially mediates the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. This is in support of Kittikunchotiwut (2020) who concluded that organizational learning capability does moderate the relationship between corporate entrepreneurship and financial performance though under the gem and jewelry, textile, clothing, leather and accessories, fashion apparel industries.

➢ *Moderated Mediation Analysis*

The main objective of the study was to test H_{05b}; external environment condition does not significantly moderate the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya. Prior to this in Table 3, there is a positive and significant (β =.915, p<.01) relationship given corporate entrepreneurship and financial performance. As well, external environment condition positively and significantly (β =.887, p<.001) relates with the financial performance of public universities in Kenya. Furthermore, hypothesis H_{05a}; External environment condition does not significantly moderate the relationship between corporate entrepreneurship and financial performance of public universities in Kenya was tested. From the findings, external environment condition has a positive and significant (β =.562, p<.01) interaction effect. It is evident that the relationship between corporate entrepreneurship and financial performance remains positive and significant but declines by .353 (equivalent to 23.90%), that is, from .915 to .562. Thus, H_{05a} was thus rejected and concluded that external environment condition positively and significantly moderate the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. This finding concurs with Guth and Ginsberg (1990), Nath and Rayudu (2014) who stated that environmental condition is essential as it affects the corporate entrepreneurship initiatives in the firm. In the same breadth, the moderating effect of external environmental condition supports those by Lumpkin and Dess (1996).

Table 3 Results for Moderated Mediation Analysis

	M(Organizational Learning Capability)		**Y(Financial Performance)**
Study Variables	Beta	Coefficient. (SE)	Coefficient (SE)
X (Corporate Entrepreneurship)	β_1	.298** (.066)	.915** (.112)
W (External Environment Condition)	β_2		.887***(.171)
Interaction (X*W)	β_3		.562** (.084)
Constant	β_0	4.013**(.918)	1.735*(.203)
		$R^2 = .4136$ F=273.019 P> F= .000	$R^2 = .6521$ F=287.184 P> F= .000

	Index	SE (boot LLCI)	(boot ULCI) 95% CI
Moderated Mediation	.0968*	.0214 .0036	.0812

Source: Researchers (2023)
*p <0.05; **p <0.01; ***p <0.001.

- *Key: SE (Standard Error); CI (Confidence Interval); Bootstrap Lower Limit Confidence Interval (boot LLCI); Bootstrap Upper Limit Confidence Interval (boot LLCI).*

To sum up, the moderated mediation index in Table 3 was positive (β = .0968) and significant basing the t-value (.0968/ .0214 = 4.523 > 1.96) as well as the non-zero bootstrap confidence interval (boot LLCI = .0036 and boot ULCI = .0812). This led to the rejection of hypothesis H_{05} and concluded that external environment condition positively and significantly moderates the relationship between corporate entrepreneurship and financial performance through organizational learning capability of public universities in Kenya. First, the result thus corresponds with Lumpkin and Dess (1996) that environmental condition moderates the nexus between

corporate entrepreneurship and financial performance. Accordingly, external environment condition in the study is found to affect the strength of relationship between corporate entrepreneurship and financial performance of public universities in Kenya. Secondly, external environmental condition comprising jointly of ambiguity, munificence and dynamism positively enhances the mediating effect of organizational leaning capability in the relationship between corporate entrepreneurship and financial performance.

VII. CONCLUSION

The main objective of the study was to examine the moderating effect of external environment condition in the relationship between corporate entrepreneurship and financial performance of public universities in Kenya through organizational learning capability. In order to attain this objective, the direct effect of corporate entrepreneurship and financial performance was found to be positive and significant. This implies that the higher the number of corporate entrepreneurship initiatives the higher the financial performance. Moving away from the direct effect, the study evaluated organizational learning capability incorporating of dimensions as managerial commitment, systems perspectives, openness and experimentation, knowledge transfer and integration. From the findings, it was established that organizational learning capability partially mediates the relationship between corporate entrepreneurship and financial performance of public universities in Kenya. Therefore, given that organizational learning capability entails both the managerial and organization factors facilitating the organizational learning process (Chiva et al., 2007), public universities in Kenya could capitalize on this so as to enhance the financial performance as a result of its diverse corporate entrepreneurship activities. According to Joao Ferreira (2009), environment is crucial as it influences corporate entrepreneurship. In this study therefore, external environment condition positively moderated the relationship between corporate entrepreneurship and financial performance. In this regard, the interaction of environmental dynamism, munificence and ambiguity with the corporate entrepreneurship increases financial performance of the public universities in Kenya. Lastly, external environment condition was found to positive moderate the relationship between corporate entrepreneurship and financial performance through organizational learning capability. Therefore, given the existence of external environment condition, financial performance arising from corporate entrepreneurship and through organizational learning capability is enhanced.

RECOMMENDATIONS

In most countries, universities play a key role of disseminating knowledge hence goes a long way in contributing toward economic growth and development. Regardless of this, most universities are in dire need of resources to fulfil their vision and mission. Corporate entrepreneurship is seen as one of the strategic means of diversifying the revenues of the public university so as to supplement the insufficient capitation received from the government. Based on the finding that external environment condition moderates the relationship between corporate entrepreneurship and financial performance through organizational learning capability study has made certain recommendations. Given the current competitive environment, the study recommends the need for the public universities in Kenya to be dynamic since external environment condition does affect the corporate entrepreneurship activities. In this regard, there is need to pay much attention on the dynamic and hostility nature of the environment, the contemporary changes in the education sector at large and other major environmental shifts. In addition, public universities in Kenya are expected to perceive knowledge possessed as a powerful resource. Through the organizational learning capability, the university is able to process such knowledge in order to enhance its corporate entrepreneurship activities that will drive its performance levels higher. This further calls for the need to have a strong management support, inclusion of all levels of management within the university and provision of shared vision. So as to contribute more to the existing literature, future studies could analyze the mediating and moderating effect given the individual dimensions under organizational learning capability and external environment condition respectively. Future analysis could dwell on quantitative measures of financial performance. Ina addition, future researchers could evaluate corporate governance role as far as corporate entrepreneurship initiatives of the public universities are concerned.

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APPENDICES

- *Appendix I; Factor Loadings for Financial Performance*

Table 4 Factor Loadings for Financial Performance

	Unrotated Component Extraction		**Rotated Component Matrix[a]**	
	1	**2**	**1**	**2**
Our university profitability has increased over the last five years	.902		.913	
Our university financial leverage has increased over the last five years	.692		.730	
Our university has experienced an increase in total revenue collected over the last 5 years	.898		.904	
Our university has experienced an increase in assets over the last 5 years	.717	.653		.812
Our university has a higher market value	.681		.722	
The organization is more inclined to decisions that enhance returns on its physical capital rather than relational capital	.694		.746	
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization				
a. Rotation converged in 3 iterations.				
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy			.808	
Bartlett's Test of Sphericity	Approx. Chi-Square		1592.143	
	Df		33	
	Sig.		.000	

Source: Researchers (2023)

➢ *Appendix II; Factor Loadings for Corporate Entrepreneurship*

Table 5 Factor Loadings for Corporate Entrepreneurship

	Unrotated Component Extraction		**Rotated Component Matrix[a]**	
	1	**2**	**1**	**2**
Autonomy				
In my university, individuals and/or teams pursuing business opportunities make decisions on their own without constantly referring to their supervisors (instead of having to obtain approval from their supervisors before making decisions).	0.891		0.912	
My university supports the efforts of individuals and/or teams that work autonomously as compared with requiring individuals and/or teams to rely on senior managers to guide their work.	0.852		0.887	
The managers of my university believe that the best results occur when individuals and/or teams decide for themselves what business opportunities to pursue (rather than when the top management provide the primary impetus for pursuing business opportunities).	0.918		0.885	
In my university, the top management team (rather than employee initiatives and input) play a major role in identifying and selecting the entrepreneurial opportunities my firm pursues.	0.876		0.891	
Competitive Aggressiveness				
My university knows when it is in danger of acting overly aggressive and avoid such actions which can lead to erosion of firm reputation and retaliation by competitors.	0.634	0.715	0.756	
My university effectively uses an aggressive posture to combat industry trends that may threaten our survival or competitive position.	0.815		0.756	
My university enhances its competitive position by entering markets with drastically lower prices, copying the business practices or techniques of successful competitors, or making timely announcements of new products or technologies.	0.634		0.687	
Innovativeness				
Our university frequently tries out new ideas	0.576		0.604	
Our university is creative in its methods of operation	0.654		0.619	
Our university seeks out new ways to do things	0.734		0.762	
University's emphasis on developing new products	0.702		0.775	
Our university spends on new product development activities	0.654		0.617	
Our university Invests in developing proprietary Technologies	0.865		0.903	
Our university frequently tries out new ideas	0.971		0.986	
Risk Taking				
The top managers of my university believe that, owing to the nature of the environment, it is best to explore the environment gradually via careful, incremental behavior (rather than bold, wide-ranging acts necessary to achieve the firm's objectives).	0.815	0.871	0.924	
When confronted with decision-making situations involving uncertainty, my university typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions (as compared with a bold, aggressive posture to maximize the probability of exploiting potential opportunities).	0.765		0.827	
The top managers of my university have a strong proclivity for low risk projects (with normal and certain rates of return) rather than high risk projects (with chances of very high return).	0.915		0.993	
Proactiveness				
In general, the top managers of my university have a strong tendency to be ahead of other competitors in introducing novel ideas or products.	0.675		0.743	
In dealing with competition, my university is very seldom the first business to introduce new products/services, administrative techniques and operating technologies.	0.786		0.814	
In dealing with competition, my university typically responds to action which competitors initiate as compared with initiating action which the competition then responds to.	0.716		0.688	
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization				

a. Rotation converged in 3 iterations.		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.902
Bartlett's Test of Sphericity	Approx. Chi-Square	4126.423
	Df	48
	Sig.	.000

Source: Researchers (2023)

- *Appendix III; Factor Loadings for Organizational Learning Capability*

Table 6 Factor Loadings for Organizational Learning Capability

	Unrotated Component Extraction		**Rotated Component Matrix[a]**	
	1	**2**	**1**	**2**
Managerial commitment				
The managers frequently involve their staff in important decision making processes.	0.654		0.742	
Employee learning is considered more of an expense than an investment.	0.631		0.753	
The university's management looks favorably on carrying out changes in any area to adapt to and/or keep ahead of new environmental situations.	0.965		0.903	
Employee learning capability is considered a key factor in this university.	0.816		0.922	
In this university, innovative ideas that work are rewarded.	0.783		0.731	
Systems perspective				
All employees have generalized knowledge regarding this university's objectives.	0.641		0.716	
All parts that make up this university (departments, sections, work teams, and individuals) are well aware of how they contribute to achieving the overall objectives.	0.671		0.685	
All parts that make up this university are interconnected, working together in a coordinated fashion.	0.911		0.887	
Openness and experimentation				
This university promotes experimentation and innovation as a way of improving the work processes.	0.780	0.816	0.921	
This university follows up what other firms in the sector are doing, adopting those practices and techniques it believes to be useful and interesting.	0.721		0.666	
Experiences and ideas provided by external sources (advisors, customers, training firms, etc.) are considered a useful instrument for this university's learning.	0.598		0.615	
Part of this university's culture is that employees can express their opinions and make suggestions regarding the procedures and methods in place for carrying out tasks.	0.654		0.612	
Knowledge transfer and integration				
Errors and failures are always discussed and analyzed in this university, on all levels.	0.577		0.625	
Employees have the chance to talk among themselves about new ideas, programs, and activities that might be of use to the university.	0.671		0.702	
In this university, teamwork is not the usual way to work.	0.713		0.801	
The university has instruments (manuals, databases, files, organizational routines, etc.) that allow what has been learnt in past situations to remain valid, although the employees are no longer the same.	0.662		0.698	

Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization		
a. Rotation converged in 3 iterations.		
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.845
Bartlett's Test of Sphericity	Approx. Chi-Square	3021.618
	Df	51
	Sig.	.000

Source: Researchers (2023)

➢ *Appendix IV; Factor Loadings for External Environment Condition*

Table 7 Factor Loadings for External Environment Condition

	Unrotated Component Extraction		**Rotated Component Matrix[a]**	
	1	**2**	**1**	**2**
Ambiguity				
New competition unpredictable	0.867		0.882	
Difficult to anticipate change	0.711		0.783	
Unforeseen threats	0.774		0.817	
Munificence				
12 month business outlook good	0.654		0.714	
Market will grow	0.743		0.682	
Dynamism				
Changing social values	0.708		0.765	
Changing customer preferences	0.690		0.717	

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 3 iterations.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.776
Bartlett's Test of Sphericity	Approx. Chi-Square	2322.018
	Df	42
	Sig.	.000

Source: Researchers (2023)