

Moderating effect of entrepreneurial self-efficacy on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies

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ABSTRACT

The purpose of this study was to determine the effect of networking capabilities on firm performance while controlling for entrepreneurial competencies, to determine the moderating effect of entrepreneurial self-efficacy on the relationship between entrepreneurial competencies and SME performance and ultimately to establish the moderating effect of entrepreneurial self-efficacy on the strength of the mediated relationship between networking capabilities and Small and Medium Enterprises (SME) performance via entrepreneurial competencies. The study adopted the positivist research philosophy asserting the existence of an objective reality that can be quantified, offering both explanatory and predictive capabilities. The research adopted an explanatory research design. Hayes Model 4 and 59 process Macro approach was used to analyse data and test the hypotheses. The results showed that networking capabilities had a significant direct effect on firm performance. The study also revealed that the interaction of entrepreneurial self-efficacy between the entrepreneurial competencies and firm performance was significant. Ultimately, the study determined the conditional indirect effect of Entrepreneurial Self-Efficacy (ESE) on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies. The study concluded that positive and significant moderated mediation analysis was evident. More importantly, the conditional indirect effect was much stronger with firms having lower levels of ESE. The study concluded that entrepreneurial self-efficacy has significant conditional indirect effect on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies. These findings emphasise the importance of self-efficacy, networking capabilities and competencies of the entrepreneurs as a predictor to improved firm performance.

Keywords: *Entrepreneurial competencies, Entrepreneurial self-efficacy, Networking capabilities, Performance, Small and medium enterprises.*

JEL Classification: L26; M00.

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Highlights of this paper:

- This study assesses the direct impact of networking capabilities on SME performance and examines the moderating role of entrepreneurial self-efficacy (ESE) on the link between entrepreneurial competencies and firm outcomes.
- Utilizing Hayes Models 4 and 59 process macro, findings indicate that ESE significantly moderates the mediated relationship between networking capabilities and SME performance through entrepreneurial competencies.
- The findings suggest that enhancing entrepreneurial self-efficacy and networking capabilities can strengthen competencies, offering a strategic pathway for SMEs to improve performance and competitive advantage.

1. INTRODUCTION

Customer relationships, profitability, product and service quality, market share, and operational excellence are just a few of the many factors that have been used to measure Small and Medium Enterprises (SME) performance globally (Arham, 2014). According to (Kimutai, 2016), other indices may include effectiveness, efficiency, relevance and financial viability as put forth by (Riwayati, 2017); Financial performance, product market performance and shareholder return performance according to (Ibrahim & Mahmood, 2016) and also non-financial indicators and financial indicators including competitiveness, financial performance, quality of service, flexibility, resource mobilization, and innovation as per (Singh & Mahmood, 2014).

Lopez-Calva et al. (2017) documents that formal SMEs contribution to total employment and Gross Domestic Product (GDP) in developing economies stands at over 60% and 40% respectively. In Kenya, SMEs contribute 33.8% of the GDP and accounts for over 80% of the new jobs created (Government of Kenya, 2018). According to this report, the SMEs sector had created 720,000 new jobs by 2016 compared to 120,000 new jobs that were created in the formal employment. According to the Kenya's Vision 2030, these enterprises are viewed as key drivers to economic and social development. They represent many businesses that generate enormous wealth and employment (RoK, 2011). Given its potential in job creation and GDP growth of Kenya, SMEs performance is of critical concern to the Government of Kenya as it tries to deliver on vision 2030.

Bengesi and Le Roux (2014) define networking capabilities as the company's capacity to establish, uphold, and take advantage of its relationships with different partners. The ultimate purpose of networking capabilities is the creation of networks with a view to creating a platform for exchanging strategic resources and capabilities. (Srećković, 2018) asserts that the four components of networking capabilities are partner knowledge, coordination, relational skills, and internal communication. In the context of business and management therefore, networking capabilities refer to a firm's ability to establish, nurture, and leverage relationships with various partners, stakeholders, and networks to gain strategic advantages and achieve organizational goals (Cartwright & Davies, 2022; Kurniawan, Budiastuti, Hamsal, & Kosasih, 2021). These capabilities encompass both internal networking within the firm and external networking with other organizations, suppliers, customers, industry associations, and other relevant entities.

Entrepreneurial competence refers to the comprehensive set of skills, knowledge, attitudes, and behaviours that enable individuals to successfully identify, create, evaluate, and exploit business opportunities (Kozlinska, Rebmann, & Mets, 2023; Venesaar, Malleus, Arro, & Toding, 2021). It encompasses a diverse range of capabilities essential for initiating, managing, and growing a business venture effectively. Entrepreneur's competence is one of the significant determinant factors for success, performance and growth or failure of business operation (Mitchelmore & Rowley, 2013; Yustian, Suryana, Furqon, & Hendrayati, 2021). Entrepreneurial competence stands as a cornerstone for the success, performance, and growth or failure of business operations (Mondal & Rahman, 2022). This competence encapsulates a spectrum of skills, knowledge, and attributes crucial for effectively steering a business venture.

Entrepreneurial self-efficacy has been seen as a significant contributory factor to entrepreneurial motivation, intentions and behaviour that influence firm performance (Abdelwahed, Soomro, Shah, & Saraih, 2022). There has

been a claim made that an entrepreneur's confidence in his ability to complete a task is more significant than his knowledge or skill level (Bird, 2019). Because a small business owner's decisions and actions directly affect the direction of their company and, in turn, its overall performance, ESE is essential to the performance of small businesses. Therefore, the performance of a business is directly impacted by the entrepreneur's confidence in his or her ability to achieve the intended outcomes in an entrepreneurial endeavor (Wu, Wang, & Wu, 2021).

This study argues that entrepreneurial self-efficacy, being an indicator of the firm owner's belief, has a moderating effect on the relationship between networking capabilities and performance more so indirectly through entrepreneurial competencies. The study further argues that ESE affects the strength of the relationship between networking capabilities (NC) and entrepreneurial competencies (EC), NC and SME performance, EC and SME performance and finally the moderated mediation interaction between NC and SME performance.

1.1. Small and Medium Enterprises in Kenya

Small enterprises in Kenya are defined as those organizations with between 9 and 49 employees while the medium enterprises are defined as those organizations having between 49-99 employees. Micro enterprises are the organizations where the number of employees is less than 5. The significance of Kenya's SMEs was identified in the 'Employment, Income and Equity in Kenya' (Leys, 1973). The report outlined SMEs as key drivers for income generation and job creation. According to the African Development Bank (2017) SMEs create close to 80% of employment. This shows the significance of SMEs in Kenya. In Kenya, while estimates put Micro, Small and Medium Enterprises (MSMEs) at about 7.5 million enterprises contributing about 44% to the Kenya GDP in 2008, it has been suggested that the number of formal SMEs is more by about 250,000 (African Development Bank, 2008). According to *Doing Business in Kenya report (2017)*, the ease with which business can be registered has a bearing on the number of entrepreneurs who start businesses in the formal sector, leading to jobs and more government revenue. In 2013 the government of Kenya passed the MSE Act 2012 in a bid to grow the economy through the SME sector. In terms of market access, swift dispute resolution, credit facility access, and technical skills, the Act was designed to support business growth. The Deloitte Kenya Economic Outlook (2017) notes that growth of SMEs in Kenya is hindered by challenges such as inadequate capital, limited market access, poor infrastructure; inadequate knowledge and entrepreneurial skills, rapid changes in technology, corruption and an unfavorable regulatory environment. Although the agriculture sector, contributing 30% to GDP and accounting for 80% of national employment, provides a livelihood and employment for majority of Kenyans, its percentage of SME financing is small. Overall, there is the need for changes in law, fiscal policies, financial institution strategy and total support for SMEs. The country's development blueprint to transform Kenya into a newly industrializing middle-income country (Vision 2030), aims to increase annual GDP growth rate to an average of 10% and SMEs will therefore play a key role in this journey. It is evident that SMEs in Kenya have a chance to boost national productivity and transform the economy. This is also anchored in the government's Big Four Agenda. It is equally note worthy that about 2.2 million small enterprises have closed shop over the last five years in the country (Ndemo & Mkalama, 2018).

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Concept of Entrepreneurial Competencies

The concept of competency was first popularized by Boyatzis, Goleman, and Rhee (2000) in his model of managerial competency, where he conducted a detailed study of over 2,000 entrepreneurs. More than a hundred potential entrepreneurial competencies were identified and evaluated by him. According to his definition, competency is the ability possessed by an individual that results in behaviour that satisfies job requirements while operating within

the constraints of an organizational environment and ultimately produces the intended outcomes. According to [Boyatzis et al. \(2000\)](#) entrepreneurial competencies relate to the ability to scan for desirable opportunities with knowledge, skills and abilities that are required to carry out entrepreneurial characters. Adapting to environmental opportunities enables entrepreneurs to understand the needs of today's consumers in line with the world's current movement. In particular, the entrepreneur's background, education, training, family history, and other demographic factors are thought to have an impact on their entrepreneurial competency ([Bird, 1995](#)).

In order to adapt to the changing external environment, imaginative, risk-taking, and creative entrepreneurs are necessary, according to [Sobaih, Hasanein, and Elshaer \(2022\)](#). Most management literature has been using the term "entrepreneurial competency" for a long time. Natural competence and unnatural competence are the two categories into which it falls. Qualities, disposition, self-concept, and social position comprise natural competence. Competencies that are acquired through theoretical and practical learning and are required to complete a task are known as learned or unnatural competence. [Ismail \(2012\)](#) states that this comprises abilities, know-how, and experience. According to [Lazar and Paul \(2015\)](#) entrepreneurial competencies are therefore the fundamental qualities that a person possesses that enable them to carry out the tasks in the most appropriate way. Strategic, opportunity, organizing, conceptual, relationship, and commitment competencies are the six main categories into which [Man, Lau and Snape, \(2008\)](#) divided the competencies demonstrated by entrepreneurs.

2.2. Concept of Entrepreneurial Self- Efficacy

An individual's cognitive assessment of their capacity to gather the willpower, mental tools, and plan of action required to exert control over life events is known as their entrepreneurial self-efficacy. More precisely, it is self-belief in one's own abilities. Entrepreneurs need to believe that they can launch and expand their company under any set of conditions. The degree to which an individual believes that they are capable of carrying out the different roles and responsibilities of an entrepreneur is known as their entrepreneurial self-efficacy ([Neneh, 2022](#)).

According to [Urban \(2019\)](#) businesses that have a high ESE seem to view the world as an opportunity rather than a threat. The businesses also think they have the power to affect how well their goals are achieved and that there is little chance of failure. [Chen, Tang, and Han \(2022\)](#) claim that ESE may influence entrepreneurial decisions for several reasons. First, people with high ESE may assess a scenario as brimming with opportunities while those with low ESE may perceive the very same scenario as loaded with costs and risks. Secondly, individuals with high ESE perceive themselves as more capable of addressing and dealing with uncertainties, risks and hardships in contrast to those with low ESE. Thirdly, those with high ESE anticipate different outcomes than people with low ESE.

2.3. Theoretical Framework

2.3.1. Competency Based Theory

David McClelland, a prominent psychologist, introduced Competency Based Theory (CBT) as an alternative to traditional trait-based approaches to understanding human behaviour in organizations. McClelland's seminal work, particularly his 1973 book "Testing for Competence Rather than for Intelligence," laid the foundation for CBT. He argued that competencies, rather than innate traits, could be developed and measured, leading to improved organizational performance. At its core, CBT postulates that certain competencies, such as problem-solving, communication, leadership, and teamwork, are critical for effective job performance across different organizational contexts. These competencies can be identified, assessed, and developed through targeted interventions, such as training programs, feedback mechanisms, and performance appraisal systems. The modern conceptualization of Competency Based Theory is much to the work of Pierre Bourdieu, James Coleman, and Robert Putnam. Pierre

Bourdieu, a French sociologist, introduced the concept of social capital in the 1980s as part of his broader theory of social reproduction. In his seminal work "The Forms of Capital". Bourdieu (1986) identified social capital as one of the key forms of capital alongside economic and cultural capital. He defined social capital as the resources embedded within social networks, including relationships, norms, and trust, which individuals can leverage to achieve their goals. Anything that gives access to a large range of markets, provides customers with tangible benefits, is costly or difficult for rivals to copy, and can be expanded to include additional products or markets in the future is considered a core competency. Compared to resource-based theory, competence-based theory seems to give entrepreneurs more hope. It is the duty of SMEs to identify the core competencies required to take advantage of a specific opportunity for innovation in their accomplishment and to maintain them (Wickham, 2006). According to Mitchelmore and Rowley (2013) competency is the caliber of an entrepreneur's actions that influence the success of their ventures. The establishment, survival, and expansion of ventures are linked to the entrepreneurial competencies (Colombo & Grilli, 2005). Furthermore, the literature focuses on various mechanisms through which performance can be impacted by competencies. Competent entrepreneurs start by looking for better business opportunities. Second, an entrepreneur's ability to formulate a venture strategy that better fits their business is correlated with their management competencies. Consequently, the theory is important to the research because it clarifies the impact of entrepreneurial competencies, which are utilized in this study as a predictor of firm performance.

2.3.2. Social Capital Theory

According to social capital theory, an individual or unit's total real resources are those that are ensconced in, accessible through, and generated from their network relationships (Claridge, 2018; Kwon & Adler, 2014; Liao & Welsch, 2003) state that, similar to other resources, sources of social capital are found in the business structures that house network actors. According to Antoldi, Cerrato, and Depperu (2011) an inter-firm network gives a firm access to social capital, fostering and supporting the creation (Antoldi et al., 2011; Lee, 2009) of intellectual capital and ultimately enhancing its competitive advantage. Social capital can be categorized into three main categories, according to Lee (2009): Structural, relational, and cognitive. Antoldi et al. (2011) assert that structural, relational, and cognitive social capital are clearly distinguished from one another. A given actor's network density, connectivity, hierarchy, and stability of ties between nodes are all considered aspects of the structural dimension of social capital. These include the number and types of actors involved as well as the presence or absence of direct ties between that actor's specific networks. The argument posits that the relational dimension pertains to the behavioral assets of the network, which include obligations, expectations, and trustworthiness.

2.4. Empirical Review

2.4.1. Entrepreneurial Competencies as a Mediator in SME Firm Performance

Several scholars have postulated a direct relationship between entrepreneurial competencies and firm performance. For instance, Mitchelmore and Rowley (2013) avers that EC has a major impact on the growth and performance of businesses. It was acknowledged by Song and Kee (2013) that SMEs must continuously enhance their EC for it to survive and be successful in today's competitive and rapidly changing environment. Tallam, Maru, and Lagat (2015) looked at the moderating effects of networking capabilities on marketing capabilities and performance of small businesses in Kenya. The study concentrated on these two ideas and attempted to ascertain how networking capabilities influenced the relationship between small business performance and marketing capabilities. The results of the multiple regression analysis indicated that small firm performance was positively impacted by both marketing and networking capabilities, but that the relationship between marketing capabilities and small firm performance was

not significantly moderated by networking capabilities. Through the use of entrepreneurial competencies, this study examined the direct and indirect effects of NC on the performance of SME firm. Zhang (2012) did a study on the effect of EO on the business performance and the role of networking capabilities among the SMEs in China. The study found out that entrepreneurial orientation (EO) had a positive effect on business performance, and more importantly network capabilities (NC) significantly moderated the relationship between entrepreneurial orientation and business performance. Thrikawala (2011) reported that a noteworthy positive correlation was observed between small and medium-sized enterprises' performance and their participation in diverse networks. Watson (2007) also discovered that networking contributed to the better performance and longer survival of SMEs. Conversely, Rowley, Behrens, and Krackhardt (2000) discovered a bad correlation between performance and networking. The current study therefore explores the indirect influence of NC on firm performance via EC. Furthermore, Zucchella (2002) examined 200 Italian SMEs in a study of internationalization, arguing that technological capability, marketing capability, and network capability were critical factors in promoting internationalization. According to Olubiyi and Fatai (2018) entrepreneurial competencies have a moderating effect on the relationship between venture performance and the entrepreneurial climate. Sarwoko, Hariani, and Sedyastuti (2023) competence on the relationship between entrepreneurial characteristics and performance of SME among 147 SMEs owner in Malang regency East Java Indonesia using survey instrument. This study therefore will seek to establish mediating effect of Entrepreneurial competencies on the relationship between networking capabilities and SME performance in Kenya.

H₀: Entrepreneurial competencies have no significant mediating effect on relationship between networking capabilities and SME performance.

2.4.2. Entrepreneurial Self-Efficacy as a Moderator in the Relationship between Networking Capabilities and SME Performance

It has been confirmed by multiple authors that there may be a positive correlation between ESE and firm performance (Brown, Mawson, & Rowe, 2019; Ferreira-Neto, De Carvalho Castro, De Sousa-Filho, & De Souza Lessa, 2023; Miao, Qian, & Ma, 2017; Newman, Obschonka, Schwarz, Cohen, & Nielsen, 2019; Tallam et al., 2015). Given that previously the relationship between entrepreneurs and opportunities was acknowledged as the primary element of the entrepreneurial process (Brown et al., 2019) the association between ESE and opportunity recognition could potentially account for the positive correlation that has been observed between NC and firm performance. Igwe et al. (2020) in their study found a positive main effect of networking competence on social entrepreneurial intentions, statistically significant interaction effects of empathy and perceived social support, no interaction effect of moral obligation, and a poor self-efficacy fit. According to study done by Indrawati, Salim, and Djawahir (2015), ESE was found to moderate the relationship between environmental complexity and entrepreneurial alertness of SMEs in Malang. Na-Allah and Ahmad (2022) examined the relationship between individual-level entrepreneurial orientation (ILEO); innovativeness, risk-taking, and proactiveness) and venture creation (VC) among Nigerian graduates, using the formative perspective to examine the mediating role of self-efficacy (SELF) and the moderating effect of entrepreneurial support (ENTSP). Partial least squares structural equation modeling (PLS-SEM) results showed that ENTSP negatively moderated the indirect, positive, and significant relationship between ILEO and VC through SELF. The current study thus seeks to determine the moderating effect of entrepreneurial self-efficacy on the relationship between networking capabilities and SME performance in Kenya.

H₀: Entrepreneurial self-efficacy has no significant moderating effect on the relationship between networking capabilities and SME performance.

2.4.3. Entrepreneurial Competencies, Entrepreneurial Self-Efficacy and SME Performance

Moderation-mediation models explain a causal relationship under special conditions. Thus, this model provides a more comprehensive description than simple moderation or mediation models. [Eniola \(2020\)](#) carried out a study on entrepreneurial self-efficacy and orientation for SME development was carried. The study investigated the importance of entrepreneurial self-efficacy in small- and medium-sized business orientation and growth. The suggested mediation model was analysed using partial least squares structural equation modeling (SEM-PLS). The findings supported the idea that entrepreneurship can help establish a successful SME with an enterprise base. Regardless of the social, economic, or geopolitical context, entrepreneurship is a key driver of long-term, sustainable economic growth. [Sriasih, Kusumawijaya, Adi, and Wartana \(2018\)](#) also conducted a study on Entrepreneurial self-efficacy mediation in entrepreneurial competency prediction to entrepreneurial orientation. The research hypothesis was tested by estimating the structural model by measuring entrepreneurial competence, entrepreneurial self-efficacy and entrepreneurial orientation using WarpPLS 4.0 program. As a result, the moderated mediation model postulated that EC had a mediating effect on NC-SME performance and that ESE had a moderating influence on the relationships between NC-SME performances. According to [Caliendo, Kritikos, Rodriguez, and Stier \(2023\)](#) self-efficacy is a reflection of one's belief in oneself to consistently accomplish challenging and unfamiliar tasks while managing hardship. They are essential for successful entrepreneurial endeavors because these beliefs influence people's actions, thoughts, and behaviors. The researchers discovered statistically and economically significant benefits of high self-efficacy scores on start-up survival and entrepreneurial income. The current study hence seeks to fill in the gap on moderating effect of entrepreneurial self-efficacy on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies in Kenya.

H₀₃: Entrepreneurial self-efficacy has no significant conditional indirect effect on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies.

Based on the summary of empirical literature review and identified gaps, the study proposed [Figure 1](#) to address the conceptual gap. It also acted as a basis of testing the hypothesis for the conceptual models of the study. The 3 models were diagrammatically conceptualized as follows.

- 1) Mediated Model: EC as a mediator in the relationship between NC and SME performance. $(H1)=(a_1*b_1)$
- 2) Moderated Model: The moderating effect of ESE on EC and SME performance. $(H2)= \alpha + b_1X + b_2X*W$
- 3) Mediation-Moderated Model: ESE as a moderator of the relationship between NC and SME Performance via EC as a mediator. $H3= (a1 + a3W) (b1 + b2W)$.

3. METHODOLOGY

The study adopted the positivist research philosophy, which embraces a quantitative outlook, asserting the existence of an objective reality that can be quantified, offering both explanatory and predictive capabilities ([Hatch & Cunliffe, 2006](#)). Consequently, the research used an explanatory research design.

3.1. Sampling

The population of this study comprised of SMEs in the retail and wholesale trade, service industry, production and manufacturing sectors in Eldoret, Kitale and Kapsabet towns within North Rift region, Kenya. Stratified random sampling together with proportionate sampling from a sampling frame of 4,596 SMEs were used. Through stratified random sampling, only active SMEs based on their current licenses to operate from the County Governments were considered. The study came up with a sample size of 323 owners of SMEs from the strata. This was distributed as follows: 169 respondents from Eldoret, 109 respondents from Kitale and 45 respondents from Kapsabet. In selecting

a sample from each stratum, a simple random sampling technique was used. Thus, a number was given to every subject member of the accessible population in the stratum. In the current study, questionnaires were formulated to capture all information needed to meet the study objectives. In this regard, each section in the questionnaire was conceptualized to measure one variable in the study using five-point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree.

3.2. Reliability and Validity Measurement of Variables

The financial and non-financial performance indicators as advocated by [Kotane \(2015\)](#) were adopted after a bit of modification. The financial indicators comprised of four perspectives: sales, annual profits, capital invested and return on investment. Non-financial measures included customer satisfaction levels, customer service improvements and number of employees. The study adopted and modified measures of networking capabilities from [Bengesi and Le Roux \(2014\)](#) and [Walter, Auer, and Ritter \(2006\)](#) as developed by [Keller and Holland \(1975\)](#) and [Mohr and Spekman \(1994\)](#). These measures were internal communication resources, relational skills, partner’s knowledge and coordination activities. The study also adopted and modified the six measures of entrepreneurial competencies derived from [Man, Lau, and Snape \(2008\)](#). The study used 9 items to measure Strategic competency level, 10 items to measure Opportunity competency, 11 items to measure Conceptual competency, 7 items to measure organising competency, 7 items to measure Commitment competency and 7 items to measure Relationship competency.

In the questionnaire validation process, various statistical tests and criteria were employed to guarantee the reliability and validity of the items. [Table 1](#) present data's suitability for Principal Component Analysis (PCA) through the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett’s Test of Sphericity. The KMO value surpassed the recommended threshold of 0.50, signifying the data's suitability for PCA ([Latif, Abidin, Azaman, Jamaludin, & Mokhtar, 2019](#)). Additionally, Bartlett’s Test of Sphericity produced a significant p-value, further affirming the data's appropriateness for factor analysis ([Backhaus, Erichson, Gensler, Weiber, & Weiber, 2021](#)). To refine the questionnaire items, factor analysis with varimax rotation was executed. Items with factor loadings below 0.5 were eliminated from the analysis, ensuring that only items strongly linked to their respective constructs were retained. This procedure enhanced the questionnaire's validity. Furthermore, the questionnaire's reliability was evaluated using Cronbach’s Alpha (α) coefficients. A reliability coefficient of at least 0.7 is typically considered acceptable for research instruments.

Table 1. Reliability and validity measurement of variables.

Questionnaire items	Factor extraction (Loadings)	Cronbach’s alpha if item deleted
Firm performance (Eigen value = 1.885, KMO = 0.768, Bartlett's test of sphericity =978.325, Cronbach’s alpha:.768)		
Annual profits have increased during the years due to increase in sales and cost control measures	0.87	0.80
The number of employees has increased due to job satisfaction.	0.51	0.67
The number of customers has increased due to increased demand in our products	0.58	0.71
Networking capabilities (KMO = 0.769, Bartlett's test of sphericity = 188.502, Cronbach alpha:.816)		
The firm analyses what it would like and desire to achieve with which partner	0.58	0.80
Judgement in advance of possible partners to talk to about building up relationships occurs.	0.58	0.81
Business information across departments / All workers is often communicated	0.54	0.80
I ensure that managers and employees give intensive feedback to each other	0.51	0.80
I can deal flexibly with partners	0.53	0.80
Problems are solved constructively with partners	0.59	0.80
We know our partners' potential and strategies	0.52	0.80

Questionnaire items	Factor extraction (Loadings)	Cronbach's alpha if item deleted
I deliberately study partners strength and weaknesses	0.56	0.81
I know which ways competitors attract customers	0.55	0.81
Entrepreneurial competencies (KMO = 0.768, Bartlett's test of sphericity =978.325, Cronbach alpha:0.935)		
I am able to determine long term issues, problems or opportunities	0.58	0.93
I am aware of the projected directions of the industry and how changes might impact the firm	0.52	0.93
I prioritize work in alignment with business goals	0.80	0.93
I assess and link short term, day to day tasks in the context of long-term direction.	0.61	0.93
I always evaluate results against strategic goals	0.53	0.93
I constantly seek and act on high quality business opportunity	0.56	0.93
I always identify goods or services customers want	0.52	0.93
I conduct marketing and promotion activities for seeking new business opportunities	0.52	0.93
I actively look for products or services that provide real benefit to customers	0.51	0.93
I identify goods or services customers want.	0.58	0.93
I have marketed very many new lines of products or services in the past 3 years.	0.54	0.93
I always seize high-quality business opportunities	0.52	0.93
I am able to perceive unmet consumer needs.	0.97	0.93
I often take actions that go beyond job requirements or the demand of the situation.	0.55	0.93
I have credibility to absorb, analyse and understand complex situations.	0.52	0.93
I have the mental ability to coordinate all the organisations interests	0.53	0.93
I take reasonable job-related risks in my business.	0.54	0.93
I monitor progress toward objectives in risky actions	0.51	0.93
I apply ideas I get from my business to different contexts.	0.55	0.93
I make decisions concerning my business very fast	0.53	0.94
I delegate duties to my employees.	0.57	0.93
I keep the records of my business.	0.56	0.93
I plan the operations of my business.	0.56	0.93
I always ensure my business runs smoothly.	0.86	0.93
I dedicate all my efforts to make my business work	0.52	0.93
I refuse to let my business fail under any circumstance	0.57	0.93
I commit to long-term business goals.	0.60	0.93
I possess an extremely strong internal drive.	0.54	0.93
I go out of my way to learn new ideas about my business.	0.65	0.93
I apply learned skills and knowledge into practice.	0.52	0.93
I always maintain a positive attitude in my business.	0.53	0.93
I develop long-term trusting relationships with others	0.58	0.93
I negotiate with others.	0.51	0.93
I interact with others with similar business as mine	0.60	0.93
I always maintain a personal network of work contacts.	0.61	0.93
I utilize business network to grow my business.	0.53	0.93
I understand what others mean by their words/Actions.	0.92	0.93
Entrepreneurial self-Efficacy (KMO = 0.826, Bartlett's test of sphericity = 641.229, Cronbach alpha:0.846)		
I can set and meet sales goals	0.59	0.84
I can conduct market analysis	0.53	0.84
I can identify new areas and territories for potential growth	0.51	0.84
I can develop new methods of production or systems	0.51	0.84
I can define organisational roles/Responsibilities	0.58	0.84
I can manage time by setting goals	0.52	0.84
I can identify and build management team	0.54	0.84
I can set up strategic plans for the organization	0.53	0.84
I can control costs	0.52	0.84
I can make decisions under uncertainty and risk	0.56	0.84
I can tolerate unexpected changes in business conditions	0.52	0.84
I can take responsibilities for ideas and decisions	0.55	0.84
I can develop new business ideas	0.51	0.84
I can discover new ways to improve existing products/Services	0.52	0.84
I can develop new methods of production or systems	0.50	0.84

Note: *p<0.05.

3.3. Model Specification

Moderated Mediation Model = One indirect effect(s) of X on Y, conditional on W:

$$Y = a_0b_1 + a_1Xb_1 + a_2Wb_1 + a_3XWb_1 + a_0b_2 + a_1Xb_2 + a_2Wb_2 + a_3XWb_2,$$

Summarised as

$$Y = (a_1b_1 + a_3b_1W) + (a_1b_2W + a_3b_2W) = (a_1 + a_3W)(b_1 + b_2W) \dots -H_{03}$$

The test hypothesis for moderation and moderated mediation models, Model 59 of the PROCESS macro described by Hayes (2018) was used. This allowed testing moderated mediation models to explore the conditional indirect effects. The number of bootstrap samples used to determine bias-corrected bootstrap confidence intervals of 95% was 10,000 for estimating the respective effects.

The PROCESS macro is preferred to the Sobel test since it uses bootstrapping to estimate the indirect effects (Baron & Kenny, 1986). Bootstrapping overcomes the problem of non-normality violations (Hayes, 2009; Preacher & Hayes, 2008). Literature advocates for the use of bootstrapping in assessing indirect effects (Malhotra, Singhal, Shang, & Ployhart, 2014; Montoya & Hayes, 2017). In bootstrapping, the sample is conceptualized as a pseudo-population that represents the broader population from which the sample is derived, and the sampling distribution of any statistic can be generated by calculating the statistic of interest in multiple re-samples of the data set. Through the repeated sampling procedure, with replacement and in repeated times, a new sample is formed for each repeated sampling. When conducting inferential tests using bootstrapping, no assumptions about the shape of the sampling distribution of the statistic are necessary.

From the PROCESS macro, the relationship can be diagrammatically presented as in Figure 1.

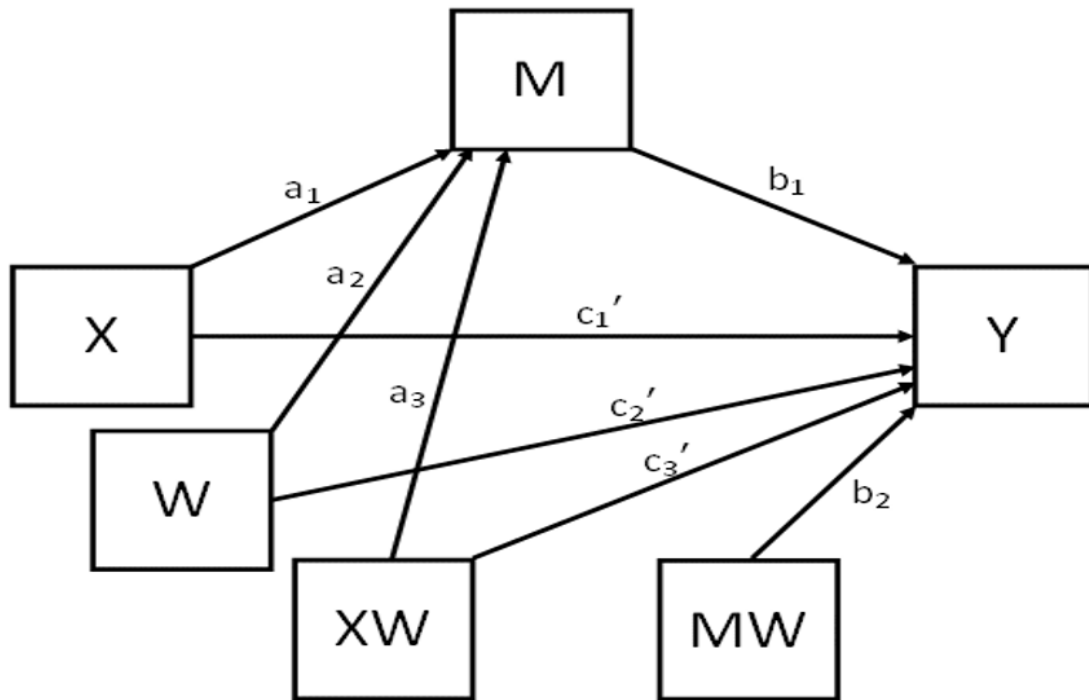


Figure 1. The moderated mediation statistical diagram for Hayes model 59.

Source: Hayes (2018) and Hayes (2013).

Where;

X= Networking Capabilities, W- Moderator variable (Entrepreneurial Self -Efficacy), M= Mediator Variable (Entrepreneurial Competencies) and Y= Dependent variable (SME performance), C= Covariates (Firm Age, Firm location and Firm Size). α_1 and α_2 are the regression intercepts. e_m and e_y are the errors to estimate M and Y

respectively. $a_1, a_2, a_3, b_1, b_2, b_3$ and c_1, c_2 and ζ_3 are the regression coefficients given the preceding variables of the model.

4. DATA ANALYSIS AND RESULTS

4.1. Demographic Characteristics

This section discusses the SMEs characteristics of the sampled respondents of the study. The results in Table 2 show that the respondents were distributed across various age ranges of firms. A significant portion of the respondents represented firms aged between 4-6 years (28.8%, n=89). Those below 3 years were 79 representing 25.6% while those above 10 years were 74 (23.9%). Lastly, those firms aged between 7 -10 years were 67 (21.7%). On the matter of firm size, the majority of respondents came from firms with between 6-20 employees (35.3%, n=109), closely followed by firms with fewer than 5 employees (32.7%, n=101) while larger firms with 21-50 employees constituted the third-largest group (18.4%, n=57). The smallest groups were firms with 51-100 employees (10.7%, n= 33) and lastly those with over 100 employees accounting for 2.9% (n=9) of respondents. In terms of the firm location, Eldoret had the highest number of firms at 142 representing 46.0% of total firms studied. This was followed by Kitale at (n=107, 34.6%) while Kapsabet came in last at (n= 60, 19.4%).

Table 2. SMEs characteristics.

Demographic factor		Number of respondents	Percentage number of respondents
Firm age	Below 3 years	79	25.6
	4-6 years	89	28.8
	7-10 years	67	21.7
	Above 10 years	74	23.9
	Total	309	100
Firm location	Eldoret	142	46.0
	Kitale	107	34.6
	Kapsabet	60	19.4
	Total	309	100
Firm size	Fewer than 5	101	32.7
	6-20	109	35.3
	21-50	57	18.4
	51-100	33	10.7
	More than 100	9	2.9
	Total	309	100

4.2. Descriptive and Correlation Analysis

Table 3 presents descriptive statistics for the study constructs and included Pearson correlation coefficients (r). The correlation results indicated that all the variables were positively correlated with firm performance. A higher correlation was evident between firm performance (FP) and entrepreneurial competencies (EC) with $r=0.705, \rho<0.01$. This was followed by networking capabilities with $r=0.687, \rho<0.01$ while Entrepreneurial- Self- Efficacy came in last with $r= 0.533, \rho<0.01$.

Table 3. Descriptive and correlation results.

Variables	Mean	S. dev	Skewness	Kurtosis	FP	NC	EC	ESE
Firm performance	3.73	0.63	-0.09	-0.342	1			
Network capabilities	3.75	0.59	-0.14	-0.57	0.687**	1		
Entrepreneurial competencies	3.73	0.59	0.18	-0.35	0.705**	0.566**	1	
Entrepreneurial self efficacy	3.73	0.70	-0.52	0.58	0.533**	0.532**	0.503**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

4.3. Test of Hypotheses

H₀₁: Testing for the mediation effect of entrepreneurial competencies.

The first hypothesis was to test for mediation to determine whether there was significant association between the independent variable and the dependent variable while controlling for the mediator. The study therefore assessed the effect of networking capabilities on firm performance while controlling for entrepreneurial competencies. Mediation processes was tested using PROCESS macro bootstrapping from Hayes model 4. The result in Table 4 showed that networking capabilities had a significant direct effect on firm performance with coeff=0.465, p=.000. It can be proven according to Baron and Kenny (1986) and Wang and Zhao (2019) that $ab+c' = c$. Using bootstrap analysis at 95% level of confidence and 5,000 bootstrap samples, there was a positive and significant effect as both class intervals (CI) were none zero (LLCI=0.194, ULCI==0.334). The significance of path `ab` indicated mediation effect. In this study, the coefficient is .260 which is the product of path $a*b$ ($0.559*0.465$). The model thus explains 47.6% which is significant with F (67.85) and $p=0.000$. The results from the control variable were statistically insignificant with $p > 0.05$ for all the three covariates. The study concluded that since the confidence intervals for the indirect effect was non -zero, then mediation existed. The study also concluded that H_{01} is rejected hence entrepreneurial competencies mediate the relationship between networking capabilities and firm performance.

Table 4. Mediation effect of EC.

Path 'a'			Path 'b' and 'c'			Indirect effect of EC (a * b)	
Variable	β	p	Variable	β	p	Bootstraps	
Constant	-0.185	0.287	Constant	-0.119	0.362	Effect	0.260
NC	0.559	0.000	NC	0.418	0.000	BootLLCI	0.194
			EC	0.465	0.000	BootULCI	0.334
						BootSE	0.035
R ²	0.328		R ²	0.621			
F	36.492		F	97.775			
P>F	0.000		P>F	0.000			

Note: a, b and c- various bootstrap paths.
 *- indicates the interaction between paths a and b.

H₀₂: Testing for the moderation effect of entrepreneurial self-efficacies.

Testing for the moderating role of entrepreneurial self-efficacies was done through the Hayes (2009) Model 59 analysed in Process Macro version 3.5. The multiple regression tested H02. The study determined whether entrepreneurial self-efficacy has a moderating effect on the relationship between entrepreneurial competencies and SME performance. The study established that the interaction of entrepreneurial self- efficacy between the entrepreneurial competencies and firm performance was significant with coeff= 0.090, $p=0.030$. $\Delta R^2=0.006$ significant at $F=4.779$, $p=0.030$. H02 was therefore rejected and study concluded that entrepreneurial self-efficacy moderates the relationship between entrepreneurial competencies and SME performance. Figure 2 shows the two lines graphical representation indicating the two levels of low and high levels of EC and ESE, that ESE moderates the relationship between EC and firm performance. At low levels of entrepreneurial competencies dimensions, SME firm performance in the three towns of North Rift is high for firms with high levels of ESE than those with low ESE. However, as firms continue to exhibit entrepreneurial competencies, firm performance continues to increase but the increases continue to increase with firms having high and low self-efficacy performing equally. The findings can also be explained by the results as displayed in Table 5. The table provides summary of the results for the moderating effects of entrepreneurial self-efficacy on the study variables as derived in Hypothesis H02.

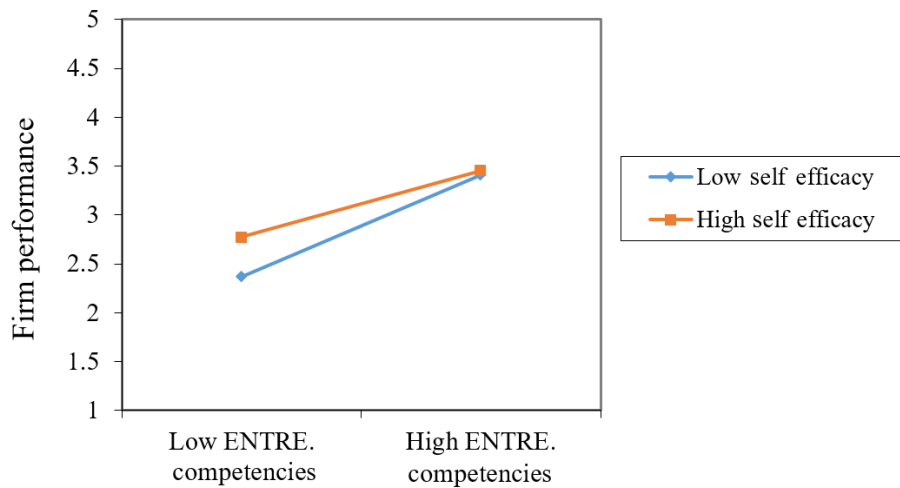


Figure 2. Moderation graph of effect of ESE between EC and FP.

Table 5. Moderation analysis of entrepreneurial self-efficacy.

Moderation (M)		
Variable	β	P
Constant	-0.144	0.901
EC	0.430	0.000
ESE	0.112	0.927
EC*ESE	-0.090	0.030
R ²	0.638	
ΔR^2	0.006	
F	4.779	
P>F	0.030	

Note: * - Interaction between variables, β - Beta, Δ - Change, > Greater.

H₀₃: Testing for the moderation effect of entrepreneurial self-efficacies.

The study also sought to determine the conditional indirect effect on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies. The hypothesis was tested at three different levels of entrepreneurial self-efficacy. The finding in Table 6 indicate that conditional indirect effects were found between NC and FP via EC with one standard deviation below the mean of ESE (coeff = 0.288, SE = 0.051, LLCI = 0.098, ULCI = 0.300). Further the study found that conditional indirect effect was found between NC and FP via EC at the mean level of ESE (coeff = 0.177, SE = 0.035, LLCI = 0.112, ULCI = 0.250). Finally, at the third level, the study found that conditional indirect effect were found between NC and FP via EC at the higher levels of ESE (coeff = 0.151, SE = 0.042, LLCI = 0.078, ULCI = 0.244).

The study concluded that the conditional indirect effect was much stronger with firms having lower levels of ESE (coeff = 0.196, SE = 0.051, LLCI = 0.098 and ULCI = 0.300. The confidence interval (BootLLCI) and bootstrap upper limit confidence interval (BootULCI) were nonzero at three interval levels and therefore the study Rejected Hypothesis H₀₃. In conclusion, entrepreneurial self-efficacy has significant conditional indirect effect on the strength of the mediated relationship between networking capabilities and SME performance via entrepreneurial competencies.

Table 6. Moderated mediation results.

Levels of ESE	Effect	Boot SE	LLCI	ULCI
Low level of ESE	0.196	0.051	0.098	0.300
Mean level of ESE	0.177	0.035	0.112	0.250
High level of ESE	0.151	0.042	0.078	0.244

The Moderated Mediation analysis can also be depicted through Figure 3 which clearly shows that impact of low levels of self-efficacy in strengthening the positive indirect effect of networking capabilities on SME firm performance via entrepreneurial competencies.

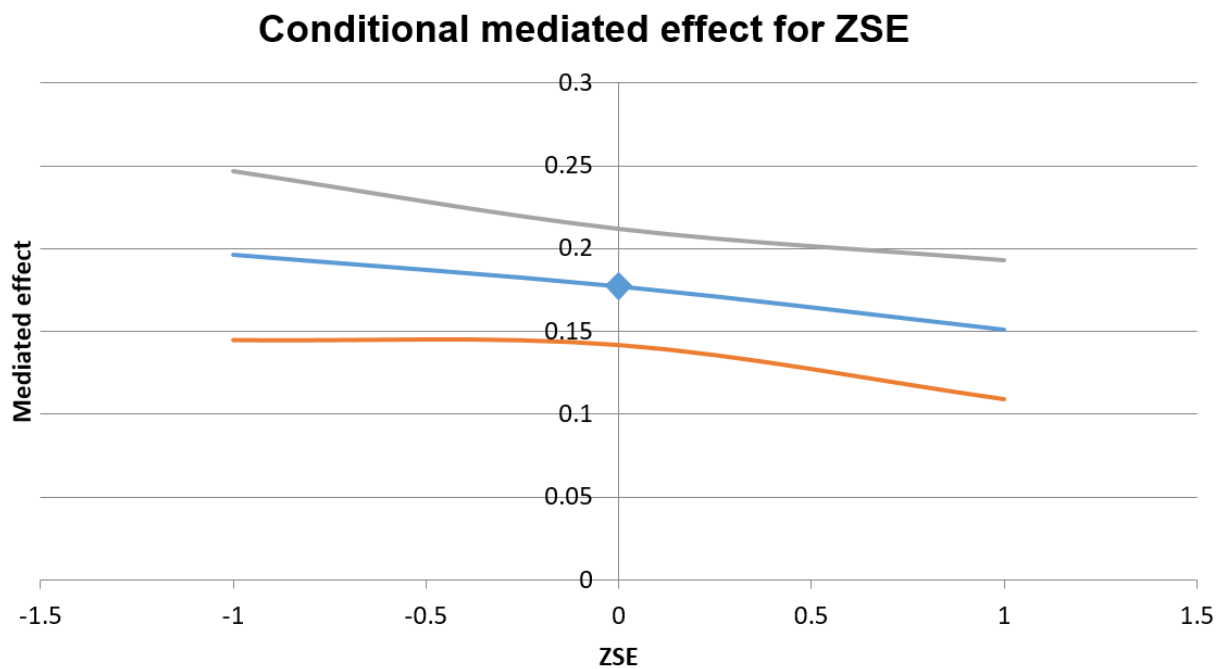


Figure 3. Moderation graph of effect of indirect effect of ESE on the strength of the mediated link between NC on firm performance via EC.
Note: Grey color portion represents the effects of low level of ESE (0.196), Blue color portion represents the effect of mean levels of ESE (0.177) and Orange color portion represents the effect of higher level of ESE (0.151).

5. DISCUSSION

The study investigates the mediating role of entrepreneurial competencies in the relationship between networking capabilities and SME performance, establishing hypothesis H05. The findings indicate a significant mediation effect, supported by a non-zero bootstrapping confidence interval, with both direct and indirect paths showing positive significance. This aligns with previous research by Sarwoko et al. (2023) which noted that entrepreneurial competencies mediate the link between entrepreneurial characteristics and SME performance in Indonesia. Furthermore, the results echo findings by Mitchelmore and Rowley (2013) and Song and Kee (2013) emphasizing that continuous enhancement of entrepreneurial competencies is essential for SME growth in competitive environments. Supporting the work of Pulka, Ramli, and Mohamad (2021) and Asmawiyah, Taba, and Hamid (2020) the current study reinforces the idea that entrepreneurial competencies serve as a crucial bridge linking networking capabilities to enhanced entrepreneurial performance. Additionally, existing literature highlights the importance of a diverse skill set for SME owners, suggesting that competencies can be developed through knowledge, experience, and technological adoption, as emphasized by Camuffo, Fabrizo, and Gubitta (2012) and others.

The study also established that the interaction of entrepreneurial self-efficacy between the entrepreneurial competencies and SME firm performance was significant with $\text{coeff} = 0.090$, $p = 0.03 < .05$, $\Delta R^2 = 0.006$ significant at $F = 4.779$, $p = 0.030$. The study revealed a partial and enhancing moderation since both direct and interactions effects were significantly affecting SME performance. There was an increased moderation model ($R^2 = .638$) as compared to the direct effect model ($R^2 = 0.145$). According to studies done by Bergman (2021); Miao et al. (2017) and McGee and Peterson (2019) individuals with higher ESE are more willing to accept the challenges of altering their business models. They become entrepreneurial competent by introducing new products or services, proactively exploiting

environmental opportunities, and embracing riskier actions to realize greater potential returns because they are confident in their abilities to succeed.

The study finally examined the moderating effect of Entrepreneurial Self-Efficacy (ESE) on the indirect relationship between networking capabilities and SME performance through entrepreneurial competencies, articulated in hypothesis H03. The results demonstrate a positive and significant moderated mediation effect, with the conditional indirect effect notably stronger in firms with lower ESE (coeff=0.196) and weaker in firms with moderate (coeff=0.177) and high ESE (coeff=0.151). These findings indicate that ESE significantly influence the strength of the mediated relationship, supporting the conditions proposed by Hayes (2018) for establishing moderated mediation. The research contributes new insights by suggesting that when SME owners leverage networking capabilities, their entrepreneurial competencies increase, subsequently enhancing SME performance, especially when these owners exhibit higher ESE. Essentially, higher ESE leads to greater resilience and persistence in overcoming challenges, allowing for more innovative behaviors (Bandura, 1982). These results are corroborated by previous studies, such as the work of Wang and Zhao (2019) which highlighted the role of ESE in strengthening mediated relationships in entrepreneurial contexts, and align with the literature associating ESE with an individual's capability to pursue new business opportunities (McGee & Peterson, 2019).

6. CONCLUSION

This study extended the research on the association between networking capabilities and SME performance by developing a moderated mediation model. The research examined whether entrepreneurial competencies mediate this association and also whether entrepreneurial self-efficacy moderates this mediation model. The findings of the study confirmed that networking capabilities, entrepreneurial competencies and entrepreneurial self-efficacy have a positive and significant direct effect on SME performance. The study revealed a complimentary mediation and confirmed that entrepreneurial competencies mediate the relationship between networking capabilities and SME performance. The study also found that entrepreneurial self-efficacy moderates the link between entrepreneurial competencies and SME performance in the three towns within North Rift, Kenya. The study concluded that entrepreneurial self-efficacy moderates the indirect relationship between networking capabilities and SME performance via entrepreneurial competencies in such a way that it is weaker when entrepreneurial self-efficacy is higher and much stronger when entrepreneurial self-efficacy is lower. Therefore, being network capable is critical for establishing trust and confidence with networking partners. Thus, SME owners should be willing to share core competitive resources. Otherwise, the relationship will be fraught and ambiguous with no benefits shared by networking partners.

7. IMPLICATIONS OF THE STUDY

7.1. Implications for Theory

The study revealed that networking capabilities, entrepreneurial competences and entrepreneurial self-efficacy directly influenced SME performance. This was further enhanced through moderated mediation effects. The findings contribute to an understanding of how to improve SME performance especially in developing economies like Kenya. The findings are equally consistent with other scholars who established that networking capabilities, entrepreneurial competencies and entrepreneurial self-efficacy have a significant direct effect on firm performance. New knowledge has thus been added to existing literature where entrepreneurial competencies and entrepreneurial self-efficacy complementarily mediate and moderate SME performance. Besides, the study further provides theoretical contribution to the existing literature where entrepreneurial competencies and entrepreneurial self-efficacy act as a mediator and moderator and an enhanced predictive power established by moderated mediation analysis. The study

builds on competency based and social capital theories in that entrepreneurial competencies are associated with the formation, survival and venture's growth. This is cognizant of the fact that an inter-firm network places social capital at the firm's disposal, promoting and supporting the production of intellectual capital which ultimately fosters the competitive advantage of firms.

7.2. Practical/Managerial Implications of the Study

The findings emphasize on the importance of self-efficacy, networking capabilities and competencies of the entrepreneurs as a predictor to improved firm performance. SMEs should consider developing policies, allocating resources and coming up with strategies that will enhance their networking capabilities. Firms should also strive to engage in trainings and capacity building activities that will promote competencies and build capability of the firm owners to have a strong belief and confidence during their entrepreneurial engagements. This will ultimately improve firm performance. Entrepreneurs should again ensure that their employees are involved in the decision-making processes and have the capacity and confidence to implement and deliver on every strategy.

8. LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES

The results of this study were limited based on geographical scope and target population since only three out of 47 counties in Kenya were looked at. Future studies should be replicated in other areas with a wider scope and target population of SMEs the whole country and establish if the results would be the consistent. Future research should consider other aspects of entrepreneur's profile such as culture, education level and gender as control variables besides the three covariates used in this study. Future studies should also consider other networking elements beyond the dimensions adopted from Bengesi and Le Roux (2014) and Walter et al. (2006) which have been conceptualized such as aspects of network intensity, range, firm structure and network dynamics.

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