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DYNAMIC CAPABILITIES, INTER-FIRM NETWORK COMPETENCE AND FIRM PERFORMANCE: A THEORETICAL REVIEW

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ABSTRACT

The indication of continuous performance improvement during rapid environmental dynamism where some firms record diminishing returns is a gap in strategic management studies that draws interest among scholars as they seek enduring solutions for performance. Contemporary businesses are run in environments that are faced with an ever accelerating rate of dynamism. Globalisation for instance opens the business floor to an increasing and unusual kind of competition in new technologies, new customer trends and demands and new product innovations. Managers have to search for a combination of fresh strategies which will deliver to new levels of competitive advantage. Dynamic capabilities is a competitive advantage that will deliver superior performance. But what are dynamic capabilities? The discussion by many authors focused on sensing, seizing and reconfiguring firm's capabilities which are operationalized as distinctive skills, learning, formal and informal relationships, routines, processes and procedures, decision making and disciplines acquired through experience. These capabilities become dynamic when they are transformed or reconfigured to offer solutions in their environments. Sensing, seizing, reconfiguring capabilities is both internal and external to the firm. Firms link with other firms in inter-firm network collaborations to provide expanded products and services to the market and hence to improve on their collective and individual performance. Firms shed off their inadequacies through interacting with other firms and share resources to raise their performance. Firm performance is operationalized as achieving firm objectives. It is both a behavioural process and an outcome. The resource based view (RBV) theory suggests that competitive advantage lies within the company's resources which are heterogeneous between firms. The dynamic capabilities theory extends the RBV by claiming that competitive advantage lies in the ability of the firm to manage the resources and capabilities that exist both internally and externally. Authors differ on the conceptualization of these constructs depending on their study interests and contexts. Studies done in developed countries cannot be easily generalized to the Kenyan or African context. This study suggested a new localized conceptual model which explains that dynamic capabilities will directly affect the level of firm performance and a firm's dynamic capabilities determines the inter-firm networks which the firm will form with other firms. Inter-firm networks play a mediating effect between dynamic capabilities and firm performance while industry dynamism plays a moderating effect between dynamic capabilities and firm performance. This study is significant to firms because it addressed the networking strategies that can build dynamic capabilities to steer the firm through turbulent times.

***Key Words**: Dynamic Capabilities, Inter-Firm Networks, Firm Performance, Industry Dynamism.*

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INTRODUCTION

The question of how a firm is able to gain and sustain competitive advantage for sustained superior performance in a dynamic environment has gained a lot of interest among scholars in recent studies. Business environments are constantly faced with rapid turbulence and harsh economic realities that have caused a wide range of phenomena stemming from stiff competition, new technological developments, new customer trends and demands and new product innovations. Teece, (2007) describes this dynamic environment as a global source of high manufacturing capability rich with inventions and innovations.

The concept of dynamic capabilities was developed by Teece, Tisano and Shuen (1997) who pointed that superior performance calls for more than the VRIM resources advocated by the RBV theory. They defined dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences that are derived from the management's creativity in sensing, seizing and transforming both internal and external capabilities. Lavie' (2006) refers to dynamic capabilities as the capacity of the firm to modify existing capabilities. This argument suggests dynamic capabilities are derived or developed from deliberate efforts and not just from the idiosyncratic resources or the resources at the firm's disposal. Zollo and Winter, (2002) have introduced systematic and patterned learning as the process needed in the development of capabilities and argued that it may be responsible for variations in performance among firms facing environmental dynamism. Fainshmidt, S. et al (2016) argue that dynamic capabilities contribute more to performance in developing economies than in developed economies. According to Eisenhardt and Martin (2000) "dynamic capabilities actually consist of identifiable and specific routines that often have been the subject of extensive empirical research in their own right".

Inter-firm networking is a basic capability that can be progressed to a dynamic capability of inter-firm competence. Inter-firm networking is a platform where firms shed off their inadequacies and seize opportunities through interacting with other firms. According to Hoang and Antoncic (2003), inter-firm networking concerns a set of actors (nodes) which are individuals or firms and a set of relationships (links) which connect the actors in long term interactions hence opening the channels and driving the flow of resources and mechanisms across firm boundaries. The reason behind networking is to have access to new information and resources (George, Zahra, Wheatley & Khan, 2011). Networks evolve over the firm's lifecycle. Firms within the same industry improve on their joint and individual performance through expanded products and services to the market. Effective networking is therefore a dynamic capability that enhances performance.

Firm performance is widely used as a dependent variable in many management studies (Richard, Devinney, Yip & Jonson, 2009) but performance as a dependent variable is subjective. Most studies conceptualise performance in financial measures which have been criticised as short term indicators. In response to this criticism, Kaplan and Norton (1992) suggested the model of the Balanced Score Card (BSC) which measures performance using financial and nonfinancial metrics. Financial metrics have indicators of quantitative performance such as the turn-over on profitability, return on investment, return on equity and on earnings per share as brought out by Muchemi (2013). Non-financial metrics point at qualitative performance in terms of satisfying stakeholders, survival and growth of the business and increased quality and efficiency.

Besides the firm doing better financially than its competitors, performance measures should incorporate superiority and quality of goods, satisfaction of all stakeholders and the expansion and penetration of the business into new markets despite

environmental volatility. This volatility and dynamism in the environment leads firms to employ various dynamic capabilities like incorporating aspects of networking with other firms in order to fit in and match the turbulence in the market so that performance can be realised. Industries are in most cases defined in terms of products or product lines although they have a wide range of characteristics such as the social and political systems, access and openness to new technologies and to information, product markets, labour markets and capital markets. Industries are also volatile; certain of their major characteristics are rapidly changing. Moreover, globalization has brought with it a new set of industry turbulence in form of stiff competition, new customer preferences, new industry norms and practices, new innovations and new technologies. Besides, foreign firms face pressure from governments on matters of taxation, laws and regulations to add to the. It is within this context that firms have to evaluate their performance against the industry standards.

Statement of the problem

There are controversies on the view and operationalization of dynamic capabilities and inter-firm networks and how they relate to our third construct performance because many studies are dependent on the context and the interest of the researcher (Zahra, Sapienza, and Davidsson, 2006). While dynamic capabilities construct has been brought forth as a process of integrating, building and reconfiguring firms' external and internal competences to respond to rapidly changing business environment (Teece et al, 1997), aspects of dynamic capabilities are viewed depending on the context of the study. Some scholars view them either as integration capabilities, learning capabilities or reconfiguring capabilities while others view dynamic capabilities within the Teece et al (1997) definition as sensing capabilities, seizing capabilities and reconfiguration of capabilities. Thus, the studies done so far are not in agreement on how to operationalise dynamic capabilities despite the general mind-set on what they are. The theory on dynamic capabilities concerns various processes and has failed to provide clear constructs (Zahra *et al*., 2006) that make comprehensive explanation of what dynamic capabilities really are. There has not been an all dimensional description of the construct of dynamic capabilities. Muge Ozman (2009) while trying to go through the maze of scholars on dynamic capabilities has described dynamic capabilities as "the elusive black box"

Dynamic capabilities are first order or second order capabilities associated with high level turbulence and market volatility. Schilke, 2014 talks of third level or ordinary dynamic capabilities and points out that both first order and second order dynamic capabilities play a substitute role to each other. General factors that designate dynamism as high or low are usually changes in demand, competition, technology and regulation (Bourgeis Eisenhardt & Bourgeis 2017). There is a gap which should focus more on studying dynamic capabilities development where businesses are exposed to high levels of dynamism. From the conceptual review, it is clear to note there are various positions on conceptualising dynamic capabilities. The air is unclear on which aspect of dynamic capability is mostly connected to inter-firm networks to make an expedient contribution to firm performance because it is difficulty to articulate the characteristics and measurement of dynamic capabilities which explains why dynamic capabilities are not easy to define.

Similarly the inter-firm networks construct has not been fully explicated into a clear concept but has been operationalised as links and relationships which enable firms to share resources and competences (Hoang and Antoncic (2003), or as actors, links, flows and mechanisms (Weigl et al, 2008). Hence components and categories of networking have not been discussed in clear terms. Issues that have been pronounced between collaborations such as power

relationships, roles and procedures, hierarchies and routines can express controversies and create capability distance between networking firms. The process of forming the network links is not been fully discussed. The focus has been on static models linking power to the resources underlying an advantage for example the knowledge and skills or access to the market advantage. There rises a need for standardized indicators and metrics in order to fill this gap. Its operationalisation is contextual (Kumar and Anderesen, 2000).

While firm performance can be elucidated as the accomplishment of a business in terms of effectiveness and efficiency of a firm to achieve its set goals using the least resources (Muchemi, 2013), success in realizing organization's objectives begins with doing right things right. There are dimensions of employee behaviour, market share, product or market leadership, public responsibility and outcomes of work activities that have not been fully outlined in the studies reviewed. These aspects concern achieving goals and stakeholder satisfaction. The performance construct is criticised as vague and loosely defined. There goes a clarion call for a standardized way of operationalizing firm' performance to limit discrepancies in succeeding studies.

The main objective of this theoretical study was to review the evolution of the constructs, dynamic capabilities and inter-firm networks and to identify the role each construct plays on the third construct, firm performance. The Specific objectives of this paper were to review theoretical and empirical literature on the constructs of dynamic capabilities, inter-firm networks and firm performance and to identify the emerging theoretical and empirical gaps that form the basis of dynamic capabilities, inter-firm networks and performance. Another objective is to propose a theoretical model in response to the theoretical gaps identified from the relationships of the constructs dynamic capabilities, inter-firm networks and performance. The extant literature reviewed identifies certain emerging theoretical and empirical gaps that form the basis of these concepts. It is imperative for firms to identify their internal capabilities and resources which they can build to become dynamic capabilities that can deliver competitive advantage to a firms during turbulent times.

These voids created a clear ground to institute a vivacious idea to extensively investigate the conceptual and theoretical underpinnings that explore how different researchers have conceptualised dynamic capabilities, inter-firm networks and firm performance.

This study is significant to firms because it addresses the networks that can build dynamic capabilities that can steer the firm through dynamic challenging times.

LITERATURE REVIEW

Dynamic Capabilities: Dynamic Capabilities are firm's capabilities that have been reconfigured or transformed to give solutions to the needs of a highly dynamic environment. Teece, *et al* (1997) shed light on dynamic capabilities describing them as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environment''. The foundations of dynamic capabilities are rooted on RBV theory which views competitive advantage as derived from firm resources. Sensing and learning capabilities and integrating them into the firm and transformation of the old depreciating assets for re-use are three factors Teece *et al* (1997) considered to be key to dynamic capabilities. Hence, many authors view dynamic capabilities as a further development of Penrose's 1959 RBV theory which assumes resources are heterogeneous between firms (Barney 1991). RBV builds on Schumpeter's 1934 study (Barney, 1991) who brought some attention to the concept of dynamic capabilities when he discussed the processes of creative destruction and innovation-based

competition (Cyert & March, 1963). Firm's capabilities become dynamic when they are transformed to offer solutions to the needs of their dynamic environment. The principal role of strategic management as pointed out by Ambrosini and Bowman, (2008) is essentially to consider the changing nature of the external environment and to respond by adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competencies toward the requirements of the environment. In this context, dynamic capabilities go beyond tangible and intangible assets. They involve complex relationships between people and processes and the abilities that describe efficiency and effectiveness in a firm. These are implications for a mediating condition of competence

Different authors have classified dynamic capabilities into various types or categories. Barney (1991) divided resources and capabilities into three broad categories: physical, human and organizational while, Anand, Oriani and Vassolo (2010) brings out capabilities as core competences and complementary competences which we hereby address as core capabilities and complementary capabilities. Core capabilities are the operational competences with key indicators such as physical assets, people and technology which are intrinsic to firm operations. Complementary capabilities on the other hand derive from core knowledge and are itemized as knowledge/ skills, net-works, teamwork, market orientation and routines which involve the physical assets, knowledge, and competencies that contribute to production or enhance the commercialization.

Another classification can be in terms of the various types as either internal or external to a firm. The internal capabilities are capabilities such as distinctive skills, learning, formal and informal relationships, routines, processes and procedures, decision making and disciplines acquired through experience. Other internal dynamic capabilities include physical assets, human assets and technology. The external Dynamic capabilities exist in the external environment as opportunities that can be identified and seized to deliver competitive advantage. Following the argument raised by Kabue and Kilika (2016), capabilities are no longer heterogeneous and are mobile between firms implying they can be acquired across firms.

Madsen, E. and Borch, O. (2007), identifies four generic types of capabilities which they refer to as, the internal and external reconfiguration and integration capability, the resource acquisition dynamic capabilities, the learning network dynamic capabilities and the strategic path alignment dynamic capabilities. This classification was modified later as Madsen (2010) focused more on entrepreneurship. It is this perspective that opens the avenue for inter-firm networks to link with the construct of dynamic capability in that inter-firm networking is a form of dynamic capability which enables firms to access other capabilities in the industry such as information and new technologies that can improve on firm performance. Thus, inter-firm networks fits well as a mediating variable, dynamic capability that enhances other dynamic capabilities to achieve performance.

The original classification of dynamic capability by Teece, *et al* (1997) as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environment" is the perspective which has been mostly used and rightly so in previous studies. Our mediating variable in this study, the inter-firm network has not been recognized much as a competence that can be built into a dynamic capability. But as Hoang and Antoncic (2003), has brought out, inter-firm networking which is "a set of actors (nodes) in form of individuals or firms and a set of relationships (links) which connect the actors in long term interactions hence opening the channels and driving the flow of resources and mechanisms across firm boundaries", we advance it as a dynamic capability perspective which should not be ignored.

Inter-firm network: Inter-firm networks have been discussed as the grouping together of two or several firms in the same industry so as to provide expanded products and services to the market. An example is the Japanese keiretsu which is a conglomeration of firms. Before the birth of the inter-firm networking, most businesses operated in their secluded world where they perceived other firms in the industry as competitors. Most economies were closed and focused on protectionism. Firms did business to satisfy their current niche. However, with the advent of new technology, globalization, new trends and increased turbulence in the business world, there has been an increased need of forming networks within the industries to learn and develop capabilities especially when venturing into new markets or going international. There are various perspectives that relate to inter-firm networking, a competence that contributes to firm performance.

Studies on net-works connotes the nodes of the networks as firms, and the linkages as informal relationships, mergers, acquisitions, R&D alliances, know-how trading, licensing, franchising, or other types of interaction in a local or a global context (Muge Ozman, 2009).

According to Koka & Prescott, (2008), alliance networks are strategic decisions involving trade-offs between prominent and entrepreneurial style structural design choices. Firms benefit from multiple access and affiliation to other firms in the network while entrepreneurial choice is on brokerage and diversity benefits arising out of access to diverse information. Inter firm networks is a capability created out of the relationships, a critical element of the "fit" between the firm and its context.

Grandori, and Soda, (1995) argue that a network of the firm is more superior to an integrated enterprise when assessing economies of scale and scope. The key indicators under this construct of the study are the tie strengths, (strong or weak ties), the social embeddedness in the environment, network governance, openness or transparency within the networks, inter-organizational structures, standardization and reciprocity.

There are various dimensions of inter-firm networks. They include franchising, licensing, assembly process, contract manufacturing, joint venture and strategic alliances Another perspective on how inter-firm networks have been viewed is in terms which describe links and relationships which enable firms to share resources and competences. Conway and Jones (2006) in their defining description came up with four components: actors, links, flows and mechanisms. Many scholars in trying to bring out the distinct characteristics of network relationships have anchored on three viewpoints namely: the structure, the content and the governance (Amitt & Zott, 2001; Hoang & Antoncic, 2003). Allee (2008) claims such network relationships in business are distinguished according to purpose, roles and value interactions with an orientation towards the achievement of a particular outcome. Hoang and Antoncic (2003) further claims that network structures are 'the pattern of ties between different actors and that within a network structure, network size and centrality determine the amount of resources an actor can access. In addition, network structures center on differential network positioning that exerts an influence on resource flow (Moran 2005). Network structure is observed to influence the flow of resources and by extension the performance of the firm. Further exploration is needed on how bargaining power emerges without focusing on static models which link power to the resources underlying an advantage. This implies that so far despite common definition of the inter-firm networks its operationalization is contextual. This calls for standardized indicators and metrics for inter-firm network in order to make a move in filling the conceptual and contextual gaps.

Firm's Performance: The ultimate aim for any organisation is to achieve its goals and objectives. Basically, firm performance is a measure of the level of success achieved in realizing the firm's laid down goals. Success is the efficiency and effectiveness in accomplishing activities, through the use of firm resources. Performance can be described as a multi-dimensional and dynamic concept that comprises both a behavioural and an outcome aspect, (Sonnentag & Frese, 2002). Performance twists itself to fit in the study context or discipline. Most scholars conceptualize firm performance as an end product or outcome of other organizational functions; thus performance in many studies is treated as a dependent variable (Kirby, 2005; Richard et al., 2009). Traditionally firm performance was viewed as financial performance and rated in terms of profitability including other aspects of financial performance like return on investment, return on equity and return on assets. However, firms have diversified their scope and widened their range of objectives; their performance measures include productivity levels, quality assurance, innovation, profitability, creativity, commitment, loyalty, decision making participation, effectiveness, efficiency and effort. Performance is then noted as an aggregate measure of the outcome or output of all organization's activities (Wandiga, Kilika & James, 2017).

Muchemi's 2013 study embraced aspects advocated by the balanced score card and categorized firms' performance as either objective or subjective. She elucidated that the objective view is quantitative in nature, focusing on end results and measures performance on financial grounds like profitability, pricing, budgeting, cost, strategic planning and incentive compensation while ultimate growth is perceived in terms of profitability. Muchemi (2013) further claims that a subjective view measures qualitative attributes of performance which focuses on process of achieving the end. Thus the subjective view measures non-financial facets like value creation with aspects such as market share, market growth, current strategy, cost market effectiveness, technological effectiveness, diversification and product development, human resource development, leadership effectiveness, customer retention, customer satisfaction, firm growth and brand reputation (Muchemi, 2013).

Industry dynamics: The business industry is part of the business environment and therefore has a stake on the course or direction which affects performance of the firm. Every industry has its own unique characteristics such as stiff competition, changing customer trends, changing industry norms and practices, new technologies and external pressures such as from government regulations adaptability of the business to other environmental conditions all of which affects the success of the firms within that industry. Some scholars have argued that the external environment does not affect firm performance (Cool & Schendel, 1988; Akio, 2005). Juma (2014) raises a contrary arguement that besides possessing resources firms require to constantly re-combine them as the external environment changes.

Kimiti and Kilika (2018) have highlighted industry dynamism taking a view of the rate of change as regularity of change, the turbulence of change as the unpredictability and volatility of change and the magnitude of change as scale and extent of change. They further address the rate of industry dynamism as involving an accelerating speed of change and the magnitude of dynamism as informed by the scale and the extent of turbulence and volatility.

Following the argument raised by Kabue and Kilika (2016), heterogeneity between firms has been eroded and mobility between firms has reduced the aspects of VRIN in resources and brought accelerating competition. Industry dynamics which comprise such factors as the rate and magnitude of dynamism of the industry is largely unpredictable and connected to the

social and political systems, access to new technologies and to information, product markets, labour markets, capital markets and openness to new technologies. Moreover, globalization brings with it stiff competition, changing customer demands, changing industry norms and practices, new innovations and technologies besides pressure from different government laws and regulations coupled with "the burden of foreignness".

Firms operating in the same industry face the same environmental conditions. They however respond differently depending on the cognition and decision making of managers. We hypothesize that the firm's innovativeness is positively related to its perception of environmental dynamism. In other words, firms that perceive the environment as dynamic are more innovative. Tan P (2018).

Conceptual Issues: Scholars have taken various positions on the concept of the constructs. Studies have not provided a multidimensional concept of the constructs of dynamic capabilities; (Rugami and Aosa, 2013).The consensus on conceptualising dynamic capabilities has been brought forth as a process of integrating, building and reconfiguring firms' external and internal competences to respondent to rapidly changing business environment. However, aspects of dynamic capabilities are viewed depending on context of the study with some scholars viewing them either as integration capabilities, learning capabilities or reconfiguring capabilities while others view dynamic capabilities as sensing capabilities, seizing capabilities and reconfiguration of capabilities. The theory of dynamic capabilities concerns various processes and has thus far failed to provide clear constructs (Zahra et al., 2006) that make comprehensive explanation. In another context dynamic capabilities have been viewed as agility, adaptability and alignment. Ambrosini and Bowman, (2008) describes it as, to adapt, integrate and reconfigure internal and external organizational skills, resources and functional competencies toward the requirements of the changing environment. Thus, there are no agreements on how to operationalise dynamic capabilities despite the common general mind set. It is unclear which aspect is most influenced by inter-firm networks leading to firm performance.

Similarly there are conceptualization controversies concerning inter-firm networks. Although many studies indicate a positive and significant relationship between the construct and firm performance, there are noted deficiencies on the way the construct is operationalised.

Review of Relevant Theories underpinning this Study

The resource based view

The Resource based view was advanced by Penrose in 1959 (Barney, 1991). The theory connotes that firm performance is ominously predisposed by the physical, organizational, and human resources that are available. The RBV notes that a firm is a collection of heterogeneous resources, made of tangible and intangible assets that are semi-permanently tied to the firm (Wernerfelt, 1984). Resources may include all assets, capabilities, organizational processes, firm attributes, information, knowledge and skills (Barney, 2001). He notes that firms achieve competitive advantage leading to firm performance by controlling resources which are valuable, rare, imperfectly imitable and non-substitutable (VRIN). These resources should be at the firm's disposal (Barney, Wright *et al.,* 2001).

According to the RBV perspective, for firms to develop strong competitive advantages that deliver firm performance, they need to accumulate and have at their control VRIM resources and dynamic capabilities that integrate, build and reconfigure internal and external competencies but Barney, (2001) notes that resources even when being VRIN do not sustain competitive advantage if they are not modified to meet the expectations of the changing environment.

Dynamic capability theory

This study is anchored on the dynamic capabilities theory which was advanced by Teece, et al in 1997. The key tenets of this theory is to explain how firms achieve and sustain competitive advantage despite an ever changing environment with appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies toward a changing environment (Helfat &Peteraf, 2009, Helfat et al, 2007). The proponents of dynamic capabilities believed that firms don't achieve sustainable competitive advantage by just having unique resources which possess VRIN attributes as proposed in RBV theory but by being in a position to integrate, build and reconfigure those resources to fit in to changes in the dynamic business environment. This theory has roots based onSchumpeter's 1934 innovation-based competition where competitive advantage is based on creative destruction of existing resources and novel recombination into new operational capabilities (Gathungu & Mwangi, 2012).

The Stakeholder theory

The stakeholder theory was proposed by Freeman in 1984. This theory advocates identifying all the stakeholders in a business organization and defining the set of performance outcomes that can measure their satisfaction (Connolly *et al.*, 1980). The initial definition of a stakeholder by Freeman 1984 was "any group or individual who can affect or is affected by the achievement of the organization's objectives". Hence managers should exemplify morals and values to ensure the rights and the participation in decision making of the stakeholder as well as safeguard the firm because it is the custodian of stakeholder interests. Economist Milton Friedman (2006),who believed in the free-market system with no government intervention talks of stakeholders as people who have classifiable relationships with the firm such as customers, employees, local communities, shareholders, suppliers and distributors. Measuring performance under this conceptualization will bring into play the use of the Balanced Score Card as a tool that identifies the areas and measures of satisfaction that give implication or indication of firm performance.

The Evolutionary theory of the firm

The Evolutionary Theory of the firm informs on all the constructs of this study but has a higher role on both the dynamic capabilities and its mediator the inter-firm networks. Proposed by Nelson and Winter in 1982 the theory that can be regarded as a subset of a wider class of theories, variously described as resource-based capabilities or competence-based theories of the firm. It describes firms as evolving through the process of natural selection where stronger firms emerge more prominently, become dominant and outwit the weaker or firms. Organisations according to Nelson and Winter are like living organisms with distinctive capabilities, made up of routines (genes) which can be developed or set to evolve for economic life. Firms with dynamic capabilities become dominant and may throw weaker firms out of business. The capabilities that are best suited to their environment survive and pass on their variations (mutations) or reconfigurations to their future generations. The firm is therefore an entity that processes, stores and produces knowledge. Knowledge is considered a capability that is produced through firm routines and can be reproduced through practice. A firm's experiences are therefore capabilities that can protect the firm in times of environmental dynamism.

Theoretical issues

The dynamic capabilities theory has limitations that arise from its foundations based on RBV theory which emphasises firm resources as the source of competitive advantage; DC proposes that firms don't achieve sustainable competitive advantage just by having unique resources which possess VRIN attributes, but they must be in a position to transform those resources to fit in to changes in the

dynamic business environment. Some aspects of the firm such as the nature of knowledge, learning and technology are left out of consideration as scholars debate on whether they are intangible assets. The theory fails to give guidance to managers on when and how to renew these capabilities to deliver competences that match the requirements of a changing environment

The RBV theory connotes that firm performance is ominously predisposed by the physical, organizational, and human resources that are available and that firms are a collection of heterogeneous resources but does not expound on how a firm can build dynamic capabilities in a dynamic environment where resources do not adhere to VRIN attributes.

The Evolutionary theory of the firm describes the firm as evolving through the process of natural selection where stronger firms emerge more prominently and outwit the weaker firms and that capabilities that are best suited to their environments survive and pass on their "good genes" or variations to their future generations. This theory does not address the idea of reconfiguration or transformation as an aspect that contributes to the nature of capabilities but rather seems to advocate that capability nature is inherited as either strong or weak.

The stakeholder theory advocates a free-market system with no government intervention but with stakeholders who are people with classifiable relationships with the firm such as customers, employees, local communities, shareholders, suppliers and distributors. The firm is expected to define a set of performance outcomes that measure to the stakeholders' satisfaction. This theory cannot work in real life because first stakeholders have diverse interests and often, to satisfy one set of stakeholders will require to dissatisfy another set. Secondly, the government is also a stakeholder who needs to be satisfied as the custodian of the welfare of everyone.

Call for a new theoretical framework

The extant literature reviewed has indicated there is a relationship between dynamic capabilities, inter-firm networks and firm performance. It is however noted there are various gaps emanating from the hitherto studies where the three constructs are conceptualised with findings that indicate some inconsistency and some indistinct and inconclusive results on their relationship. Studies have not placed a clear beacon on how to succinctly operationalize dynamic capabilities since different authors have looked at it from perspectives such as capabilities are learning, integration or configuration capabilities or as technological, human resource configurations and still other studies talk of sensing, seizing and configuration of capabilities. Another gap identified is the activity interdependence and process capabilities that arise out of network collaborations as a relationship challenge that has not been fully addressed in literature. A networking gap emerges from power relations, networking roles, routines and procedures and emerging hierarchies. There is also a contextual gap in defining the constructs because extant empirical literature describe studies that are mainly done in developed countries whose business dynamism and openness of economy is different from the African or Kenyan context. There is need to localize our understanding of the constructs within the local context.

The several gaps identified in the literature reviewed on the constructs of this study have elicited a need for a new theoretical model to bridge the gap. From ontological and epistemological perspectives, a theoretical framework is prudent to advance new knowledge on dynamic capabilities, inter-firm networks and firm performance. A theoretical framework should support the theories in the study and present and define the theory that explicates whether the phenomenon under investigation exists.

It explains the relationship between various constructs and how they work (Nachmias & Nachmias, 2004). The framework allows evaluation of assumptions in a critical way so that a researcher may answer the paradoxes available on the existing knowledge and be in a position to describe the phenomenon and to generalize it to related phenomena. Looking at the lacunas described, there is a need to address the issues emerging from different studies that gape out as loose ends that should be tied into a comprehensive argument that describes the relationship of the constructs as the variables in the study. We propose a theoretical framework which attempts to provide comprehensive answers to the issues identified

The proposed model

The conceptual model below outlines the different relationships between the constructs. The dynamic capabilities construct has an impact on firm performance. The core capabilities and the complementary capabilities of the firm determine its level of performance.

It should be noted that the construct of inter-firm networks is a capability that also affects the firm performance. Inter-firm networks also play a mediating role between dynamic capabilities and firm performance by strengthening the effects of the relationship.

The third construct in the model is industry dynamics which tends to control the relationships formed between the other constructs. It has a moderating role on the effect of dynamic capabilities on firm performance, the effect of dynamic capabilities on inter-firm networks and the effect of inter-firm networks on firm performance. The key indicators of industry dynamism include the rate or speed of industry changes or dynamism, the magnitude and the unpredictability of the changes.

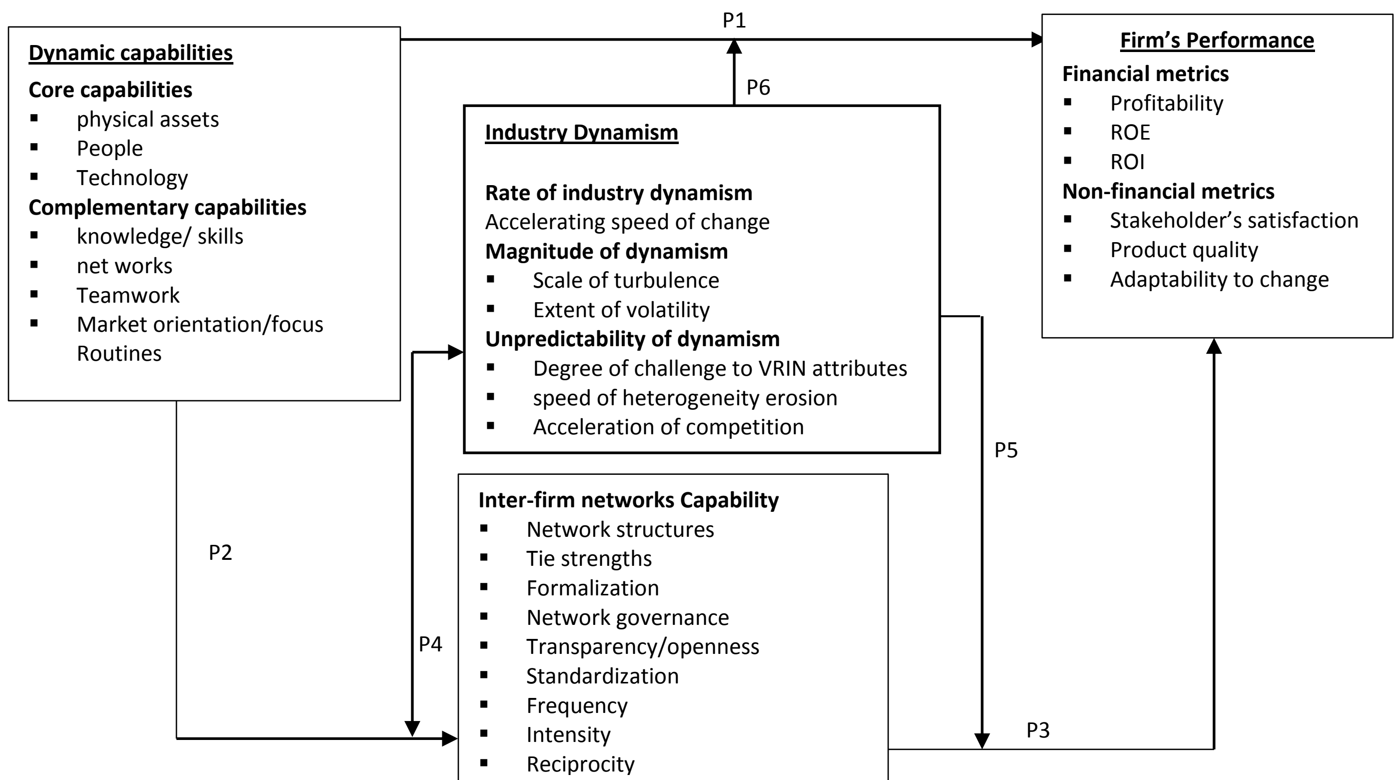

Figure 1: Theoretical framework linking dynamic capabilities, inter-firm network and firm performance. The moderator is industry dynamism. Source: (Author, 2017)

The instability and unpredictability of the industry calls for a well-timed adjustment of firms' internal and external competences and capabilities in order to realize firm performance. It should be noted that networks between firms within the same industry comes in and contributes to the strength of the construct relationships.

The role of Dynamic capabilities on firm performance

Dynamic capabilities seek to explain how firms can achieve and sustain competitive advantage in an ever changing environment. Teece,et al (1997) describes dynamic capabilities as "the firm's ability to integrate, build, and reconfigure internal and external competences to address a rapidly changing environment." Strategic management as Ambrosini and Bowman, (2008) points out should respond to the changing nature of the external environment by adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competencies to fit the requirements. These response aspects form the firm's dynamic capabilities defined by Teece (2007), as sensing, seizing and reconfiguring firm's capabilities to respond to the external environment. The way various dynamic capabilities are conceptualized and utilized will influence how firms meet their performance targets. In view of the authoritative arguments drawn from both the theoretical and empirical literature in relating dynamic capabilities and firm's performance, it makes sense to conclude that dynamic capabilities will directly affect the level of performance in an organization. This relationship of the two constructs is expressed in the following proposition.

Proposition *1: The dynamic capabilities a firm is able to accumulate and utilize will determine the firm's level of performance*

The role of inter-firm networks

Inter-firm networks has been discussed as the grouping together of several firms in the same industry so as to create new capabilities. Grandori, and Soda, (1995) argues that a network of the firms is more superior to an integrated enterprise when assessing economies of scale and scope. Empirical literature indicates that a firm's dynamic capabilities will influence the inter-firm networks that firm will engage in. These inter-firm networks play a mediating role between dynamic capabilities and firm performance which helps to explain the relationship between the two constructs. In the light of these relationships, this paper makes the proposition:

Proposition *2: A firm's dynamic capabilities will influence the nature and type of the inter-firm networks formed by the firm with other firms.*

Networks between firms within the same industry affects the strength of the relationship between a firm's capabilities and its performance. Superior performance in future organizations will be dictated by how they will form networks to share resources, skills, competences and information which will come in handy to help reduce costs, increase economies of scale and increase efficiency. Networks lead to wealth formation (a financial measure of performance) through several channels such as increased knowledge exchange, improvement on technology, increased capacity, diversification of products, improved agglutination of both supplier and the customers, risk- sharing through joint funding operations, facilitation of access to finance and improved innovation in firms (OECD, 2004). Aspects of inter-firm networks included in the framework include: tie strengths, social embeddedness, network governance, openness, inter-organizational structures, labour markets and products markets. Networks lead to performance measured on the scales of the BSC because reciprocity increases satisfaction and firm growth.

Proposition *3: Dynamic capabilities influence firm performance, the strength of the influence is based on the mediating role of networks formed by the firm with other firms.*

The role of industry dynamics

When dynamic capabilities are engaged to influence firm performance, industry factors will have a controlling effect on the expected performance. It should be noted that industry dynamics will affect the relationships at both stages; this construct will moderate the direct relationship between dynamic capabilities and firm performance and also have a moderating effect on the relationship between dynamic capabilities and inter-firm networks. Industry dynamics will also affect the relationship after the mediation effect of inter-firm networks has been engaged and therefore have a moderation effect on overall firm performance.

The antecedent of industry dynamics has been identified as playing a moderating role in the relationships between the constructs of dynamic capabilities and inter-firm networks as well as between inter-firm networks and performance. Firms operate within industries that are within the overall dynamic environment. Each industry has its own unique dynamics that moderate the success of the firms within that industry. Even networks between firms within the same industry is a characteristic that has an effect on the strength of the relationships that affect performance. Industry dynamics affects the relationship between dynamic capabilities and inter-firm networks when the antecedent of dynamic capabilities engages the mediator, inter-firm networks to influence firm performance. This relationship is explained in the following proposition.

Proposition 4: Industry characteristics have a moderating effect on the relationship between dynamic capabilities and inter-firm networks

It should be noted that the construct of industry dynamism has a further controlling influence on the relationship between the intervening construct, inter-firm networks and the construct of firm performance as expressed in the next proposition.

Proposition *5: Industry dynamism has a moderating effect on the relationship between inter-firm networks and firm performance.*

In circumstances where firms have not engaged the mediator, inter-firm networks, to influence the relationship between dynamic capabilities and firm performance, industry dynamics still hold a moderating effect on the direct relationship between dynamic capabilities and firm performance. This relationship is expressed below.

Proposition 6: Industry dynamism plays a moderating role on the direct relationship between dynamic capabilities and firm performance.

When improperly managed, firms tend to lose focus due to pressure from industry dynamics and this negatively affects their level of performance.

CONCLUSIONS

This paper contributed to the literature by making a collection of information and knowledge on the relationship between dynamic capabilities and inter-firm networking and how the two constructs relate to firm performance. The framework introduced a moderator, industry dynamics which was missing in other existing studies. The study identified voids in the existing empirical literature which had failed to have an integrated approach on dynamic capabilities, inter-firm networks and firm performance. Thus, future research needs to embark on studying all aspects of dynamic capabilities together with inter-firm networks and firm performance with a focus on the Kenyan context or another developing country to fix the contextual gap that was identified because the studies that were reviewed had been mainly carried out in developed countries.

The study also noted the different findings in many studies where dynamic capabilities and firm performance had not been mediated by inter-firm networks but by other mediating factors like firm size or firm structure. This calls for further studies on the two constructs which are open for further investigation to add up to the literature and to get a clear understanding of the three constructs.

Lastly, most empirical studies reviewed did not provide enough knowledge due to the methodologies used. Many addressed the constructs using survey or cross sectional research design which renders the studies to appear limited because of the short study time. Some aspects of dynamism revolving around the three variables would require a longer time to study. If firm performance would be measured on longitudinal research design, it would yield better results because some of its aspects are non-financial in nature and can therefore not be succinctly evaluated in a cross sectional research. Besides, even the financial measures such as profitability would provide better indications of sustainability in performance if the measurement is carried out repeatedly over a longitudinal period. There is therefore a gap which this study advocates should be addressed using the longitudinal research methodology which takes not less than five years of concentration.

REFERENCES

Akio, T. (2005). The Critical Assessment of the Resource-Based View of Strategic Management. Ritsumeikan International Affairs, 3, 125-150.

Allee, V. (2008), Value network analysis and value conversion of tangible and intangible assets, *Journal of Intellectual Capital, Vol. 9 Issue: 1*, pp. 5-24.

Alon, I., Jiao, H., Kwong, K. C., & Cui, Y. (2013). The moderating effects of environmental dynamism on the relationship between dynamic capabilities strategy and new venture performance in an emerging market. *Journal of Engineering and Technology Management, Vol. 30, Issue 2, pp.188-205*.

Ambrosini, V. and Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews Vol.11(1),* pp. 29–49

Amitt, R. and Zott, C. (2001). Value Creation in E-business, *Strategic management Journal*

Vol. 22, Issue 6, pp.493-520

Anand et al (2010), Alliance Activity as a Dynamic Capability in the Face of a Discontinuous Technological, *Organization Science, Vol. 21, No. 6, pp. 1213-1232*

Barney, J. (2001), Resource Based theories of competitive advantage: A ten-year retrospective on the resource-based view, *Journal of management*, 26 (1), pp. 41-46, *Sage publication.*

Barney, J. (1991), Firm resources and sustained competitive advantage, *Journal of Management Vol. 17, No. 1, pp. 99-12*

Cool, K., & Schendel, D. (1988). Performance differences among strategic group members. Strategic Management Journal, 9(3), 207-223

Connolly *etal.*, (1980), Organizational Effectiveness: A multiple constituency approach, *Academy of Management*, *555 Pleasantville Road, Suite N200, Briarcliff Manor, NY, USA*

Conway, S., & Jones, O. (2006). *Networking and the small business. In S. Carter & D. Jones Evans (Eds.), Enterprise and small business.* Harlow: Prentice Hall., 220-230

Cyert, R. M. & March, J. G. (1963). *A Behavioral Theory of the Firm.* Prentice-Hall, Englewood Cliffs, NJ. pp. 60-69

Eisenhardt, K. & Martin, J. (2000). Dynamic capabilities: what are they? *Strategic Management Journal,* (21)10/11, 1105-22.

Evans, S. (2007). Performance Measures for Small Business. *Journal of Financial Management,* 32, 45-56.

Fainshmidt, S. *et al* (2016). Dynamic Capabilities and Organizational Performance: A Meta Analytic Evaluation and Extension: *Journal of Management Studies*53 (8), 1348-1380.

Friendman, A. & Miles (2006), Stakeholders: Theory and Practice, Oxford University Press

Gathungu & Mwangi, (2012),Dynamic Capabilities, Talent Development and Firm Performance, *DBA Africa Management Review, Vol 2 No 3, pp 83-100*

George, Zahra, Wheatley, & Khan, R. (2011). The effects of alliance portfolio characteristics and absorptive capacity on performance. A study of biotechnology firms. *The Journal of High Technology Management Research*, 12: 205-226.

Grandori, and Soda, (1995), Inter-firm networks: Antecedents, Mechanisms and forms, *Journal of management and governance.* Vol. 16 (2), pp, 183-214

Helfat, C., and Peteraf, M. (2009), Understanding Dynamic Capabilities: Progress along a developmental path, *Strategic organization Vol. 7(1)* pp: 91-102*,* Sage Publications, London

Helfat, C. et al, (2007), Understanding Strategic Change in Organizations, Blackwell Publishing, United Kingdom). *Dynamic capabilities: Foundations. In Dynamic Capabilities: Understanding Strategic Change in Organizations,* Blackwell Publishing: Malden MA; 1-18.

Helfat, C.E. & Peteraf, M.A. (2003). The dynamic resource-based view: capability lifecycles. *Strategic Management Journal* 24 (10): 997-1010.

Hoang, H. &Antoncic, B. (2003). Network-based research in entrepreneurship: a critical review, *Journal of Business Venturing*, 18. (2.), pp. 165-187.

Juma, O. W. (2014). Organizational resources, corporate governance structures and performance of Kenyan state corporations, *MBA Thesis*.

Kabue and Kilika (2016), Firm resources, core competencies and sustainable competitive advantage: An integrative theoretical framework*. Journal of Management and Strategy, 7(1): pp.98-108*

Kaplan, R. and Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review 70, no.1 pp.71–79.*

Kimiti, P & Kilika, J (2018), Organizational resources, industry velocity, attention focus and firm's performance: A review of literature, *International Journal of Business and Management, Canadian Center of Science and Education, Vol. 13, No. 5; 2018,*

Koka, B. and Prescott, J. (2008), Designing Alliance Networks: The influence of Network Position, Environmental Change, and Strategy on Firm Performance, *Strategic Management Journal 29, 2008*

Kumar, V. and Anderesen, P. (2000). Handbook of research on customer equity in marketing, Edward Elgar publishing limited, Cheltenham, Glos, United Kingdom. pp. 78-79

Larvie, D. (2006). Capability reconfiguration: An analysis of incumbent responses to technological change. *Academy of management review*, 31(1): 153-174.

Lenox, M.,Rockart,S. and Arie Y.(2010), Does interdependency affect firm and industry profitability? *Strategic Management Journal,* Vol. 53, issue 4: 559-615.

Madsen, (2010), A dynamic capability framework: Generic types of Dynamic capabilities and their relationship to entrepreneurship. *International journal of technoetrepreneurship,* Edward Elgar Publishing*, 223-284*

Madsen, E. and Borch, O. (2007), Dynamic capabilities facilitating innovation strategies in SMEs, *International journal of technoetrepreneurship 1(1) pp.109-124*

Muchemi, A.W. (2013). Top management team diversity and performance of commercial banks in Kenya. *PHD Thesis, University of Nairobi*.

Muge Ozman, (2009) Economics of Innovation and New Technology 18(1):39-67,

Nachmias, C.F. &Nachmias, D. (2004). Research Methods in the Social Sciences, 5th Ed. London: Arnold. *Administrative Science Quarterly,* 20, 546–558.

Nelson and Winter, (1982), An Evolutionary theory of economic change, Havard University Press, London, England, pp. 11-20

Nzewi, H., Osisioma, H. and Mgbemena, I. (2016), *European Journal of Business and Social Sciences, Vol. 4, No. 10,* pp. 98 – 110.

Parker and Bradley(2000), Organizational culture in the public sector: evidence from six organizations, *International journal of public sector management Vol. 13 Issue 2, pp. 125-141*

Penrose, E.T. (1959). *The theory of the growth of the firm*. Oxford University Press, New York.

Porter, M.E. (1991). Toward a dynamic theory of strategy. *Strategic Management Journal* 12

Richard, Devinney, Yip & Jonson, (2009)Measuring organizational performance, Towards methodological best practice, *Journal of Management, Vol. 35, No 3.*

Rugami and Aosa, (2013),Environmental dynamic capabilities and their effect on competitive advantage and firm performance, *Prime Journal of Business Administration and Management Vol. 3, No. 11, pp. 1239-1243*

Schilke, O. (2014), Second order dynamic capabilities: How do they matter, *Academy of management executive, Vol. 28, No 4*.

Sonnentag and Frese, (2002), Performance Concepts and Performance theory – Psychological management of individual performance, *John Wiley and sons Ltd*

Tan, P. (2018), A Study of Firms' Perception of Environmental Dynamism and Innovativeness in Non-Dynamic Environments, *Journal of Business & Financial Affairs, Vol. 7, Issue 2, pp.329*

Teece, D. (2012), Dynamic Capabilities: Routines versus entrepreneurial action, *Journal of management studies Vol. 49, Issue 8*

Teece, D.(2007), Explicating dynamic capabilities: the nature and micro foundations of (sustainable) enterprise performance, *Strategic Management Journal Vol. 28(13), 1319-1350*

Teece, D., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management, *Strategic Management Journal,* 18(7), pp.509-533.

Wandiga, Kilika & James, (2017), Linking operations strategies with customer based competence and firm performance in the context of knowledge based intensive sector: A theoretical review, *International journal of business and management,Vol.12 (8)* pp. 234-247

Weigl et al (2008), Inter-organizational network structures in Russia: organizational changes from institutional and social embeddedness perspectives, *Human Resource Development International,* Vol. 11, No. 2*, European Business School, Wiesbaden, Germany*

Wernerfelt, B., (1995), The Resource based view of the firm: Ten years after, *Strategic Management Journal Vol. 16, No.3, pp.171-180*

Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies,* 43(4), 917-955.

Zollo and Winter,(2002). Deliberate Learning and the Evolution of Dynamic Capabilities', *Organization Science Vol.13, No.3*, pp.339-351