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Revisiting Innovation Typologies among Agro-food Small and Medium-Size Enterprises (SMEs) in a Developing Country

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ABSTRACT: *Innovation has been identified as an enhancer of competitiveness of Small and Medium-Size Enterprises (SMEs). Moreover, a growing body of scholarly research demonstrate the that organisations stand to gain competitive advantage if they combine the right mix of culturally embedded innovative and knowledge sharing practices. Despite the vast amount of studies that have spawned concerning innovation in SMEs, very few have been done among Agro-food SMEs in developing countries of Sub-Saharan Africa, such as Nigeria. Given the importance of the agri-food sector, particularly with respect to the many SMEs in developing countries, this study considers it fruitful to identify the typologies of innovation of such firms in Nigeria, in order for them to compete in world markets. Moreover, this study draws its relevance from the fact that agri-SMEs in Nigeria still lag behind those in developed countries in terms of innovation. Based on the reviewed literature, this study advances two conceptual frameworks for further studies on Agro-food SMEs in developing countries, viz: (i) the relationship between culturally-embedded innovation and competitiveness (ii) the relationship between knowledge-based innovation and competitiveness.*

KEYWORDS: Organisational innovation, competitiveness, organisational culture, knowledge sharing, Agro-food SMEs

INTRODUCTION

Innovation is concept in business practices that is receiving enormous attention among small- and medium-sized enterprises (El Chaarani et al., 2022; YahiaMarzouk & Jin, 2022; Zighan et al., 2023) due to its proven performance benefits (Jalil et al., 2022). Through innovations small agri-food farms can modernize their production processes to become more efficient, grow more quality produce, be more cost-effective (reduce staffing costs), be more flexible in delivering products, minimize cultivation risk related to climatic factors and be more resilient during turbulence. Innovation could be crucial for farms to seize new opportunities remain competitive and sustainable over time (Taneo et al., 2020; Paoloni et al., 2022). For instance, in Indonesia, it has been observed that the low competitiveness of food SMEs is caused by the slow pace of

innovation (Hutahayan & Yufra, 2019). Moreover, in both industrialized and developing countries, small and medium-sized businesses (SMEs) have been critical to sustained economic development (Love & Roper, 2015; OECD, 2018; Wellalage & Locke, 2020). In developing countries, SMEs are important because they create jobs, boost national income and exports, and increase Gross Domestic Product (Love & Roper, 2015). Thus, many people, including company founders, board members and scholars are interested in the growth and progress of SME innovation (Ajer et al., 2023; Le et al., 2023). Specifically, in today's globalised business environment, agri-food organisations understand the need of innovation in achieving economic and social success (Kafetzopoulos et al., 2020).

Some research works have been conducted concerning innovation in agri-sector (Taneo et al., 2020; Martínez-Filgueira et al., 2022; Paoloni et al., 2022). Ajer et al. (2023) investigated factors influencing agro-food micro, small and medium enterprises (MSME) innovations in Uganda. Silvestri et al. (2023) examined the role of business networking on new digital innovation, which leads to the competitiveness and sustainability of agro-food small and medium-size enterprises (SMEs). Hutahayan and Yufra (2019) evaluated the effect of innovation speed and competitiveness of agro-food SMEs in Malang, Indonesia. Despite the vast amount of studies that have spawned concerning innovation in SMEs (Zhang, 2022), very few have been done among Agro-food Small and Medium-Size Enterprises (SMEs) in developing countries of Sub-Saharan Africa, such as Nigeria.

Given the importance of the agri-food sector, particularly with respect to the many SMEs in developing countries, this study considers it fruitful to examine the typologies of innovation of such firms in Nigeria, in order for them to compete in global markets (Tell et al., 2016). Moreover, this study draws its relevance from the fact that agri-SMEs in Nigeria still lag behind those in developed countries in terms of innovation. The rest of the paper reviews the literature on innovation in agri-businesses and develops a framework for testing in future research.

LITERATURE REVIEW

Innovation

Innovation, as defined by Schumpeter (1934), entails the adoption and development of methods that promote disruption of the economic system and allow for the introduction of novelties. According to Drucker (1988), innovation is the committed and systematic attempt to achieve organisational transformation or economic or social progress. According to the EU Community Innovation Survey (CIS), innovation is the introduction of a new or improved product, process, organisational or marketing method by a firm, implying newness of products, processes, or business practices (Johannessen et al., 2001). Crossan and Apaydin (2010) define innovation is the "production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome (p. 115). Innovation, in a similar vein, is defined as the

practise of transforming available possibilities into novel concepts (Drucker, 2015; Tidd, Besssant, & Pavitt, 2005). These novel concepts are being implemented internally throughout the company (Damanpour, 1991); and when these novel concepts are put to use, they benefit the company (Dadfar et al., 2013). Therefore, innovation in agriculture may refer to the incorporation of R&D results into agricultural business practise. Such R&D outcomes may be new or improved versions of: (i) plant varieties, breeds, species of animals and poultry, (ii) food products, materials, equipment, technologies in crop production, animal husbandry and processing industry, and (iii) organization, management systems and social services. Specifically, some of the top innovations in the agro-SMEs include, bee vectoring technologies, precision agriculture, indoor vertical farming, laser scarecrows, minichromosome technology, innovative water management process, fertiliser deep placement, and mobile apps (e.g. VetAfrica).

Businesses function in ever-changing contexts "where customers' tastes, product-service technologies, and competitive weapons often change unpredictability" (Miller, 1983, p. 775). Therefore, for businesses to be successful in achieving their goals, they need to be on the lookout for new possibilities, but also highly innovative. (Tajeddini et al., 2006). In today's highly competitive marketplaces, many experts believe that innovation is crucial to a company's long-term survival (Chatzoglou & Chatzoudes, 2018; Hanif, & Asgher, 2018; Guan et al., 2019; Franco, 2020). The rationale for this is that innovative businesses will be more equipped to handle corporate environmental problems than those that are not (Brown & Eisenhard, 1995; Miles & Snow, 1978; Cingöz &Akdogan, 2013). The agri-food sector's growth has been directly tied to the persistence of innovative practices (Zouaghi & Sanchez, 2016), most notably, the funding for research and development of novel products and processes (Batterink et al., 2006). Also, introducing novel goods and ideas to both domestic and international markets is how innovation breaks new ground and creates new possibilities (Ferreira, Fernandes & Ratten, 2017). Drucker (1988) argued that innovative ideas are crucial to the growth of any organisation. Innovation in in service/process quality and reduced waiting times are two examples of how non-profits may grow, whereas decreased expenses and greater sales are two methods for-profit businesses could expand. It is thought that an organization's capacity to innovate is a type of dynamic capability that gives it an edge over its competitors (Helfat et al., 2007). Anning-Dorson (2018) found that, both in India and Ghana, innovation has a positive and significant relationship with competitive advantage. In both cases, the market innovation dimension was found to be the most important factor in gaining a competitive edge. According to Anning-Dorson (2018), innovation "can result from the discovery of superior resource combinations that will yield competitive advantage. Such innovation will result in a firm gaining superior insight about and access to firm- and industry-specific resources with positive future value" (p. 584).

In addition, innovation has been touted as a promoter of knowledge creation (López-Nicolás & Meroño-Cerdán, 2011), user satisfaction, organisational prosperity, return on investment

(Allocca & Kessler 2006), market share and overall firm success and survival (Al-kalouti et al., 2020). It has also been lauded as a means through which businesses may cut their supply, transaction, and overhead expenses significantly, which in turn boosts their profitability (Damanpour et al, 2009); and a solid groundwork for companies to mitigate danger and make their way through a dynamic, unpredictable, and chaotic business environment (Damanpour, et al, 2009). For agro-based SMEs/smallholder farmers, innovations can provide a chance to boost output while also reducing environmental impact. As a result, production externalities like pollution and waste are mitigated, ensuring sustainability over an extended period of time.

Dimensions of Innovation

There are several types of innovation, such as radical, incremental, market, administrative, strategic, behavioural, and technological innovation (Damanpour, 1991; Utterback, 1994; Tsai, 1997; Cooper, 1998; Wang & Ahmed, 2004; Snihur & Wiklund, 2019). The Oslo Manual published by the Organization for Economic Co-operation and Development (OECD, 2005; OECD/Eurostat, 2005) suggests that business innovation, process innovation, product innovation, and process innovation are all possible types of innovation. Later, Garca-Zamora et al. (2013) included the fifth component, which they referred it as management innovation. Previous studies have found that product, process, and market innovation are the most often occurring types of organisational innovation (Cainelli et al., 2006; Murat & Baki, 2011; Chang et al., 2015).

Product Innovation

Product innovation is "introducing new product or service with the significantly improved performance characteristics such as technical specification, incorporated software to full fill the key customer needs better than the existing product" (OECD, 2005, p. 49). Product innovation is also regarded as the introduction of novel and meaningful new products to the market at the appropriate time (Wang & Ahmed, 2004, p.304); a brand-new product or service that is just now being introduced to consumers and that is vastly different from anything the firm has done before. It also includes replacing (Meroño-Cerdán & López-Nicolás, 2017) or broadening a company's offering of goods and services (Hjalager, 2010). Product innovation also includes significant improvements to a product's technical specifications, usability, or other functional elements to fulfil the needs and preferences of consumers (Psomas et al., 2018). In agro-based SMEs, product innovation includes biological and genetic modifications such as the introduction of new breeds or varieties with specific advantages (e.g. higher yields or resistance to certain weather/soil conditions); the introduction of new species that extend the farming calendar or the type of farming; the transformation of plant produce into cash crops (e.g. olive oil, wine, and beer); and so on (Van der Veen, 2010).

The traditional approaches are no longer effective in the competitive world of today. Consequently, there is a need for innovative and improved products. Product innovation has attracted the attention of management experts (Masaaki & Scott, 1995; Schmidt & Calantone,

1998) because it is a critical antecedent to product success (Zirger, 1997; Sethi et al., 2001), which in turn is closely related to sustainable organisational success (Henard & Szymanski, 2001). Product innovation accelerates competitiveness (Anning-Dorson, 2018), the legitimacy and standardization of firms (Chen et al., 2017), a revitalization of the organization (Danneels, 2002) and improvement in efficiency, profitability, market share and quality, while decreasing expenses and overhead (Danneels & Kleinschmidtb, 2001; Leiponen & Helfat, 2010; Berends et al., 2014; Amabile & Pratt, 2016).

Process Innovation

The Oslo Manual (OECD, 2005) defines a process innovation as "the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software." (p. 49). Process innovation is a dynamic capability (Piening & Salge, 2015), characterised by adaptability and flexibility, involving the effective application of novel, modified or enhanced task specifications, work and information flow mechanisms, technological processes, administrative procedures, or product/service delivery or operational procedures within the value chain (Damanpour, 2010; Gambardella et al., 2017; Moreira et al., 2017; Anning-Dorson, 2018). It is also seen as a set of internally focused, efficiency-seeking activities (Boer & During, 2001) that aim to create a new process model to come up with brand-new or improved products or services that provide a certain amount of "value" for the business or the customers in terms of better quality and lower costs (Moreira, Gherman, & Sousa, 2017). Thus, process innovation refers to the execution of tasks in an entirely novel fashion, which requires the application of specific change tools and the re-engineering of business processes (Davenport, 1993). Many advances in agricultural technology are "process innovations" that enhance production methods, including new techniques (such as grafting), improved seed varieties or more effective irrigation systems. Improved animal husbandry, such as using animals for more than only their meat and skins (via the exploitation of their wool, milk, blood, and traction), is an example of an innovative agricultural method (Van der Veen, 2010).

A general description of "process innovation" encompasses either enhancing the output and delivery processes or upgrading a variety of activities, including accounting, computing, purchasing, and maintenance (Polder et al., 2010). Process innovation is crucial to establishing a cost advantage based on service efficiency, whereas product innovation is associated with a company's strategy of differentiating its products (Barney et al., 2001; Porter, 1990). Better results may be achieved through process innovation by first assessing the needs of the market and the likelihood of a breakthrough, then exploring potential solutions, and then converting, diffusing, and creating new ideas. (Bernstein & Singh, 2006).

Innovations in processes may be technical or administrative in nature (Meeus & Edquist, 2006; Damanpour et al, 2009). In an organization, technological process innovation (or technovation) refers to the introduction of novel processes and systems, or the improvement upon those

already in place (Meeus & Edquist, 2006). It entails making adjustments to a product or procedure so that it better meets user needs and/or industry standards in terms of functionality and/or technological sophistication (Tushman & Nadler, 1986).

Introducing new organisational methods, policies, administrative systems, procedures, rules, and roles, or making substantial changes to these, is an example of administrative process innovation with the goal of inspiring employees, growing talent, and enhancing management (Lin & Chen, 2007; Birkinshaw et al., 2008; Damanpour et al., 2009). Administrative innovation is known to boost business performance in a number of ways, including through the reduction of administrative and transaction costs, the enhancement of workplace satisfaction, productivity, and employee commitment, and the acquisition of previously unavailable non-tradable assets (such as non-codified external knowledge), or lowering the costs of supplies (Damanpour & Gopalakrishnan, 2001; Walker, 2008; Birkinshaw et al., 2008).

In general, process innovation has been lauded as a productivity and efficiency enhancer for business processes, resulting in improved service quality and lower service unit costs (Evangelista & Vezzani, 2010). According to Lee et al. (2019), the benefits of process innovation are productivity gains, product quality enhancements, and cost and time savings". In addition, it promotes technological change, delivery flexibility, and prompt responses to fluctuating consumer needs for businesses; and accelerates the adoption of new and modern technology (O'Regan et al., 2006; Damanpour et al., 2009; Prajogo & McDermott, 2011; Dahiyat, 2015; Kafetzopoulos & Psomas, 2015). There is evidence to suggest that companies that innovate their processes also improve their competitiveness and overall performance (Camison & Villar-Lopez, 2014; Piening & Salge, 2015; Aliasghar et al., 2020).

Marketing Innovation

In a market economy, innovations in the marketing of products and services are non-technological innovations that occur alongside innovations in products and processes. According to the Oslo Manual (OECD, 2005), marketing innovation (or commercial innovation) is "the implementation of a new marketing method involving substantial changes in product design or packaging, product placement, product promotion, or pricing." (p. 45). It is also defined as the "development of new services, new price-setting strategy, new advertising promotions, new distribution channels and marketing information systems" (Gupta et al., 2016, p. 5673). Weerawardena (2003, p. 34) submits that marketing innovation is the "introduction of new pricing methods, new distribution methods, new sales approaches, leasing arrangements, and entering a new market". It is an enterprise' "ability to approach the market, effectively use the channels of communication, and deliver product and service to capture potential or existing customers" (Lee et al., 2019, p. 509). Therefore, marketing innovations entail the adoption of new market-oriented behaviours (Sundbo & Gallouj, 1999) or changes in sales and distribution channels, and other novel marketing techniques (Tidd et al., 2005; Junge et al., 2015). According to Dileep and Mathew (2017), marketing innovation extends

beyond procedural and technical mechanisms to encompass the marketing mix's aggregate capacity. Consequently, it is the process of identifying and exploiting market opportunities by galvanising distinctive efforts around the marketing mix.

Marketing innovation is used to increase product demand, better meet consumer requirements, break into untapped areas, or reposition an existing product for greater market success. New marketing methods and technologies have a major impact on how industries develop. In a similar vein, Moreira et al. (2012) state that innovative marketing strategies aim to implement new marketing techniques within businesses with the goal of boosting competitive advantage, performance, and ultimately shareholder value. Sales and productivity increase as a result (Junge et al., 2015). According to Hamilton (2005), farmers have always been interested in marketing innovation because of the great demand for high-quality fresh food, the need to create social ties and exciting shopping experiences, and the prevalence of health concerns.

MODERATORS ON INNOVATION AND ITS CORRELATES

Organisational Culture

Organizational culture is defined as "the underlying values, beliefs, and principles that serve as a foundation for an organization's management system as well as the set of management practices and behaviors that both exemplify and reinforce those basic principles" (Denison, 1990, p. 2). Organisational culture is also defines as "the collective programming of the mind which distinguishes a member of one group from another" (Hofstede, 1991, p.5). Schein (2004, p. 17) submitted that organisational culture is "the pattern of shared basic assumptions - invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems"; organizational culture, according to Deal and Kennedy (1983), is "the way we do things around here". (p. 501). A company's culture consists of the norms and values that its members have come to embrace as the standard for getting things done inside the company over time (Calori & Samin, 1991; Hofstede, 2001; Schein, 2004).

Various authors in the past have examined the nexus between culture and competitiveness from different perspectives. Cultural issues, for instance, have been investigated by Büschgens et al. (2013) as a potential source of competitive advantage. Local culture enables the development of distinct and differentiated products, consumer services, and product-service combinations. When workers and supervisors have a shared culture, it helps to foster a positive work climate (i.e. what it feels like to work in the group). When there is a lot of trust, there will be less formal and expensive relationship governance (Gulati & Nickerson, 2008) and transaction costs go down as a result (Bachmann & Inkpen, 2011). Furthermore, studies demonstrate that organisational culture may impact the innovative behaviour of organisations (Lau & Ngo, 2004; Miron et al., 2004; Chang & Lee, 2007; Naranjo-Valencia et al., 2012; Lin et al., 2013), which may lead to improved performance (Lee et al., 2019; Clausen et al., 2020).

Organizational culture has been broken down into individualism/collectivism, power distance, masculinity/femininity, uncertainty avoidance/tolerance of ambiguity, long-term/short-term orientation, indulgence/restraint, monumentalism/self-effacement, human orientation, and performance orientation (Hofstede 1980; Hofstede et al., 2010); bureaucratic, innovative and supportive cultures (Wallach, 1983); communal culture, fragmented culture, networked culture and mercenary culture (Goffee & Jones, 1998); involvement, consistency, adaptability and mission (Denison & Neale, 1996; Denison et al., 2006; Nazir & Lone, 2008); employee development, harmony, customer orientation, and social responsibility (Tsui et al., 2006). Also, Cameron and Quinn's (2011) Competing Values Framework is one of the most popular models of corporate culture. It has four competing cultures: Adhocracy Culture, Clan Culture, Market Culture, and Hierarchy Culture. However, a growing body of literature suggests that Adhocracy Culture and Clan Culture may amplify the competitiveness benefits of innovation (Zeb et al., 2021; Strengers et al., 2022) in SMEs (Shuaib & He, 2021).

Adhocracy culture

Adhocracy culture is marked by a high level of flexibility, a focus on external factors, and a good amount of decentralisation. In this type of organisational culture, not much is fixed or steady because the main organisational goals are flexibility, creativity, risk-taking, autonomy and innovation, which are used to cope with uncertainty (Cameron & Quinn, 2011). Strengers et al. (2022) aptly submits that "the values of the adhocracy type include growth, stimulation, variety, autonomy and attention to detail. Behaviors that arise as a consequence are risk-taking, creativity and adaptability" (p.117). The fast-paced nature of the business world necessitates that workers be given the resources they need to grow professionally and provide their own fresh perspectives. Thus, adhocracy culture is an innovation-seeking culture, which can be defined as a set of organisational values, core beliefs, norms, and social rules that act as a common reference for employees as they develop and implement new ideas, products, processes, and marketing strategies, or adapt and improve upon existing ones. Deshpandé et al. (1993) demonstrated that companies in Japan where an emphasis is placed on individual initiative and innovation (adhocracies) have been more successful than their competitors that are more rule-bound (hierarchies). Also, Azeem et al. (2021) examined the competitiveness benefits of organisational culture, knowledge sharing, and organizational innovation in the textile industry of Pakistan, and found that organisational culture, knowledge sharing, and organizational innovation positively affect competitive advantage. Specifically, Azeem and colleagues demonstrated that adhocracy culture amplifies competitive advantage ($\beta = 0.246$; t-value = 3.506, $p < 0.001$).

Clan culture

A clan culture, also known as *keiretsu* in Japanese firms (Chan, 1997), is one that is flexible and inwardly focused, taking on family-style structures that emphasise mutual support and cooperation in all areas, including decision-making to teamwork and employee involvement

(Cameron & Quinn, 2011). Trust and commitment on the part of the organisation are the foundations for open and cordial communication (Hartnell et al., 2011). Effectiveness comes from hiring the right people and constantly developing workers' skills. Effectiveness in the Clan type is driven by staff satisfaction and commitment, which are promoted through managerial support, empowerment, and mentorship (Gregory et al., 2009; Hartnell et al., 2011). Employees' propensity to share knowledge may be enhanced or hindered by the prevalent clan culture that is expressed via collaboration and trust among employees and management (Ng, 2023). Also, Azeem et al. (2021) examined the competitiveness benefits of organisational culture, knowledge sharing, and organizational innovation in the textile industry of Pakistan, and found that organisational culture, knowledge sharing, and organizational innovation positively affect competitive advantage. Specifically, Azeem and colleagues demonstrated that clan culture amplifies competitive advantage ($\beta = 0.215$; t-value = 2.925, $p < 0.01$)

Knowledge Sharing

The notion of knowledge sharing may be conceptualised under a number of different umbrella categories, such as knowledge dissemination and knowledge transfer. In the context of business, knowledge sharing refers to the transmission of information, and suggestions between employees and team members engaged in the execution of processes (Elrehail et al., 2018; Takhsha et al., 2020). It is the gathering, communicating, and dispersing of information and relevant work experiences among staff members (through formal and informal channels) in order to facilitate knowledge application, improve performance or gain competitive advantage (Terry Kim et al., 2013; Takhsha et al., 2020). According to Vij and Farooq (2014), employees' contributions to knowledge application, innovation, and competitive advantage may be maximised through knowledge sharing. It reduces the time wasted in trial and error (Matošková et al., 2022). Meetings, conversations, social networking, and partnerships can all play a role in propelling knowledge sharing. Learning and information exchange may occur through correspondence that is both interactive and practical. It enhances job performance (Deng et al., 2023), business processes, budget projections, stakeholder collaboration, and long-term corporate sustainability goals (Qasrawi et al., 2017). Caloghirou et al. (2004) found that a culture of openness towards sharing knowledge was significantly associated with higher levels of innovative performance.

Organizations have a hard time getting workers to share knowledge because they do not want to spread the most important or useful information. To support and encourage knowledge sharing, organisations must have a flexible structure, a good organisational culture, and strong trust between people. Knowledge sharing can work well at all levels of management if there are good reward systems in place. Monica Hu et al.'s 2009 study of the Taiwanese hotel industry found a positive link between knowledge sharing and the innovation of firms. Arsawan et al. (2012) found that knowledge sharing plays a part in creating innovation culture to improve business performance and build a lasting competitive advantage in Indonesian SMEs. Jones III (2017) demonstrated that knowledge sharing components of (a) trust, (b)

training on technology, and (c) good communication leverage technological innovation. Also, Azeem et al. (2021) examined the competitiveness benefits of organisational culture, knowledge sharing, and organizational innovation in the textile industry of Pakistan, and found that organisational culture, knowledge sharing, and organizational innovation positively affect competitive advantage. Specifically, Azeem et al. demonstrated that knowledge sharing enhances competitive advantage ($\beta = 0.187$; t-value = 2.575, $p = 0.01$). A critical aspect of this study is predicated on the idea that organisation may improve their competitive standing by encouraging workers to share their knowledge with one another as the first step on the road to innovation.

CONCLUSION

In sum, innovation has been identified as an enhancer of competitiveness of farms and food SMEs (Hutahayan & Yufra, 2019; Taneo et al., 2020; Paoloni et al., 2022). Moreover, a growing body of scholarship have demonstrated the that organization stand to gain competitive advantage if they combine the right mix of culturally embedded innovative and knowledge sharing practices (Arsawan et al., 2012; Azeem et al., 2021). Based on the reviewed literature, this study advances the following conceptual frameworks (figures 1 and 2) for further studies on the relationship between innovation and competitiveness of Agro-food Small and Medium-Size Enterprises (SMEs) in developing countries.

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Conceptual Framework 1

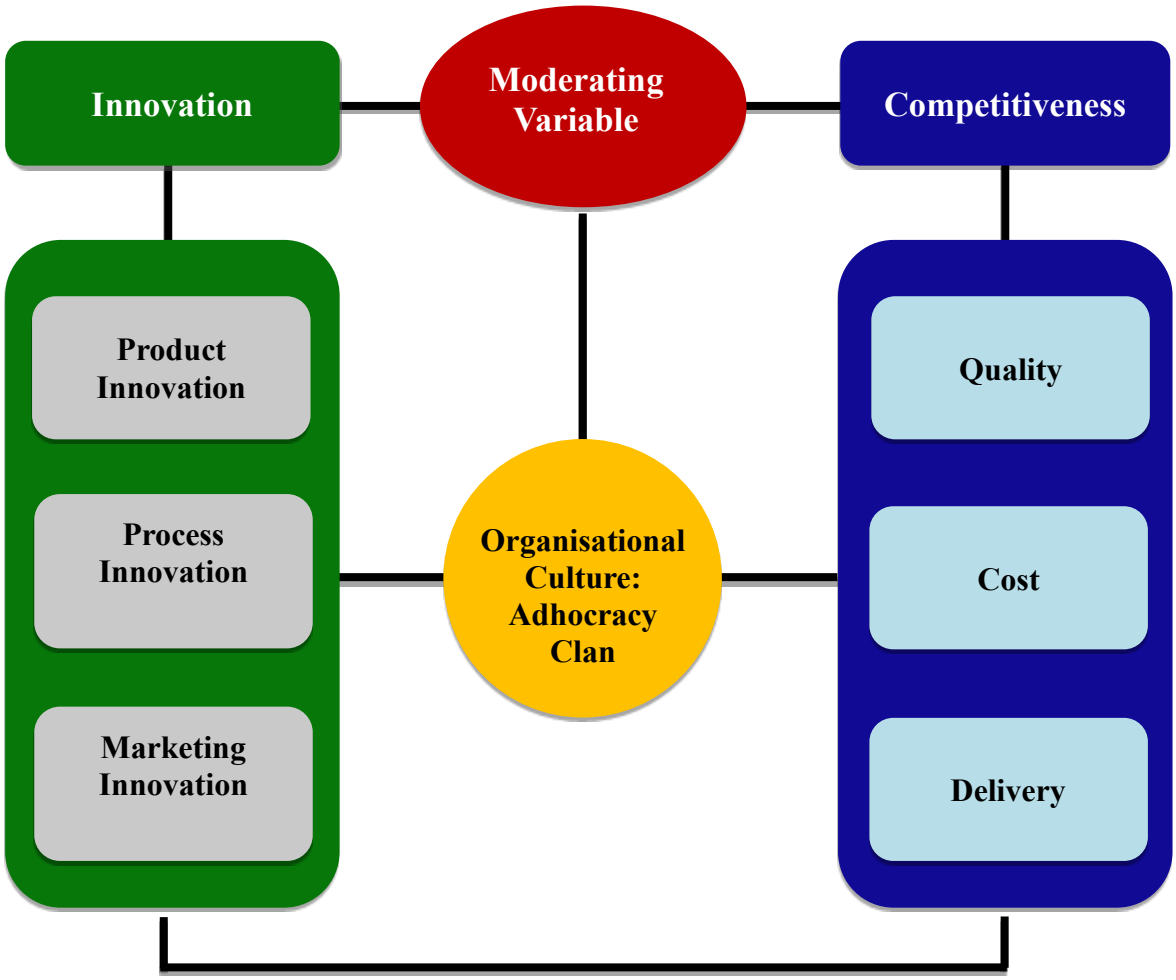

Figure 1: First Conceptual Framework of the Study
Source: Organisational Innovation: product innovation, process innovation and market innovation (Wang & Ahmed, 2004; Anning-Dorson, 2018; Anning-Dorson & Nyamekye, 2020; Mabenge et al., 2020). ***Competitiveness***: (Ward et al., 1998; Awwad et al., 2013; Nawanir et al., 2013; Srivastava et al., 2017; Afum et al., 2020). ***Organisational culture*:** (Wallach, 1983; Lund, 2003; Denison & Neale, 1996; Nguyen et al., 2019).

Conceptual Framework

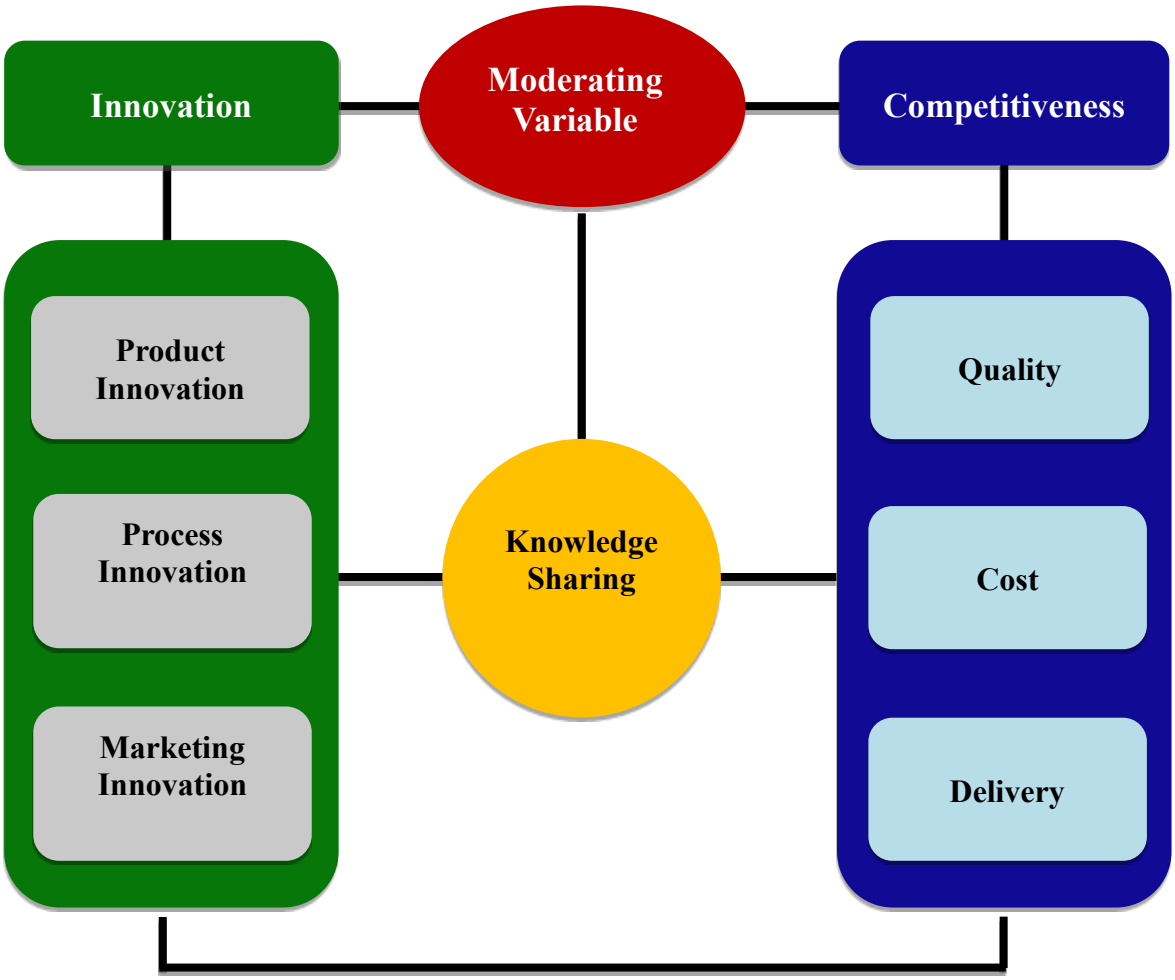

Figure 2: Second Conceptual Framework of the Study
Source: ***Organisational innovativeness***: product innovation, process innovation and market innovation (Wang & Ahmed, 2004; Anning-Dorson, 2018; Anning-Dorson & Nyamekye, 2020; Mabenge et al., 2022). ***Competitiveness***: (Ward et al., 1998; Awwad et al., 2013; Nawanir et al., 2013; Srivastava et al., 2017; Afum et al., 2020). ***Knowledge Sharing*****:** (Casimir et al., 2012; Mafabi, Munene & Ntayi, 2012; Takhsha et al., 2020).

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