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Examining the Impact of Innovation types on Ivorian Small and Medium-sized Enterprises (SMEs) Performance and Competitiveness

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Abstract

Researchers, entrepreneurs, and governments all agree that Small and Medium-sized Enterprises (SMEs) play an important role in the world's economic development. This study sought to examine the effect of innovation on SMEs' competitiveness and performance in Cote d'Ivoire. Data for the study was obtained from 250 SMEs operating in Cote d'Ivoire through a structured questionnaire. The PLS-SEM was the main analytical tool used to analyse the research findings via SmartPLS 3 and SPSS 22. Findings from this study revealed that marketing innovation, product innovation, organisational and process innovations are the innovation dimensions that contribute to SMEs' performance and competitiveness in Cote d'Ivoire. Marketing innovation contributes more significantly to SMEs' performance; followed by product innovation; organizational innovation; and process innovation. Additionally, the study found a significant and positive relationship between competitive advantage and SMEs' performance. The study thus concluded that to remain competitive and profitable, SMEs operating in developing countries must embrace innovation and constantly seek ways to be innovative remain relevant in the industry.

Keywords: Cote d'Ivoire, SMEs, Innovation Types, Performance, Competitiveness

Introduction

In recent times, a growing body of literature on the importance of small and medium enterprises (SMEs) considered SMEs to promote economic growth (Gebremariam, Gebremedhin, & Jackson, 2004). Apart from generating income to its owners, it is argued that SMEs formulate innovative ideas in the business environment as well as providing employment. Research supports the notion that SMEs that engage in innovation activities are better performers (Vermeulen, Jong, & O'Shaughnessy, 2005; Westerberg & Wincent, 2008). Expósito, Fernández-Serrano, and Liñán (2018) defined SMEs as reactive, flexible and risky organisations, being able to obtain profits from a quicker and more flexible adjustment to environmental changes due to simplified hierarchies

and quick decision (Terziovski, 2010). In this context, innovation represents an opportunity for small entrepreneurs to improve their business performance through a better market positioning (Expósito et al., 2018). Thus, the introduction of innovation represents an additional opportunity for SMEs to stand out from competition and improve their business performance to remain competitive (Tan, Chong, Lin, & Eze, 2009). To survive in this new technological and innovative business world, SMEs are pushed into adopting innovation and the use of new technologies. These technologies and innovations are aimed at improving SMEs business performance through involvement in innovative business practices (Expósito et al., 2018). The reduction of time-to-market, costs and risk and the acquisition of missing knowledge are among the main motives for SMEs to apply innovation in their businesses (Vrande, Jong, Vanhaverbeke, & Rochemont, 2009). Additionally, the interactions with external actors (e.g. market partners and/or authorities and research institutes) can ultimately increase the innovative capacity of SMEs for innovation (Klewitz & Hansen, 2014). Those businesses who do not adopt new technology and innovative business practices are left behind by adopters. Jerry Jesionowski, a renowned President of the US National Association of Manufacturers stated in the Wall Street Journal that “small firms need to get in the e-commerce game or they are going to be shut out of a critical part of the marketplace” (Alam & Jani, 2011). It is not surprising therefore, that many parties, including governments; focus much attention in encouraging SMEs to adopt the use of technology to enhance their businesses.

The role of SMEs in economic development is remarkable and appreciated by governments. Many researchers have done relevant studies of SMEs precisely on their performance and innovation. For example, Bouwmana, Nikoub, and Reuver (2019) have stated that digital transformation is a unavoidable for today and requires companies to make innovations in their business models. Thus, they remarked that SMEs have few time and resources to adapt their business models to digitization; however, those that use digital transformation have good results on their firm performance. In a study about UK SMEs, Saridakis, Idris, Hansen, and Dana (2019) prove in one of their objectives that innovative SMEs are more likely to export internationally than non-innovative SMEs, according to their study, innovation in products, services and processes play an important role in the internationalization of SMEs. Shashia, Centobelli, Cerchione, and Singh (2019) empirically demonstrates that leanness and innovativeness positively influence business performance. For them, simultaneously leanness and innovation have a significant positive impact on financial and environmental performance. Ioanid, Deselnicu, and Militaru (2018) aware of the positive impact of social networks in the world of business conducted a survey among Romanian SMEs to prove the impact of social network marketing on the performance of SMEs. They found that the interaction of social media between firm owners and customers, suppliers, communities is supportive of a spirit of new creativity. Indeed, the study clearly shows the impact of social networks on the innovation potential of firms. Yu, Yan, and Assimakopoulos (2015) have conducted a study of several cases of Chinese manufacturing SMEs in order to show how Chinese firms are successfully transit from pure imitation to original innovation (imitative innovation). The study mentioned the issues facing SMEs in this transition and shed light on the skills required to make this transition a success. For them, this design adopted by most Chinese manufacturing SMEs is an important factor that can enhance their ability to innovate. Wang (2018) opined that due to the scarce resources available to them, SMEs

in developing countries must innovate. This would ensure that SMEs would acquire knowledge that would lead to achieving competitive advantage. In addition, in response to the increasing nature of markets, firms should not only develop new skills but also exploit existing products and services. Additionally, he opined that, in a highly turbulent environment, the key factor determining an enterprise 'success or failure is whether it has an appropriate technological innovation strategy and sustains high performance (Wang, 2018). Creating a successful SME has never been easy, particularly; it is more difficult in developing countries such as Cote d'Ivoire. Developing countries often have high rates of start-up businesses but the chances of the creation of a sustainable business (survival longer than 42 months) are greatly reduced when compared to developed countries (Acolatse, 2012). According to the National Development Plan (PND, 2011) SMEs represented 98% of national enterprises and contributed about 18% of total GDP and offered nearly 20% of modern employment. However, this sector receives little support from the government (Abo, 2013). The economy of Cote d'Ivoire is stable and currently growing, in the aftermath of political instability in recent decades. The country is largely market-based and depends heavily on the agricultural sector. Almost 70% of the Ivorian people are engaged in some form of agricultural activity (Hongbo, Lucien, Raphael, & Boris, 2018; Tondoh et al., 2015). Several studies have shown that there is a clear connection between innovation and the creation of an entrepreneurial economy (Schumpeter, 1934). Studies related to the performance of SMEs with a central focus on innovation capacity however are limited (Siqueira & Cosh, 2008). This study therefore seeks to address the role of innovation in SMEs performance in Cote d'Ivoire. From the foregoing, this study seeks to achieve the following objectives:

- Assess the importance of innovation types on SMEs sector.
- Find out the impact of innovation types on SMEs performance and competitiveness.
- Find out if SMEs performance can be a competitive advantage.

Review of Related Literature

The Concept of Innovation

Innovation is a broad concept with several terminologies including "new", "changes", "opportunities", and "creative ideas", "adoption of organisation" and "value creation (Dadfar, Dahlgard, Brege, & Alamirhour, 2013). Thus, innovation can be defined as a process of turning opportunities into new ideas (P. Drucker, 2015; Tidd, Bessant, & Pavitt, 2005) the adoption of these ideas within the organization (Damanpour, 1991) and successful application of resulting novelties in a way which provides values to the organization (Dadfar et al., 2013).

Crossan and Apaydin (2010) defined innovation as the "production or adoption, assimilation, and exploitation of value added novelty in economic social spheres; renewal and enlargement of products, services, and markets; development of new methods of production, and establishment of new management systems". Hurley and Hult (1998) mentioned that, innovation is an aspect of firm's philosophy and openness toward new ideas. They introduce in their model the capacity to innovate, which is defined as "the ability of the organization to adopt or implement new ideas, processes, or products successfully." Lundvall (1985) also posits that innovation comes from accumulated knowledge and experience and can be an incremental technical change or an upsurge in technical opportunities.

Also according to Drucker (2015) innovation is a determined and dedicated work to realize organisational change in economic or social potential. He emphasized that innovation is a process of developing organisational growth. Growth can occur in a number of ways, such as better service quality and shorter lead times in non-profit organizations and cost reduction, cost avoidance, and increased turnover in profit-focused organizations. We define innovation based on the definition offered by Hage (1999) as, "innovation can be a new product, a new service, a new technology or a new administrative practice used by an organization to enhance the delivery of its business or service process. Innovation, strongly rooted in organizational innovation capability, is creating the required new products, processes and systems for adapting to changing technologies, markets and models of competition (Dougherty & Hardy, 1996)

Innovation types

The innovation dimension reflects a tendency to engage in and support new ideas, novelty, experimentation, and creative processes, thereby departing from established practices and technologies. A high rate of technological, product, service and market innovation, as implied by the innovativeness dimension, can be used by the firm to pursue new opportunities (Cooper, 1998). This idea is supported by Zawawi et al. (2016) which, through the multiple dimensions of innovation, explains how the four main dimensions of innovation generate a good performance and a competitive advantage for firms.

Innovation has been classified under four main dimensions, which are; product or service innovation, process or technology innovation, organization innovation and market innovation (Lumpkin & Dess, 1996). Tidd, Bessant, and Pavitt (2007) discussed the four dimensions of innovation as "The 4Ps of innovation space" and define it as follows: The first *P* of 4Ps is Product Innovation. It is a change in the products that the company is proposing. The second *P* of 4Ps is Process Innovation, that is, a change in the method of manufacture and the way of rendering the service. The third *P* of the 4Ps, meanwhile, is the innovation of Position. This is the change in the context in which the products services are introduced. Paradigm's innovation is the fourth *P* of the 4Ps it modifies the underlying mental models that frame what the company does (Tidd et al., 2005). Innovation has a significant impact on business performance, this is what Aksoy (2017) in his study on SMEs mentioned, and for him innovation has a significant impact on the performance of SMEs. These four dimensions of innovation are discussed next:

Product Innovation

Product innovation is the introduction of new product or service which is a significantly improved with respect to features, performance and quality. Product innovation is the input process adopted to improve the production of a standardized product (Alexe & Alexe, 2016) and it is defined as the one used in different sectors (Aksoy, 2017). Despite the fact that innovation importance is recognized, not all organizations are capable to develop or apply it considering that the average percentage of companies that have implemented any innovation from 2008 to 2010 was 53% (Ganzer, Chais, & Olea, 2017; OECD, 2017a)

According to OECD (2005), the product innovation involves a significant improvement in technical specification, features, component and material, inculcated software, user friendliness, portability, durability and other significant characteristics. This means that changes in the quality,

1 features, and performance of a product is called product innovation. Recent studies have shown that 156 innovation in products and services includes Growth, expansion and acquisition of a competitive advantage. This is remarkable in the SME sector. Compared to large firms, SMEs most often use product or service innovation to differentiate their product or service from others, giving them a competitive advantage (Ganzer et al., 2017). For companies operating in highly competitive environments, the adoption of service or product innovation becomes paramount; this is a well-honed weapon to defend overall business performance.

Process Innovation

Process innovation is the introduction new and improved way of production or method of service delivery by an enterprise that include significant changes in techniques, equipment, tool, machine etc. (Union, 2013). This is how organisations improve the process by which they create superior customer value for clients. Process innovation often entails small, incremental improvements coming from people in the trenches, not the managers. According OECD (2017a), simple organisational and managerial changes shall not be included in the process innovation. However, Union (2013) states that the outcome of process innovation should be significant with respect to the level of output as increasing quality of product or decreasing cost of production or distribution.

Process innovation organisation is any organisations that implement a new or significant process of production during the period of organisational review (OECD, 2017a). In considering innovation as a process, Damanpour and Gopalakrishnan (1998) proposed a unitary sequence model to explain the innovation process. They viewed innovation process as a generator or an adopter of innovation. When it is viewed as generation of innovation, it is defined in terms of problem solving and decision making where innovation process is divided into five stages: idea generation, project definition, problem-solving, design and development, and marketing or commercialization (Higgins, 1995). This is the place where new products, services and the business models are made. Process innovation is one of the strong pillars of innovation management because firm's innovation objectives are necessarily driven by the process innovation, which in turn defines the steps in the process (Oke, Burke, & Myers, 2007)

Organizational Innovation

Organizational innovation refers to the extent of adoption of change in the organization. As Rajapathirana and Hui (2018) put it, Organizational innovation is “implementation of a new organizational method in the firm’s business practice, organization or external relations” (p.46). Organizational innovation can enhance firm performance by reducing administrative and transaction cost, but its intended purpose is to improve the workplace satisfaction. Damanpour and Gopalakrishnan (1998). Abidin, Mokhtar, and Yusoff (2011) explained the organization innovation a process of organizational change that directly affects the technical and social systems of an organization. This stage consists of two phases: initiation and implementation. Initiation stage is characterized by three sub-stages: awareness of innovation, formation of attitude towards it and evaluation from organizational standpoint. Implementation stage also includes two sub-stages: trial implementation and sustained implementation (Damanpour & Gopalakrishnan, 1998).

Organizational innovation also means using new ideas to improve the different sectors of an enterprise. It allows the firms to convert new ideas into a new products or services. For Porter (1990) organizational innovation is responsible for technological improvements, new and better methods and ensures ways of doing things. This results in changes in new marketing methods, new forms of distribution, product, process, and new designs (Porter, 1990, p.45). Organizational innovation is about creating value, increasing efficiency. It enables firms and managers to bring innovations in management practices, innovations in business organisation

Marketing Innovation

Innovation and marketing are two different things that complement each other, and the success of one depends on the success of the other. Marketing Innovation takes into account marketing activities in the process innovation such as the marketing of new products that meet the needs of customers. Marketing Innovation plays a very important role in ensuring and increasing the success of innovation. Marketing innovation covers all innovation management activities that help to promote market success of new products and services (Casidy, Nyadzayo, & Mohan, 2019). It is the successful marketing of a new product or service for the satisfaction of customer needs. It anticipates future needs and helps identify future and new market opportunities. P. F. Drucker (1958) believes that a firm has two core functions that are "Marketing and Innovation" for him, marketing and innovation are the couple that guarantees the success of the company. In marketing management the main mission is to increase sales, the focus is therefore on customer and market orientation. Thus, the process, the product and the service are aimed at meeting the needs of customers and users. To succeed, marketing and innovation management have to couple because marketing is effective when there is innovation in marketing tasks. Adoption of marketing innovation tools is needed to meet new challenges of business competitiveness (Fiore, Silvestri, Contò, & Pellegrini, 2017) Marketing and innovation are two entities that complement each other for the firm's performance. Having a unique original product highly improve sales and customer growth. On this fact, Hendrayati and Gaffar (2016) have thus affirmed that the performance of the innovation leads to the marketing performance.

Hypothesis Formulation

Relationship between innovation types and SMEs firm competitiveness and performance

The effect of innovation on firm's performance has been widely discussed by previous scholars (Gunday, Ulusoy, Kilic, & Alpkan, 2011; Hernández-Espallardo & Delgado-Ballester, 2009; Rajapathirana & Hui, 2018). For example, an empirical research has proven that this would also result in a significant linkage between outcome of innovation and firm's performance such as return on investment, market share, competitive position versus direct competitors and value to customers (Neely, Adams, & Crowe, 2001). Despite the widespread interest on innovation and firm's performance, however, understanding of the relationship between multi-dimensional factors of innovation process and identified innovation outcomes towards firm's performance is limited (Abidin et al., 2011).

Gunday, Ulusoy, and Kilic (2011) empirically studied the relationship between innovation types and firm's performance. In this study, firm performance is referred to innovative performance, production performance, market performance and financial performance, while innovation is

classified into four types: product innovation, process innovation, marketing innovation and organizational innovation. Findings have revealed the positive effect of innovations on firm's performance in manufacturing industries. Considerable amount of research has indicated that organizational innovation is positively associated with the innovation performance (Roberts & Amit, 2003; Yavarzadeh, Salamzadeh, & Dashtbozorg, 2015), and helps to better understanding of which type of capabilities would affect for competitive advantage that can generate economic rent (Zahra & Das, 1993). Yavarzadeh et al. (2015) also investigated the relationship between organizational innovation and performance in tax affair general administration of Iran. Their result shows that innovation (product, process, administrative/organizational) as positive and significant effect on organizational performance in terms of financial, growth, customer and internal process (Rajapathirana & Hui, 2018). In addition to that, product and process innovation play effective role on organizational performance. We therefore firstly hypothesize that:

H1: *Product innovation has direct positive influence on SMEs performance*

H2: *Process innovation has direct positive effect on SMEs performance*

H3: *Organizational innovation has positive impact on SMEs performance*

H4: *Marketing innovation has direct positive influence on SMEs performance*

Relationship between SMEs performance and Competitive Advantage

To survive and win, a firm has to gain advantage over its competitors and earn a profit. The firm gains competitive advantage by being better than their competitors in doing valuable things for their customers (Calantone, Vickery, & Droge, 1995). Barney (1991) argued that firms that possessed resources that were valuable and rare would attain a competitive advantage and enjoy improved performance. Firms that are able to create innovative-resource are more likely to gain competitive advantage and achieve higher performance (Bateman & Snell, 2007; Han, Kim, & Srivastava, 1998). According to resource theory, the competitiveness of a firm depends on sustainable resources, difficult to imitate and replace that differentiates this enterprise from its competitors (Zeebaree & Siron, 2017). Barney (1991) supports this idea, for him, improving the performance of a business depend on availability and access to valuable resources, rare, inimitable, non-substitutable. It comes out of these two assertions that the strength or weakness of a company is based on its resources (financial capital and physical capital) and that allow it to produce a competitive advantage (Rosenbusch, Brinckmann, & Bausch, 2011).

The company's performance is linked to its material and immaterial resources, which allows it to benefit from sustainable competitive advantages. Researchers agree to classify RBV as follows: financial, physical, legal, human, organizational, informational and relational resources. RBV is at the base of the management of business and the entrepreneurship and contribute enormously to the company's performance and result in a sustainable competitive advantage (Wernerfelt, 1984; Zaridis, 2009). Finally, we hypothesize that:

H5: *SMEs performance is expected to have a positive and direct impact on Competitive advantage*

Theoretical Framework

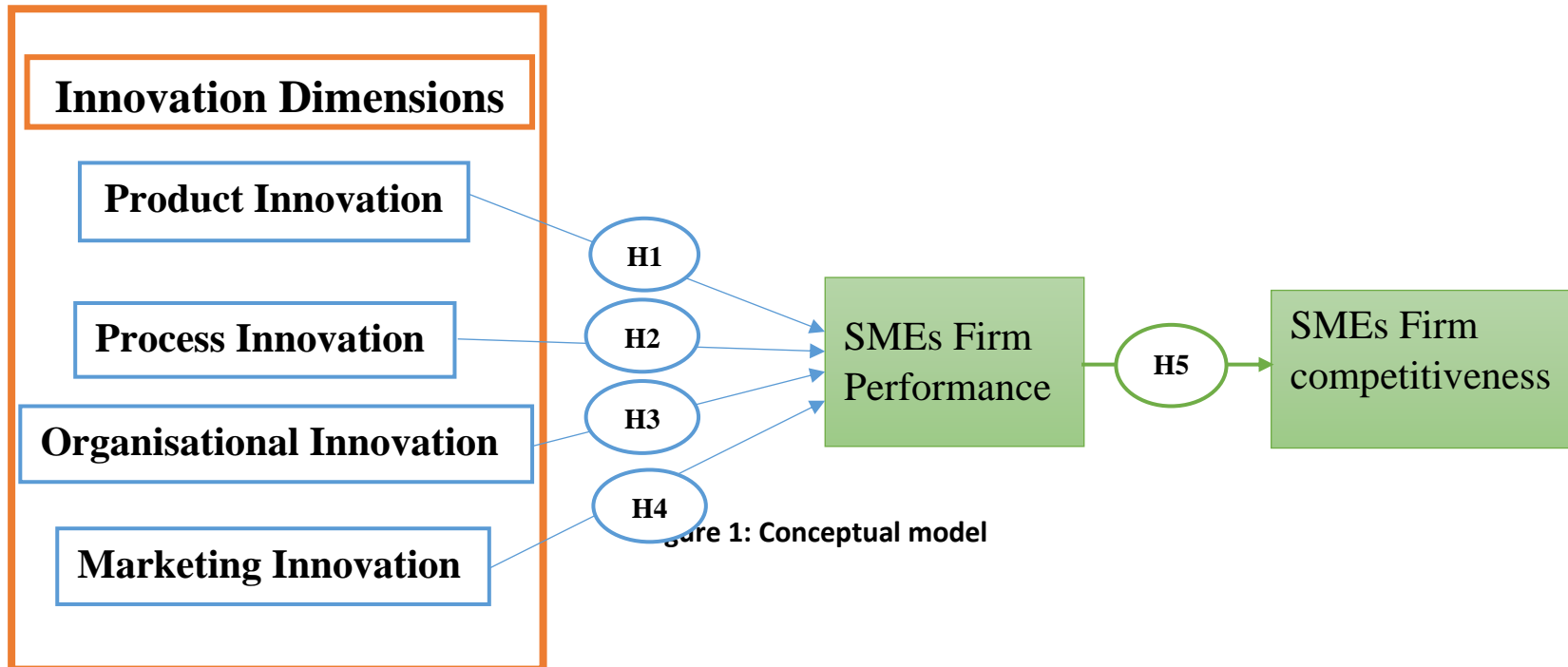


Figure 1: Conceptual model

Methodology

This study adopted the survey methodology with questionnaire as the main data collection tool. The population of study included all SMEs operating in Cote d'Ivoire. A cluster sampling method was used to divide the sample into four main clusters based on location of the business. Four cities were selected (Korhogo in the north, Abidjan in the south, Abengourou in east and Man in the west) to form these clusters due to the heavy presence of SME businesses in the cities and the availability of register for SME businesses operating in the city. A convenient sample size of 500 respondents was chosen for the study. Out of the 500 questionnaire administered, a 320 usable questionnaire were obtained, after data cleaning. The researchers used informed consent form to seek permission from the respondents and assured the respondents of anonymity and confidentiality of their responses. A five point Likert scale was used to measure variables for the research constructs as recommended in previous work (Hunt & Morgan, 1996 ; Marques & Ferreira, 2009) The Likert scale ranged from strongly disagree to strongly agree, coded 1 to 5 respectively. In all, the measurement items for the five multi-item constructs had 26 items that were derived from previous studies and modified to suit the research context (see Figure 2).

Resultats

Common Method Bias

The study used Harmann's Single-Factor test to check the common method variance. This test was conducted using exploratory factor analysis (EFA) and loading 12 items on one factor. Thirty items were initially entered but 4 of the items were later removed leaving 26 items. Together these components explain about 74% of the variance in the sample

Reliability and Validity

The data was first checked for reliability through convergent and discriminant validity. Applying SPSS, the exploratory factor analysis (EFA) was conducted to measure the underlying dimension associated with the 26 items. The constructs validity was measured using Bartlett's test of Sphericity and Kaiser-Mayer-Olkin (KMO) measure of the sampling adequacy of individual variables. KMO overall should be 0.6 or over to perform factor analysis (Danaher & Haddrell, 1996). The results of Bartlett's test of Sphericity and KMO revealed that both are significant and suitable for the factor analysis (see Table 1).

The cumulative variance explained is 93%, which exceeds the acceptable limit of 60% (Danaher & Haddrell, 1996). The value of Bartlett's test of Sphericity indicate sufficient correlation between the variables, it shows 4505.510 and significant ($p > 0.000$). The factor loading of all items of each scale exceeds 0.5 (Delvin, Dong, & Brown, 1993). Thus, these values constitute of evidence of convergent validity

Table 1: KMO and Bartlett's Test

| | | |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .930 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 4505.510 |
| | Df | 66 |
| | Sig. | .000 |

Source: Author's calculation.

Measurement Model Reliability and Validity

The construct reliability measures the extent of internal consistency of measures used. This is measured through the item factor loadings which should not be less than 0.70. It is also assessed through the Cronbach's alpha at an acceptable level of 0.7 (Delvin et al., 1993; Ozdamar, 2002) From Table 2, all of the constructs have item loadings higher than the recommended 0.70.

Table 2: Item loading, construct reliability and discriminant validity

| | FL | CA | rho_A | CR | AVE |
|------|-------|-------|-------|-------|-------|
| CA1 | 0.816 | 0.842 | 0.844 | 0.894 | 0.678 |
| CA2 | 0.811 | | | | |
| CA3 | 0.844 | | | | |
| CA4 | 0.824 | | | | |
| MT11 | 0.865 | 0.927 | 0.927 | 0.945 | 0.774 |
| MT12 | 0.862 | | | | |
| MT13 | 0.889 | | | | |
| MT14 | 0.891 | | | | |
| MT15 | 0.892 | | | | |
| OI1 | 0.841 | 0.846 | 0.865 | 0.894 | 0.679 |
| OI2 | 0.835 | | | | |
| OI3 | 0.804 | | | | |
| OI4 | 0.815 | | | | |
| PCI1 | 0.908 | 0.884 | 0.886 | 0.921 | 0.744 |
| PCI2 | 0.876 | | | | |
| PCI3 | 0.892 | | | | |
| PCI4 | 0.768 | | | | |
| PDI1 | 0.781 | 0.889 | 0.894 | 0.919 | 0.693 |
| PDI2 | 0.810 | | | | |
| PDI3 | 0.844 | | | | |
| PDI4 | 0.849 | | | | |
| PDI5 | 0.876 | | | | |
| SMI1 | 0.806 | 0.816 | 0.818 | 0.879 | 0.645 |
| SMI2 | 0.793 | | | | |
| SMI3 | 0.855 | | | | |
| SMI4 | 0.756 | | | | |

Notes: FL – Item Loadings, OI – Organisational innovation, PDI – Product innovation, PCI – Process innovation, MTI – Marketing Innovation, SMI– SME Performance, CA- Competitive Advantage; AVE-Average variance extracted, CR- Composite reliability, CA – Cronbach’s alpha

Table 2 shows the item loading and reliability of the variables used in this study. All the variables returned Cronbach alphas above 0.70, which shows the reliability for the measurement of each construct. The validity of the constructs was also ensured through construct validity and convergent validity. Convergent validity assesses the degree to which a measurement represents and logically connects the observed phenomenon to the construct through the fundamental

theory (Hair, Ringle, & Sarstedt, 2011). It is assessed through convergent validity and discriminant validity (see table 3) (Ozdamar, 2002). Convergent validity was considered adequate since the average variance extracted (AVEs) and composite reliability (CR) satisfied the minimum of 0.50 and 0.70 respectively (Hair et al., 2011; Ozdamar, 2002)

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Results of Structural Model

The structural model was assessed through the regression weights, t-values, p-values for significance of t-statistics (Ringle & Becker, 2015). The results of structural model for testing the research hypotheses are presented in Table 4 and in Figure 2.

Table 3: Discriminant validity

| Hypothesis | Relationship | Estimate | SE | T-Stat | p-value |
|------------|--------------|---------------------|-------|------------------------|---------|
| H1 | PDI—SMP | 0.540 | 0.032 | 16.94 | *** |
| H2 | PCSI—SMP | 0.644 | 0.035 | 18.63 | *** |
| H3 | OI—SMP | 0.622 | 0.043 | 14.69 | *** |
| H4 | MTI—SMP | 0.604 | 0.023 | 24.27 | *** |
| H5 | SMP—CA | 0.790 | 0.034 | 23.0 | *** |
| | | R^2 (SMP) = 0.667 | | R^2 Adjusted = 0.663 | |
| | | R^2 (CA) = 0.646 | | R^2 Adjusted = 0.644 | |

Source: Author's calculation

Note: ** significant at 0.01, *** significant at 0.001; PDI – Product innovation, – OI-- Organizational innovation, PCSI – Process innovation, MKI – Marketing Innovation, SMP – SME Performance, CA—Competitive Advantage

The results in Table 4 shows that all the hypotheses tested were supported. First of all, the direct effect of the innovation variables on SME performance was supported (H1; H2; H3; H4; H5; $p < .05$). Product innovation had a direct positive effect on SME performance ($\beta = 0.540$; $t = 16.94$, $p < .001$); this led to the acceptance of first hypothesis (*H1*). The Beta score means that when product innovation increase by 1%, SME performance increases by 54%.

Process innovation also shows a positive and significant relationship with SME performance ($\beta = 0.644$; $t = 18.63$, $p < .001$); this led to the acceptance of the second hypothesis (*H2*). It means that the more innovative process engaged in by SMEs, the better the performance would be in terms of increased and enhanced growth and profitability for the firms.

Organisational innovation also had a positive and significant on SME performance ($\beta = 0.622$; $t = 14.69$, $p < .001$), and this led to the acceptance of the third hypothesis (*H3*). The Beta score means that when organisational innovation increase by 1%, SME performance is expected to also increase by about 62%. When organisations engage in new methods in terms of the way they conduct their activities, the result is that the firms would then be able to churn out better products and services, which would lead to increased and enhance performance.

Marketing innovation also shows a positive and significant relationship with SME performance ($\beta = 0.604$; $t = 24.27$; $p < .001$). That also led to the acceptance of the fourth hypothesis (*H4*). A focus on marketing innovation would lead to innovative solutions that give customers value for their money as the firm focuses on satisfying customers' needs at all times.

Overall all the independent variables product innovation, process innovation, organisational innovation, and marketing innovation account for about 0.667 of the variance in SME performance (R-square). That means that, together, the independent variables predict about 67% of the dependent variable. Also, the independent variable in the second model (SMP) influences the dependent variable (CA) by 0.646 or 65%. It means that SME performance explains about 65% of the dependent variable competitive advantage (see Figure 2).

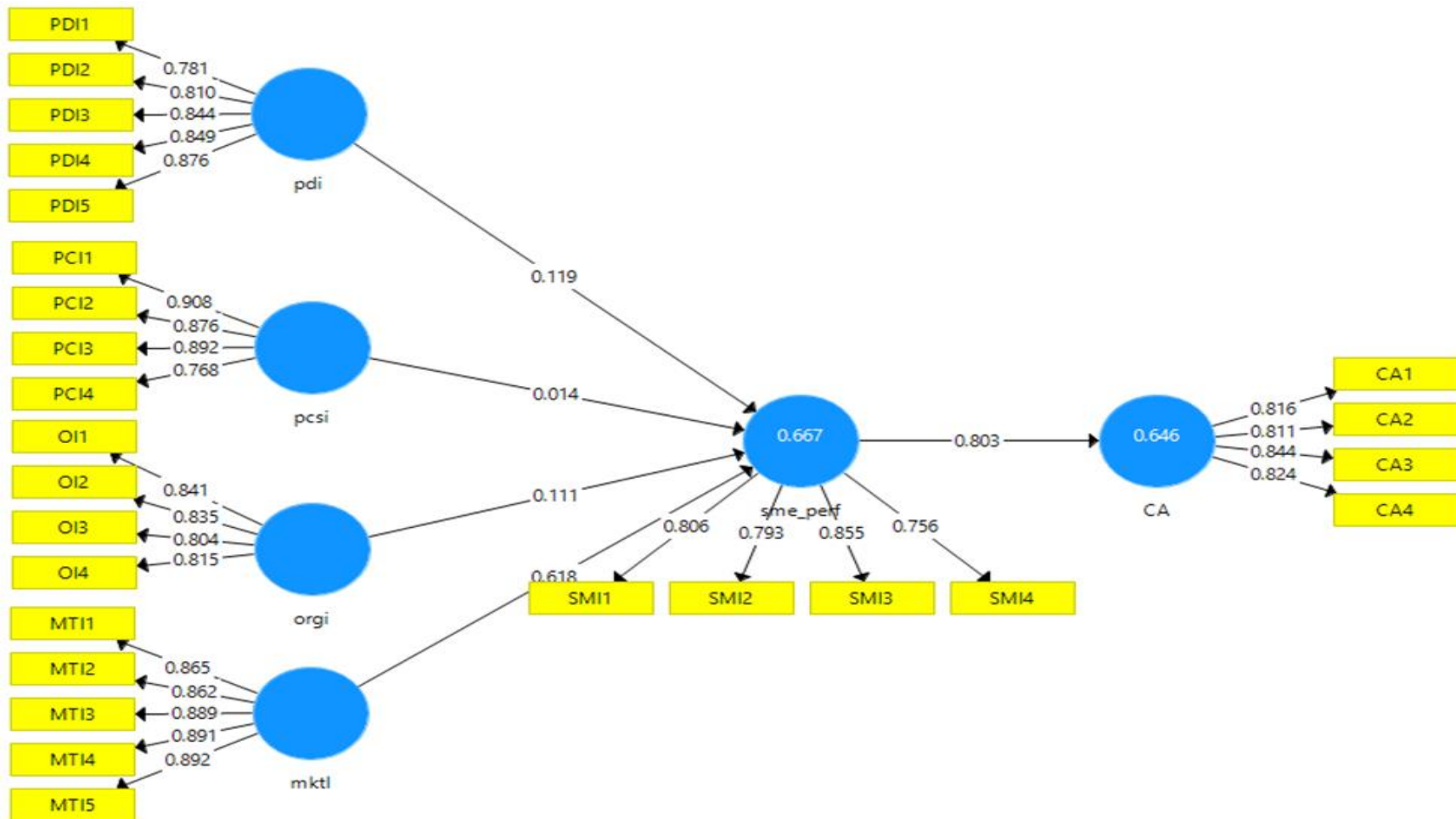


Figure 2: Path model on the relationship between innovations, SME performance, and Competitive advantage

Discussion

First, this study sought to explore the effect of innovation in SMEs' performance and competitiveness in Cote d'Ivoire. Findings from this study revealed that the dimensions of innovation that contribute to SME performance are marketing innovation, product innovation, organisational and process innovations. Marketing innovation contributes more significantly to SME performance (62%); followed by product innovation (11.9%); organizational innovation (11.1%); and process dimension (1.4%). This finding supports earlier findings (Ameme & Wireko, 2016; Fornell & Larcker, 1981; Yusheng & Ibrahim, 2019). This finding is significant as it shows the type of innovation needed by SMEs to spur growth and achieve competitive competitiveness by using innovation to enhance their output.

Second, concerning the hypotheses of the study, all the five hypotheses tested were supported in this research. The first hypothesis (*H1*) found a positive relationship between product innovation and SME performance. SMEs will be successful if they implement a robust strategy on how to churn out innovative products and services. That would make them stand out as they offer unique products and services to customers who are always yearning for something new. Product innovation thus appears to be very the critical driver for performance. This finding also supports earlier findings (Ameme & Wireko, 2016; Kalay & Lynn, 2015; Lilly & Juma, 2014; Uzkurt et al., 2013) Hypothesis 2 (*H2*), which states that process innovation has a direct positive relationship with SME performance, was also supported. Process innovation relates to the introduction of new and improved techniques of production or method of service delivery by firms that include changes in techniques, equipment, and tool and machine

(OECD, 2005, 2017b). Organisations and businesses need to continually search for new methods of production or service delivery as the cost of production keep getting higher due to the finite nature of raw materials and scarcity of resources due to competition. It agrees with the position of the Union (2013) that the outcome of process innovation should be significant that would result in an increasing level of output, quality of product, or decreasing cost of production and distribution. Firms that are able to set up new production methods or service delivery can reduce cost of production, delivery cost, as well as overall cost of doing business and in the long run, make profit.

The third hypothesis (*H3*) further revealed a positive and significant relationship between organisational innovation and SME performance. This finding means that SMEs in Cote d'Ivoire are doing enough in terms of adopting change in the way they do business. Thus, they seem to be adopting new organisational methods in their business practices and using new ways of dealing with their clients. This finding supports earlier findings that showed a positive relationship between organisational innovation and firm performance (Fornell & Larcker, 1981; Kalay & Lynn, 2015; Uzkurt et al., 2013)

The fourth hypothesis (*H4*) also revealed a positive relationship between marketing innovation and SME performance. This finding shows that firms engaging or adopting new marketing methods are able to meet customer needs and have the opportunity to increase and enhance their business performance. Once a firm engages in marketing innovation as a strategy, it seeks ways by which to stay relevant by scanning the environment to take advantage of opportunities available in its internal and external environment to its advantage and benefit. That gives it the idea to produce novel products and services and charge premium prices as a benefit for its unique products and services. It thus becomes difficult for competitors to outsell the business until such time competitors are able to

come out with similar innovations and by which time the firm would have sought for innovations as in the case of the two giant telephone manufactures Apple and Samsung.

Finally, hypothesis 5 (H5) also revealed a significant and positive relationship between competitive advantage and SME performance. Competitive advantage entails benefits firms achieve by possessing some capabilities and resources that others do not have. That is because the firm is always on the lookout for new resources and capabilities that gives it a superior competitive advantage over its competitors. Amit and Shoemaker (1993) defined capabilities as “information-based tangible or intangible processes that are firm-specific. These are deployed over time through complex interactions among the firm’s resources which includes innovativeness (1993; p.35). Having an intangible asset such as innovation would thus put SMEs in an excellent position to dominate their industry as well as compete with other large companies that are not innovative.

Conclusion

This study examined the effect of innovation types on SMEs' performance and competitiveness in Cote d'Ivoire. Findings from this study render some support for previous research on the relationship between innovation types and SME performance and competitiveness. First, we found that different types of innovations like product, process, organisational and marketing innovations have significant effect on the success of SMEs in terms of growth and profitability. Second, we observed that being innovative also leads to the achievement of a competitive advantage, which enables firms to outperform their rivals due to the advantage they possess, which other competitors do not have. We, therefore, conclude that to remain competitive as well as become profitable, SMEs operating in developing countries must embrace innovation and continuously seek ways to be innovative.

The study is being carried out on only 250 SMEs in Cote d'Ivoire, as such; the results obtained cannot be generalized. It is true that innovation types through the results of this study have been confirmed to have a significant effect on the performance and the competitiveness of SMEs firm, however, future studies could look at factors other than the innovation types to know their effect on performance and competitiveness. In addition, the model of this study allows measuring the effect of firm performance on its competitiveness (how the performance of an SME firm can constitute its competitive advantage) By the way, the study suggests that future research examine the opposite of this hypothesis. That is to say, how the competitiveness of an SME firm can promote its performance?

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