Enhancing Competitive Intelligence Innovation for Competitive Performance of SMEs in Nigeria [1]

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ABSTRACT

Small and Medium Enterprises (SMEs) are seen as bedrock for economic growth and development. The objective of this paper is to investigate how competitive intelligence enhances innovation performance in the context of (SMEs). The purpose of this exploratory study is to investigate the contribution of absorptive capacity competitive intelligence and performance in Enterprises. Competitive advantage is measured by cost reduction and market expansion. Our findings allowed us to propose a framework showing the contribution of competitive intelligence innovation performance relying on absorptive competitive intelligence; highlighting that a prospector owner-manager can improve the results of competitive intelligence in the SMEs and contribute to better innovation performance. The managers were selected using the non-probabilistic method of convenience. Primary source of data collection was deployed (questionnaire) and reliability was done using Crombach Alpha with a reliability statistic of .899. Descriptive statistics (mean) and inferential statistics (regression analysis) at 5% level of significance was adopted for data analysis and test of the hypothesis respectively. This research work examines and conducted the findings revealed that competitive intelligence has significant positive effect on cost reduction and marked expansion of SMEs in Nigeria. The study concludes that SMEs seeking to reduce their cost and expand their market should adopt competitive intelligence strategies towards the enhancement of their competitive advantage.

KEYWORDS Intelligence, innovation, competitive performance, SME

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1. INTRODUCTION

1.1. Background of the study

In dynamic and complex environments, it can be difficult for Small, Medium Enterprises (SMEs) to achieve business performance, innovate and survive, even though these actions are crucial competitive intelligence for economic growth and competitiveness. Competitive intelligence appears as a strategic practice to help them. Although many theoretical study the relationship between competitive intelligence and innovation, few studies have conducted empirical studies in the context of SMEs.

Small and medium-sized enterprises (SMEs) are considered the primary source in creating jobs and economic wealth Ahire, Landeros and Golhar, (2006), employing more than 95% of the world's working population Akinc, and Roodman, (2006). In Nigeria, SMEs account for 99.7% of total firms in terms of population and contribute about 54% of Nigeria's GDP. Despite the importance of SMEs in economic growth, significant obstacles impede their sustainability, leading in most cases to failure.

The main objective of competitive intelligence is to provide an alert for external turbulence events that may have an impact on the economy's strategy and performance (Chen et al, 2019). The main environmental turbulence includes market, technologies, competitors' intensity (Choi et al, 2008; Chopra et al, 2020). Many studies have shown that SMEs prefer to monitor sources in their immediate environment. This environment consists of customers, competitors, suppliers as well as technologies. Competitive intelligence is essential for business because it only provides a solid foundation for innovation process but because its absence can also be considered a barrier or even a factor in the failure of innovation (Feichtinger, (2001); Ebrahimpour, (2003); Garwe et al, (2010); Horng et al, (2010); (Derijcke et al, (2010); (David et al, (2011); (Filippini et al, (2016); (Cornick et al, 2016); (Dingus et al, (2017); (Chow et al, (2020)).

To overcome challenges and survive, SMEs need to improve their innovation performance (Amoako-Gyampah, K. and Meredith, J.R. (2005). Innovation requires research and development (R&D) (Anderson, Cleveland, and Schroeder, (2011), which is a determinant of innovation (Aviv, 2003). However, most SMEs do not have sufficient competitive intelligence resources to invest in R&D (Bailetti, & Tanev, S. 2008). Moreover, they are not qualified to benefit from government assistance programs for R&D. They are, more than ever, compelled to exploit external information Ballou, (2003); Battain et al, (2013) by adopting environmental analysis activities such as competitive intelligence Beheshti, (2020). Competitive intelligence allows companies to gather information from customers, suppliers, competitors; technologies thus build a strong foundation for the innovation process (Bendoly et al, (2014); Booker et al, (2014)).

1.2. Problem Statement

The literature shows that the effectiveness of competitive intelligence in the context of SMEs depends on the company's owner-manager profiles and the absorptive capacity competitive intelligence of the company. Indeed, the SME prospector owner-manager seems to contribute to more effective competitive intelligence in acquiring and interpreting external information (Bretthauer, et al, (2014); Cadogan et al, (2015)). In addition, absorptive capacity competitive intelligence allows the company to transform external information (Bailetti et al, 2008) into knowledge, which in turn contributes to innovation performance (Chen et al, 2015).

Although competitive intelligence is useful for businesses, few studies have been devoted to SMEs (Cagliano et al, 2003; Aviv, 2003)). More specifically competitive intelligence, empirical studies treated the relationship between competitive intelligence covering economic, marketing, military theory, information sense strategic management (Battain et al, 2013). However, to our knowledge, no framework that explains the role of competitive intelligence in the innovation performance of SMEs in practice.

This paper addresses this gap and proposes a framework for a better understanding of how competitive intelligence contributes to innovation performance relying on absorptive capacity competitive intelligence for better results. The proposed framework is based on empirical data and the published literature.

2. LITERATURE REVIEW

This section presents a literature review on innovation performance and competition, as the concepts supporting this study. The following sections present methodology and results. In discussing the implications of the proposed framework, the paper proposes several propositions predicting the positive impact of competitive intelligence and absorptive capacity competitive intelligence on innovation performance.

2.0. Description of one SME in Nigeria

Stallion Vision is an automation Company, they are continually striving to bring new solutions and features to market that help customers address their most pressing business needs and maximize business results.

Stallion Vision, a Nigeria based company that specialized in Audio & Video Innovative Solutions and deploying sophisticated technologies. The company is part of Platinum Vision Group headquarters in the UAE and a member of the Stallion Group. The team has over 20 years of experience in the video conferencing and automation industry across the UK, Europe, the Middle East, and Africa.

Platinum Vision Group's head office in Dubai is part of the Stallion group of companies that have been operating in Sub Saharan Africa for more than two decades, Stallion has expanded rapidly into one of West Africa's largest businesses conglomerates with well-consolidated business lines, robust infrastructure, and valuable human resources.

Today Stallion is the controlling entity of several leading businesses in the trading, industrial, automotive, and services sectors of the regional economy. Stallion's proven track record is based on the ability to identify business opportunities that correlate with the organization's core competence areas and execute business plans the most optionally.

Stallion's business decisions are made based on well-researched long-term prospects and the sustainability of shareholder value. They typically invest in businesses that have high growth potential and are within their physical market/origin access.

Platinum Vision has now set up Stallion Vision in Nigeria and West Africa with European standards of installation and service. Stallion Vision has a leading brand association with the likes of Polycom, Crestron, and 40 other leading brands. Polycom is the leader in Video conferencing, TelePresence, and Real Presence solutions providing high-quality video and audio conferencing over low bandwidth a perfect solution for the African market today.

2.1 Innovation

Innovation can be four types: product innovation, process innovation, organizational innovation, and marketing innovation. Innovation is the engine of growth and development for SMEs (Horng et al, 2000). Empirical studies have shown that the most successful innovative SMEs in Nigeria, the United States, and Europe generate strong growth (Katsikea et al, 2012) for long periods (Katsikea et al, 2012). Innovation performance is a critical requirement for business competitiveness (Horng et al, 2000); Kohli et al., 2015)). It can be efficient as competitive intelligence and effective (Kuehn et al., 2007). According to those authors, intellectual refers to the degree of effectiveness of innovation to the use of resources in terms of the time and cost required to complete the innovation project. Similarly, Kohli et al. (2015) emphasize that innovation performance represents the degree of effectiveness of the firm in implementing innovation, which in turn has a significant impact on the organization's performance.

To stimulate innovation, companies invest more and more in R&D. Large companies can cover the costs associated with R&D activities and spread the risks associated across their entire project portfolio (Laforet, 2016). They have access to resources to invest in equipment, marketing technical work to major innovations (Laforet, 2016). However, most SMEs do not have sufficient competitive intelligence resources to invest in R&D (Laforet, 2016).

Therefore, to promote and conduct innovation better, organizations need to be proactive in identifying and exploiting opportunities. To do this, these organizations should have anticipatory competitive intelligence approaches (Kohli et al 2015; Laforet, 2016). In addition, absorptive capacity competitive intelligence as being crucial competitive intelligence to convert the information collected into knowledge for the innovation process (López-Fernández et al, (2018); (Lichtenthaler, (2020)).

2.2 Competitive intelligence

Competitive intelligence is an evolving concept (MacInnis et al, 2005). Their definitions present a challenge for both academics and practitioners (McClelland, 2012); Mitton, 2012); Mosconiet al, (2018)). Competitive intelligence is an amalgam of disciplines competitive intelligence covering economics, marketing, military theory, information sense competitive intelligence, and strategic management (Moss, 2014). In addition, competitive intelligence is different from industrial espionage, which is both an illegal and unethical activity (Najafi-Tavani et al, 2016). Competitive intelligence is both a process and a product (Olson et al, 2016).

The society of Professionals defined competitive intelligence as the systematic and ethical collection, analysis, management of external information that can affect the company's planning, competitive intelligence decision-making business operations. Competitive intelligence can also as a product, which refers to intelligence information about competitors' activities from public, private sources, and its scope is the present and future behavior of competitors, suppliers, customers, technologies, acquisitions, markets, products, services, and the general business environment (Najafi-Tavani et al 2016). Competitive intelligence has been the fourth factor for the survival of enterprises after capital, technology talent (Moss, 2014).

The main objective of competitive intelligence is to provide an alert system for external turbulent events that may have an impact on the company's strategy and performance (Najafi-Tavani et al, 2016). The three main sources of such environmental turbulence include market, technologies, and competitors' intensity (Nenzhelele et al, 2013; Najafi-Tavani et al, 2016)). Many studies have highlighted that SMEs prefer to monitor sources in their immediate environment (Olson et al, 2016; Nenzhelele, 2013)). This environment consists of customers, competitors, and suppliers ((Nenzhelele et al, 2013), and technologies (Nenzhelele et al, 2013; Najafi-Tavani et al, 2016; Pavitt et al, 2015; (Moss, 2014)). Competitive intelligence is essential for business because it not only provides a solid foundation for the innovation process (Najafi-Tavani et al, 2016; Pickton et al., 2012)) but because its absence can also be a barrier (Pavitt et al, 2015) or even a factor in the failure of innovation (Wycoff, (2013); Woll et al, 2014)).

2.2.1 Customers' intelligence information and innovation performance

Customer engagement enables enterprises to effectively enhance the success rate of radical innovation and incremental innovation (Xu et al, 2020). To innovate, enterprises must identify potential customer need, and collect and analyze their demands, which can help generate new ideas for products and services (Moss, 2014). According to (Moss (2014); Kohli et al, (2015)) intelligence information from customers is essential for companies. Indeed, intelligence information increases the level of innovation performance (Kohli et al., 2015) and helps the development activity of new products (Kohli et al., 2015; Moss, 2014)). More competitive intelligence, customers' intelligence information improves both radical innovation performance (Dingus et al., 2017; Filippini et al., 2016)) and incremental innovation (Laforet, 2016; Filippini et al., 2015)) in particular, in the early stages of the innovation life cycle (Laforet, 2016). A study by Bailetti et al, (2008) found a positive correlation between customer intelligence information and innovation in SMEs.

2.2.2 Competitor intelligence information and innovation performance

Competitor analysis is the soul of competitive intelligence. Competition helps enterprises analyze competitor strengths and weaknesses, predict their strategies, and evaluate their new products, especially competitive intelligence their prices, costs, profits, and development (Moss, 2014). Prior research advises companies to monitor competitors to develop the ability to accelerate product innovation activities (Wong, 2014; Laforet, 2016)) and innovate in those areas where competitors are weak (Kohli et al., 2015). Competitive intelligence on competitors has an impact on different types of innovation in companies. It contributes to radical service innovation (Chopra et al, 2020). In the same vein, Filippini et al. (2016) noted that intelligence information from competitors stimulates the exploitation of skills and leads to radical innovation.

2.2.3 Suppliers' intelligence information and innovation performance

Suppliers are information sources for helping firms' innovation performance (Garwe et al, 2010). The participation of suppliers in the innovation process contributes to a potential source of sustainable competitive advantage (Chopra et al, 2020). Suppliers often establish strategic partnerships with customers and competitors to implement technologies, processes, or new products. To gather information from suppliers, the company can therefore conduct primary research (Chopra et al., 2020).

According to Garwe et al, (2010), intelligence information from suppliers allows the product development team to understand the market dynamism and act faster, which can contribute to new-product performance. Chen et al, (2014) argue that intelligence information from suppliers helps companies to improve innovation performance. Battain et al, (2013) highlight the fact that

suppliers contribute to innovation in different forms, such as the provision of new product/ process technologies, or the development of joint projects. Supplier intelligence information is also one source of innovation and has a positive effect on innovation performance (Chopra et al, 2020).

2.2.4 Technologies intelligence information and innovation performance

Several research results highlight the importance of technologies as a rich information source, which contributes to the emergence of innovative ideas. Information from technologies allows organizations to be more competitive (Choi et al, 2008; Derijcke et al, 2010; Dery et al., 2012)). The literature highlights multiple tools and technology platforms that can help companies gather information about their external environment. The internet, especially competitive intelligence social competitive intelligence media, are the sources of information most often mentioned in the literature (Derijcke et al, 2010). Chow et al, (2011) argue that the internet helps companies gather quality market information and make more informed decisions competitive intelligence.

In the same vein, Ahire et al, (2006) emphasize that the internet improves the integration of innovation activities through the exchange of ideas with external actors, especially competitive intelligence with customers. Socially competitive intelligence media, on the other hand, is at the same time a kind of source and a tool for gathering information about competitors' offers and customers' needs (Anderson et al., 2011). Laforet (2016) notes that the companies, especially competitive intelligence SMEs, that are more interested in technologies can achieve a high degree of novelty in their products, which helps innovation performance.

2.3 SME owner-manager and competitive intelligence

López-Fernández et al. (2018) found that, among several organizational factors, strategy is the factor that best explains competitive intelligence. In the context of SMEs, the strategy is to the profile of its owner-manager (Laforet, 2016). The owner-manager has a relevant impact on the strategy and behavior of their company over time (López-Fernández et al, 2018).

The literature has pointed out that the SME's owner-manager is concerned with the collection, analysis, and dissemination of information López-Fernández et al. (2018). To perform in innovation, the owner-manager, among other responsibilities, develops new technologies and implements new processes, competitive intelligence that allows for the generation of new knowledge on the market (Lichtenthaler, 2020). These processes may include for example, how companies coordinate and disseminate information flows from their customers, competitors, suppliers to their research and development teams and production units (Lichtenthaler, 2020).

According to the strategy typology of Kuehn et al, (2007), the prospector owner-manager, characterized by innovation, pro-activity, risk-taking, significantly improves competitive intelligence (Kohli et al, 2015). Katsikea et al, (2012) argue that proactive managers who analyze the external environment can detect disturbances and react before the emergence of threats.

Similarly, the prospector owner-manager analyzes the external environment, selects promising opportunities, and formulates strategies (Katsikea et al, (2012). Kohli et al, (2015) note that the prospector owner-manager contributes to developing new activities (innovation) and to anticipating competitive new needs and market demands (strategic planning). In addition, the effectiveness of competitive intelligence is related to the prospector owner-manager in acquiring and interpreting external information, competitive intelligence in SMEs Lichtenthaler, (2020).

2.4 Absorption capacity competitive intelligence, competitive intelligence and innovation performance

Lichtenthaler, (2020) defines absorptive capacity competitive intelligence as a firm's ability "to recognize the value of new, external knowledge, assimilate it and apply it for commercial ends." The literature shows that there is a link between absorptive competitive intelligence innovations. Indeed, absorptive capacity competitive intelligence contributes to improving innovative capacity competitive intelligence (Katsikea et al, 2012) and innovation performance within the firm (Kohli et al, 2015; McClelland et al. 2012; Lichtenthaler, 2020)). Previous studies have highlighted that absorptive capacity competitive intelligence has as a possible moderator of various determinants of innovation performance (Mitton et al., 2012).

Absorptive capacity competitive intelligence helps managers understand the effect of competitive intelligence on the organization's performance (Najafi-Tavani et al., 2016). Olson et al, (2016) report that firms' absorptive capacity competitive intelligence positively moderates the relationship between competitive intelligence and its innovation performance. Nenzhelele et al, (2013) argue that to exploit the benefits of information gathered from suppliers, the ability to assimilate and transform this information is required. In the same vein, the results of the study by Najafi-Tavani et al, (2016), which was conducted on 1000 companies representing a variety of sizes and business sectors, shows that organizational absorptive capacity competitive intelligence is positively related to competitive intelligence practices and innovation performance.

In the context of SMEs, Zobel (2017) points out that a high assimilation capacity competitive intelligence allows a good understanding and dissemination of information coming from customers, competitors, suppliers as well as technologies. According to Woll et al, (2014), competitive intelligence is useless to have a variety of information sources without being able to exploit emerging information.

3. METHODOLOGY

The purpose of this exploratory study is to investigate the contribution of absorptive capacity competitive intelligence and competitive intelligence to innovation performance. A qualitative research approach is appropriate for an exploratory study. A case study was conducted which involved close observation of the phenomenon of interest in a real-life context Yin, (2017). In

addition, a case study approach is recommended for investigating the topic of the contribution of competitive intelligence to the innovation performance of SMEs, since it has been relatively unexplored. The case study and data collection were conducted within an SME located in Nigeria, referred to here as "Stallion Vision".

3.1 Data Collection

Multiple data-collection methods, including semi-directed interviews, document analysis, and non-participant competitive intelligence observation were used for triangulation (Yin, 2017). Semi-structured interviews were conducted with a sample of seven members of Stallion Vision, including the Chief Executive Officer (CEO), and six managers and middle managers representing management, marketing departments, the development of new services, and systems engineering. The managers were selected using the non-probabilistic method of convenience.

Data collected before each interview a list of topics was sent to the interviewees. Nine interviews in total including three interviews with the CEO were conducted in the field. The interviews were audio-recorded with the authorization of the interviewee and were transcribed verbatim.

These interviews lasted between 60 and 90 minutes. In addition, we were non-participating competitive observers in Stallion Vision. Data was collected by note-taking in several activities, which mainly involved weekly meetings and strategic planning workshops.

Secondary data were collected from official documents and Stallion Vision's website. For data analysis, we used a thematic analysis to refine the grouping of thematic categories and subcategories (Ebrahimpour, 2003). Table 1 describes the characteristics of the firm studied and the interviewees. Concerning the sampling unit, a medium-sized company was taken into consideration. This company offers professional, scientific competitive intelligence and technical services, develops design services for companies operating in the manufacturing sector.

4. RESULTS

4.1 Innovation in Stallion Vision

Stallion Vision has an innovation process called "development offering". This process aims to develop new technological solutions, new approaches working methods to create added value for customers. To generate new ideas, the CEO reported: *"Ideas are generated through different techniques. These techniques can be creative workshops that are organized around a service development project or specific competitive intelligence meetings to discuss the emergence of new technology or a work approach. The creativity workshops within Stallion Vision have led to several innovative projects. For example, operations support projects, cost reduction*

applications, and other projects associated competitive intelligence with operational excellence and industrialization activities."

Table 1 Characteristics of the company sample and interviewees.

Company	***Code***	***Sub-Sector*** [a]	***Company Size*** [b]	***Interviewee Positions***	***Code***	***Number of Interviewees***
Company	***Stallion Vision***	*Medium design services*	*Owner-Manager*		*CEO*	*3*
				Manager	1	1
				Manager	2	1
			Manager	3	1	
Manager	4	1				
Manager	5	1				
Manager	6	1				

[a] ***According to Nigerian Industry Classification System.***
[b] ***According to Industry Nigeria (2019), a micro-company has less than 5 employees; a small company between 6-99 employees; a medium company - 100-499 employees; and a large company - over 500 employees.***

4.2 Competitive intelligence in Stallion Vision

Competitive intelligence activity has been identified in Stallion Vision as "strategic monitoring". Competitive intelligence allows the company to develop vision, strategies for new projects. As Manager 1 explains: "We have already done strategic monitoring and reviewed the market trends before doing our strategic planning" The most prominent competitive intelligence activity in Stallion Vision occurred when the concept of Industry 4.0 emerged. In this context, the CEO of the company mentioned: "In doing the strategic monitoring, Industry 4.0 emerged. We retrieved this information to clarify our position in the market and develop a new project." In the same vein, Manager 2 reported that: "Industry 4.0 is the result of reflection, monitoring, and competitive intelligence customer needs analysis."

The CEO plays an important role in the business of competitive intelligence within Stallion Vision. Indeed, his presence at conferences, fairs and exhibitions, and local and international allows him to collect information on market dynamics trends through exchanges with experts and CEOs of other companies. Manager 2 and Manager 4 emphasized: "Our CEO often generates quality information and creative ideas." (Manager 2). "Our CEO is a visionary person, using his great ability to analyze the market; he manages to unlock crises." (Manager 4)

The primary data in our case study shows that Stallion Vision uses competitive intelligence to collect information from multiple external sources. Manager 1 claimed: "The activities organized by various professional socio-economic associations' competitive intelligence allow the leaders of Stallion Vision to interact with the presidents, directors, managers of other organizations including competitors. These events promote the exchange and collection of strategic information." According to all managers interviewed, the most important source of useful information is the customers. Manager 2 pointed out: "Some members of Stallion Vision are directly connected to their customers' factories, which allows them to collect information about the needs of these customers.

In addition, Stallion Vision directors organize regular meetings with clients to evaluate projects therefore to have feedback on their product and service development work." Collaboration with external partners, especially competitive intelligence with suppliers, plays an important role in acquiring information. Manager 1 and the CEO mentioned: "Our Company has established partnerships with suppliers, which led to the deployment of the technological solutions." (Manager1). "We are in constant contact with some suppliers to develop products and meet the needs of customers." (CEO)

For monitoring the external environment's dynamics, Stallion Vision uses many technologies and platforms. Several managers talked about the importance of technology platforms in a competitive business. For example, Manager 3 and Manager 5 argued: "For gathering new information, our employees use the internet, especially competitive intelligence digital media." (Manager 3) "To gather information, Stallion Vision uses the Internet, in particular professional networks, social competitive intelligence media, blogs, forums Google Alerts." (Manager 5)

4.3 Absorption capacity competitive intelligence within Stallion Vision

The CEO of Stallion Vision understands absorptive capacity competitive intelligence as: "Our ability to organize the work, to be able to deploy and execute the actions we must do to achieve our goal. It's the organizational capacity competitive intelligence to execute the blueprint." Specifically competitive intelligence, in the context of Industry 4.0, Manager 1 noted: "Industry 4.0 is the novelty for our company. At first, the absorptive capacity is the intelligence to self-learn, to define what this element is to conceptualize and define the situation.

In a second step, formalize it and transfer it." An organization's absorptive capacity competitive intelligence is based on its ability to gather, transform and exploit external knowledge. In Stallion Vision, the CEO pointed out: "A good understanding of the market needs for innovation our ability to assess the effect of technology solutions for customers and help our teams better identify value and then gain external knowledge". For other managers, the valuation of external knowledge

depends on its impact on the strategy and its effects on the company's outcome, whether related to an opportunity, a threat of new technology.

Regarding the transformation and exploitation of external knowledge, Stallion Vision relies on the varied skills of its employees. Indeed, most employees are highly qualified (about 90% of employees have engineering, Master's degrees, or Ph.D. training) combining knowledge and experience in several fields. Their skills allow for the transforming and exploiting of external knowledge in the form of concrete and competitive projects. Manager 2 emphasized: "Experienced employees have been instrumental in using their previous knowledge, turning it into new knowledge, then creating new and innovative projects."

However, Stallion Vision has to improve its absorptive capacity competitive intelligence taking up some challenges. Indeed, most of the employees have technical skills but they miss management skills. The CEO and Managing Director said: "They want to develop more professional and technical experience but not in management." This challenge is more important in multidisciplinary activities. As Manager 1 pointed out "Most projects are multidisciplinary and informal, presenting management challenges for the firm". This challenge is both intra-departmental and interdepartmental which requires managers with technical and managerial skills.

5. DISCUSSION & IMPLICATION:

PROPOSITIONS

The objective of this paper is to investigate how competitive intelligence can enhance innovation performance relying on absorptive capacity competitive intelligence to reinforce the potential results in the SME context. This section presents propositions and discusses some implications from these findings. These propositions are based on analyzed empirical data and the theoretical literature. To present our main findings and data results in Stallion Vision, we adopted perspective (Speece et al, 2018). This allows us to discuss the implications of our results for competitive intelligence and absorptive capacity regarding its contribution to the innovation performance of Stallion Vision.

First, our findings suggest that despite a lack of resources, SMEs can practice competitive intelligence, at least partially (Horng et al, 2010). However, this activity can remain incomplete, unsystematic informal, which makes it inefficient competitive intelligence (Saldaña 2016; Slater et al, (2014)) if the SMEs have no absorptive capacity competitive intelligence or engagement by top management. At Stallion Vision, the CEO conducts brainstorming, imagination, and ideation exercise competitive intelligence with several top- and middle-managers to bring out innovative ideas.

According to Slater et al, (2014), the expertise and imagination of CEOs are components of creative problem-solving. The strategic planning activities, held periodically by the CEO, aim to anticipate competitive intelligence changes in Stallion Vision's external environment. In this sense, the literature reveals that a CEO with a proactive personality can understand market trends and therefore anticipate competitive intelligence planned changes (Speece et al, 2018). Based on this understanding, the prospector-CEO enhancing competitive intelligence activities in SMEs were observed and lead us to proposition 1 (P1).

P1: The prospector owner-manager seems to contribute to competitive intelligence.

According to several managers in Stallion Vision, employees are directly connected to customers, allowing them to understand the needs and preferences of these customers (Kohli et al, 2015). Customer needs and preferences are the main ingredients for new ideas, products, or services (Kuehn et al, 2007). The transformation and exploitation of customer insights into innovation rely heavily on the skills of the individuals at Stallion Vision. Coordination and communication with customers contribute to creating new knowledge and to increasing absorptive capacity competitive intelligence, which in turn leads to innovation (Thieme et al, 2019). In Stallion Vision, intelligence information, which means data and information gathered from customers analyzed in context by managers, contributes to innovation performance. The contextual knowledge and experience are related to absorptive capacity competitive intelligence. These observations are related to the two following propositions:

P2: Intelligence information from customers enhances the innovation performance of SMEs.

P1b: Absorptive capacity competitive intelligence enables improving information from customers and contributes to the innovation performance of SMEs.

Our findings revealed that Stallion Vision is more oriented towards improving their understanding of customer needs and preferences than to conducting monitoring. This orientation is in line with (Uhlenbruck et al, 2016) who stated, "Small organizations with high revenues are more satisfied with current intelligence than small organizations with low revenues". However, the study suggests that excessive customer orientation can hamper the monitoring of changes in the external environment (Varvakis et al., 2016), as was the case of Stallion Vision during a period before a competitive intelligence strategy was implemented.

Stallion Vision would have taken full advantage of its innovation activities if its employees were collecting strategic information about competitors. Our findings show that the low intensity of information from competitors created a barrier to the innovation and growth of the company. In addition, Stallion Vision identified several lost opportunities for innovation after implementing

competitive intelligence practices. According to Thieme et al, (2019), information from competitors is relevant to help identify their objectives, strategies, activities, offers, resources, capabilities of competitive advantage. However, managers at Stallion Vision mentioned difficulties in collecting strategic information about their competitors. Based on our findings, information from competitors can enhance innovation performance, especially competitive intelligence if supported by information analyses and absorptive capacity, this understanding translates to the following propositions:

P3: Intelligence information from competitors enhances the innovation performance of SMEs.

P2b: Absorptive capacity competitive intelligence improves the use of competitor information and contributes to the innovation performance of SMEs. Companies in most countries prefer to collaborate with customers and suppliers rather than with competitors and private R&D centers to protect their development model. Indeed, the study's results show that managers at Stallion Vision are more open to collaborate with suppliers, which allows them to collect information on customers and competitors. Collaboration with suppliers allows these managers to identify opportunities for developing new Industry 4.0 technological solutions and become a leader in this domain. Thieme et al, (2019) report that the participation of suppliers in activities has an impact on innovation performance. In addition, frequent exchanges between employees of Stallion Vision and their external environment including vendors strengthen their absorptive capacity competitive intelligence, which in turn facilitates the transformation of information.

Their relationships with suppliers serve to stimulate the exploitation of individual absorptive capacity, thus enhance organizational absorptive capacity competitive intelligence, which contributes to the success of innovation (Souitaris et al, 2012). Our findings showed that Stallion Vision analyzes the information or the intelligence information from suppliers to help to improve innovation performance, and the contribution of the manager's absorption capacity was useful. These findings lead us to the following propositions:

P4: Intelligence information from suppliers enhances the innovation performance of SMEs.

P3b: Absorptive capacity competitive intelligence improves the use of suppliers' information and contributes to the innovation performance of SMEs.

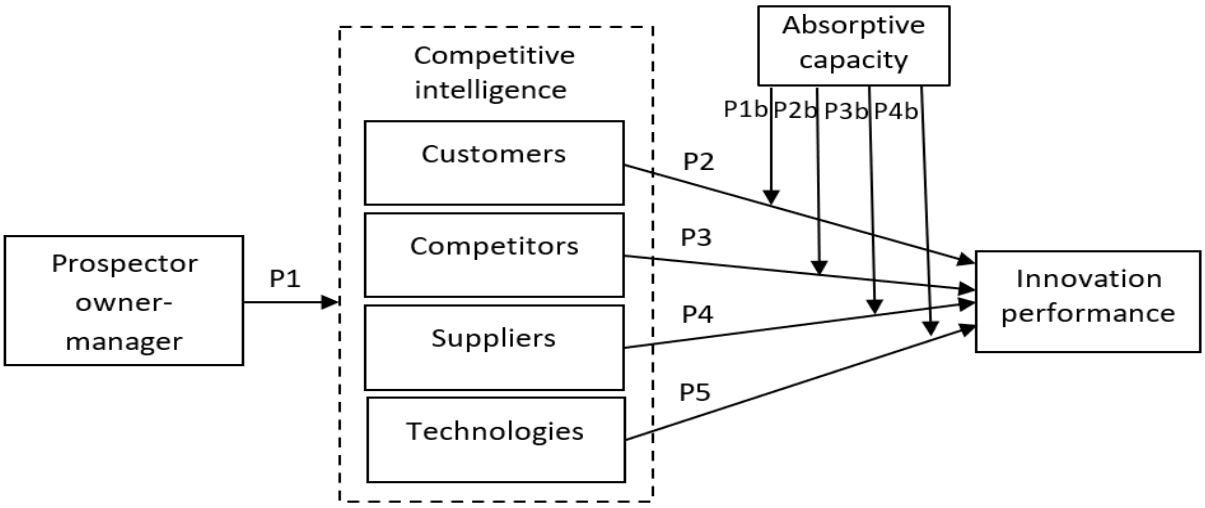

Figure 1 framework showing the flow from competitive intelligence the innovation

Our results suggest that Stallion Vision has focused on information technologies to identify future needs, which culminated in projects and innovation performance. Findings reveal that these projects contributed to an increase of 15% in business revenues. This practice is in line with the literature that suggests that data and information from technologies allow firms to create new technical solutions and develop new products (Snow et al, 2008). Varied information technologies, including social competitive intelligence media, blogs forums, and Google Alerts, allowed the managers of Stallion Vision to monitor changes related to new technological trends. Competitive intelligence including information from technologies helped Stallion Vision make the shift to Industry 4.0 and become a leader in their region.

Many studies have pointed out that technologies are considered an information source, which contributes to business competitiveness (Smallman et al, 2011; Souitaris, 2012). To better use these information sources, firms need individuals with prior knowledge in the field to take advantage of using absorptive capacity competitive intelligence (Nenzhelele et al, 2013). Our findings show that Stallion Vision had some 100 engineers with technical training and experience in technological fields. These skills were crucial to competitive intelligence to transform technical information into innovative projects. These results are related to the following propositions:

P5: Intelligence information from technologies enhances the innovation performance of SMEs.

P4b: Absorptive capacity competitive intelligence improves the use of technology information and contributes to the innovation performance of SMEs.

These propositions emerged from the data analysis and allowed us to propose a conceptual framework to illustrate how competitive intelligence contributes to innovation performance

(Figure 1). This theoretical framework is based on the understanding that competitive intelligence comprises information collected from customers, competitors, suppliers, and technologies. The capacity intelligence to analyze and integrate this information is represented by the absorptive capacity that reinforces the potential of the innovation performance. Moreover, competitive intelligence also benefits from the important contributions of the prospector owner-manager in the context of an SME.

6. CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

This paper presents an exploratory case study that allowed a framework proposition showing how contributes to innovation performance and why absorptive capacity competitive intelligence is important for better results. This framework fills a theoretical gap and is supported by empirical data collected during the case study. Our findings suggest three main contributions.

First, competitive intelligence requires a prospector owner-manager characterized by a profile of innovation, pro-activity, and risk-taking. This type of owner-manager analyzes the external environment and detects disturbances, which contributes to better results from the competitive intelligence (Olson et al, 2016).

Second, the findings have highlighted that the contribution of competitive intelligence to the innovation performance of SMEs is mainly based on the collection, analyzing and exploitation of information from customers, competitors, suppliers, and technologies. More specifically competitive intelligence, our case study shows that understanding customer needs and preferences allows companies to create innovative ideas, as proposed by Pavitt et al. (2015). However, we also understood that focusing more on clients without considering competitors' strategies, activities, and objectives can lead to the loss of growth opportunities, and the failure of the SMEs (Saldaña et al, 2016).

Our findings also allowed us to understand that collaboration with suppliers is seen as an opportunity to gather information from customers, competitors, the market as well as to develop new creative ideas, which aligns with previous studies (Thieme et al, 2019). The SME studied invested given particular importance to technologies, both as tools and information sources. These decisions seem to be relevant to enable them to be able to monitor the dynamic business environment, which allowed them to capture opportunities and develop new products. This same aspect was also pointed out by Xuereb et al, (2007) even though the business environment has changed since this time technologies have been constantly evolving disrupting established practices in business. At this point, to face technological challenges and continue to innovate in SMEs, it is important in future research to investigate the ambidextrous organizational-learning habits to mitigate a lack of resources.

Third, the findings show that the firm's absorptive capacity competitive intelligence is essential to understanding the contribution to innovation activities, as proposed by Najafi- Tavani et al (2016).

In addition, Woll et al, (2014) argue that absorptive capacity is essential for competitive intelligence because it plays an important role in transforming data into rich information and knowledge. Although this is only an exploratory study, our findings can guide managers to make the best choices for competitive intelligence practices, to develop competitive advantage, and be more agile than their competitors are. SME CEOs, managers need to consider their profiles, as well as their involvement in operations, for innovation performance within the firm.

This study proposes a framework, certain limitations, and several propositions that should be investigated in future research. As a limitation, the observation approach, whether systematic or electronic, may have an intrusion effect on the observer (Zobel, 2017). Second, the results obtained are not generalizable because of the chosen research approach, as well as due to the variability existing between SMEs (Pavitt et al, 2015; Speece et al., 2018)). Third, given that there is no single way to innovate (Pavitt et al, 2015), that competitive intelligence practices are heterogeneous, future research can test our propositions using a larger sample survey to gain quantitative evidence regarding our conclusions. This will improve the understanding related to innovation performance in SMEs, as they are an important component of the economy of all countries.

Additionally, in current contexts of digital transformation, Industry 4.0 where competitive intelligence is needed (Mosconi et al. 2018) including the assimilation capability (Mosconi et al. 2018), it would be relevant that future research could investigate the role of analytics capability on innovation performance. In link with the own manager, future research can also study the managers' ambidexterity, which is important for intelligence-based activities (Thieme et al, 2019).

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