

COMPETITIVE INTELLIGENCE AND FIRM COMPETITIVENESS: AN OVERVIEW

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Abstract

The purpose of this article is to examine the relationship that exists between competitive intelligence and firm competitiveness through literature review. This study is being done under the background of intense competition being experienced by firms globally. The methodology used for this article was a literature review of published electronic journal articles. The paper found the following two critical issues: there are varying perceptions of the relationship that exists between competitive intelligence and firm competitiveness; and that there is no universally accepted model of best practice for adoption and adaptation. The findings from this research will assist business managers improve their CI outlook by understanding how CI is related to firm competitiveness and will be of great value to academics.

Keywords: Competitive Advantage, Firm Performance, Competitive Intelligence, Firm Competitiveness

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1 Introduction

The purpose of this article is to examine the relationship between competitive intelligence (CI) and firm competitiveness given the rapidly changing technology, deregulation, and globalization. The examination is done through a review of related literature from published electronic journal articles on CI and firm competitiveness. According to Viviers et al., (2004), intelligence is the active use of information to guide decision making in order to reach the goals set by an organization. The business practice of competitive intelligence is the function of turning information into intelligence (Viviers et al., 2004). Literature has shown CI to be an efficient instrument for improving firm competitiveness, though its applicability in developing nations has yet to be fully examined. Sound CI practice is presented as a key element in providing organizations with appropriate “corporate radar” and actionable intelligence (Fuld, 1995; Pollard, 1999 in Bergeron and Hiller, 2002).

Fleisher and Bensoussan (2002) in Juhari and Stephens (2006) and Bergeron and Hiller (2002) regard CI as an old phenomenon in both scholarship and business practice. As in many fields of scholarship, history connects the field of CI to philosophical views and methodologies found documented by early war and economics scholars, from which CI is already thought to have originated. Hence, its employment may be traced to a long and winding history. Juhari and Stephens (2006) state that history has also shown that the evolution of CI

borrowed elements and processes from the military, government administration, business administration, marketing, economics, and to some extent intelligence-driven cultures. They further state that prior to Prescott’s placement of the 1990’s as being the refined ‘modern CI’, elements of the intelligence cycle for business applications had already been in practice as formal processes in China, Japan, France, Great Britain and other parts of the world. Chin (1997) in Juhari and Stephens (2006), reports that China had records of observations and Stratagems for ensuring its sustainability as far back as 2 500 years ago, c. 500 BC. He further argues that the practice of employing Eunuchs, as envoys, business advisors and spies to further the ‘leadership’ of Imperial China in a number of industries was a good example of intelligence. By 204 BC, Rome was known as the greatest organized military force in the world and as such thrived on trade and competition for world goods. In 1234, the Mongols had already institutionalized their system that served to provide CI to their whole Government and business administration (Juhari and Stephens, 2006). Teo (2000) in Juhari and Stephens (2006) states that, today, CI is receiving even more attention from top management than before. The origins of CI was to give some competitiveness of some sort either militarily or business wise. Although CI is considered to be an old phenomenon (Bergeron and Hiller, 2002 and Juhari and Stephens, 2006) especially in developed countries, its slow embracement in developing countries poses it as a new phenomenon

thereby creating a huge gap in the board of knowledge.

There has not been any extensive review of literature on the relationship that exists between CI and firm competitiveness. This is the first literature review paper of its kind. The purpose of this paper is to examine the relationship that exists between CI and firm competitiveness through a literature review of related published journal articles. CI has emerged as a critical aspect of firm competitiveness, hence the need for this paper to provide an overview of that relationship. The remainder of the paper presents a brief literature overview of CI as a source of firm competitiveness, followed by the methodology used in the research paper. The results are subsequently presented. This paper concludes with recommendations and an area for further research.

1.1 Competitive intelligence definition

“Definitions,” to paraphrase Samuel Johnson (1709-1784), are like watches and none is ever exactly correct. The concept of CI is multifaceted and fuzzy. CI is variously presented as a process, a function, a product, or a mix of all three (Gilad and Gilad, 1988 in Bergeron and Hiller, 2002). Adding to the confusion is the multitude of varying definitions of the term (for examples of definitions see Fahey, 1999; Fuld, 1995; Fuld, 2000a; McGonagle and Vella, 1998; Pollard, 1999; Society of Competitive Intelligence Professionals; Westney & Ghoshal, 1994 all in Bergeron and Hiller, 2002; and McGonagle and Vella, 2002). Roitner (2008) and Weiss and Naylor (2010) in Pellissier and Nenzhelele (2013) state that there are many definitions of CI in the literature and none has achieved worldwide acceptance. Following the arguments of many different authors cited by Pellissier and Nenzhelele (2013) in the fifty (50) definitions of CI one is forced to conclude that there is no universally agreed definition of CI although there are common characteristics in each, there are also unique characteristics identified. Pellissier and Nenzhelele (2013), however, formulate the following comprehensive and universal definition out of the 50 definitions which this paper has adopted for the purpose of this research. Pellissier and Nenzhelele (2013) define CI as a process or practice that produces and disseminates actionable intelligence by planning, ethnically and legally collecting, processing and analyzing information from and about the internal and external or competitive environment in order to help decision-makers in decision-making and to provide a competitive advantage to the enterprise. Moreover, CI should stimulate an organization’s creativeness, innovativeness, and willingness to change (Salmon and de Linares, 1999 cited in Bergeron and Hiller, 2002), in a continuing quest to create an evolving and intelligent organization (Choo, 1998a and 1998b in Bergeron and Hiller, 2002). (For a more detailed

analysis of the definition of CI see Pellissier and Nenzhelele, 2013).

1.2 The meaning of firm competitiveness

According to Schwanitz et al., (2002) in Karaev et al., (2007), competitiveness means the abilities of individual firms, or whole sectors, regions and even countries successfully to assert themselves in the domestic and global market. They further state that competitiveness is not only a result of entrepreneurial activity of individual firms, but also a result of an appropriate structural policy, functioning competitive policy and adequate infrastructure. It is obvious within the capitalist system that businesses survive and thrive through successful competition (Connor, 2003). The concept of competition itself is being redefined (Cronin and Crawford, 1999a, 1999b; Shapiro and Varian, 1999; Von Krogh, Ichijo & Nonaka, 2000 all in Bergeron and Hiller, 2002) with competitor-focused strategies becoming increasingly viewed as essential for survival. A focus on only the competitive environment might be perceived as a straitjacket hampering an organization’s capacity to develop advanced strategies based on creativity and innovation (Von Krogh et al., 2000 in Bergeron and Hiller, 2002). Competitiveness is a multidimensional concept that refers to the ability to create sustainable competitive advantages that can be used at the national, industry and firm level (Vilanova et al., 2009 cited in Marín, Rubio and Maya, 2012). At the firm level, competitiveness is described as the ability to produce goods and services creating value or to act against the rivalry originated in the relationship with other firms (Porter, 1996 in Marín, Rubio and Maya, 2012). As a concept restricted to competitive markets, the relative position against rival agents is a key determinant of the differences between successful and unsuccessful organisations (Porter and Kramer, 2006 in Marín, Rubio and Maya, 2012).

Some define competitiveness as a condition, whereas others define it as an attitude. Competitiveness is a multifaceted concept and according to Schuller and Libom (2009) in Sewdass and Du Toit (2014), competitiveness refers to the competitive environment that a country’s companies face. Connor (2003) states that competitive may be defined in a variety of ways. It could describe the state, or condition, of an industry or a firm. It could describe an approach to business. It could be seen as a measure of performance. The central question arises: who decides if a company is competitive? A number of answers to this might be proffered. For example, governments might define a company as competitive if it conforms to the criteria contained within the competition or anti-trust law. Managers might define competitiveness in terms of market share, profitability and growth. It is clear that the definition will vary with differing points of view and with the nature of

the viewer's interest in the performance of a business (Connor, 2003).

Porter's (1990) diamond frame-work thus provides the link between company and country-specific sources of competitive advantage that companies leverage to gain international competitive advantage. Globalization of markets has created the need to enhance companies' and countries' competitiveness more rapidly. This paper, however, takes firm competitiveness to include firm competitive advantage, performance and profitability.

1.3 The competitive intelligence process

Intelligence is viewed as a process comprising a number of activities, steps or constructs that should follow on from one another without any of the steps of actions being overlooked (Kahaner, 1997 in Saayman et al., 2005). The steps or phases should be linked to one another by a feedback loop (McGonagle and Vella, 2012). Key constructs or stages that emerge in the literature are: Planning and focus, Collection, Analysis, Communication, Process and structure, Organizational awareness and culture (Daft et al., 1988; Herring, 1998; Gilad, 1989 in Saayman et al., 2005; Collins, 1997; Herring, 1998 cited in Saayman et al., 2005, McGonagle and Vella, 2012; Gilad and Gilad, 1985, 1986; Kahaner, 1997; Calof and Miller, 1997; Herring, 1998 cited in Saayman et al., 2005). (For more detail on the CI process, see Pellissier and Nenzhelele, 2013).

1.4 Competitive intelligence and firm competitiveness

Competitiveness assumes that a firm's strategy matches internal competencies with external opportunities to provide a source of sustainable competitive advantage through which it can reach certain goals, such as profits generated by the market share. However, for any competitive advantage to be sustainable, the strategy must be acceptable to the wide environment in which the company competes (Werther and Chandler, 2006 cited in Marín, Rubio and Maya, 2012). The concept of intelligence as a process has long been proposed as an effort to increase a firm's competitiveness (Montgomery and Urban, 1970; Pearce, 1976; Montgomery and Weinberg, 1979; Porter, 1980 cited in Viviers et al., 2002). Porter (1980) cited in Cuyvers et al., (2008) states that CI is the component of Business Intelligence (BI) aimed at gaining strategic competitive advantage. CI is an information system which many firms make use of to determine their competitiveness (Van Brakel, 2005 in Iyamu and Moloi, 2013, Guimaraes, 2000 in Iyamu and Moloi, 2013, Viviers and Muller, 2004 in Iyamu and Moloi, 2013). According to McGonagle and Vella (2004) in Iyamu and Moloi (2013), CI is becoming more and more vital to firm survival in today's dynamic

markets through improved effectiveness and efficiency. In order for a firm to gain its own competitive advantage using information systems such as CI, it has to ensure that its focus is on its structural capabilities (Song and Li-Hua, 2005 in Iyamu and Moloi, 2013).

For many firms, CI is often intended to be a differentiating factor within the market, as it is able to stand in a better position within the market place. De Pelsmacker et al., (2005) in Iyamu and Moloi (2013) state that CI as a strategic business tool has long been proposed in an effort to increase a firm's competitiveness. For a firm to utilize its CI efforts successfully there has to be firm awareness of CI and a culture of competitiveness. Effective information handling is of paramount importance within a firm.

Martin (1992) in Viviers et al., (2004) states that successful enterprises recognize the value of managing their information assets effectively and efficiently. The effective handling of critical information resources can make all the difference in the enterprise's survival against aggressive competitors. Viviers et al., (2004) argue that making the most of available information through the CI process is a necessary activity for any business to remain competitive or even survive in a competitive world. According to Fleisher and Bensoussan (2002) in Viviers et al., (2005), the global economy is increasingly characterized as a knowledge and innovation economy where knowledge and innovation are the new currencies. The challenge is now on how to differentiate one firm from the next. Porter (1996) in Viviers et al., (2005) adds that in today's competitive global business environment, companies need the skill to translate indicators in the competitive environment into business opportunities and to apply the intelligence in decision-making and developing competitive strategies.

1.5 Global overview of competitive intelligence and firm competitiveness

According to Combs and Moorhead (1993), CI has undergone a groundswell of interest in recent years, an interest in part fueled by an increasing availability of information itself (the much-touted information explosion) and an increase reflected in the proliferation of commercial databases world-wide. In purely competitive terms, no time before ours has presented so many opportunities or dangers (Combs and Moorhead, 1993). Given this changing scene, CI has increased its importance as a source of firm competitiveness. Reliable global information has become central to national success, whether the need is for knowledge of an industry, a market, a product or a competitor. As Frederick the Great once said, "It is pardonable to be defeated, but never to be surprised" (Rouach, 1996 in Bergeron and Hiller, 2002, Kahaner, 1996). With today's information resources, and CI programmes that reflects the needs

of the corporation, surprises can be minimized since CI helps and directs firms in spotting new opportunities or avert disasters as well as empowering them to monitor their developmental cycles. CI has become a worldwide phenomenon.

CI has become a worldwide phenomenon not limited to a few countries or companies in certain industries. Calof (1998) in Viviers et al., (2005) states that most of the Fortune 500 companies use CI extensively as a source of their competitiveness and to sustain their position. Kahaner (1997) in Viviers et al., (2005) states that countries that include France, Japan, Sweden and the USA are more advanced in their embracement of CI as a means for enhance competitiveness. CI has become a major source to achieve firm competitiveness in these countries. The worldwide development of the Strategic and Competitive Intelligence Professionals (SCIP) is another indicator of CI growth globally. The SCIP Chapters have taken root in almost every continent (Viviers et al., 2005). Moreover, they argue that SCIP Europe, SCIP Italia, SCIP Australia, SCIP China and SCIP Deutschland are all part of a growing worldwide network of SCIP affiliates, that is, independent organizations that have formally affiliated with SCIP. Globally, some 20% of SCIP's members are in 60 countries outside the U.S., as are 37 of SCIP's 76 chapters (as of May 2001). Leaders in the field of CI education are France, Japan, Israel, Sweden, and Korea while Europe is beginning to appreciate the importance of CI as an instrumental source to enhance competitiveness (Viviers et al., 2005).

CI is far from new since for centuries before marketing was a gleam in a Harvard Professor's eye, firms have at least watched their competition, to learn and pick up useful ideas. Had one asked a Roman or Greek artisan producing spears or amphora whether they studied their competitors they would probably have said, 'of course we do.' West (1999) further states that it is hard today to imagine that any company, other than monopolies or the fatally arrogant, would fail to take at least some account of their competitors when developing their plans or pitching for business.

1.6 CI and firm competitiveness in Africa

Limited research has been conducted or published on CI practices in African countries (Viviers et al., 2005). The state of CI remains fragmented in Africa. With the exception of South Africa, though much has not yet been done, other African countries are quite when it comes to CI. SCIP was launched in SA in the mid 1990s and albeit slowly, companies are becoming increasingly competitive minded. Until that time, research into CI in South Africa had also been limited. The first comprehensive research projects [in Africa] were launched in the beginning of the century in South Africa. Before that, only a few papers were written on CI (Viviers and Muller, 2004 in Viviers et

al., 2005). Luiz (2006) in Du Toit and Strauss (2010) states that as a result of factors such as history, culture, diversity, geography, and political and institutional landscape, the business environment in Africa is highly complex, and this has affected the competitiveness of the continent and of its firms.

For CI to flourish in Africa and for the discipline to be implemented and used optimally, there has to be an appropriate awareness of CI and a culture of competitiveness. Mersha (2000) in Du Toit and Strauss (2010) points out that African society also tend to be collectivist. Collectivism, in contrast to individualism, refers to a society, in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty (Mersha, 2000 in Du Toit and Strauss, 2010). Without proper empirical evidence of CI as a source of firm competitiveness, awareness and attitudes that favour both CI and information sharing, it is difficult to develop CI programmes within Africa (Viviers et al., 2005 in Du Toit and Strauss, 2010). With the exception of a recommendation from Dou, Dou and Manullang (2005) in Du Toit and Strauss (2010) that developing countries should design a national competitive intelligence system (Morocco has already made progress in this regard), no other information on CI practices in other African countries is available.

2 Research methodology

The methodology used for this paper was a literature review of published electronic journal articles on CI and firm competitiveness. The paper was informed by the researcher's inductive epistemological, ontological and axiological logic of reasoning. An inductive approach starts by looking at the focus of the research. It considers that there are multiple realities hence the need to dig deeper for exploration and reconstruction of meaning. The aim of the literature review was to describe and critically appraise studies and articles reporting on CI and firm competitiveness. This was done to examine the relationship between CI and firm competitiveness. The review focused on gathering evidence to understand and reconstruct the meaning of CI and its relationship to firm competitiveness. This literature review was conducted through collecting published electronic journal articles from different electronic databases. The paper reviewed articles as shown in Table 1 below to generate a deeper understanding and reconstruction of meaning. The aim was to dig deeper into the text to look for categories or themes in the data that builds into rich CI ideas or theories. The summary of the journal articles reviewed is shown in Table 1 below.

The articles were selected from UNISA's library that has over 2.7 million items that supports both staff and students in research. The library is considered to

be the biggest academic library in Africa. The library came into being in 1946 when UNISA introduced distance learning as a mode of tuition. The University library is seen by many as a giant sieve or filtration plant. A broad search strategy was used, covering separate electronic databases, (e.g. EBSCO, ProQuest, Sage, ScienceDirect.com, Wiley online, Oxford journals, and Taylor and Francis) and through Google Scholar. In the search process of electronic databases, since the paper was one of its kind, many key words were used and some of the words include; “competitive intelligence”; “competitiveness”; “firm performance”; and “competitive advantage.” Relevant papers were also retrieved using the ‘pearl-growing’ technique, that is, further references were identified using the bibliographies of relevant papers that the author was already aware of. The bibliographies of which were – in turn – checked, until saturation point was reached.

The study also borrowed some phenomenological tenets such as epoche (bracketing of preconceived ideas) descriptive accuracy, empathy and eidetic intuition from Mouskakos (1994). According to Cox (1996) in Sibanda (2012), the term eidetic was derived from the Greek noun eidos to refer to the essence of phenomena. Hence, Moustakas (1994) asserts that the phenomenological approach provides an emic view that allows the researcher to respect the believer’s perspective and to unearth the essential aspects of his/her research. The researcher had to hold his assumptions and presuppositions in suspension to improve the rigor of the research and to enhance neutrality (Husserl, 1913/1931). The bracketing process was crucial throughout the research process, especially during data evaluation and analysis. Kvale (1996) claims that bracketing is a form of phenomenological reduction process of suspending judgment. Bracketing required the researcher to remain neutral with respect to belief or disbelief in the existing journal literature. Although the researcher had a great deal of experience in CI he set aside his prior experiences in the subject, so that he would not instill any bias during the review of the articles. This allowed “truth” to show itself and determine the trustworthiness of the results. The researcher believed the depth of the journal articles and the methodologies used ensured the credibility of the data.

Trustworthiness ensures the quality of the findings and increases the confidence of the reader that the findings are worthy of attention. Many different strategies are employed in qualitative research to establish trustworthiness (Krefting, 1991) and this paper adopted triangulation to enhance its trustworthiness. This involved the use of multiple sources and perspectives to reduce the chance of systematic bias. The paper achieved this by: source (data was collected from different published and peer reviewed journal articles from different sources) methods (different data collection strategies), and

researcher (which involves the use of the mentor, critical reader and language editor). An evaluation was then carried out.

The following criteria was used to select the journal articles for inclusion in the review: the article should have been written in English, published in a peer-reviewed journal, cited CI or competitiveness, firm performance, competitive advantage and involves firms or companies. At first the paper targeted articles that were published between 2004 and 2014 but, however, it ended up including other articles that met the selection criteria above. Abstracts of articles were read to determine whether to obtain full texts of the studies. Fourteen articles, which met the criteria for inclusion, were selected for the final sample. All the articles were reviewed. Each research article was summarized according to the following criteria: author, theme, research purpose, research design/methodology, and primary findings related to CI and firm competitiveness. Each article was read several times taking down notes according to the criteria in the framework in Table 1 below to identify the emergent themes and to identify any differences or contradictions. This was then followed by a critique of the articles for the purpose of this research article. It was important to reduce the limitations of narrative literature review.

3 Discussion of findings

The purpose of this article is to review the current literature on CI and firm competitiveness to examine the criticality of CI as a source of firm competitiveness. To help with this, articles from peer-reviewed journals have been reviewed. The literature shows various and opposing perceptions as to how CI relates with firm competitiveness. Table 1 above presents a summary of the articles reviewed and findings. The literature review findings were organized in a more flexible manner for the purpose of this paper. The following steps were followed. Important themes or categories were identified within each article under review. These themes were used for data preparation, defining unit of analysis, coding and interpretation so as to provide a thick description of CI and firm competitiveness. The template approach (Crabtree and Miller, 1992) was used to transform data into themes/codes.

In order to help understanding the CI concept the literature review provides an overview of CI and its various definitions. It provides various perceptions on the CI process, firm competitiveness, global overview of CI, CI in Africa, and CI as a source of firm competitiveness. According to Karaev et al., (2007), a distinction should be made between the competitiveness of a nation, a region, an industry or a single company at a micro level. However, this paper only looked at CI as a source of firm competitiveness. In spite of all findings from the literature which support the fact that CI relates positively to firm

competitiveness; there is a lack of substantive and empirical evidence to support that firm competitiveness is as a result of an organized CI approach or that it is due to some other external factors.

Table 1. Summary of journal findings

Authors (Year)	Theme	Purpose	Context & nature	Method	Findings
Yap et al., (2013)	Mediating role of CI in Strategic uncertainty & firm performance	Examine mediating roles of CI on the relationship between strategic uncertainty & firm performance.	Malaysia listed companies. Cross-sectional research	Quantitative – Survey (900 questionnaires distributed, 123 returned usable questionnaires).	Results reveal a positive relationship between CI practices and strategic uncertainty, and in turn to firm performance.
Wanjau et al.,(2012)	CI & profitability in banking firms	To investigate CI practices for greater profitability in the Kenyan banking industry.	Kenyan Banking industry. Cross – sectional research.	Quantitative – Survey (200 questionnaires distributed, 60 returned usable answers)	All strategic intelligence practices lead to greater profitability & also reduction in costs for banks, with technology intelligence being the highest contributor.
Adidam et al., (2012)	CI & firm competitiveness	Explore the impact of CI on firm performance in emerging markets.	India. Cross-sectional research	Quantitative – Survey (500 questionnaires distributed, 145 returned usable answers)	Firms that exhibit higher levels of CI activities indeed achieve better financial performance results. Current levels of CI activities are at moderate levels.
Karim (2011)	CBIS and global market competitiveness	...whether competitive advantage can be gained through CBIS.	Global. Cross-sectional research	Quantitative – Survey (122 questionnaires distributed, 69 returned usable answers)	There is a highly significant relationship between CBIS strategic plan, cooperation, information, and effective decision making and improved business performance and gained competitive advantage.
Du Toit and Strauss (2010)	CI & Africa's competitiveness - SA	How CI can enhance Africa's competitiveness.	South Africa. Cross-sectional research	Quantitative – Survey (132 questionnaires distributed, 78 returned)	The research identified the importance of CI in SA in order to improve the country's competitive position.
Santos and Correia (2010)	CI as a source of competitive advantage	Examine how CI is used to obtain sustainable competitive advantage.	Portuguese Biotechnology Industry. Cross-sectional research.	Exploratory case study. Survey and interviews	Informality that characterizes CI practice confers some advantages and allows CI to be identified as a source of competitive advantage. However, if the informal process is hard to imitate and substitute due to fluid and fleeting nature, it compromises its sustainability.
Viviers et al., (2005)	CI & South Africa's competitiveness	To describe the role of CI in enhancing competitiveness in SA.	South Africa. Cross-sectional research.	Descriptive research	The study finds a strong case for CI as an instrument that can enhance the competitiveness of SA companies and as a country.
Cappel and Boone (1995)	Link between CI & performance	Examine the relationship between the emphasis on CI and effective company performance.	USA. Cross-sectional research.	Quantitative-secondary data (Compustat PC plus database for financial reporting year 1993)	There is a positive relationship between CI and financial performance. CI companies outperformed other companies by all three key financial measures in this study.
Jaworski and Wee (1992)	CI & Bottom-line performance	Examine the role of CI in corporate strategy and performance and to provide evidence of the relationship between CI and business performance.	USA industries (pharmaceutical, telecommunications & packaged foods). Cross-sectional research.	Mixed methods – interviews followed by survey.	The results demonstrate clear evidence of how CI contributes to strategy development and corporate performance.

Table 1. Summary of journal findings (continued)

Authors (Year)	Theme	Purpose	Context & nature	Method	Findings
Ngugi et al., (2012)	CI practices & profitability of banks.	Investigation of CI practices for greater profitability in the commercial banking industry in Kenya.	Kenyan banking industry. Cross-sectional research	Case study. Data analysed by descriptive analysis and regression analysis	Adoption of CI practices affects the profitability of the banking sector. Study concludes that technology, product, market and strategic alliance intelligence practices affect the profitability of commercial banks in Kenya.
Cory (1996)	Can CI lead to a sustainable Competitive advantage?	To provide guidance for analyzing activities that are more likely- and less likely- to result in sustainable competitive advantage.		VRIO model. Model to determine if a resource is valuable, rare and/ or imitable and whether the organization is capable of taking advantage from those that can at best lead to competitive parity-or worse.	It was found that not all CI activities are equally capable of generating competitive advantage (CA). It was suggested that sustainable CA has the highest probability of being generated from the analysis component of CI activities. Gathering and dissemination of information have a lower probability due to an increased likelihood of being imitated. Finally, the storage and protection of intelligence is not likely to generate CAs, but may help to prolong advantages established through other activities. Goal of CI operations plays a significant role in generating CAs.
Bartes (2012)	Increasing the competitiveness of company by CI.	To show certain factors, in particular the CI, which may significantly participate in the ensuring of undertaking competitiveness on the demanding markets?			CI plays one of the most important roles in the preparation of the decision of the company when management create new conditions for securing the future success of the company in a demanding business environment, and it is considered as one of the most powerful prospective weapons in the hands of the company management. The highest added value is created in CI in the trading companies in the process of strategic planning. CI ensures good information and ability to react in advance on the possible challenges in the future. Finally companies which actively use CI, show better results.
Agnihotri and Rapp (2011)	CI as a tactical tool for sales people to gain a competitive advantage.	Explores CI as a tactical tool that can be useful at the salesperson level.		Conceptual framework	CI is useful for keeping sales people informed, as well as for developing, implementing and revising sales plans. CI also allows sales people to provide the customer with a greater listing of available options in the market place. CI relates positively to customer relationship performance, customer satisfaction and loyalty and hence led to high performance.
Taib et al., (2008)	Knowledge Management and Competitive Intelligence, a Synergy for Organizational Competitiveness	The similarities, differences and benefits of the two fields & their importance creating sustainable CA for firms to compete strategically.		Discursive	Knowledge is a key ingredient to firm strategy. KM and CI are in this regard two important strategies for decision making. Organizations should focus on both fields to create and sustain competitive advantage. Analysis of the data needs to be complete to enable high performance.

3.1 Discussion and analysis

Although the findings in this study points towards a positive relationship between CI and firm competitiveness, there are some areas that need special attention. The researcher felt that if well addressed these might improve the reliability of the findings.

3.1.1 Methodology

The researcher felt that all the articles that were reviewed were silent on their epistemology, ontology

and axiology positions since Denzin and Lincoln (2000) assert that each method is inextricably tied to a specific set of ontological, axiological and epistemological assumptions, which assumptions help to guide the research. These three positions are very critical when one is carrying out a research because of the bearing they have on the quality of a research.

Epistemology, as a technical term in philosophy, refers to how we know and the relationship between the knower and the known and how we know about reality. It refers to how people know what they know including assumptions about the nature of knowledge and reality. Researchers need also to appreciate the

importance of inductive approach. This is important in that understanding of reality is a social construction, not an objective truth, and that there exist “multiple realities” associated with different groups and perspectives, a notion supported by Denzin and Lincoln (2000). This position opposes the views that are variously labeled positivist, realist or objectivist; as the latter assumed the possibility of some kind of unmediated, direct grasp of the empirical world and that knowledge simply reflects or mirrors what is “out there” (Denzin and Lincoln, 2000). The positivist approach was assumed in six articles that were reviewed for this study.

The majority of the research articles reviewed used the quantitative approach. This approach is called the deductive approach of testing theory, often using number or fact and therefore a positivist or natural science model, and an objectivist view of the objects studied. However, because of some limitations of the positivist approach the researcher felt that the use of a mixed methodology yields significant advantages and enhances the reliability and accuracy of the research results. In a mixed methodology approach, divergent and even contradictory positions are brought into conversation with one another, in order to deepen the understanding of the phenomena studied and to open new paths for exploration and reconstruction of meanings (Denzin and Lincoln, 2000). These two approaches supplement each other. Quantitative and qualitative research should not be seen as competing and contradictory, but should instead be viewed as complementary strategies appropriate to different types of research questions or issues. Furthermore, with multiple methods the researcher has to confront the tensions between different theoretical perspectives while at the same time considering the relationship between the data sets produced by the different methods (Brannen, 1992). Given the above, this article is presenting a case for the use of multiple epistemological perspectives within a single methodological tradition in studying CI especially in developing nations where the concept is new or nonexistent.

3.1.2 Measurement of competitiveness/performance

This study found that there is a positive relationship between CI and firm competitiveness or performance and that CI plays a very critical role in firm competitiveness. However, from the review of literature there was no consensus as to the measurement of firm competitiveness or performance. There is no universally accepted measurement criteria and tools to measure or link the relationship that exists between CI to firm competitiveness. This poses some difficulty as to the ascertainment of CI as a source of firm competitiveness or profitability or competitive advantage. The researcher felt that they might be a number of factors that might have contributed to firm competitiveness and profitability

besides CI. This calls for further research. There was no consistency in the measurement of profitability to ascertain its link to CI.

3.1.3 CI model

The results of the review show that there is no universally accepted CI model for adoption within large organizations and within SMEs. The implementation of the organizational process of CI varies with the specific characteristics of each company, including its size, age, structure, organizational culture, management model and the business sector in which it operates (Santos and Correia, 2010). Viviers et al., (2005) assert that multinational companies in South Africa, for example, face unique challenges as far as CI is concerned. They argue that probably the biggest challenge is to find a model for CI that suits the environment since it is unique and different when compared to developed nations where these CI models are adopted.

3.1.4 Cross-sectional/longitudinal data collection

All the articles reviewed adopted the cross-sectional research approach of data collection. This poses a great challenge in examining or evaluating the effectiveness of CI or its contribution or its relationship its role towards firm competitiveness. Since CI is a process hence its measurement needs to be assessed over a long period, that is, longitudinal research approach to data collection must be applied. Cross-sectional method of data collection was considered to have limitations in this case. As environmental turbulence and competition increases, more and more companies either commence or increase their CI activities hence the longitudinal data collection is perceived to be the best approach (Adidam et al., 2012). It would be desirable then to collect data using a longitudinal data collection method which would track the level of CI activities with firm competitiveness. The longitudinal data collection method must be combined with the inductive epistemological and ontological approaches that seek to get a deeper understanding and reconstruction of meaning. These philosophies display ‘multiple constructed realities’ through the shared investigation (by both the researcher and participants) of meanings and explanations. Testing of relationships between variables is of paramount significance.

3.1.5 Testing of relationships between variables

Regression analysis can be used for prediction, inference, hypothesis testing, and modeling of causal relationships. A linear relationship between continuous dependent variables and continuous independent variable can be assessed with simple

linear regression. To assess the type of relationship, a regression must be done. However, in probability theory and statistics, correlation indicates the strength and direction of a linear relationship between two variables. Correlation does not imply causality. Only three researches applied regression and correlation analysis. From the findings, the study found that there was a positive relationship between the dependent and independent variables except in one article where it was found that there was a positive though weak relationship between CI and performance. In this study the independent variables only contributed about 19.4% to the profit. However, in other two articles, the results showed a strong correlation between the variables. Linear regression was also carried out in the analysis of variables (ANOVA) and the result of the model was highly significant. The Cronbach's alpha and composite reliability tests were applied to all measures and they were deemed reliable. These findings suggest that CI is significant or critical source for firm performance or competitiveness. Other articles used different methods of measurement, for example, X2 and Earnings per Share (EPS). The one that used EPS found a positive relationship between emphasis on CI and profitability and the X2 test of independence indicates a positive linkage but not causal relationship between firm performance and level of CI activities.

3.1.6 Limitations and directions for future research

The following were identified as knowledge gaps in CI for literature review: formal CI training is not yet provided at an appropriate level in African learning institutions, that is, if any is being provided. Training is very critical as it will increase and broaden CI's knowledge base. Future research need also to establish the appropriate CI function's positioning within organizations for effective decision-making. There is also need to review the importance of CI contribution to knowledge base in organizations.

4 Conclusion and recommendations

4.1 Conclusion

The objective of this study was to provide an overview from the current literature on how CI relates to firm competitiveness with the aim of making critical conclusions and recommendations. The paper found some interesting insights on CI. CI provides firms with a competitive strategy that helps decision-makers in firms of all sizes and these strategies are connected to philosophical views and methodologies found documented by early war and economics scholars. Because of the time frame, CI has undergone a groundswell of interest due to increased availability of information and the increased proliferation of commercial databases world-wide. Even though it is connected to these philosophical

views and methodologies, research has shown that limited research has been conducted or published on CI practices in African countries with the exception of South Africa where significant progress has been made so far. It was also found that many CI researches have followed the deductive approach with nothing much being done inductively. Most studies addressing this issue have linked CI to firm performance, competitive advantage, firm bottom-line and nothing much has been done on CI as a source firm competitiveness.

4.2 Recommendations

This paper recommends the adoption of CI especially in developing nations as it is a critical source of firm competitiveness. The review shows that there is a correlation between CI and firm performance and enhanced firm competitiveness. Furthermore, the paper recommends the introduction of CI programmes in Universities especially in developing nations and to foster research collaboration between academics, the private and public sector. African universities are encouraged to seek partnerships with other international universities already offering CI programmes.

The paper also recommends the adoption of mixed research methods in future CI researches as this approach reduces bias and takes into consideration the epistemological, ontological and axiological approaches. Mixed research methods provide both quantitative and qualitative research strength and answer a broader and more complete range of research questions since the researcher will not be confined to a single method or approach. Today's research world is becoming increasingly interdisciplinary, complex, and dynamic hence the need to use more than one research method to enrich the findings.

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