

Competitive Intelligence and Knowledge Management: An Analysis of the Literature

Salima El Fadili*, Firdaous Gmira

Department of Management, Hassan 1st University of Settat, Morocco

*Corresponding Author:

Salima El Fadili

Email: elfadili.salima@gmail.com

Abstract: In recent years, especially in the field of management, concepts such as competitive intelligence and knowledge management have gained a rising interest as a result of information explosion. Nevertheless, these concepts need an additional effort to perceive the common features in both practice and research. Nowadays, numerous studies consider knowledge as the lifeblood of companies and as a valuable organizational resource. In a knowledge based context, there has been growing awareness about the importance of knowledge as an organizational performance driver. In this sense, how do competitive intelligence and knowledge management interact to create knowledge and optimize organizational performance? Drawing upon the literature review and analysis of both competitive intelligence and knowledge management processes, we discuss several important research concerns surrounding the role of these two concepts in achieving organizational performance. The main purpose of this article is to shed some light on competitive intelligence and knowledge management as powerful catalysts for knowledge creation, and as the foundation for organizational performance.

Keywords: competitive intelligence, information, decision-making, knowledge management, organizational performance, data, knowledge based view

INTRODUCTION

Intangible assets have long been recognized as valuable resources for the organizational performance, going back to several management theorists such as Hall [1] and Teece [2]. According to this view, companies should not limit themselves to physical investments, but rather engage in intangible investments by acquiring information and knowledge and exploiting cognitive assets. This paper attempts to examine the role of competitive intelligence and knowledge management in creating, sharing and exploiting organizational knowledge, particularly in a context where this latter is viewed as a valuable source of sustainable competitive advantage. It also discusses the similarities, differences and benefits of these two practices for firms.

In today's organizational practice, competitive intelligence and knowledge management practices have generated a remarkable amount of interest in both business and academic communities, and have led to some misunderstandings and confusion. Therefore, the differences between these two concepts need to be clarified. Competitive intelligence and knowledge management are described as systematic processes that produce relevant and timely information and help decision makers to counter threats and take advantage of the emerging opportunities and challenges.

Thus, in such a context, an important question is drawing an increasing interest and consists of exploring the connection between competitive intelligence and knowledge management. Given this, our specific research question is: how do competitive intelligence and knowledge management practices interact to create knowledge and enhance organizational performance?

According to the knowledge-based view, which depicts firms as stores of knowledge, this research aims to identify the concepts of competitive intelligence and knowledge management through a literature review centered on these two concepts with the goal to create an articulated understanding of how these two informational practices can impact the firm's performance. In other words, this paper attempts to provide a framework for understanding the various aspects of competitive intelligence and knowledge management practices. In more detail, the paper unpacks the interactions between competitive intelligence and knowledge management as managerial practices that are becoming increasingly important. It also aims to make some contributions to previous competitive intelligence and knowledge management researches.

The remainder of this article is organized as follows: First, we review theoretically relevant aspects

of the literature related to competitive intelligence and knowledge management. Second, we will illuminate the dimensions of the articulation between these two concepts with emphasis on their main points of complementarity. Finally, we discuss some implications of the interaction between competitive intelligence and knowledge management on organizational performance.

RESEARCH METHODS

In this research paper, the principal sources of information were books, journal including on-line journal and thesis. To identify pertinent literature, academic databases and search engines were used. A review of references in related studies led to more relevant sources, the references of which were further assessed and examined. Keywords such as "competitive intelligence" and "knowledge management" were used in search engines to find significant sources. To ensure high reliability, only peer-reviewed articles were examined.

The documents analysis was designed to gather information regarding competitive intelligence and knowledge management, their definitions, functions and process.

In the processing of this article have been used these methods: analysis, synthesis, deductions and comparison.

CONCEPTUAL BACKGROUND

Knowledge creation: an overview

In today's competitive environment, companies have been encouraged to develop new managerial practices that help decision makers to face external forces that they should live with and react to,

such as competitive intelligence and knowledge management practices. Before exploring the various facets of knowledge management and competitive intelligence, we first need to re-examine the notion of tacit and explicit knowledge, and the standard triad of data/information/knowledge.

Basically, data, information and knowledge are the cornerstone of these practices. An attempt to clarify these notions is made, and a theoretical framework for integration is recommended by focusing on their various roles and aspects within a decision-making process [3].

Thus, in economic analysis, concepts such as: data, information and knowledge are generally assimilated. For Reix [4] "*The difference between data, information and knowledge has undergone little practical value*". However, some differences between these three concepts have been highlighted. In short, data (words, numbers, symbols ...) are viewed as simple isolated facts and are obtained by a simple process of observation, however information is acquired via an interpretive model that consist of putting data into a context and combining within a structure.

Consistent with this view, knowledge is the result of information processed by individuals through a cognitive process. Furthermore, even if both terms of knowledge and information are used indifferently, there are some elements that should be nuanced between these two concepts. In this sense, information is recognized as a flow of messages, while knowledge is perceived as a set of rules and a process of simultaneously knowing and acting [5]. This conversion from data to knowledge is illustrated in figure 1



Fig-1: From data to knowledge, adapted from Nonaka [6]

As illustrated in figure 1, this transformational process from data into knowledge underlines an essential feature of knowledge that relates to human action and cognitive style. In this sense, knowledge exists in two main forms in organizations: explicit knowledge which is communicated in symbolic forms such as : diagrams, or procedural manuals etc. and tacit knowledge which is acquired through experiences and comprised of both cognitive and technical elements that could not be codified [6]. Moreover, knowledge refers to a cognitive capacity, whereas information remains a set of formatted, structured and interpretable data. Indeed, the crucial characteristic of knowledge is to be able, by itself, to generate new knowledge through a process of feedback, while information is extracted from data and is carried out simply by duplication.

Furthermore, the creation of new knowledge appears as a dynamic and continuous process of learning. This idea is reiterated by Foray [7] who emphasizes that knowledge has something more than information. In other words, knowledge leads to the generation of new information and knowledge.

If knowledge is viewed as valuable and strategic resource, the practices and tools to set up a knowledge management system within the organization are highly required. Thus, in an extremely competitive market, firm competitiveness depends on gaining a good understanding of its business environment. As a result, two managerial practices have been developed to take advantage of this competitive pressure and create a

sustained competitive advantage. On the one hand, competitive intelligence, which is regarded as a process of knowledge creation that aims at improving the competitive position of the company. On the other hand, knowledge management as a process through which corporate knowledge is exploited and capitalized to improve organizational performance.

Competitive intelligence: a lever for knowledge creation

In today's fast-paced context, knowledge creation, which refers to the capability of an organization to develop innovative and valuable intangible commodities, has become one of the major concerns of organizations. Accordingly, competitive intelligence has emerged as a central theme in the knowledge-based literature and has become a more generalized discipline that has been examined under various titles. This emerging field has attracted significant interest among researchers, academicians and practitioners, and as often in this kind of general concepts, there is no single universally accepted definition. Hence, several definitions have been proposed to better understand this concept.

According to Martre [8], competitive intelligence can be defined as "*all the coordinated actions of collection, processing and distributing of useful information for the economic actors with the aim of its exploitation. These actions are taken legally with all the guarantees of protection necessary for the conservation of the company's patrimony, in the best conditions of quality, of delay and of cost*". This definition was developed by Juillet [9], who states that "*competitive intelligence is the mastery and protection of strategic information in order to allow company managers to take the right decision at any given time*". In this spirit, Levet [10] privileged the logic of coordination to define competitive intelligence. In other words, competitive intelligence enhances cooperation and coordination among stakeholders within and outside a company.

Drawing on the researches of Sutter *et al* [11] competitive intelligence is viewed as a process that aims at clarifying the strategic objectives of organizations. Besides, competitive intelligence is not limited to information search and tracking, it focuses more on managing external knowledge resources by involving different organizational levels and using cognitive skills to solve decision-making problems.

In other words, the main objective of competitive intelligence is the collection, processing and interpretation of the content of information arising from the business environment and required by different levels of decision. As a result, competitive intelligence is, on the one hand, a process of scanning and detection of opportunities and threats and

adaptation to a changing environment and, on the other hand, an organizational learning process.

According to Besson and Possin [12], "*competitive intelligence is a collective system of acquisition, production and transformation of information into useful knowledge. This system aims at improving the decision-making system, exercising influence, detecting opportunities, preventing threats and risks, protecting and enriching the heritage, performance, maintaining and straightening the image, and creating values*". Going forward, many scholars have stressed the need to implement a knowledge management system [10, 13, 14].

In this sense Guilhon and Levet [15] consider that competitive intelligence should not only manage information flows, but also convert this latter into knowledge and skills, and therefore, into competitive advantages. Thus, for Levet [10], competitive intelligence is generally regarded as the "infrastructure" of a knowledge-based economy. In this spirit, competitive intelligence as a process of knowledge creation offers a new representation of the firm for two main reasons:

- Firstly, the importance of the firm's intangible and cognitive resources is increasingly confirmed compared to technical resources, and knowledge inputs are relatively large compared to physical capital expenditures.
- Secondly: organizations face new challenges and problems related to innovation that require new and effective managerial practices.

Based on these concerns, it appears that competitive intelligence emphasizes the importance of individual and collective ability to understand information and to produce knowledge that might be at the origin of organizational performance. Hence, one of the most popular dimensions in the context of competitive intelligence is the creation and the capitalization of the company's knowledge.

More specifically, competitive intelligence is often perceived as a part of a collective activity shared by a group of actors whose goal is organizational knowledge creation that might reduce uncertainty, provide tangible benefits, and contribute to convert the company into "a learning firm" [15, 10].

Additionally, Crozier and Friedberg [16] suggest that the first major source of power is the possession of a difficult and replaceable skill or functional specialization. In this case, having knowledge confers power to the person or the organization that holds it. From this perspective, Guilhon and Levet [15] consider that the creation of competitive advantage does not depend solely on technical division of labor, but rather on a cognitive division based on information and knowledge. In other

terms, information and knowledge are recognized as a powerful resource that contributes significantly to value creation.

Knowledge management: enhancing organizational knowledge creation

One of the most associated concepts with the term of competitive intelligence is "knowledge management". *This emerging notion has attracted a growing interest in management sciences. Many scholars have devoted much of their researches to study knowledge management which is viewed as a "multidimensional and multidisciplinary concept" [17]. Thus, for Prax [18] "knowledge management is a process of creation, enrichment, capitalization and dissemination of knowledge that involves all the actors of the organization, as consumers and producers".*

Conceived as an organizational project, knowledge management mobilizes all the actors and catalyzes change. Following the same perspective, Brillman and Hérard [19] argue that "knowledge management is regarded as a way of creating a competitive advantage and create value for customers, employees and shareholders". In addition, for some authors such as Newman and Conrad [20], "knowledge management is a discipline that seeks to improve the performance of individuals and organizations by maintaining and leveraging the present and future value of knowledge assets. Knowledge management systems encompass both human and automated activities and their associated artifacts".

One of the most challenging tasks of a knowledge management is to achieve high and sustainable organizational performance. In this sense, Preston et al [21] consider knowledge management as a process of creating, acquiring, sharing and processing knowledge to improve learning and performance in organizations. Essentially, it is considered as "an attempt by organizations to capture, codify, organize, and redistribute the firm's tacit forms of intellectual capital or knowing and make them explicit. In other words, the essence of knowledge management is to find, awaken and harness the ingredients of sustainable benefits" [22].

Based on all these definitions, knowledge management, as depicted above, has gradually evolved as an important discipline in the field of management sciences and regarded as a system of valuing and capitalizing knowledge that contributes to value creation for the company [23]. In most organizations, knowledge management is considered as a process that consists of identifying, mapping, preserving knowledge and putting it at the disposal of decision makers

COMPETITIVE INTELLIGENCE AND KNOWLEDGE MANAGEMENT: TWO INTERCONNECTED PROCESSES

While the existing literature provides a good understanding of competitive intelligence and knowledge management activities, we know little in terms of the interactions between these two concepts and their relationships with organizational performance. As mentioned earlier, considerable attention has been given to competitive intelligence and knowledge management, but few scholars and practitioners examine the potential of each field to contribute to the other.

This article has been designed to achieve two main objectives: In the first place, it has the goal of examining the relationship between competitive intelligence and knowledge management. In the second place, this literature review has been contemplated as an attempt to study the impact of these two informational practices on organizational performance. On the basis of this reflection, many authors have pointed out the links between competitive intelligence and knowledge management.

In this paper, we try to comprehend how competitive intelligence is coordinated with knowledge management to foster better knowledge creation within the company and what are the main elements of their complementarity. In this spirit, several points of divergence and convergence between these two concepts have been highlighted in management literature.

Competitive intelligence and knowledge management: complementary or substitutable

The unclear distinction between competitive intelligence and knowledge management has impaired their combination and utilization for the development of integrated system. Consequently, there is need for a unified definitional model of competitive intelligence and knowledge management based on their roles and cognitive information processing.

An attempt to clarify the differences between these two notions is made by Shelfer [24] who examined a number of differences between competitive intelligence and knowledge management. These differences can be briefly summarized as follow:

- Knowledge management is a process that focuses on the exploitation of cognitive assets and internal information, whereas competitive intelligence is a process that focuses on external information emerging from the business environment.
- Knowledge management tends to be more reactive. However, competitive intelligence is associated with a proactive behavior of the company especially in predicting the evolution of competition and market developments.
- Knowledge management is often associated with collaborative computing device that allow sharing information and making strategic

decisions. While competitive intelligence uses analytical and understanding capacities and skills to comprehend the company's external environment.

In this sense, Blondel *et al.* [25] argue that competitive intelligence and knowledge management are two distinct approaches. On the one hand, they both contribute to the process of organizational learning through the transformation of information into actionable knowledge and, on the other hand, they rely

on the same collective cognitive abilities. However, each of these practices follows very different methodologies in organizations.

Thus, for knowledge management, the information sought emanates essentially from the internal environment of the company, whereas competitive intelligence refers to an organizational process designed to take advantage of information emanating from the external environment as shown in figure 2:

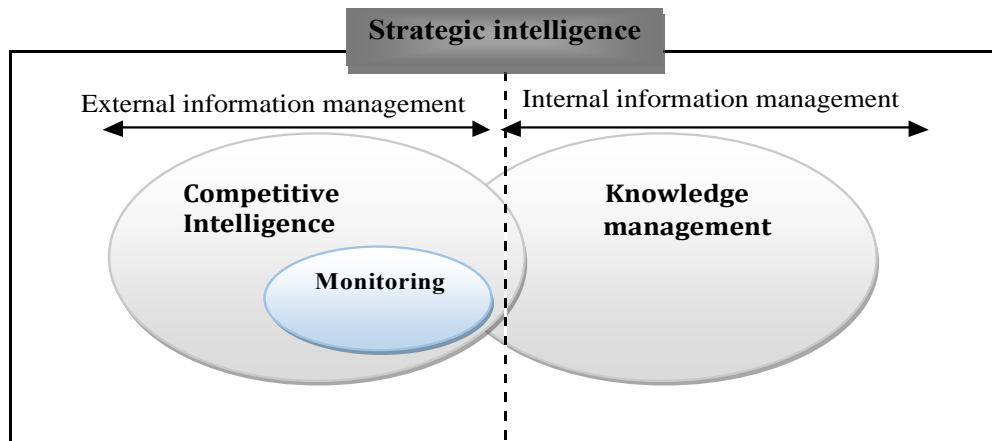


Fig-2: Competitive intelligence and knowledge management: fields of application [26]

As cited earlier, competitive intelligence and knowledge management practices have a number of differences, but both fields aim at creating actionable knowledge in order to improve organizational performance. Thus, it has been argued that knowledge management and competitive intelligence share complementary objectives [25].

Accordingly, it seems that knowledge management is considered as a "methodological support" and a "tank of knowledge" for competitive intelligence which, on its side, should select and filter the knowledge that the company considers relevant and necessary for the decision-making process. Therefore, competitive intelligence can rely on the methods and tools of knowledge management to improve strategic decisions and lead to better performance. In summary, the major common ground between these two processes is to achieve a sustainable competitive advantage.

The mutual impact of competitive intelligence and knowledge management on organizational performance

The concept of organizational performance has been an active research area and has attracted

significant attention among organizational theories and business strategy researchers, particularly with a focus on its explanatory elements and sources. Several researchers in management sciences acknowledge the existence of a relationship between firms practicing competitive intelligence and/or knowledge management and organizational performance [27]. However, little empirical work has confirmed or refuted this correlation. Thus, in an increasingly competitive context, Bouvard and Storhayne [28] consider that the value of information depends largely on its operational utility.

According to the "Resource Based Theory", an organization is a combination of tangible and intangible commodities whose nature and attributes determine its competitiveness and performance. Thus, as previously mentioned, information and knowledge are seen as a valuable resource contributing to organizational performance. This idea was emphasized by Mahoney and Pandian [29] who point out that information and knowledge constitute resources that confer a greater competitive advantage as shown in figure 3:

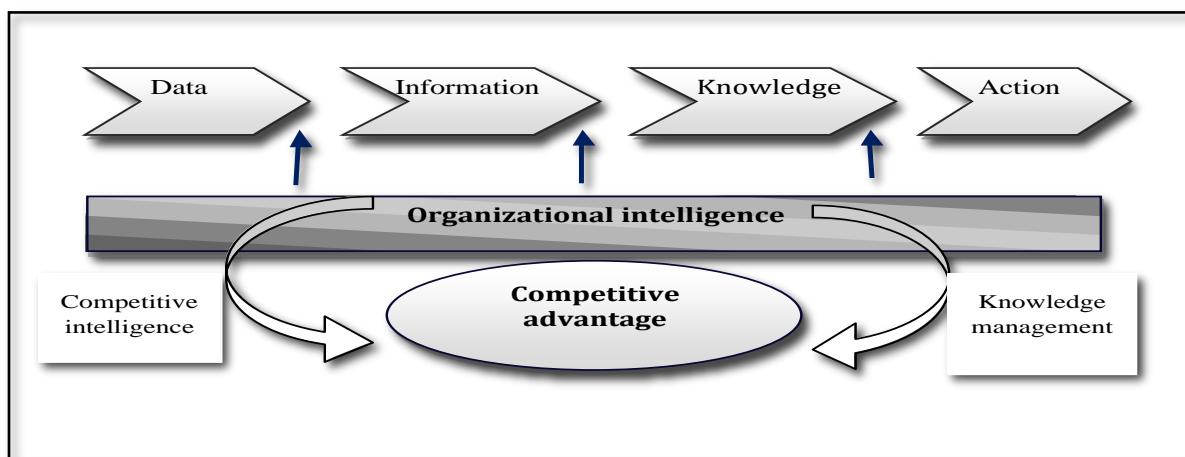


Fig-3: Developing organizational intelligence through knowledge management and competitive intelligence [25]

Resource-based theorists suggest that firms can and do differentiate themselves on the basis of their resources. Based on this view, a firm's knowledge assets are widely recognized as valuable resource.

Thus, organizational performance depends on the way that the company manages its intangible resources. In this sense, the creation of organizational value requires the development of a knowledge management approach [30]. Indeed, competitive intelligence and knowledge management support decision makers with relevant and value-added information and contribute to the transformation of this latter into knowledge.

Being an outside business activity, competitive intelligence relies on a work of internal introspection that knowledge management tools provide. In contrast, knowledge management process can be exploited in order to develop a relevant competitive intelligence system. In other words, competitive intelligence can rely on information provided by a knowledge management system when this information is strategic, while competitive intelligence aims to provide actionable information to decision makers and therefore fosters the process of knowledge management. This synergy between these two practices contribute to improve firm's overall performance.

RESULTS AND CONCLUDING REMARKS

In this paper, we have presented a discussion of competitive intelligence, knowledge management, and organizational performance based on a review, interpretation, and synthesis of a wide array of pertinent literature. Some typical conclusions may be drawn from our work: by examining the roles of competitive intelligence and knowledge management in enhancing knowledge creation, this research paper revealed the existence of synergy between these two concepts via a number of aspects of complementarity. We can summarize such complementarity by considering that

competitive intelligence is an extension of knowledge management process.

The literature findings indicate that the firm is required to continuously develop a knowledge culture which contributes to encourage the creation of intangible assets that are considered as the main factors of its competitiveness in the business market. From this literature review, it can be argued that by combining competitive intelligence and knowledge management in a judicious and efficient way within the organization, this latter would be able to develop a learning capacity enabling it to be constantly alerted to changes and to face the potential risks and threats emanating from its environment. An understanding and use of competitive intelligence and knowledge management practices, and their relationship with organizational performance, might provide directives to decisions makers regarding the unexploited opportunities that these two managerial practices offer them in a rapidly changing environment.

Finally, one of the key limitations of this research is its descriptive nature. It would therefore be desirable and worthwhile to extend it with other empirical studies that would appear to be relevant and useful. In other words, future research on competitive intelligence and knowledge management might examine, for example, what are the critical success factors for implementing competitive intelligence and/or knowledge management practices in organizations? or how firms actively manage these practices to encourage organizational learning?

REFERENCES

1. Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strateg. Manag. J.*, 14(8), 607–618.
2. Teece, D. J. (1998). Capturing value from knowledge assets: The new economy, markets for

- know-how, and intangible assets. *Calif. Manage. Rev.*, 40(3), 55–79.
3. Aamodt, M., & Nygard, A. (1995). Different roles and mutual dependencies of data, information, and knowledge—an AI perspective on their integration. *Data Knowl. Eng.*, 16(3), 191–222.
 4. Reix, R., Fallery, B., Kalika, M., & Rowe, F. (2011). *Systèmes d'information et management des organisations*. Vuibert.
 5. McQueen, R. (1998). Four views of knowledge and knowledge management. *AMCIS Proc.*, p. 204.
 6. Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organ. Sci.*, 5(1), 14–37.
 7. Foray, D. (2010). *L'économie de la connaissance*. La découverte.
 8. Martre, H. (1994). Intelligence économique et stratégie des entreprises. Commissariat général du Plan., La documentation française.
 9. Juillet, A. (2005). Référentiel de formation en intelligence économique. *Secrétariat Général Déf. Natl.*
 10. Levet, J. L. (2001). *L'intelligence économique: mode de pensée, mode d'action*. Economica.
 11. Sutter, E., Martin, P., & Martin, P. (2006). *Intelligence économique et management de l'information: les questions les plus fréquemment posées*. Ed. Tec & doc.,
 12. Besson B., & Possin, J. C. (2006). Dix ans d'intelligence économique en France », in *Intelligence économique et gouvernance compétitive*, La Documentation française., paris, p. 31- 51.
 13. Paquet, P. (2008). *Information, communication et management dans l'entreprise: quels enjeux?* Éditions L'Harmattan.
 14. Oubrich, M. (2007). L'intelligence économique: Un outil de management stratégique orienté vers le développement de nouvelles connaissances. *Rev. Sci. Gest.*, 4(226- 227), 77- 88.
 15. Guilhon, B., Levet, J. L. (2003). *De l'intelligence économique à l'économie de la connaissance*. Economica.
 16. Crozier, M., & Friedberg, E. (1977). L'acteur et le système.
 17. Meihami B., Meihami, H. (2014). Knowledge Management a way to gain a competitive advantage in firms (evidence of manufacturing companies). *Int. Lett. Soc. Humanist. Sci.*, 03, 80–91.
 18. Prax, J. Y. (2000). Le guide du Knowledge management, Concepts et pratiques de la gestion des connaissances. *Éd Dunod*.
 19. Brilman, J., & Hérard, J. (2006). *Les meilleures pratiques de management: dans le nouveau contexte économique mondial*. Editions Eyrolles.
 20. Newman B. D., & Conrad, K. W. (2000). A Framework for Characterizing Knowledge Management Methods, Practices, and Technologies. in *PAKM*.
 21. Preston, J., Swan, J., Scarbrough, H., Personnel, I., & United K. Development. (1999). *Knowledge management A literature review*.
 22. Rothberg, H. N., & Erickson, G. S. (2005). *From knowledge to intelligence: Creating competitive advantage in the next economy*. Routledge.
 23. Veybel, L., & Prieur, P. (2003). *Le knowledge management dans tous ses états: La gestion des connaissances au service de la performance*. Ed. d'Organisation.
 24. Shelfer, K. (2004). The intersection of knowledge management and competitive intelligence: Smartcards and electronic commerce. *Knowl. Manag. Lesson Learn. What Works What Doesn't Eds Michael ED Koenig T Kanti Srikantaiah N. J. Inf. Today Inc*, p. 419–42.
 25. Blondel, F., Edouard, S., & El Mabrouki, M. N. (2007). Quelle articulation entre intelligence économique et knowledge management au sein de l'entreprise?.
 26. Menendez A. (2002). *Intelligence économique. Un guide pour débutants et praticiens*. Guide, CETISME.
 27. Cohen, C. (2007). Intelligence et Performance mesurer l'efficacité de l'Intelligence Economique et Stratégique (IES) et son impact sur la Performance de l'Organisation. *Vie Sci. Entrep.*, 174(1), 15–50.
 28. Bouvard, P., & Storhayne, P. (2002). Knowledge management. *EMS Paris*.
 29. Mahoney, J. T., Pandian, J. R. (1992). The resource-based view within the conversation of strategic management », *Strateg. Manag. J.*, 13(5), 363–380.
 30. Mallet, C., Rousseau, A., & Valoggia, P. (2006). Gestion des connaissances, TIC et création de valeur organisationnelle: proposition d'un modèle d'évaluation. in *15e Conférence Internationale de Management Stratégique (AIMS)*.