Critical Sucess Factors of Competitive Intelligence Implementation: A Conceptual Framework

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Abstract—**This paper presents a preliminary literature review of previous and current research in the field of competitive intelligence (CI). Its purpose is to identify critical success factors (CSFs) and apparent benefits of CI process for an organization. The intensive review of previous study is explored, a serious gap in literature of relationship among CSFs and CI, is noticed.**

Based on the finding of the literature, a conceptual model is developed with the intention to fill this gap. The proposed conceptual framework is considered a contribution towards the enrichment of the relevant literature despite some limitations on term of applicability and validity.

Moreover, this study will enrich the CI literature, especially CSFs, and will provide a direction and the justification for further research in order to enhance capabilities of organization's CI.

Keywords—Competitive Intelligence; key sucess factors; process; conceptual model;

Introduction

With the change of economic environment and fierce competition, many organizations struggle to survive. In this context, recognition of changes entity and market, competition, technology, innovation and prediction of future trends are necessary for competition [1]. In order for an organization to survive in such an aggressive environment, a better understanding of its competitors and competitive force that affect its success is required. Companies should know how to remain competitive and how to anticipate and react to changes inside and outside of their industries. In sequence, to manage such an achievement, firms should have a process in place for turning data into actionable intelligence [2][3]|4], from which strategic and tactical decisions can drive. The utilization of such knowledge is known as CI.

In fact, several studies consider that CI has undergone raising interest in recent years as a result of the spectacular development of information, technologies, exponentially use of the Internet. CI involves the legal and ethical methods of collecting information about competitors, suppliers customers,, and overall business environment. the knowledge gained from this information is then used to enhance the organization's own competitiveness. kahaner [5] argued that the CI is conceptualized as a process of monitoring the competitive environment, with a goal to provide actionable intelligence that will provide a competitive edge to the organization.

CI has earned its right full place as an acknowledged business discipline and has become a major technique for achieving competitive advantage [6]. Many writings stress the importance of CI in shaping strategic decision-making [7][8]. Given its potential strategic benefits, many organizations have implemented CI with the intention to increase their competitive advantage. Priporas et al [9] noted that "CI seems to be the key ingredient for success in today's uncertain business environment".

I. CI: DOES IT REALLY MATTER FOR AN ORGANIZATION?

A. Definition of CI:

CI is both a product and a process [10]. *The product* of CI is the actionable input ("the intelligence") which organization needs to have in its possession in order to chart its future course of action. The *process* is the systematic acquisition, analysis and evaluation of information for competitive advantage over known and potential competitors [10]. Information assists decision makers to understand their competitors and to make sound strategic decisions [11]; [12]; [13].

According to Kahaner [5],"CI is the action of gathering, analyzing, and applying information about products, competitors, suppliers, regulators, partners, and costumers for short-term and long-term planning needs of an organization".

The Society of Competitive Intelligence Professional (SCIP) notes that CI is: "The process of monitoring the competitive environment and analyzing the findings in the context of internal issues, for the purpose of decision support." [14].

Most definition related to CI refers to similar concepts. These definitions have the following in common; it distinguishes intelligence from information (intelligence

giving you the ability to act on); it highlights the dynamic cyclical nature (process based) approach and it highlights the fact that it is linked to business objectives and decision making.

B. Benefits and value of CI for an organization

CI has long been recognized as a strategic management tool and is one of the fastest growing fields in the business world. CI is rapidly becoming a major technique for achieving competitive advantage [15],[16] [17].

According to Myburgh [10], the objectives of CI are to manage and reduce risk, make knowledge profitable, avoid information overload, ensure privacy and security of information, and use corporate information strategically. In essence, CI helps strategists to understand the forces that influence the business environment and, more importantly, to develop appropriate plans to compete successfully.18] Because of this critical impact on business decisions and on shaping company strategy, CI should be an important responsibility of top management. [19]. Further, Guimaraes (2000)[20] argues that a company can improve its competitive edge and its overall performance by applying an effective CI programme, and thereby satisfy two vital goals for its survival.

CI has the main function of processing and refining information and knowledge, whether it is with of organization. Martre (1994)[21]argues that complex modes of competition in organizations are increasing and are characterized by cooperation –competition relationships to witch companies must adapt. CI should be applied to adjust strategy to the new paradigm of competition.

The most common benefit of CI however is its ability to built information profiles that helps a company identify its competitor's strengths, weaknesses, strategies, objectives, market positioning and likely reaction patterns.

Further review of literature related to CI suggest that CI is a key tenet of market orientation, customer and competitor orientation [22],[23].[24] and intelligence behavior are an integral part of strategic marketing for organizations[25];[26].

In addition to that, CI gives some direction to the research and development. Organization may identify potential opportunities for investing in new technology and help incorporate new technologies into their own products. By so doing, they identify potential technology- based threats to market, share and identify possible partners for collaborative research and development [27]. According to Vedder and Guynes (2002)[27], "CI can also play a role in the development and operation of Strategic Information Systems(SIS).

C. CI process:CI

CI is a process consisting of phases that are linked. The output of each phase is the input to the next phase [28]. The overall output of the CI process is an input to the decision-making process [29]. Most CI definitions clearly reveal that it is a process that produces actionable intelligence [29]. According

to Du Toit and Muller (2004)[30], without a proper intelligence process and structure, it is difficult to develop intelligence. Also, without the visible support of and utilization of intelligence by top management, the process will be flawed.

The SCIP describes the CI cycle as the process by witch raw information is acquired, gathered, transmitted, evaluated, analyzed and made available as finished.

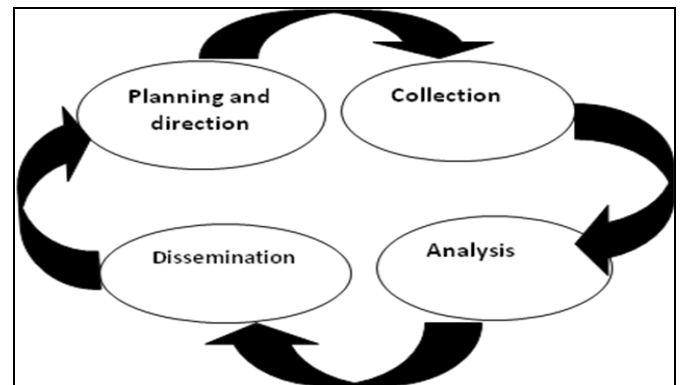Many versions of the conceptualization of the CI cycle can be found in the literature [31].

Fig. 1. CI cycle

* **Planning and direction:** Many researchers and authors have highlighted the importance of this first step in the CI process [32][33][5]. Cl is not about collecting all information but focusing on issues of highest importance to senior management [33],[34],[35],36],[37];[38]. It is also about a wider focus than only on competitors to include facets such as suppliers, customers, the regulatory environment...

* **Collection or intelligence gatherings:** It is during this phase that information is collected from a variety of sources for examination during the CI process. Collection involves accessing a variety of different sources (primary and secondary). These can be internal such as company employees or external to the company. Herring (1988) [38] argues that human sources in general deliver more timely and unique information. However, published data is important for analysis and for cross checking the human reporting. The key to successful CI is to focus on what information is important and relevant and know where to find it [31].

* **Analysis and production**: Many practitioners believe that this is where "true" intelligence is created, that is, converting information into "actionable intelligence" on which strategic and tactical decisions may be made [39]; [40]; [5]; [41]; [42]. According to Kahaner [5] and Rouach and Santi [33] this is the core activity of the CI process. An interpretation of information is made based on the key intelligence needs of the user.

* **Dissemination:** Once the analysis is completed, the intelligence unit must ensure that the results of the CI process or project are communicated to those with the authority and responsibility to act on the findings. If intelligence is not

delivered no intelligence was created. Kahaner [5] says: "It's the time when you present your logical arguments based on your analysis of raw data. It's a time to defend logic, to put up or shut up. It's the time.

II. OVERVIEW OF CRITICAL SUCCESS FACTORS (CVF'S) OF CI

A. definition of CVF'S

The idea that are a few factors which are decisive for the success of the company, and that these factors can be ascertained, was first introduced by Daniel (1961)[43] and later mainly elaborated by Rockart (1979)[45]; Butter et Rockard, 1981)[46] how proposed the CSF method to help CEOs specify their own needs for information about issues that were critical to the organization so that systems could be developed to meet those needs. CSF are "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization" [46]

According to Leidecker and Bruno[47], CSF are "those characteristics, conditions or variables that, when properly sustained, maintained, or managed, can have a significant impact on the success factors" "factors which, if addressed, [would] significantly improve project implementation chances" [48]

In strategic management field, a similar concept to CSF is used: Key Success Factors (KSF). According to Grunert and Ellegard (1993)[49], the term has been used in basically four different ways: as a (necessary) ingredient in a management information system; as a unique characteristic of a company; as a heuristic tool for managers to sharpen their thinking, and as a description of the major skills and resources required to have a successful performance in a given market. The terms KSF and CSF have been used interchangeably in the literature.

B. KSFs of CI

CI practices have features as a specific goal in a wide range of scholarly and practitioner works. However few studies have investigated the KSFs that affect the implementation of CI success. Therefore, empirical research to shed more light to those KSFs influencing the implementation of CI systems is desirable. In fact, few authors have included the factors influencing the development of these practices within their frameworks [50];[51];[52]];[32].

An understanding of KSFs enables managers to optimize their scarce resources and efforts by focusing on those significant factors that are most likely to aid successful system implementation.

Despite the luck of studies of KSFs impacting the implementation of CI systems, some general success factors and guidelines can be identified in the literature.

1) Top management support and understanding

Top management has to support the whole implementation process and the project needs. Top management involvement can take several different forms such as demonstrating commitment; helping teams to overcome obstacles, making things happen and provide encouragement to team. Moreover, commitment and support from top management plays a key role in influencing the success in almost any initiative within an organization. [53]

The support from top management is considered as one the most important success factor for CI implementation success.

If CI is to become an ongoing activity within the organization, it must be used and promoted by senior management." An intelligence strategy must have full support at board level if it is to succeed. [54]

2) Identifying CI needs:

Identifying needs of new CI system or a new task for an established intelligence unit is a critical success element [54]. In addition, to fulfilling the user needs, CI must be actionable. Sawka (1996)[55] notes "Competitive Intelligence is actionable knowledge about the external operating environment. In order for the whole program to function properly, it is essential that intelligence is adequately used".

According to Herring[56] company's intelligence needs can generally be assigned to one of three functional categories:

- **Strategic decisions and actions**: including the development of strategic plans and strategies.
- **Early warning topics**, including competitor initiatives, technological surprise, and government actions.
- **Description of the key players** in the specific marketplace, including competitors, customers, suppliers, regulators, and potential partners.

3) Organizational culture:

Organizational culture is a vital element in directing and monitoring efforts towards CI implementation. The culture of an organization means the environment that influences behavior, decision-making and the organization's approach to markets, customers and suppliers.

For a company to use its efforts successfully, an appropriate CI culture that support open communication, team spirit, information and knowledge sharing and focus on shared goals, is necessary[57]. According to Calof (1999)[58] the attitudes of people when they don't trust CI, and are unwilling to share information is considered as a main barrier that prevent firms from effectively gathering and using CI.

The organization should develop programs that make people want to share their knowledge and acquire new one without fear and freely exchange their thoughts, ideas and ways of working .

4) CI tools and resources:

The present global environment is characterized by constant change and rapid development as a result of technological innovations and new business developments. The need to access to information increased also. This means that organizations (and individuals) are forced to have the tools, strategies, techniques and models as well as the skills needed to manage this vast amount of information. Tools for gathering, sorting and analyzing information so that it can be converted

into actionable intelligence are required to assist CI practitioners in accomplishing their tasks. It is also important to note that, whilst several tools, techniques, and strategies are identified in the literature [59];[60];[61];[62], each organization has to select appropriate tools, techniques and strategies to suit their unique environment and needs. In certain instances, a range of CI tools may be used in an organization to ensure that information (intelligence) reaches the users in a form that they can assimilate easily and quickly.

Fleisher & Bensoussan [59] state that the analysis of collected information requires creativity and technical knowledge, intuition, models and frameworks. They have discussed over four dozen techniques, tools and frameworks that organizations can utilize in order to obtain the CI that is needed.

III. CONCEPTUAL FRAMEWORK AND HYPOTHESIS

By integrating the different factors identified in the literature review, and taking into consideration that these factors have been acknowledged through previous research, this study consolidates the mentioned factors into a single KSFs model of CI implementation, considering four factors within the model. Figure 2 shows the conceptual model.
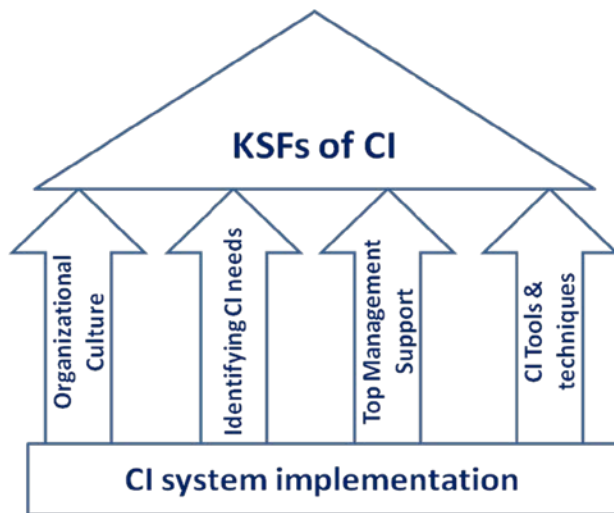

Fig. 2. Conceptual Model of CI implementation.

Hypothesis of research have been listed below:

H1: there is a positive correlation between organizational culture and successful CI system implementation,

H2: there is a positive correlation between identifying CI needs and successful CI system implementation,

H3: there is a positive correlation between identifying CI needs and successful CI system implementation,

H4: there is a positive correlation between CI tools and techniques and successful CI system implementation,

IV. CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This research has made a theoretical contribution to our understanding of the KSFs that impact CI implementation. The literature review reveals relatively little previous work on the subject. This study helps to fill the gap by building the theory of the ways KSFs impact CI system implementation. Besides that, the framework identified critical constructs that can be used by academicians for further empirical studies.

In fact, the proposed conceptual model may indicate some limitations in term of validity and applicability. Therefore, further empirical research is required in a form of survey research in the organizations by using multivariate analysis to validate this conceptual model. The use of this statistical method is suggested in order to broaden the finding of this research.

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