



COMPETITIVE INTELLIGENCE LOOP CONTEXTS IN INSURANCE INDUSTRY

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Abstract: *The paper's aim is to modeling the dynamic context and relations of affecting and forming components on competitive Intelligence (CI) context. The research method is based on system dynamics. The insurance industry's senior experts formed the research population. These loops are the infrastructure of organizational intelligence. The research approach is dynamic modeling. The models have casual aspects. The data collection is based on scientific documents, focus groups and deep interview with scholars in insurance industry. The sampling survey is target one which its size determined by maximum precautions estimation. The design software of looped dynamic models is VENSIM.*

Keywords: *Competitive Intelligence, Competitive Intelligence context, Intelligence Business, feedback loops.*

I. Introduction

Excessive accumulation of knowledge at competition levels is one of the features of new organizations so that increasing the amount of information in the organizations and the necessity of its use in organizational decision lead to the emergence of a phenomenon called CI in the last two decades. CI is considered as a strategic management tool and one of the fastest development areas of business. It is also considered as an important technique in the creation of competitive advantage [21]. CI, which is also called business intelligence, was developed in the context of business in 1980. Although the main source of it goes back to the decades before 1980, the main idea came from Michael Porter in order to use CI techniques to analyze the rivals and industries. Since the end of the Cold War, CI – once widely used in the military environment – has rapidly infiltrated into business competition [18]. One reason for the emergence of the knowledge is explosion of information that has been developed through increasing information and reflection in the proliferation and dissemination of global commercial database. Another reason for the growth of the knowledge might be the nature of the period we are living in; time for major changes in the political and social globalization, increasing the speed of business, increasing global competition, more invasive competition and rapid technological change [7].

In fact, CI is the ability of a systematic process of collecting and analyzing environmental data and information related to competitors, customers, suppliers, industry and market trends and future behavioral patterns. It is known as the art of attracting and transferring knowledge from outside of an organization and environment according to specific rules and certain regulations to the organization for protecting from competitive threats, identifying and exploiting potential opportunities and building the future [11]. In fact, CI is purposeful and coordinated monitoring of competitor activity and identifying them within the framework of the target market, so it is the process of employing ethical and legal methods to discover, provision and delivery of required information to decision makers who want to enhance their business competitive potential. It can be said in the definition of CI that it is gathering information about the environment and competitors intelligently in order to create and maintain competitive advantage [14].

Intelligent systems monitor the organization's environment, take the events under their supervision and provide required knowledge. Thus, CI is a systematic process for acquiring the knowledge of rivals, evaluation of them in order to simplifying organizational learning and improving, isolation and targeting them in the context of the industry, market and customers [13]. CI cannot be considered aligned with other CI intelligence is beyond all of them so that business intelligence, knowledge management and some of other knowledge-based systems could be considered in the framework of CI [24]. In fact, CI is a backbone of the foundation of competitive advantage is based on it and the strength of these systems provides sustainable capacity and capabilities for CI [8]. Knowledge management (KM) and business intelligence (BI) are closely related to CI. KM focuses on how you can best manage knowledge within your organization, and externally – to customers of the organization and its stakeholders. Similarly, BI is concerned with improving the way information is taken and shared, in order to make it widely available throughout the organization [19].

II. Literature Review

Table 1: Summary of previous research

Researchers	Related Study	Results
Mohn, 1989	How to create competitive intelligence in organizations	Indices of successful implementation of business intelligence in organizations: identifying management requirements, recruitment of qualified personnel, data collection, applying analytical procedures, formulation of appropriate strategies
Mehri & Hosseini, 2005	Designing the competitive advantage model of automotive industry in Iran	The dimensions of competitive intelligence: networking capabilities, process-orientation, organizational capabilities such as concentration, learning, creativity and development
Azvine, et al, 2006	Real time of business intelligence for adaptive entrepreneurship	Application of business intelligence at the strategic level of insurance industry, helping to increase the overall efficiency of the organization and optimizing processes
Dishman & Calof, 2008	Competitive intelligence: a multi phase approach to marketing strategies	The most important problems in order to develop competitive intelligence in organizations: shortage of skilled labor, insufficient participation of executives and legal and ethical issues
Muller, 2009	Presentation of competitive intelligence model in South Africa car industry	The components of competitive intelligence: information technology, pay attention to the organization's inner and outer processes and management approach to innovation and creativity

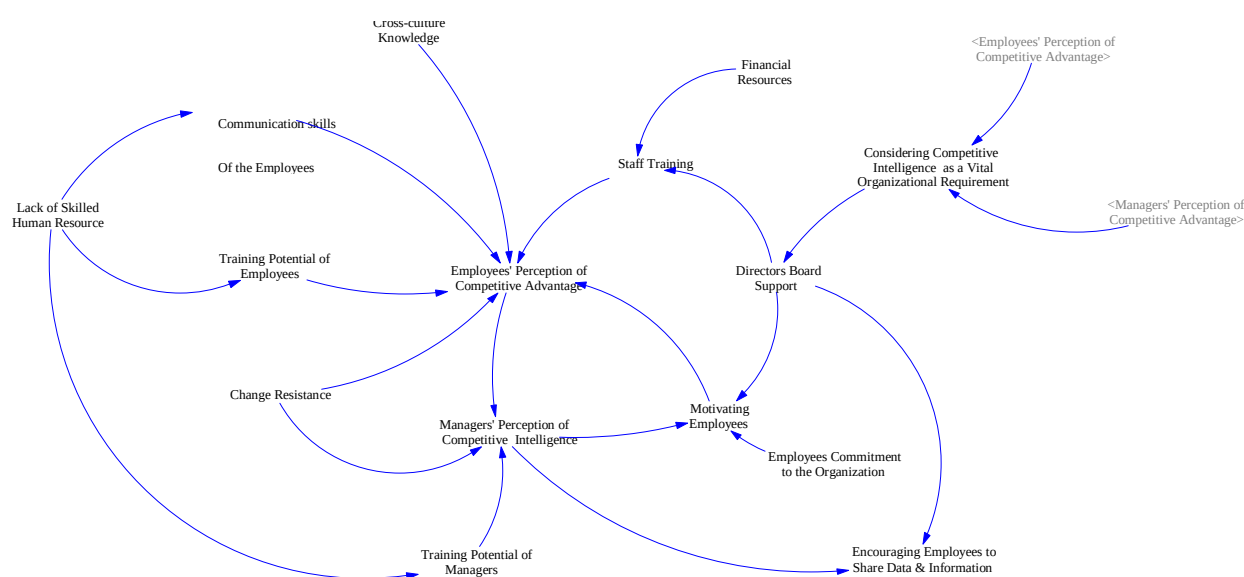
III. Research Methodology

In the present investigation, library and internet resources including books, articles and English and Persian theses were used in the theoretical principles formulation for the confirmation of CI context variables and creation of scientific framework. Moreover, expert opinions based on focal interview relying on Delphi method according to the researcher made questionnaire was used in the test and development of basic theoretical framework of research model. Eventually, the methods of inferential statistics and system dynamism were used after data collection and summarization. The methods of systems dynamism and related functions such as pulse and step functions and sensitivity analysis using Vensim software were used in the present investigation; moreover, structural equations were used in order to determine the relationships of research model variables and associated tests. The population consisted of insurance industry experts including senior and middle managers of insurance industry in Iran. The sampling method of the research is purposeful, and the sample size method based on maximum precautionary estimation was employed in order to determine the sample size of the population considering the limited access to the sample experts.

IV. Findings

CI context is the readiness within the organization and the organizational infrastructure that is the first step in organizational intelligence. In other words, the implementation of CI process is facilitated in case of availability of CI.

Figure 1: The Dynamic casual model of CI context in insurance industry



The components of CI context and their dynamic relations were obtained through previous research context, focus groups and deep interview with scholars in insurance industry, and they were approved by structural equations. The components consisted of manager's perception of competitive intelligence(MPCI), employee's

perception of competitive intelligence(EPCI), staff training, communication skills of the employees, motivating the employees, cross-culture knowledge, employees commitment to the organization, Training potential of employees, Training potential of managers, change resistance, considering CI as a vital organizational requirement, directors board support and encouraging the employees to share information. The casual model of CI context is presented in figure 1. In the description of dynamic loops, the first variable is increased firstly and the impact is shown throughout the system.

The director board supports the implementation of CI which has upgraded by increasing in considering CI as a vital organizational requirement. Therefore, the motivation of staff in cooperation in the process of CI increases. Employees with more motivation have more understanding of CI ultimately, and this more understanding leads to considering CI as a vital organizational requirement. Thus, a positive and amplifier feedback loop is created, which the increase in considering CI as a vital organizational requirement has positive effect on this variable. Figure 2 presents the loop.

Figure 2: The Dynamic loop of employee perception of CI

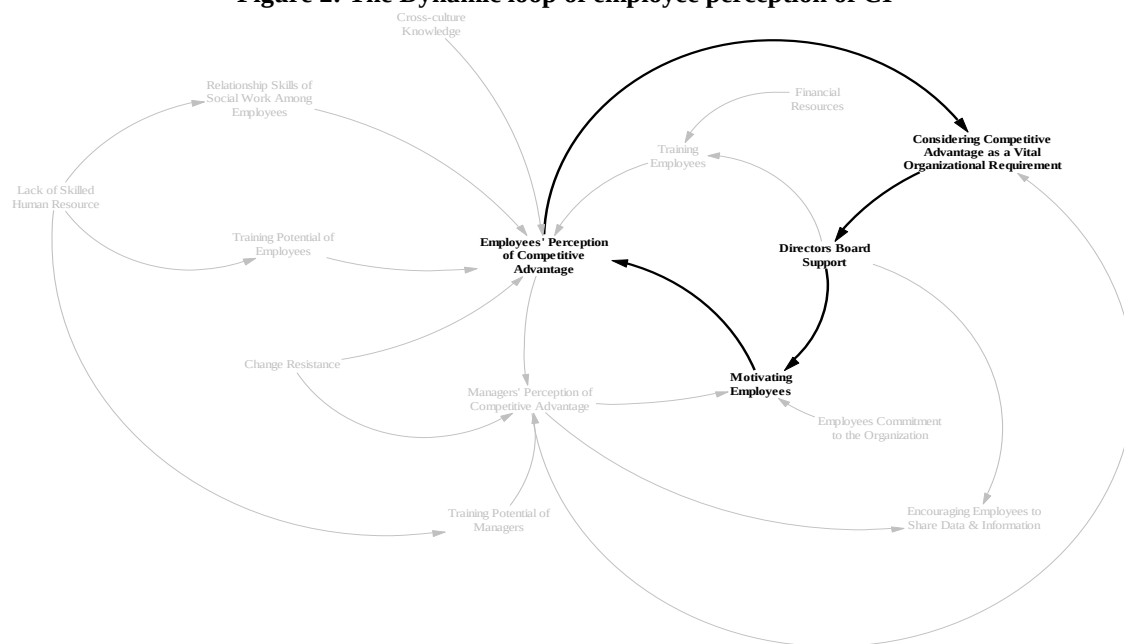
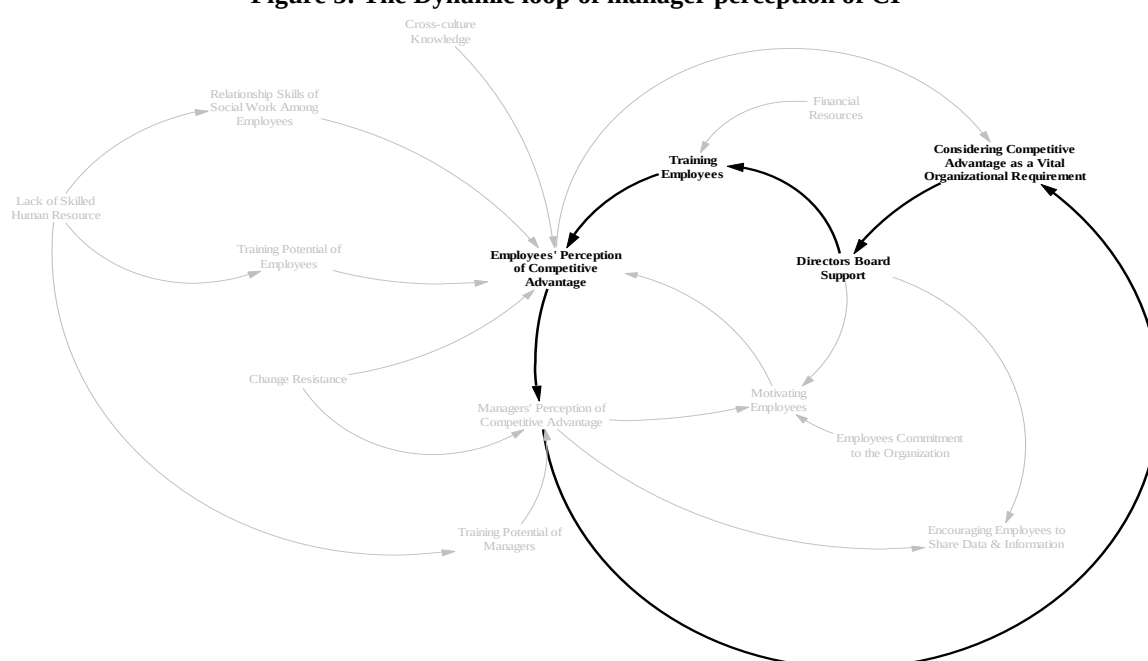


Figure 3: The Dynamic loop of manager perception of CI



In figure 3, the company's training programs on CI is increased by increasing in the directors board supports from the program of CI within the organization, so the understanding of the employees from CI increases. This

increased perception comes from interactions with their managers, which the MPCCI increases and CI within the organization takes into consideration. Consequently, the directors board supports increases and a positive loop will be created, which the directors board supports has positive impact on the variable. In figure 4, MPCCI is increased by increasing in EPCI, and this comes from employees' interaction with their managers. Consequently, more motivation will be emerged in the employees for accepting developed CI programs and the EPCI increases. So, this loop is an amplifier loop too, and this variable has positive impact on itself. In figure 5, the EPCI is increased by increasing in staff training in the field of CI. Employees' more perception of CI leads to the advantages of achieving CI in the organization, increase in considering CI as a vital organizational requirement and attracting support of senior managers from all CI programs. More directors board supports ultimately provide more training for the employees.

Figure 4: The dynamic loop of creating motivation in employees

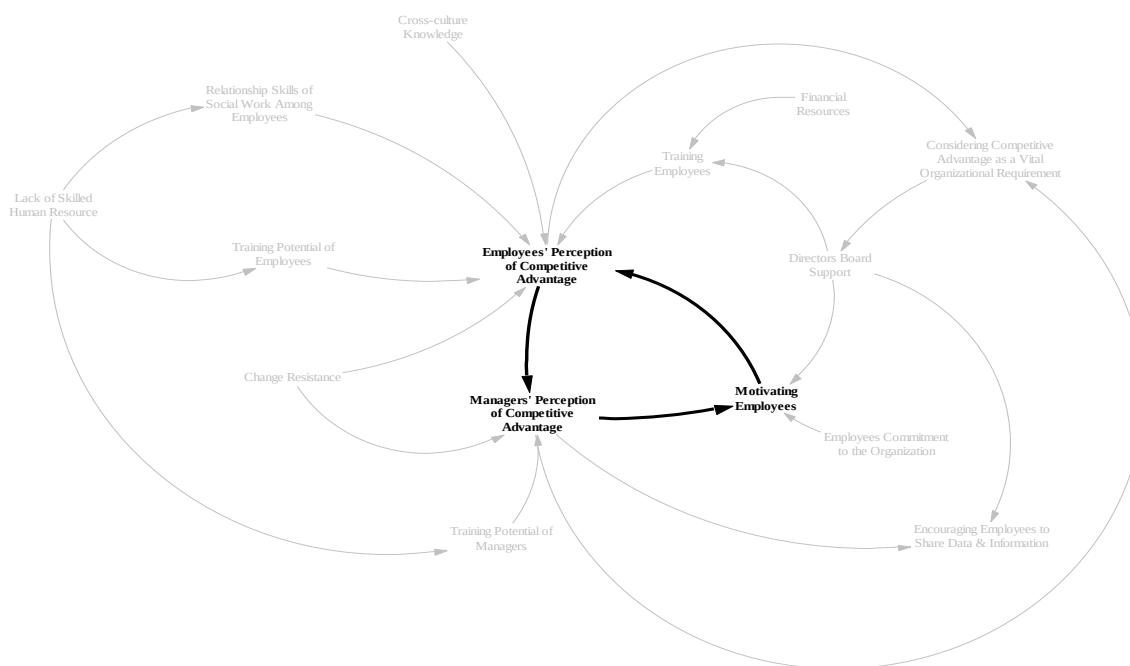
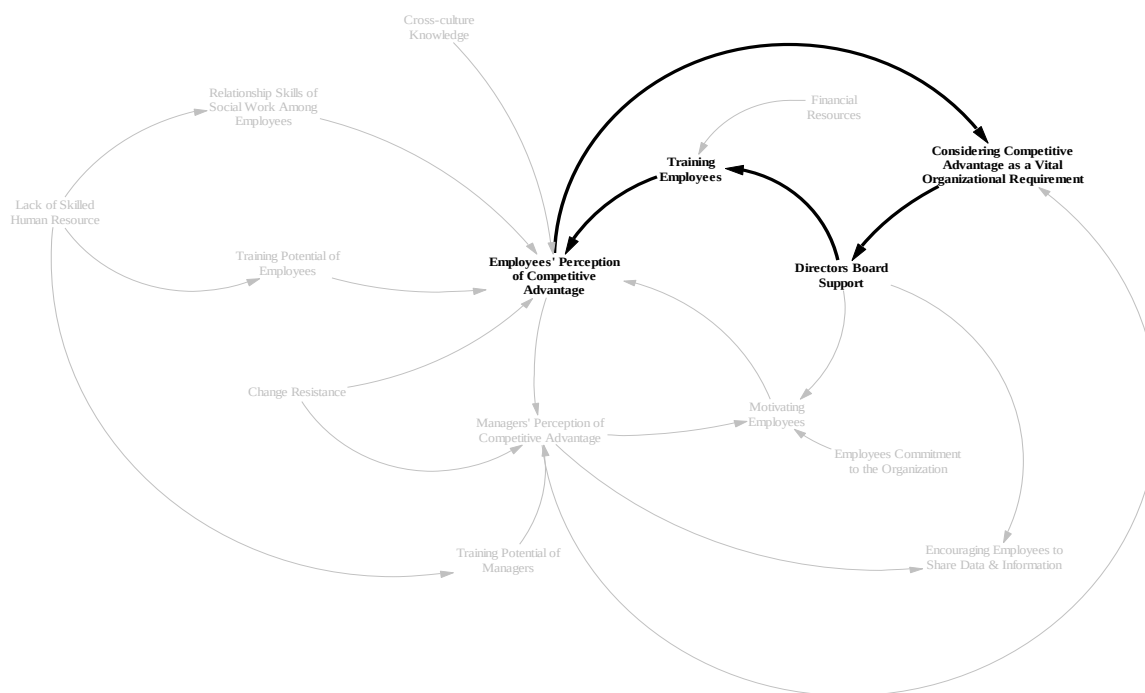


Figure 5: The Dynamic loop of employees training



V. Conclusion and Recommendations

Studying the loops CI context shows that CI context is considered as context and infrastructure for CI within organizations, which strongly affects CI in the organizations. The loops demonstrates that all variables of CI context have dynamic relations with each other directly and indirectly in a way that variables are affected one after another by change in a variable contentiously, and these impacts return to the changed variable with delay and as a feedback. The present research demonstrates that a director board supports is of key variables among the context variables that almost affects all the variables. It can be said that the development of CI in organizations and the organization's performance are improved by directors board supports, which is affected by their perception of CI and their approach to CI. Therefore, it is proposed to provide training courses on CI for organizations' senior managers and to justify them about the advantages of CI in achieving sustainable competitive advantage in the organization and to deem CI necessary in the organization. In this regard, increasing the managers' training budget is effective. It is determinant in organization's CI and achieving sustainable competitive advantage. Moreover, it is proposed to use specialty and personality choices in the recruitment of senior managers, because the CI is affected by managers' ability. In addition, the managers' personality features such as resistance to changes is determinant in the acceptance of CI.

Reference

- [1] Alessi, S. M. (2003). Designing educational support in system-dynamics-based interactive learning environments. *Simulation & Gaming*, 31(2), 178-196.
- [2] IEEE International Conference on E-Commerce Technology and the 3rd IEEE International Conference on Enterprise Computing, E-Commerce and E-Services. San Francisco, California, USA, 29-39.
- [3] Barlas, Y. (2002). System dynamics: Systematic feedback modeling for policy analysis. *Encycle opedia Of Life Supports Systems*.
- [4] Barney, J. B. (2001a). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 6, 643-650.
- [5] Calof, J., Wright, S. (2008). Competitive intelligence A practitioner, academic and inter-disciplinary perspective, *European Journal of Marketing*, 42 (7/8) 717-730.
- [6] Calof, J.L. and Smith, J. (2010). The Integrative Domain of Foresight and Competitive Intelligence and Its Impact on R&D Management. *R&D Management*, 40(1): 31-39.
- [7]. Chen, H., Chau, M., & Zeng, D. (2002). CI Spider: a tool for competitive intelligence on the Web. *Decision Support Systems*, 34 , 1-17.
- [8] Dishman, P. and Calof, J. (2008), "Competitive intelligence: a multiphasic precedent to marketing strategy". *European Journal of Marketing*, 42, (7/8), 766-785.
- [9] Dishman, p., Pearson, T. (2003), "assessing intelligence ass learning within an industrial marking group: a pilot study", *industrial marketing management*, 32, 615-620.
- [10] DuToit, A. & Muller, M.L. (2004). 'Organizational structure of competitive intelligence activities: a South African case study', *South African Journal of Information Management* 6(3), 308-321.
- [11] Fleisher, C.S. (2008), "Using open source data in developing competitive and marketing intelligence", *European Journal of Marketing*, 42 (7/8), 852-866.
- [12] Hamidizadeh, Mohammad Reza (2014). " System Dynamics", Tehan, Shahid Beheshti University Publishing.
- [13] Johns, P., Doris, Doren, C. V. (2010),"Competitive intelligence in service marketing: A new approach with practical application", *Marketing Intelligence & Planning*, Vol. 28 Iss: 5 pp. 551 – 570.
- [14] Mc Gonagle, J.J. and Vella, C.M. (2008), *The Intelligence Age of Competitive Intelligence*, Greenwood Publishing Group, Inc., Westport, CT.
- [15] Mohn, N. Carroll (1989) "How To Create a Corporate Competitive Intelligence System", *American Journal of Business*, Vol. 4 Iss: 2, pp.3 – 6
- [16] Muller, M. L. (2009), "How and what others are doing in competitive intelligence: outsourcing model", *Competitive Intelligence*, 11(2).
- [17] Murphy, Ch. (2005), "Competitive Intelligence, Gathering, Analyzing and putting it to work", Published by Gower Publishing Limited.
- [18] Pellissier, R. & Nenzhele, T.E., (2013), 'Towards a universal competitive intelligence process model', *SA Journal of Information Management*, 15(2), 567-574.
- [19] Peterisor, Ioan, Strain, Natalia. (2013). Approaches On The Competitive Intelligence. *The USV Annalas Of Economics and Public Adminstration*, 13(17), 100.
- [20] Porter, M. (1985); "Competitive Advant, age: Creating and Sustaining Superior Performance ", New York: free Press.
- [21] Qiu, T. (2008), "Scanning for competitive intelligence: a managerial perspective, *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 814-35.
- [22] Rouch, D., and Santi, P. (2001) "competitive intelligence adds Value", *Eroupean management journal*, 19(5), PP. 552-559.
- [23] Saayman, Andrea.; Pienaar, Jaco.; de Pelsmacker, Patrick.; Viviers, Wilma.; Cuyvers, Ludo.; Muller, Marie-Luce., & Jegers, Marc.(2009). Competitive intelligence: construct exploration, validation and equivalence. *Aslib Proceedings: New Information Perspectives*, 60(4), Pp: 383-411.
- [24] Tanev, S., Bailetti, T. (2008), "Competitive intelligence information and innovation in small Canadian firms", *European Journal of Marketing*, Vol. 42 No. 7/8, pp. 786-803.
- [25] Toit, A. (2003); "Competitive Intelligence in the knowledge Economy", *International Journal of Information Management*, 23, PP. 111-120.
- [26] Vivers, W.; Muller, M.L. & Du Toit, A.S.A. (2005). Competitive Intelligence: an instrument to enhance competitiveness in South Africa. *South African journal of economic and management science*, 8(2):246-254.
- [27] Wright, S., Clofe, J. L. (2006). The Quest for Competitive, Bussiness and Marketing Intelligence. *European Journal of Marketing*, 40(5/6), PP. 453-465.
- [28] Zangouinezhad, A., Moshabaki, A.(2009). The role of structural capital on competitive intelligence. *Industrial Management & Data Systems*, Vol. 109 Iss: 2 pp. 262 – 280.