

The mediating effect of the information systems use on the relationship between Economic Intelligence and organizational performance

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Abstract— In recent years, research work has increasingly taken a new direction, allowing the analysis of certain intangible factors, in particular information and economic intelligence.

On the other hand, at the strategic level, economic information management has become one of the essential drivers of the global performance of companies and nations.

To keep abreast of changes, and to contribute to theoretical and practical debates, through our contribution we will try to analyze the relationships which exists between the economic intelligence practices and performance, and then propose a conceptual framework

Keywords— **Economic Intelligence, Performance, Firm Culture.**

I. INTRODUCTION

In a highly fluctuating world, complex, and shaped by the information. The current competition is without precedent, where it is essential to demonstrate competitiveness, proactivity and permanent vigilance for a better development of the company,

In fact, successful organizations depends on their ability to provide relevant information,

And given the information which the Organization have needs must be reliable, Economic intelligence is susceptible to have an impact on the performance of The Company (S.Habhab, 2007);

Thus, despite the role that Economic intelligence practices can play in achieving better performance, some research has addressed this relationship.

In this order of ideas that this communication will attempt to put the light on the work who treated the relationship which exists between the practices of the economic intelligence and performance while trying to then propose a conceptual model.

II. REVIEW OF RELATED: LITERATURE REVIEW

A. Conceptual Review: Economic intelligence

As for many concepts in management science, the definition of the IE poses theoretical debates but also practices.

The authors use, in effect, definitions diverse and varied to

designate this practice; each stressing the different characteristics of this activity,

In effect the economic intelligence is more than an activity of supervising environment, and it distinguished from the economic espionage, by the fact of being a responsible attitude to protect the information and the company against the threats and vulnerabilities (S. Habhab2007)

According to A.Juillet (2003); The economic intelligence is the set of actions coordinated research, treatment and distribution in view of its exploitation, useful information to the economic actors, these various actions are conducted legally with all the safeguards for the protection of the necessary for the protection of the Heritage;

This definition puts the emphasis on other dimensions very essential: the protection of the heritage and the information cycle.

According to the Martre report (1994); “Economic intelligence is defined as the set of coordinated research, processing and distribution of information useful to economic actors, so economic intelligence is a public policy of competitiveness, economic security, and influence, (Carayon 1993),

In fact, most of the definitions of the economic intelligence list a number of dimensions all constituents of the practices of the economic intelligence,

Most of the definitions proposed in the literature tend to

describe the activity of IE from three dimensions aimed at the improvement of the decision-making: The Monitoring Environment (In French Veille), the protection of the Heritage informational and the influence (Paturel and Richomme-Huet, 2010).

1) *Monitoring environment:*

Monitoring environment is considered as the first and most well-known of the functions of the economic intelligence (Laghzaoui 2016), is defined as a continuous activity and largely iterative aimed at active monitoring of the technological environment, competitive, etc. ...; to anticipate developments; it is a cyclical business and processual in function of informational flows 'standard'¹; Therefore Monitoring environment is a set of facts transforms the information obtained from different sources for the benefit of a user, according to Martinet and Ribault (1988), Monitoring and watch environment as organized attitude of listening to the signals from the environment of the company likely to put in because of strategic options, these elements refer finally to an organized collection of the information available in the environment The Organization Coutenceau (2012) cited in Laghzaoui ;(2016), says that the management of the information passes by several operations called 'Information cycle.

2) *The protection of the tangible and intangible heritage:*

Is the fact to put in place measures to protect the intangible capital of the organization; it aims to protect the intangible and tangible heritage and of the company and everything that could confer a competitive advantage (Breillat, 2010; Paturel and R.Huet, 2010).

The protection function can cover the following aspects: information safety and security, counterintelligence, rumour fighting, patenting, etc. (Larivet, 2009)².

3) *The influence:*

Influence is the Diamond point of Economic Intelligence; it is the act of building consent and configuring specific

contexts so that the rival or ally makes decisions in the interests of the influencer.

The influence function is to implement a series of direct pressures and/or indirect effects on influential actors in the sector. The objective is to force the maintenance or development of a competitive position (Boumard, 2000).

Two natures of influence can be identified:

- Lobbying: This practice aims to influence external stakeholders in order to serve the company's interests (Jakobiak, 2009).

In doing so, a company can carry out interventions to guide the development process, based on the application or interpretation of legislative, normative and regulatory measures and, more generally, any intervention or decision by public authorities (Larivet, 2009)- The Management of Competitive signals: this strategy of influence in competitive field consists of the sending of deliberate signals in order to influence a competitor and persuade them to modify its positions (Marcon and Moinet, 2011).

B. Conceptual Review: the firm's organizational performance

C. Batz and Haltin define organizational performance 'the performance of a multi-dimensional structure of the variables it depends on several factors; they also suggest that goal setting, evaluation assessment and behavior of performance result is much more important'

Firms performance measurement can be divided into two components namely Financial Performance (Kapal and Nortan, 2011) and non-financial performance, which respectively evaluates firms monetary and non-monetary dimensions, (Daly; Okumus, 2011).

1) *The Financial Performance:*

Financial performance reflects the Firms financial situation which can be evaluated using indicators such margin profile, return on assets (ROA), returns on sales (ROS), return on investment (King) and others (Tee et al, 2010)

The evaluation of the financial performance of a business is done through its financial ratios.

Over the past three decades, empirical studies have been carried out to prove the usefulness of these ratios (Chen and Shimerda, 1981). In effect, these are required to analyze the financial health of a business to know: the profitability, liquidity, the estimate of the benefit future, the analysis of the competition and the prediction of the bankruptcy of the companies (Zeller et al. ,1996, cited in Z.Samlal 2016).

¹Defined by AFNOR (standard XP X 50-053, April (1998).

² LAGHZAOUIS ;International Commitment and practices of economic intelligence: the case of the exporting SMES Moroccan ;13e Congrès International Francophone entrepreneurship and SMES CIFEPMO Octobre 2016

2) *The Non-Financial performance:*

Non-financial measures inherently focus on the long-term achievement of firms by concentrating on customs gratification internal business process,

Productivity, invention, and employee fulfillment (Avci et al., 2011), So according to (Zigan and Zegglat (2010), Customer satisfaction and loyalty were also found to be the core components firms non-financial performance:

D. Empirical Review: Economic intelligence & Firm Performance:

The importance and the usefulness of the economic intelligence within the companies are no longer to demonstrate in a world very fluctuating, we can say that the achievement of a better performance is even the central objective of the economic intelligence;

The management of the economic information has become, one of the essential motors of the overall performance of economic agents.

Economic Intelligence lead targeting of the organization and shows the competition positions and makes the company to be able for forecasting and developing their markets through analyzing the behavior of the competitions and environment to identify opportunities that in long run will lead to innovation (Britt, 2006).

Companies with using Economic Intelligence and analysis of competitor's strengths and weaknesses can predict opportunities of market development and having better performance rather than competitors (Cobb, 2003).

Therefore, performance results à process seen as a strategically important, condition for the survival of any organization intertying to improve their performance in terms of profitability (Antoncic and Hisrich, 2000).

F.Jakobiak (1998), has noticed the difference in performance between firms depending on the location and the use of system of monitoring environment, it has concluded that the most successful companies are those equipped with systems of supervising environment.

According to C.Cohen(2007), the economic intelligence has for main missions to propose and carry out actions, in the aim of helping the strategic decision making, to improve the competitiveness and performance of the Organization.

Economic Intelligence practices can be a source of sustainable competitive advantage by enabling a firm to develop, implement and monitor strategies that create as well as protect shareholders value in the long term (Protiviti, 2011);

So competitive intelligence practices can make to measurable impact on the firm performance by a proactive manner to enhancing business performance;

In fact, according to several researchers and specialists (Peters, Waterman, 1993), the ability of an enterprise to monitor its environment can explain a large part of its capacity and its performance.

Indeed, the VASIC study showed that monitoring activities explain the variance in the company's performance in terms of environmental control capabilities.

The Audet study (2003), which focused on the innovative SME has for the purpose of verifying the existence of relationship between the intensity of standby, the integration of the information in the strategic process in order to establish if this relationship has an impact on the performance of SMES studied, the results show that the leaders of the most performing SME's have a strong propensity to innovation.

Bournois and Romany have made a study on 1200 French companies, after these authors the fact to practice or not to practice economic intelligence is linked directly or indirectly to the economic performance, they have in fact put in relation economic intelligence practices and financial performance.

The study conducted by S. Habhab (2007) on high-tech SMEs shows that the most efficient SMEs are distinguished from the least efficient by information sharing.

Stubbart 1982, in his study emphasizes that there is a direct link between performance and intelligence, however, in several cases the association may be negative, the fact that performance problems cause a change toward a regular monitoring.

In the same sense of idea in 1999 Kaish and Gilad find a decline in activity of the supervising when SMES reach a experience and a sufficient profitability, because according to them the leaders, when they focus on the internal management they negligent the search for new opportunities for that they reach a satisfactory level of performance .

Shakoori, Alvedari, and Mosafri (2014), cited in (Hope N. Nzewi and al., 2016) conducted a research in selected banks in Iran on the role of competitive intelligence in moving customers towards high level loyalty; They finding revaluated that among component of high level loyalty, trust, affection, satisfaction, value, brand value and resistance to change have more importance in direction, customers towards an ideal loyalty and making ambassadors for bank Phani, Madhumita, and Paurav, (2011) conducted research in India on the impact of Competitive intelligence practices on the firm's performance in the emerging market of India;

Their finding revealed that Indian firms exhibit higher levels of competitive intelligence practices indeed achieve better financial performance result (Hope N .Nzewi and al.,2016).

III. ELEMENTS OF PROBLEMATIC AND THE RESEARCH HYPOTHESIS:

A. Problem of research:

The literature review on the practices and the dimensions of the economic intelligence also on the links that exist between the practices of the economic intelligence and the performance of the company on the other side, has made initialed certain questions that deserve a reflection and a deepening, the fact that the studies which have treated the relationship between performance and the practices of the economic intelligence are somewhat limited by the fact that they do not specify the indicators(S.Habhab2007) ;

So, the work focused on the nature of the link that exists between performance and economic intelligence does not concern the public companies, these reasons and other lead us to ask the question:

What characteristic of practices of economic intelligence are having the impact of the organizational performance of Moroccan public institutions and companies?

B. A conceptual Framework: conceptual model

In order to build our conceptual model, we had to articulate a vision based on the theoretical and empirical studies conducted on the practice of the economic intelligence and its impact on the firm performance.

As well, the conceptual model that we are going to present bringing together the dimensions of (EI) and those of the performance of the company.

And we assume that the dimensions of the practice of (EI) have a significant impact on the organizational performance of the company.

According to Levet³: "In its global approach, economic intelligence is based on information literacy and the production of new knowledge. »

the emergence of new technologies has radically changed transformed the way organizations operate.

³ Président de l'Association française pour le développement de l'intelligence économique (AFDIE), in Levet Jean-Louis, L'intelligence économique, mode de pensée, mode d'action, Economica, 2001.

In this case, the transition period, information systems appears a solution that can guarantee a competitive advantage⁴

And the Information systems, through their technical performance and transversal ramifications, can radically accelerate the development of economic for companies.

In fine, the information system has a strategic role in organizations, its degree of quality and efficiency is considered very important in the speed and accuracy of decision making.

and according to M. BAROT the quality of an information system is four-fold, namely relevance, speed, reliability and confidentiality,

As a result, the research model developed as part of this research (Figure No. 1) postulates that the dimensions of (EI) practice (Monitoring Environment; Protection, Influence), have an impact on the information systems use and that the latter influences the company's performance as well.

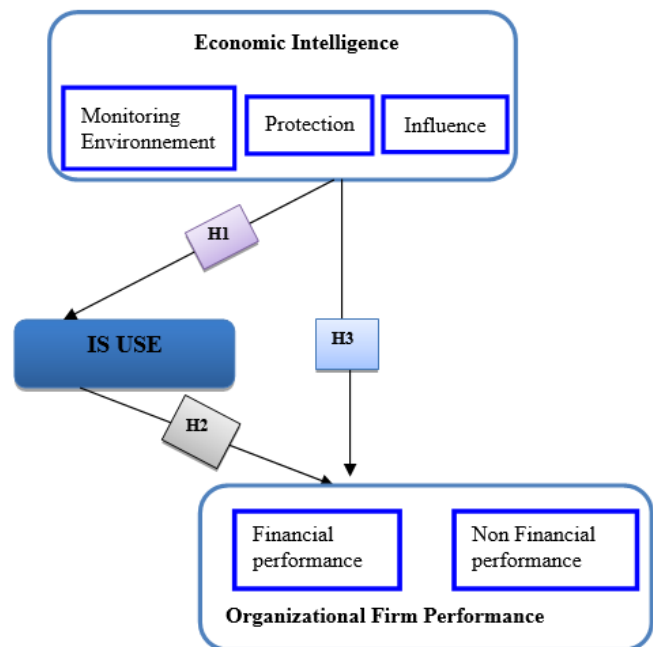


Fig.1: Research Framework

As well, practices of (EI), forming the block of independent variables (explanatory), include the dimensions and sub-dimensions:

- **Monitoring environment**, evaluated using the 4 under

⁴Intelligence Économique Et Stratégique Les systèmes d'information au cœur de la démarche Rapports publiés par le Cigref en 2002-2003 :

the dimensions of the information cycle: The expression of needs in information, the collection of information, the analysis of the information and tools for the dissemination of information.

- **Protection:** appreciated by the importance of this practice for the company. Two sub-dimensions are selected: the sensitivity to the security of information and the security measures adopted by the enterprise.

- **influence,** measured by the ability of influence of the company on its environment.

As to the organizational performance, representing the dependent variable (explain),

-**the financial performance** will be measured by: ROA(Return on assets);ROE(Return on Equity)and Tobin's Q, according to (E. Al-Matari et al.,2014) researchers revealed that the accounting based measurements like ROA, ROE, profit margin and others are used for the short-term performance of the firm while the market-based performance of the firm is gauged through Tobin's Q as a representation of future long-term performance. Therefore, the integration between the two provides a clear picture of the firm

-**the non-financial performance** will be measured by: customer satisfaction;

by report to the variable mediator who is the culture of sharing of information within the company it will be measured by:

Of this fact, and with the help of these different variables, two major assumptions will be tested.

-The first hypothesis

(H1) postulates that there is a positive link between the Economic Intelligence practices and the information system use in Moroccan public institutions and companies

This hypothesis is subdivided into three under hypothesis

H1-1: There is a positive link between the practice of Competitive intelligence in the Moroccan public institutions and companies, and the use of information system

H1-2: that there is a positive link between the protection in the Moroccan public institutions and companies and the information system use

H1-3: There is a positive link between the practice of the influence in the Moroccan public institutions and companies and the use of information system

The second hypothesis:

(H2): Postulates there is a positive link between the information system use and the dimensions of the financial and non-financial performance of the company.

(H3):Economic Intelligence through information system use affects organizational firm performance.

C. Research Methodology

We are adopting a mixed design (a qualitative and quantitative approaches) of descriptive and explanatory survey research. According to Sekaran and Bougie (2009)

A researcher should use more than one design to enhance the study; hence these two designs were used to achieve the optimal results as recommended by (Saunders, Lewis & Thornhill, 2009). Mixed methods can elicit insights that may be overlooked by a mono-method and can produce more complete knowledge contributions to theory and practice (Niglas, 2008)

It should specify the maturity of our research subject is not yet reached. To date, it is difficult to identify major robust empirical trends in Economic intelligence supporting hypotheses shared consensually by the scientific community. It is in this logic that we have opted for PLS Partial Least Squares as a choice of software because it is adapted to predictive causal analyzes in situations of high complexity and weak theoretical information (Jöreskog & Wold, 1982).

It is a nonlinear iterative procedure following partial least squares which minimizes the residual variances under a constraint of "fixed point" (Croutsche, 2009). We will therefore apply a second-generation, exploratory statistical method for modeling complex relationships between observed variables and unobserved variables.

The model chosen to confirm or reverse the assumptions made previously. We will seek to define the systems that constitute Economic intelligence practices and to identify its interactions with performance indicators. So, we will use the method of structural equation modeling (ESM).

Our methodological choice will test the relevance of a set of hypothetical relations through a mixture of exploratory factor analysis and multiple regression. It should be specified that the statistical verification of the hypotheses will be carried out through two types of analysis:

A) Exploratory Factorial Analysis

B) Confirmatory Factor Analysis

Target Population

The target population for this study were all the Public Moroccan companies. There are 92 companies. The study targeted the manager or directors in-charge of planning /strategy, and Information System Managers.

Objective of the study

Is to determine the Mediating effect of information system use on the relationship between competitive intelligence practices and organizational performance of Moroccan public institutions and companies

IV. CONCLUSION

This article is a part of a Ph.D. program that aims to understand what impact of the practices of the economic intelligence on the performance of Moroccan public institutions and companies

. In other words, our doctoral research project will try to answer the following research questions: What importance is given to the practices of economic intelligence in Moroccan public enterprises and what is their impact on performance In order to answer our research questions, a qualitative research will be adopted. This research is appropriate in the sense that the aim of our investigation is to obtain a holistic and integrated understanding of how do Moroccan companies judge their practices of economic intelligence. Given the nature of the research questions and objectives, in depth semi-structured interviews will be selected as our research method. For that purpose, the dimensions of the framework proposed in this article will be transformed into observable and measurable elements. The objective of the empirical part of our research would be to present The characteristics of firms that practice economic intelligence and what impact their practices have on their organizational performance

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