Economic Intelligence system and decision making: Proposal of a theoretical model.

Système d'Intelligence Economique et prise de décision : Proposition d'un modèle théorique.

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Résumé:
Sachant qu'une prise de décision de qualité est tributaire d'un ensemble d'informations ad hoc, l'intelligence économique peut être considérée comme l'utilisation de l'information pour la prise de décision stratégique. De ce point de vue, il peut être considéré comme un processus couvrant deux domaines scientifiques à savoir les systèmes d'information et la prise de décision. L'organisation se trouve obligée d'en chercher les meilleures-celles qui répondent à ses besoins.

La maîtrise de l'information, notamment celle qui permet l'anticipation et l'influence devient ainsi un enjeu stratégique, représentant une source d'avantages concurrentiels. Néanmoins, l'obtention d'un tel avantage n’est pas le résultat d'une accumulation d’informations, mais plutôt, de la capacité d’un système d’intelligence économique d’acquérir les bonnes informations stratégiques et leur mise à disposition aux acteurs, au bon moment, en vue d’une prise de bonnes décisions. Les décideurs ont ainsi besoin d’une démarche appropriée susceptible de leur permettre la maîtrise et la protection de l’information stratégique pertinente pour mieux positionner leurs organisations sur un environnement compétitif.

L’objectif de cet article de synthèse est de proposer un modèle théorique en s’attachant au point de vue des acteurs des organisations, qui s’inscrit dans l’approche socioéconomique et qui permet d’expliquer le processus par lequel les systèmes d’intelligence économique contribuent au processus de prise de décisions stratégiques.

Keywords: Information, Intelligence économique, Systèmes d’information, Processus, Système d’intelligence économique, Prise de décisions stratégiques
Abstract:
The quality of decision-making depends on a set of ad hoc information; Economic intelligence recognizable as the use of information for strategic decision making. From this point of view, it can be considered as a process covering two scientific fields; information systems and decision-making. The organization is forced to look for the best ones which meet its needs.

The control of information that allows anticipation and influence becomes a strategic issue, representing a source of competitive advantages. Obtaining such an advantage is not the result of an accumulation of information, however the ability of an economic intelligence system to acquire the right strategic information and make it available to the actors, at the right time, in order to make high-quality decisions. Consequently, Decision-makers need an appropriate approach qualified to protect pertinent strategic information in order to have a first-class position of their organizations in a competitive environment.

The objective of this summary article is to propose a theoretical model through focusing on the point of view of the actors of organizations, which is part of the socioeconomic approach and which explains the process through which the economic intelligence systems contribute to the strategic decision-making process.

Keywords: Information, Economic intelligence, information systems, process, Economic intelligence system, strategic decision making

1. Introduction

One of the fundamental goals of researchers in strategic management, since the 1970s, is to better decipher and understand the external environment of the organization in order to better illuminate the gray areas, facing the threats that weigh on the organization and seize new opportunities to constantly adapt to the requirements imposed by the new environmental situation in order to ensure their sustainability.

Several studies have highlighted environmental monitoring methods allowing the organization to anticipate adaptation. In addition, Ansoff (1975) insisted on the need to collect weak signals from the environment that herald strategic surprises. From the 1980s, monitoring of the organization's environment took an even more important place with the work of Porter (1980) and more particularly with Thiétart (1993), who stated that among the decisive points for an effective enunciation of the strategy of organizations, there is the development and the use of an environmental monitoring system.

By the 1980s, the environmental context had become vulnerable, muddled and competitive, as well as increasingly provocative for the survival of all types of organizations. The organization must no longer be content with the adaptation to incessant changes in the environment, but it must also act quickly, with a high level of determination and relevance to improve and promote the environmental fabric in order to acquire and sustain better decisions.

Therefore, EI can be considered as a strategic steering system allowing the organization to benefit from a freedom of action which results from a conjunction with information systems to influence the environment in its favor, making it possible to acquire and maintain better competitiveness. Fundamentally, EI draws its interest from two fields, Information and Communication sciences and Management sciences, in order to demonstrate its role in organization. Thus, it embraces a research subject that involves several disciplines that we intend to tackle from several fields of research. Certainly, this multidisciplinarity makes it possible to bring considerable enrichment to studies and research in EI as a whole, thanks to the polysemy of this concept, and often to the complementarities of each of the disciplines involved.

This paper fits into this perspective and seeks to develop a theoretical model of the contribution of economic intelligence to the strategic decision-making of Moroccan organizations, both the public or private ones. In this regard, we are interested in five points; the first point is an overview of the economic intelligence and its definition and evolutions in a general manner; the second point, the information systems in the literature;
the third point is the components of the economic intelligence system; the fourth point is the organization’s strategic behavior under the influence of the decision making; The last point will concern the presentation of the hypotheses and model reach.

2. OVERVIEW OF ECONOMIC INTELLIGENCE: DEFINITION AND EVOLUTION

This part dedicated to shedding the light on the concept of economic intelligence, its definition and its evolution.

2.1. ECONOMIC INTELLIGENCE DEFINITION

The concept of economic intelligence knew its first overseas development, in particular in the eighties by one of the fathers of competition analysis, Porter, with his work "Competitive Strategy", to constitute what became today a particularly dynamic field of activity.

Indeed, in Morocco, economic intelligence is a relatively new concept, the actors still cannot agree on a single definition. According to Besson and Possin (1996), it is a question of: "The ability to obtain answers to questions by discovering intelligences between two or more pieces of information previously memorized". The organization will make available all the means at its disposal to seize opportunities or detect threats. "The working group chaired by Henri Martre in 1994 uses the following definition: "Economic intelligence can be defined as all of the research, processing and dissemination of information useful to economic actors…" (Martre, 1994).

For his part, Revelli (1998) proposes a definition which takes these concepts into account expressing themselves in these terms: "Process of collection, processing and dissemination of information which aims to reduce the share of uncertainty in making any strategic decision ".

Economic intelligence makes it possible to provide decision-makers and managers with valuable and reliable information in the context of their decision-making. For this, it would be necessary to produce a kind of bright, relevant information with high added value through the different phases of the process: Information gathering, Processing, Dissemination.

![Fig. 1: The stages of the economic intelligence process](Source: Colletis (1997))

In this context, we consider information as a value, a "resource" in its own right, which allows the organization to have a comparative advantage among its competitors. So far, information is "integrated as an intangible asset into the work tool, it is a collective source of profit and one of the guarantees of the organization's sustainability" (Martre et al, 1994). It is a knowledge-creation tool made available to organizations. The concept of economic intelligence must therefore be considered in a long-term vision, during which it will be led to acquiring an economic as well as a cultural intelligence of its environment and its competitors.

As a result, EI also has the role of promoting information within the organization through internal networks such as the intranet. It takes into consideration both the protection aspect, the defense of information and "know-how".
We will therefore consider EI as a choice of approach for our study. Thus, we will consider it as the set of methods and techniques for managing and using information flows for:

- Anticipation of developments;
- Organizational Learning Action;
- The strategic activity of adapting the institution to the environment and the needs of users.

In the same vein, Colletis shows in his article in the first issue of the French journal of economic intelligence that a new concept in economic analysis in a knowledge-based wealth creation system. (Colletis, 1997).

2.2. ECONOMIC INTELLIGENCE EVOLUTION

The universe of EI is very vast consequently, its concept turns out to be very rich in theory and in field of application. Figure 2, illustrates the historical evolution of EI in the industrial and academic world, from the first civil crisis cell at General Electric in 1950, to recent research in EI.

![Fig. 2: The historical evolution of economic intelligence](image)

**Source:** (Couzinet, 2005)

- **1950s: British and American intelligence cells**

  The emergence of the first institutions practicing EI emerged just after the Second World War. The competitive pressure, created at the time, made the economic fabric more unstable. Companies absolutely had to adapt to guarantee their sustainability. The company was no longer a unit isolated from its environment but rather an open system that interacts with it to adapt to developments and ensure its survival.

  It was the very beginning of the emergence of the consumer society, which allowed awareness of the importance of marketing to meet the needs of increasingly demanding customers and the need that has become an indispensable necessity. For companies, the “marketing intelligence” cells in Great Britain and the “competitive intelligence” cells in the United States were created in the 1950s. The American economy has a strong diverse EI system. The logic that governs it is marked by an individualist touch. Born out of organizational politics, EI has long remained a competitive advantage in the domestic market.
- **1958s: Hans Peter Luhn**

Luhn (1958) presents his first works on intelligence as being a faculty to connect events to give them direction "the concept of intelligence can be defined, in a general sense, like the capacity to apprehend the interrelationships between the facts available so as to guide action towards a desired goal". The quote also highlights the strategic purpose of intelligence in achieving set goals. In a technical approach, Luhn, a forerunner in the field, and researcher-computer scientist at IBM, also advocated an automatic system for collecting, processing, storing and disseminating information for the companies he names «Business Intelligence System».

- **1960s: Harold Wilensky**

Wilensky (1967), an American sociologist, invented the concept of organizational intelligence in the 1960s. According to him, organizational intelligence is expressed through the collection, analysis, interpretation and dissemination of useful information to the organization's decision-making process. It is Wilensky who has the merit of establishing the two major issues that are the subject of a great deal of concern today:

- Collective strategies and cooperation between governments and companies in the production of common knowledge for the defense of competitive advantage;
- The importance of knowledge in economics and industry as a strategic driver of development and change.

If information is a source of power, it is also a source of "confusion" according to the famous saying: "too much information kills information". This failure exacerbates the problems encountered by the intelligence process, therefore by EI. The latter often suffers from a bad image linked, most of the time, to poor management of secrecy (versus sharing) and to structures (hierarchies and partitions versus network) Harbulot and Baumard (1997) explain Wilensky's contributions in “Organizational Intelligence: Knowledge Policy in Government and Industry” and stress that EI is a process of knowledge production, by governments and industrialists, when necessary, within the framework of collective strategies.

- **1994s: Henri Martre**

French Documentation published the report "Economic Intelligence and Business Strategy" in 1994s, commonly known as the "Martre Report". Henri Martre was the chairman of the working group. The Martre Report explains the decision of the public authorities to perceive the development of economic intelligence in France, understood as all the coordinated operations of research, processing and distribution of information with the purpose of exploitation, information is useful essentially to the development and implementation of the strategy of economic actors.

Following the collapse of the Communist bloc and the end of the confrontation between the two dominant ideological entities, a new economic geography of the world has emerged. This is how the market and financial dimension of economic activities has assumed unparalleled importance and, consequently, international competitive pressure has gradually impacted all sectors of activity. Immediately, relations of cooperation and competition between nations and companies were established and began to develop on several chessboards, at the rate of complex and sometimes contradictory logics (Martre, 1994).

- **2003s: Bernard Carayon**

Bernard Carayon's report (2003) to Prime Minister Jean-Pierre Raffarin offers reflections around economic intelligence along five axes which relates to:

- Actors and fields of economic intelligence;
- France's competitiveness;
- The review of the influence policy;
- Training in economic intelligence;
- Economic intelligence and territories.
Carayon suggested changing the name of EI after the concept had been accused with espionage because of the double meaning of the word intelligence. Both Anglicism and Neologism, "economic intelligence" remains, however, a "brand" on which everyone agrees, for the lack of another trustworthy choice.

- 2004s: Alain Juillet

Alain Juillet (2006) was appointed senior official in charge of EI to the French Prime Minister. In the context of the information society, the former second man of the French secret services has the task of drawing the attention of administrations and companies to the challenges of economic intelligence. Its mission within the general secretariat of national defense consists in sensitizing French companies and administrations to the primordiality of the use of information technologies in the context of economic war.

According to Juillet, 90% of the data that interests companies for their development is freely accessible. The role of information systems only appears when selecting these value-added materials, which requires close collaboration between the information systems department and the other departments of the organization. This function, entrusted by Prime Minister Raffarin, following the Carayon report (2003), should make it possible to identify everything that is done in the field of economic intelligence, at the level of administrations and state services. The goal is to bring all French companies to discover the concept, to practice it and to appropriate it.

3. OVERVIEW OF INFORMATION SYSTEMS

This part comes back to the definition of information systems and intermediate system.

3.1. INFORMATION SYSTEMS: DEFINITION

The concept of IS consists of two important terms: system and information. A system is an assembly of interconnected elements, included in a larger whole. Generally, a system is made up of components (or elements) organized together in order to facilitate the flow of information, materials or energy (Maharrar, 2014). Information increases knowledge about a specific person, object or event. It can be objective (when it reflects a meaningful data set) and subjective (when it results from the interpretation of a data set). The IS can be defined by its objective, which is to ensure the entry, conservation, processing and circulation of information, so that everyone in the organization can have the data they need at the right time to complete its task (Sornet et al, 2016).

In France, it is the works, among others, of Le Moigne (1974) and Melese (1976) who demonstrate a representation of the related organization at three levels, at the articulation of which there is a first definition of the IS "The information system is the set of information and processing functions which allow the establishment processes to be carried out", that is to say, a system that controls, so as to manage and a physical system who executes. However, in the 1960s, the results led us to conclude that the most common outcome was autonomous automation, and efforts were considerably undertaken. These last ones allowed us to bring together several basic activities at the level of what we qualified as operational.

For Reix (2004), an IS can be defined as: "an organized set of resources in hardware, software, personnel, data, procedures making it possible to acquire, process, store and communicate information (in the form of data, texts, images, sounds, and so on) in and between organizations”. In general, an IS is a set of resources which allows us to manage information in a given organization.

3.2. INTERMEDIATE SYSTEM

For many years, the IS has been the intermediate system between the decision-making system and the operational systemat the basis of application design (Le Moigne, 1977). The operational system makes it possible to carry out the various functions of the organization, while the decision-making system gives the possibility of making decisions. To function properly, these two systems must be based on consistent updated information. Therefore, the IS must guarantee the reliability and the adequacy of the information.

In the 1980s, the systems approach appeared in the context of this debate, as an organization in place and an external environment of decisive importance (Harrington, 1985). When dealing with IS, it is necessary to start with the preliminary tool which is the computer, without forgetting that this technical starting point is
The diversity of information and communication technologies has not been accompanied by a better understanding of information. We have seen that the information paradigm was supported from the 1950s with cybernetics, the science of piloting.

In his analysis of the evolution of information systems, Berdugo (1993), considered information as a whole through two different visions:

- The first is that information is considered as a raw material to be exploited, or in other words, "Resources";
- The second considers information as a construction derived from individual or personal judgment.

As a result, we can admit that the consequences of these two points of view at the level of decisions and organization are different. In some cases, excess can lead to too much rationality or irrationality, too much analysis or too much intuition, too much formal or too much informal. Information is not an isolated or isolable tool; it must naturally point to a difference since it is part of a whole. Although it was not really seen until the 1970s, it remains true today.

Historically, the first computerized activities were accounting, inventory management and invoicing. The design process was simple, classic, sequential and did not involve any change in work or activity habits, only the means of realization was different. As time went by, the institutions computerized their basic operational activities by programming. Indeed, "It was the mono-product, mono-function, mono-factory enterprise, these were the sixties, when the enterprise was then seen as a cybernetic system" (Tardieu & Guthmann, 1991).

In relation to the advent of the concept of budget accounting that appeared in this period, the information flows affecting fields such as forecasts, production, orders, consumption and expenditure are gathered for the purpose of hierarchical monitoring. The first database and network management systems are emerging at the management level. As a result, ordered information goes back to the head quarters of the institutions from different origins.

The first groupings, cooperations or associations for large projects took place, mentioning here the Sandoz-Hoffman-Laroche and Ceiba case in the pharmaceutical field aiming, at the start of their activities, to make available to their researchers all their documentation and their current research, under the name of "Chemicals Abstracts".

The organization is seen as an entity which has its own memory and which is capable of organizing a decision-making process (Tardieu & Guthmann, 1991). For Simon in the U.S.A., the Information Process System model is based on the conviction that human reasoning and subsequent decisions are structured, then normalizable and finally programmable, in accordance with certain processes that can be modeled on a computer. Davis, Olson, Peaucelle and Ajenstat (Davis et al, 1986) made substantial contributions in this area from this period. For Le Moigne (1974), we are talking about the Opération-Information-Décision model and concerning the practical phase, we can focus on the Merise method, the IS is at the articulation of operational management systems.

In this perspective, these different models have the role of being diagrams or representations of the organizations as they function, based on all the so-called formal information, by developing dashboards with transformed information for managerial purposes (Weick, 1995). As a result, we are adopting more and more sophisticated means to bring information back from the operating levels to the tactical levels to make strategic analyzes.

During the eighties, the wealth of data and information archived in files and databases, which are also exchanged across networks, encouraged many institutions to have a more systemic view, a much more general vision of the role of information technology, at managerial level. The concepts of information systems management, interactive decision support systems and the use of expert systems are being disseminated in the form of turnkey software packages.

Bringing together a set of propositions in interfaces allows users to take a step forward in the human-machine interview, in a way that is the least separated from current human dialogue. The creation of the Prologue language form constituted a significant contribution, in important areas of investigation, data and information interpretation systems that are not personalized enough or specific to the institution, the ease of use
and the continuous maintenance of such systems. As a result, the multitude of tools extends even more than there are hardware and software. Optimization of communications via networks and satellites, Computer-aided production, robots, graphics, videos, lasers, Exchange of computer data, and Requests are multiplying with IT departments, maintenance and documentation, systems are becoming more and more delicate. This is due to the need for development flexibility, marked by the industrial, commercial, regional and international environment.

It was only in the eighties with some works like Porter (1989) in the USA that the organization realized that they must take advantage of the strategic opportunities that arise, therefore it is concerned with understanding its environment, especially at the competitive level. As well, the strategic dimension of IS is manifested.

4. THE COMPONENTS OF THE ECONOMIC INTELLIGENCE SYSTEM

The concept of EI is observed as a managerial practice at the service of the organization's strategy. In addition, we consider that EI cannot be assimilated only to an approach, or a method, since it makes a set of actors cooperate to put into practice the stages of such an approach using various technological tools. It is clear that we are in the presence of a "system" constituted of three interrelated components, which are the actors involved in the practice of EI, an EI process and a strategic information system.

Taking as a starting point the principles of the systems approach, which considers that a system generally gathers three elements; the inputs, the processes of transformation and the outputs, we can also consider that the EIS has as inputs the decisional problems arising in the organization and has as outputs strategic knowledge with high added value produced by the EIS that is useful for decision-making as well as for the implementation of strategic actions. The following figure illustrates the different components establishing an EIS:

![Fig. 3: The various elements constituting an EIS](source:Knauf, (2007))

The EIS provides its actors with a collaborative workspace in order for all of them to be able to, through their skills, contribute to the smooth running of the EI process. Therefore, it becomes interesting to clarify the role of each of the actors operating in the EIS. The interactions between the actors involved in the EIS manifests itself through their respective contributions to the resolution of a decisional problem throughout the EI process, ranging from the identification and clarification of such a problem, until decisions are made and appropriate actions are put into practice. Each actor is involved at different stages of the EI process and the arrangement of the stages is expressed through exchanges between actors.

The human factor represents a first-order element in the functioning of the EIS because at each stage of the EI process, the human actors take action to bring their experience, their knowledge and their know-how.
5. THE ORGANIZATION'S BEHAVIOR UNDER THE INFLUENCE OF DECISION MAKING

5.1. DECISION CONCEPT

The decision support system concept in management science was initially, formally defined by Gorry and Morton (1971) as: “interactive computerized system helping the decision maker to manipulate data and models to solve poorly structured problems”. Their reasoning approach consists of integrating the following two taxonomies:

- Kinds of management activities describing management activities in the form of three levels: strategic, intermediate and operational;
- Kinds of decision suggesting, first, an analysis of the problems from the angle of the possibility of whether to formalize them or not (programmable or non-programmable) and second, a model describing the process of individual decision-making (the "Intelligence - Design - Choice").

There is a specialized literature on decision support systems, born in the seventies; it comes from certain branches of commercial IT, such as office automation systems and management information systems. We can distinguish three main research periods from Zuurbi (1992) and Keen (986). In the beginning, any computer tool that helped the manager in his tasks, including decision-making was referred to as decision support system. This concept has also been defined as "The decision, whether monolithic or based on group work, can be defined as a commitment to an action, the signal of an explicit intention to act (Mintzberg, 1982)”. It is always utilized to solve a problem that confronts the organization or the individual. However, it can be a response to a change in the environment or a seizure of an opportunity.

Theoretical approaches to decision making shape the way a decision support system will be designed. A historical interpretation of the theory of decision makes it possible to identify two main successive stages from the point of view of the implementation of information systems for decision support (Lederer, 2003) namely:

- **The stream of operational research**: The first decision theories were based on the application of a normative decision model leading to determining an optimal solution to a given problem. This optimizing vision consisted of determining a set of possibilities and calculating the optimal solution according to a predefined criterion. To deal with decision-making complexity, two adjustments have been made:
  - First, in order to take into consideration the uncertainty linked to the states of nature, probabilistic analyses have been developed;
  - Second, to integrate the preferences of decision-makers, the theory of subjective probabilities was adopted as criterion of decision, that of subjective utility.

Many decision support systems have been designed based on this theoretical trend. These Decision Support Systems are therefore based on high-level mathematical models. Applications have been developed, including in particular the field of financial decision support.

- **Behavioral and cognitive approaches**: The previous, normative and optimizing approach to decision-making was largely questioned by the introduction of psychology and cognitive sciences. This second step is marked by the recognition of an efficient type of reasoning, based on heuristics.

These heuristic modes of reasoning make it possible to solve problems for which the exhaustive enumeration of the states of nature turns out to be impossible. They constitute an indirect, but effective means of grasping complex problems for which the algorithmic approach is inapplicable, this current, known as "cognitive theories", aims to study the decision process.

We no longer seek to determine a usefulness criterion, rather to understand the stages which follow one another when making a decision. The organizational vision of the decision suggests that the decision maker does
not have a total knowledge of the situation, hence the term of limited rationality in Simon (1983). We are less interested in the search for an optimal result than we are in the psychological functions which process and interpret information.

5.2. INDIVIDUAL DECISION MAKING

- **Cognitive process of the decision maker:** The decision process can be seen as alternating phases of divergences and convergences as shown in the figure below. It is described as a set of activities that are not necessarily sequential.

![Decisional process; alternation of divergence and convergence phases](image)

**Source:** (Gavriloff, 2001)

The decision-making process is also described as fumbling and cannot be detailed in advance. The decision maker proceeds by partial goals, defined step by step. The stages with a limited horizon are traversed in a non-linear way keeping the possibility of going back because the partial goals chosen can be dead ends in the achievement of the solution. The decision criteria used throughout the process can change or even be contradictory.

The decision maker is guided in his trial and error by his expertise and know-how; he searches for solutions to the problems to be solved using his heuristics. The research principle stated by Simon designates this approach by trial and error. In fact, according to Le Moigne (1990), systemic approaches to modeling decision-making processes were born from observations of decision-making processes carried out by Simon. Indeed, we then consider that the complex model of the decision is understood as a complex cognitive process and no longer as an object held for good or bad with regard to a single criterion of disjunctive rationality.

The decision-maker therefore develops expertise, heuristics, and cognitive models that he will have a hard time explaining before making his decision. The decision-maker deals with buried knowledge, with a high level of operationality in relation to the problems he has to solve. In this context, the decision maker seeks the first solution (s) that a satisfactory result gives him compared to his level of aspiration (principle of satisfaction). This is the principle of limited rationality.

- **Limited rationality:** The usual decision models assume that the decision maker has complete information. When reality does not correspond to theory, we call into question the actor's rationality proposes.
In practice, acquiring information takes time; it costs energy and possibly funds. The decision maker does not have complete information to decide. It would not necessarily be rational. The decision maker, having the intuition of his limits, does not seek to make the best decision, rather an acceptable decision taking into consideration his objectives. The horizon of rationality is consequently limited.

The decision maker is an expert. He is the center of the system to be implemented to improve the decision. Simon focused his work on the role of the decision maker and his decision-making process. Its cognitive process described by the latter always remains the reference. He considers that the cognitive capacities of the human being are limited since he cannot apprehend all the possible choices. What the decision-maker is looking for is a satisfactory solution. It is the principle of limited rationality that corresponds to the search for a satisfactory solution and the affirmation that one can organize rationally, a process of research for this decision. This means that rationality is part of the procedure.

Procedural rationality corresponds to the way in which human beings conduct their reasoning, by relating their own intentions to their perceptions of the environment.

5.3. COOPERATIVE DECISION MAKING

There are many ways for a group to make decisions. They differ depending on the organization of the decision-making process. Desanctis (1987) defines group decision making as "the combination of two or more people who join their responsibilities in order to detect a problem, develop its nature, generate potential solutions and formulate strategies for implementing these solutions. Group members may not be physically located in the same location, but they are aware of each other's existence and of their participation in a group whose objective is to make a decision."

A group is therefore a collection of entities:
- Seeking to reach an explicitly identified common goal;
- Sharing standards and operating rules;
- Developing a set of roles;
- Sharing knowledge.

The group's action results from distributed or cooperative decisions:
- Distributed decision-making: Each cognitive actor is here specialized in his field and has only a partial view of the global problem to be solved. He will not have to interact on the decision-making process. The cognitive actor can actively resist or try to mitigate the consequences of a decision until the next decision is made.
- Cooperative decision-making: It is a method of making a decision that calls on the creativity of each cognitive actor; it has real potential for change in an organization. It is a process in which no decision can be made until all participants accept it. It is distinguished by greater collegiality. It works by compromise (system of contracts between two or more cognitive actors). It is used as a method for making a decision, usually obtained through negotiation.

Two or more parties announce their respective positions and change them little by little, through measured concessions. Negotiation can lead to dissatisfaction on both sides, as no one is completely satisfied. (Verrons, 2004). Each cognitive actor can oppose a decision from the moment his refusal is argued if he agrees to try to find a solution. It can take a long time to build, because consensus is the patient product of all the best ideas and wills in a group, in a spirit of cohesion and balance, avoiding dysfunctions.

In addition, the way in which the promises are kept will have a strong influence on the sequence of events. The best compromise is worth nothing without its execution, we will then speak of traceability of commitments. However, the advantage of such decision-making is that it leads to better solutions.

6. HYPOTHESES AND RESEARCH MODEL:

Theoretically, this research has identified the importance that should be attached to economic intelligence, since it has a direct influence on decision-making. In addition, our study has the distinction of being among the research done in Morocco, and being done to establish a close link between the two concepts (Woodger, 1939).
6.1. RESEARCH HYPOTHESES:

Academic reflections are essential to understand the interaction between the variables of our theoretical model. The following table presents the different research hypotheses of our theoretical model (Nagel, 1979).

Table 1: Research Hypotheses

<table>
<thead>
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<th>Variables</th>
<th>Research hypotheses</th>
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| Economic Intelligence                  | H1: There is a positive and significant relationship between economic intelligence and the actors of the organization.  
|                                        | H2: There is a positive and significant relationship between economic intelligence and the information system.  
|                                        | H3: There is a positive and significant relationship between economic intelligence and organization.  |
| Information system                     | H4: There is a positive and significant relationship between the information system and the actors of the organization.  
|                                        | H5: There is a positive and significant relationship between the information system and the organization.  
|                                        | H6: There is a positive and significant relationship between the information system and the economic intelligence system.  |
| Economic Intelligence System           | H7: There is a positive and significant relationship between the economic intelligence system and the quality of information.  
|                                        | H8: There is a positive and significant relationship between the economic intelligence system and the quality of the system.  
|                                        | H9: There is a positive and significant relationship between the economic intelligence system and the quality of service.  
|                                        | H10: There is a positive and significant relationship between the economic intelligence system and user satisfaction.  |
| Actors & quality of information        | H11: There is a positive and significant relationship between the actors of the organization and the quality of information.  |
| Organization & quality of service      | H12: There is a positive and significant relationship between the organization and the quality of service.  |
| Process Maturity and Economic Intelligence System | H13: There is a positive and significant relationship between the maturity of the process and the EIS.  
|                                        | H14: There is a positive and significant relationship between the maturity of the process and the quality of the system.  
|                                        | H15: There is a positive and significant relationship between the maturity of the process and the quality of the information.  |
| Decision Making                        | H16: There is a positive and significant relationship between the decision-making and the maturity of the process.  
|                                        | H17: There is a positive and significant relationship between the decision-making and the actors in the organization.  
|                                        | H18: There is a positive and significant relationship between the decision-making and economic intelligence.  |

Source: Author

6.2. RESEARCH MODEL:

Theoretical research may have the objective of developing a model or a theory (Hanson, 1961) (Hempel, 1966). According to current literatures, a model is a simplified representation of a process or a system.

Our research model aims to explain, demonstrate and understand the relationships between two variables’ results on the present study. In fact, the research model consists of the articulation of three fundamental
concepts; the economic intelligence, the information system and the decision making. Based on the hypothesis formulated above, the research model will be schematizing as follows in the figure below:

Fig. 5: Research Model

Source: Author

Our theoretical model aims to understand the path through which the economic intelligence system contributes to the performance of decision making.

As a matter of fact, these qualitative analyses affirm the importance of certain variables in our model, in order to identify if there are specific relationships between variables. This approach will help us understand the social and cultural contexts of the actor’s behaviors. The ultimate goal of this analysis is to refine our conceptual model. Subsequently, the results of this phase will serve as a basis for an empirical study quantitative.

7. CONCLUSION

We can conclude that it is unreasonable to try to define EI solely based on one of the two terms constructing the expression “Economic Intelligence”. We have demonstrated that the expression itself constitutes a concept
encompassing a series of processes of which the goal is not to accumulate archives, but to find relevant information and create knowledge that can guide the decision-making process.

The contribution of this research mainly resides in the understanding of the managerial variables that can increase the satisfaction level of actors and users of the economic intelligence system, and who can then influence the level of maturity of the processes and deciding making.

We have proposed a theoretical model based on the articulation of information systems and economic intelligence. This model allowed us to optimize the strategic steering of organizations. The study of the relationship between the EI process and the system’s maturity process, as well as the analysis of EI contributions to strategic management, allowed us to clarify what is the success of a EIS means, furthermore it allowed us to develop a model that is capable of serving as a guide for decision-makers in order to improve their information system for the benefit of an economic intelligence system within the organization.

As for the perspectives , they can be summarized in studying several leads to evolve our work.First of all, we would like to amplify the context of application of our work within public and private organizations. It will be equaly interesting to develop in depth the respective evolution of two concepts: economic intelligence and system of information. In other words, our work continues to evolve in the Information and Communication sciences, we plan to direct it towards the communication of organizations.

Finally, we draw attention to the fact that future research may visualize synergies with other disciplinary fields of Management and Communication sciences as well as the introduction of other variables.
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