

The role of human factor in economic intelligence

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Abstract:

Information and communication technologies are now capable of accelerating the dissemination of economic intelligence. However, the importance of the human dimension, which is decisive in intelligence processes, should not be neglected. We cannot rely solely on software to solve strategic issues and arbitrate between apparent or real contradictions.

In this sense, man becomes a determining factor for the sustainable competitiveness of the organization and its ability to withstand critical situations or requiring adaptation.

In this research, we will focus particularly on the importance of the human factor in the economic intelligence approach.

Keywords: Human capital, Economic intelligence, Knowledge economy.

JelClassificationCodes: M20, J24.

1. INTRODUCTION

It is central to understanding economic intelligence and its implementation to be aware that it is not reduced to the disorderly accumulation of information of all kinds. Economic intelligence aims to give meaning to information: identifying opportunities and threats to the organization. This involves producing structured knowledge for operational purposes. The discipline therefore requires interpretation and analysis skills that are the prerogative of the "human factor".

In this communication, we will focus on one of the key factors in the economic intelligence approach, namely: human capital. **It is therefore a question of recognizing the importance of human capital and knowing how to encourage its involvement in this approach?**

2. Polysomic use of intelligence

The works around intelligence justify the diversity in interpretation around the concept of intelligence. In fact, (Larivet, 2000) underlines that this concept's interest resides in the multiple significations that enrich and complete themselves. By referring notably to the theory of multiple intelligence (Gardner, 1997), the individual does not dispose of general intelligence but rather of multiple intelligences (logical, mathematical, musical, interpersonal...etc) more or less developed. Human intelligence qualifies as multiple faceted intelligences that enrich and develop each other.

Table 1. The different types of intelligence according to (Achar & Bernat, 2005).

Types of Intelligence	Analytical Intelligence	Creative Intelligence	Practical Intelligence	Interpersonal Intelligence
Functions	Comparison Judgment Evaluation Analysis	Imagination Hypothesis Invention creation	Application Usage Concretization Action	Comprehension Sharing Motivation Organization

Source: (Achar & Bernat, 2005) P.63.

3. Pluridisciplinarity and Definitions of Economic Intelligence

One of the first difficulties that we encounter when speaking of economic intelligence is the ability to agree on a definition. In fact, the concept of economic intelligence remains PROTEIFORM: different aspects of economic intelligence, such as the VEILLE or strategic intelligence have been treated and developed in different ways. The total of the application fields and competences that it englobes have contributed to make the uniform comprehension of economic intelligence complex.

There are several disciplines that adopt economic intelligence in their field:

- **Information and communication sciences:** it is about qualifying information, disseminating it, collecting it, storing it, and memorizing it.
- **Management sciences:** the implementation of an economic intelligence approach in the company necessarily calls for the company's strategy, marketing, information systems, finance... all these fields are impacted to set up and manage an economic intelligence approach.
- **Law:** it evolves to adapt to the knowledge economy (protection of information and informational heritage).

- **Economics:** to understand the environment surrounding company and the associated digital transformation.

Several definitions of economic intelligence have existed explicitly since the 1950s, each aiming to respond to tensions and new emerging constraints in the global economy. But EI practices are much older, even if they were not as such.

Today, economic intelligence is commonly understood as the process of processing information in order to create new knowledge; its main challenge is to create favorable contexts for collecting information, making it relevant and useful, in order to renew or create knowledge.

In accordance with a Persian aphorism that says: "Your knowledge is nothing if others do not know what you know", it is better to share information and knowledge rather than keeping them to oneself. Information, the heart of EI, is owned by **humans** who have the mission of transforming it into knowledge, but above all who have the mission of disseminating it and making it useful.

The main consequence for companies and all organizations is to undertake a knowledge management approach and to promote organizational learning and the development of their **human capital**.

This decennial breakdown allows to show the principal evolutions of the concept of IE:

Table 2. Evolution of the concept of Economic Intelligence.

Post-War	-Application of defense techniques to the economy; -Awareness of the key role of knowledge for the competitiveness of a nation; -Emergence of work on the competitive paradigm (Porter's work); -Emergence of the concept of strategy applied to companies (Harvard Business School).
1980s	-information applied to the economy (defensive approach): company strategy, competitive environments, characterization of environments, structures, products...etc. -Reinforcement of links between the structures and strategies of companies.
1990s	-The protection of the information and the immaterial capital: -Publication of the MARTRE report in France: Protect, defend itself against company attacks, identify strategic sectors...etc.
2000s	-Mastering strategic information in order to protect and anticipate: -The development of the offensive approach of EI: -EI has broadened its action field in a multitude of disciplines, but also in companies and especially the SMC (small medium companies)
2010s	The information, which is the heart of EI, is possessed by people who have a mission to transform it into knowledge, to diffuse it and to render it useful (Managers, deciders, engineers, analysts... etc.)

Source:(Moinet & Guilhon, 2016). P .11.

4. The Role of Economic Intelligence

The accelerations and changements on the level of company environment have rendered economic intelligence indispensable for states and companies because this approach allows a better(Bounoua, 2018).

4.1 Information management (monitoring role)

Economic intelligence is supposed to ensure this role of information management. It is about determining the need for information and then searching for and processing all relevant information. Monitoring falls within this field as a logic of information production to describe a situation previously perceived as complex. As Audrey Knauf indicates, "These so-called strategic information, after interpretation, lead to the reorganization of the strategic intentions of firms and thus reduce the difference between the real environment and the perceived environment"(Knauf, 2010).

4-2 Knowledge management (interpreter role)

The second role of economic intelligence is knowledge management through the interpretation of the information collected by human capital, followed by the creation of new actionable knowledge. It is the ability to interpret and make sense of the collected information.

4-3 Decision-making (action role)

The third role of economic intelligence is to prepare strategic decision-making. In other words, it is analytical and synthesis skills oriented towards action. The exercise of economic intelligence not only allows the passage from information to knowledge but also from knowledge to action through learning, for example, in order to act well(Bounoua, 2018).

4-4 Counter-intelligence

This is an approach that combines on the one hand, all actions to protect the material and immaterial capital of the company and on the other hand, influence and lobbying maneuvers aimed at changing the course of events.

Economic intelligence is therefore multiple in its content and its devices. It induces both adaptive and proactive functions(Bounoua, 2018).

5. The role of the human factor

The foundation of computer data security in an organization depends on education, collective awareness and permanent collaboration of all stakeholders in order to face threats. There is no miracle solution, but reducing the threat of a cyber-attack requires a sustained multi-front program involving the entire company and not just IT management (information technology)(Insights for Professionals/IFP, 2017). No rule or technical protocol can protect the organization against a security breach if top management and employees are not fully involved. Rules to follow can be ignored and unfortunately no protocol is infallible(Pijoulat, 2015).

As a result, every incident, every event and every anecdote related to cyber security must be taken into account and treated in order to arouse curiosity and attention from employees. Well rounded knowledge of recent attacks will encourage each employee to always be on their guard. A study(Gros, 2016)conducted among 1,000 employees spread between the USA, UK, Germany, France, Holland and Australia on risky practices reveals the following results:

Table 3.The risky practices of the organization's employees

Internal Risks	Percentage
Employees willing to sell their credentials to a third party	20 %
Employee using the same password across applications used	65 %
Employees sharing their credentials with other employees	32 %
Employees who have already been affected by data theft	37%

Source :(Gros, 2016).

Although companies are investing more and more in the security of their IT infrastructures, incidents are multiplying due to human activities that are generally at the root of the problems(Portail de l'IE, 2015).

In general, protection systems and policies exist, good practice guides follow one another, alert emails are regularly displayed, the news talks about it, IT management (information technology) invest in information protection software... All this does not prevent intrusions. The last line of defense is the human being.

6. Articulation between economic intelligence and recognition of human capital

In order to succeed in this articulation, the company must invest in its human capital through training activities aimed at having specialized and expert employees in their fields (Costs). In a second step, these specialized employees are supposed to exploit their new knowledge and share it with their peers to benefit the company (Benefits). The problem arises when the company is not able to obtain the benefits related to the costs it has already incurred, either because employees do not voluntarily adhere to its projects related to economic intelligence, or because the enterprise is not able to put in place motivation and recognition mechanisms that encourage them to do so(Foss & Mahnke, 2003). An effective knowledge management strategy must be able to take into account this cost-benefit duality. The company must not take for granted the voluntary and free adherence of its employees to investments in human capital and the subsequent knowledge sharing process(Foss & Mahnke, 2003).

(Yahya & Goh, 2002)research examines the links between four areas of human resource management (training, decision-making, performance evaluation and recognition and reward system) and five areas of knowledge management (acquisition, documentation, transfer, creation and application of knowledge). The results show that if a company wants to become efficient in its knowledge management, it must first rethink its human resource management through the valorization of good behaviors in terms of information sharing.

Several researches in organizational learning and knowledge management explore the effect of rewards and recognitions on learning. Individuals will tend to imitate behaviors that are rewarded rather than those that are desirable(Kerr, 1975). Therefore, setting up a learning model without taking into account evaluation systems, bonuses, promotions and compensation is likely

not to have the expected results. The same principle can be applied to an economic intelligence project. If the company wants to obtain the adherence of its staff to its economic intelligence project, it must establish recognition mechanisms that encourage them to do so and not take for granted the participation of individuals in its projects.

Today, most jobs involve handling information and creating knowledge. In this sense, it is essential that each individual does so in a way that benefits the company and not himself at least for the most part. A knowledge strategy that does not take into account the "recognition" variable will inevitably lead to its own rejection by employees and its disappearance. This recognition is not necessarily monetary and financial but can take any other form that makes employees feel that their work is appreciated (Gal, 2004).

7. Key success factors of an economic intelligence approach

Given the different cultural and structural variables, there can be no single model of economic intelligence to which all organizations would refer. In fact, the economic intelligence process should reflect the organizational culture, available resources and objectives of each organization (Fuld, 2002).

However, some key success factors (KSFs) and guidelines are worth mentioning:

7.1 Management support

Without a boost from general management, it is widely recognized that economic intelligence projects are invariably doomed to failure. Management must therefore support economic intelligence efforts cohesively and must apply itself to encouraging its mode of operation to all staff. Without this action, those involved in the economic intelligence process, at whatever level, quickly find themselves isolated and their actions have limited effect (Delecroix, 2005).

7.2 Identification of needs

Managers must consider economic intelligence as a key resource for better decision-making. They must express their informational needs, identify imminent threats, and alert management when there are new business opportunities (Delecroix, 2005).

7.3 Cultural aspect and employee involvement

Information management is first and foremost a cultural issue. Retention must give way to sharing in order to achieve intelligence, hence to be efficient, a company has every interest in raising the level of information culture of its staff through awareness-raising and training actions (Sutter, 2006).

7.4 Organizational aspect

The organization is the central point for implementing an economic intelligence approach. In fact, EI cannot be implemented without generating certain procedural and structural changes. New roles, new tasks and new working relationships will therefore have to be invented. Each person involved in the project must have a clear vision of: "who does what", "who has to work with whom" (Delecroix, 2005).

7.5 Valuation of skills

The objective is to constantly acquire strategic skills that constitute a competitive advantage for the company. Individual factors also consist in protecting the skills held within the company or ensuring regular renewal of strategic skills within the company.

Finally, practitioners and researchers have different views on how an economic intelligence program can be designed and implemented in organizations. Several variables are frequently proposed by researchers for successful implementation of an EI program.

8. Case study: Perception of economic intelligence among Sonatrach's salaried executives

To highlight the preponderant role of the human dimension of economic intelligence, we opted for the interview as a method and mode of data collection with 24 executives from SONATRACH (Production Division). This interview aimed to assess these executives' perception and degree of involvement in an economic intelligence approach (convenience sample). It seems obvious to us that a correct adaptation of an economic intelligence project in a company necessarily requires a better understanding of its human resource's perceptions.

To do this, we used the content analysis method which constitutes a rigorous and systematic approach to explaining, interpreting and coding data collected from the proposed interview guide. Although there is consensus in the literature on the fundamental role of human capital in the success of economic intelligence; to our knowledge, few research works have mentioned the link between the involvement of this human capital and its perception towards an economic intelligence project. Following(Allen & Meyer, 1990) in their work on organizational involvement (affective involvement, normative involvement and calculated involvement), this research distinguishes three types of perception in terms of economic intelligence:

- 1- Affective perception;
- 2- Calculated perception;
- 3- Normative perception.

In this context, we asked the interviewees to comment on the following items, according to the perception and sensitivity of each:

Table 4.The dimensions of perception of economic intelligence

Affective perception of economic intelligence	1- Economic intelligence is as important to me as it is to the organization. 2- I really want to get involved in this economic intelligence project. 3- Making efforts to ensure the success of this economic intelligence project is important to me.
Calculated perception of economic intelligence	1- It could be costly for me if I don't adhere to this economic intelligence project. 2- I have a lot to lose if I don't adhere to this economic intelligence project. 3- It would be risky for me to rise up against this economic intelligence project.
Normative perception of economic intelligence	1- I owe this company a loyalty that drives me to do my best to succeed in this economic intelligence project. 2- I really feel obliged to achieve the objectives of this economic intelligence project. 3- I believe it is my moral duty to work towards achieving the objectives of this economic intelligence project.

Source:(Cantwell, 2010)

9. Discussion and interpretations

After analyzing the responses collected using content analysis, we were able to identify the predominant involvement profile among the respondents. This is the profile linked to affective involvement. Next comes normative involvement and finally calculated involvement.

Indeed, we were able to observe that the executives interviewed are affectively and normatively involved in Sonatrach. Their affective attachment to Sonatrach and their moral sense of commitment could be explained by several factors (social climate, perceived support from superiors, recognition...).

An individual with strong affective involvement is more likely to perform their tasks to the best of their abilities in order to provide assistance to their organization (Allen & Meyer, 1990). As such, the more a person has strong affective involvement towards an organization, the more importance they will attach to the project launched by it.

Indeed, this has already been confirmed by (Valéau, 2004), who indicates that affective involvement is marked by adherence to the objectives of the organization. Thus, a person with strong affective involvement for their organization will not hesitate to implement actions that go beyond the traditions of the company for which they work in order to accomplish their tasks and therefore achieve the set objectives.

Thus, one could even say that a person with strong affective involvement will be more inclined to take risks and adopt innovative practices to contribute to achieving the objectives of a project. Indeed, for (Valéau, 2004), affective involvement corresponds to the internalization of the values of the organization, and therefore to the internalization of its objectives.

In this sense, salaried executives involved affectively in Sonatrach express their willingness to carry its economic intelligence project.

On the other hand, acting according to one's conception of duty (Normative Involvement) can appear as a voluntary and rational act, it also contributes to reinforcing subjects' sense of identity or sense of belonging. This moral value can be translated among this segment of the population by a better culture of sharing (collective intelligence favorable to economic intelligence).

Finally, some authors underline the stimulating role of financial valuations (Calculated Involvement). They specify that monetary reward is one of the most probative systems for explaining employee behavior towards economic intelligence practices. (Hannon, 1997).

The executive is indeed motivated by the practice of economic intelligence only if it allows him/her to develop and realize himself/herself within the company (Lesca & Dourai, 2004). For example, when an individual is promoted to a higher level in the hierarchy following an evaluation of his/her efforts in terms of economic intelligence practice, he/she will be inclined to become more involved in the project.

10. CONCLUSION:

In light of these elements, exploring human behavior during the exercise of economic intelligence practices would involve identifying their predisposition to adopt the system. Their behavior is intimately conditioned by the enterprise's management system. Modern economic intelligence, whether at the level of companies or territories, is based on a perception model. The changing global context intensifies competition and forces companies to make marked efforts in

terms of economic intelligence practice. The winning companies will be those that can perceive the changes in the economic context in order to better structure their evolution and strategy.

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