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INTELLIGENCE AS A FACTOR OF PRODUCTION IN THE POST-CRISIS ECONOMY

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Intelligence as a Factor of Production in the Post-Crisis Economy

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Abstract

Nowadays, a lot of information is becoming available to anyone around the world, thanks to the development of the internet and the increasingly rate of globalization. Concepts like business intelligence, data mining and, more recently, big data, gain an important role in the work of information management. However, the new knowledge based society needs the development of a more specific and competitor based type of information analysis, such as the one part of the Competitive Intelligence cycle. The result of the information analysis within the Competitive Intelligence activity is called intelligence, and it refers to useful and actionable information, which can be used by a decision maker within a firm in order to gain durable competitive advantages.

Therefore, with the competitiveness playing an essential role in the new post-crisis economy, earning competitive advantages with the use of proper actionable information is mandatory. The sub-prime economic crisis hit firms and corporations all over the world and the period following this crisis was and still is a real test of survivability. Only the strongest and the most adaptable firms can thrive in a society with skeptical and more and more exigent consumers.

This study brings information together with the other newer factors of production (besides labour, land and work), such as technological or entrepreneur's ability, properly managing information analysis inside a firm being an important element of development in the new post-crisis economy. At the same time, it can be the base of a more thorough research regarding the importance intelligence for the competitive market and the role it can play in developing the business environment. The main answer this study gives refers to the importance of information analysis and of using its results inside a firm that aims to increase its competitiveness in the market.

Keywords: *Intelligence, Competitive Intelligence, information analysis, factor of production, post-crisis economy, durable competitive advantages.*

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1. Introduction

From the earliest times, man needed information in order to survive, to evolve and to thrive. Today, everyone wants to know as much information as possible, although most of the times the information they receive is irrelevant and useless for their needs. All in one, information gained a vital role, especially since communication all around the world became more facile. More than that, the quantity of available information is growing exponentially by the day. For example, in 2010, an article from *The Economist* named “Data, data everywhere”, stated that, in the period 2005-2010, the amount of created information increased by more than 10 times (*The Economist*, 2010). Moreover, *Science Daily* published a study in May 2013, according to which 90% of all the data in the world has been generated in the period 2011-2013 (*Science Daily*, 2013). The causes for this burst of data and information are diverse, but for sure the development of the internet and of the interrelationships between states and even private institutions all around the world are amongst them.

Given the importance of information in the business environment, various filtering methods have emerged in order to manage the information created every day. Therefore, quantitative analysis methods such as data mining or, newer, big data, are still trying to keep the pace with the technological development.

Despite all that, by being created in such huge amounts and by coming from all over the world, information starts to lose value, because it's harder and harder to distinguish the authentic useful one from the false or useless other.

Because of that, the need for a more precise form of information emerged, and the term of “intelligence” appeared in the business environment. Therefore, the quantitative analysis methods are no longer the core of finding useful information, but more a supplier for qualitative analysis methods, such as Competitive Intelligence. Competitive Intelligence can be defined as a sum of operations through which data and information are collected, processed and analysed and, in the end, the produced intelligence will be disseminated to beneficiaries. One of the main goals of Competitive Intelligence activity is to understand the role of early warnings and to prevent surprises that can have major impact on the market share, reputation, turnover and profitability on medium and long term (Ivan, 2012: 146).

Until recently, information was considered to be an important factor of production but, with the unexpected growth of the information amount, intelligence might take that place nowadays. In the introduction of a very detailed book related to Competitive Intelligence, Leonard M. Fuld raises the idea that “all companies, large and small, in today’s world have virtually the same access to information. The companies that convert available information into actionable intelligence will end up winning the game. Intelligence will make the difference between two competitors that sell similar products and have similar access to markets.”(Fuld, 2010: 14).

Fuld’s approach on intelligence anticipated to some extent the times we live now, regarding the economic environment. The sub-prime crisis, which started at the end of 2008, had a great impact on all the actors from the competitive markets. The downturn felt in that period, and even today in some countries, changed the rules on nearly all markets. If before 2008 consumption was at a very high level, the demand being most of the times higher than the offer, the crisis made the consumer more careful, moderate and skeptical regarding the products and services he buys. For this reason, the post-crisis economy is one of increased competitiveness, one in which firms put a lot of effort in obtaining even a small competitive advantage. A correct approach on the proper use of intelligence can be the key to assert itself on the crowded market.

2. Intelligence as a factor of production

The first clear description of the factors of production is given by the classical economics of Adam Smith and David Ricardo. Therefore, the “component parts of price” (Smith, 1776) are land, labor and capital stock. Since then, many economists added more factors to this main list, such as J. B. Clark², Frank Knight³ or Frederick W. Taylor⁴. Nowadays, others referred to intellectual capital or even social capital as a factor of production. Among its definitions, dictionaries show a factor of production as an economic term to describe the inputs that are used

² Saw entrepreneurship as a possible forth factor

³ Introduced managers with co-ordinate using of their money

⁴ Supporting the idea according to which management talent and entrepreneurial ability can be considered as factors of production

in the production of goods and services in the attempt to make an economic profit.⁵

We can place information and information technology within the intellectual capital, so the subject of information as a factor of production has been already discussed. In an important article, C. Richard Scott from the College of Business and Economics, Radford University and Walter R. Kendall from the College of Business Administration, University of Northern Colorado, argued why information should be considered a factor of production:

“It is the authors’ contention that the time has come to add another factor of production – *information*. The inclusion of information as a productive input should not entail as great a conceptual leap for managers as for economists. As land, labor, and capital are all tangible inputs, it is easy for both economists and managers to recognize their value to the productive process. Management and entrepreneurial ability are far less tangible and are, therefore, more difficult to evaluate. But, because managers have already accepted management and entrepreneurial ability (relatively intangible factors), they should now be open to the concept of adding information as a production input.” (Kendall, et al., 1990: 40).

If in 1990 the mere possession of information meant a real possibility of creating competitive advantages, today the huge volume of such information makes it a lot harder. Therefore, information can no longer be a factor of production if it’s not collected, processed and analyzed accordingly to the informational need inside a company.

At present, we should take the factors of production discussion to the next level and talk about intelligence as a new factor of production. If Kent studied intelligence for the first time, in a scientific manner, separating its “process” and “products” characteristics (Kent, 1949), L. M. Fuld describes intelligence as “using information efficiently, making decisions on a less-than perfect picture; it’s all about seeing your competition clearly, understanding its strategy, and acting early on that knowledge” (Fuld, 2010: 20). We can also find this concept approached by Romanian authors, in many fields of activity, such as internal intelligence services (Nițu, 2011), external intelligence services (Maior, 2014), military (Frățilă and Solomon, 2013) and, of course, business

⁵ www.investopedia.com/terms/f/factors-production.asp, accessed on 04.04.2015

environment (Măzăreanu, 2005; Obreja and Rusu, 2009). In 2014, Ș. V. Ivan states that "by intelligence we refer to that particular type of information which arises from a gathering/collecting, processing and analysis process and which is intended for the action of that for which it is elaborated, even if it reveals developments that do not involve immediate action". My personal view, taken strictly from the business environment perspective, is that intelligence is the result of a thorough process of information gathering, processing and analysis conducted in the business environment as a consequence of management's needs identification. Therefore, information becomes intelligence only if it has a proper use for its recipient.

Without doubt, knowing your competition and understanding their moves on the market is an important asset a company can have. By following a thorough process of identifying the intelligence needs, collecting, processing and analyzing data and information, a firm can have, in the end, a final intelligence product with significant added value that may create competitive advantages if used right by the management.

After completing this process, the resulted intelligence gains a sum of characteristics that simple information doesn't have. Compared to simple information, intelligence is more accurate, more complex, more trustable and for sure more suited for the management needs, since it's obtained following a very important and intricate step of identifying the management's intelligence needs. Therefore, these differences between the information used as raw material for the intelligence process and the resulted intelligence make the last one a lot more useful for the companies, regarding both the strategic moves and the tactical ones. Also, intelligence is a perishable commodity and its value declines rapidly if not used properly.

Moreover, in the new economic environment context, the efficiency of all the traditional factors of production is essential. The sub-prime crisis made everyone aware of the system's fragility and turned consumers from people willing to spend on anything to rational individuals, making even small financial decisions after rigorous thinking processes. This forced firms to find solutions in order to gain or even maintain market position. They had to either improve the efficiency of the factors of production or find innovative solutions for further development. I think that implementing a Competitive Intelligence department in a firm using the resulted intelligence in order to grow on

the market can be one innovative solution that both significant corporations and small firms can use. Because of the rapid technology development, no matter if the company is large or small, in today's world, everyone has virtually the same access to information, making it relatively inexpensive and easy to obtain.

As a first conclusion, we can put the factors of production definition, stated at the beginning of this chapter, together with the intelligence characteristics and notice that, if properly managed, it can easily be an input used in the production of goods and services in the attempt to make an economic profit. Actually, its main purpose is to help management take the correct decision regarding the production of goods and services, being an active asset in the production process. After all, we can consider management both as science, as an organized and coherent ensemble of knowledge, concepts, principles, methods and techniques, and as state of mind, as a way to see and search for progress (Russu, 1996). Intelligence can easily be the way of progress.

3. Implications of adding intelligence to the combination of productive inputs

The implications of adding intelligence to the combination of productive inputs can be varied, and increase in importance depending on the level of intelligence needs a company has. However, in order to be an efficient factor of production or even have any kind of implications on the firm's results, managers should acknowledge the relevance and utility of using intelligence as leverage for obtaining durable competitive advantages.

At the same time, in order for the entire process to have the expected impact, the one that is implementing it has to be aware of the management decision making process. Therefore, from firm to firm, this intelligence producing process will vary from the implementation methodology regard, and its implications can also differ.

In spite of this, we can identify some generally valid benefits that intelligence can provide to a firm. Thus, the use of intelligence can (Kahaner, 1997: 23-28):

- Anticipate changes of the market – by knowing every important event on the market you can anticipate towards where that specific market is going. Also, not looking at the market events can be dangerous under any circumstances.

- Anticipate actions of competitors – competitors will always try to surprise the market and the others with their actions, and knowing specific details about those movements can give anyone early notices about what is going to happen. Reacting fast is extremely important in certain business areas.
- Discover new and potential competitors – in a global interconnected market, keeping track of competitors becomes nearly impossible without a thorough and targeted research.
- Learn from the success and failure of others – benchmarking is a practice used by all the important companies in order to compare their activities with the competitors' one. Through benchmarking, assisted by a competitive intelligence process, a firm can learn from what brings success or failure to others and act properly.
- Learn about new technologies, products, and processes that affect your business – by directing your research and information collection towards that area.
- Learn about political, legislative, or regulatory changes that can affect your business – the legal framework being itself an important element to take into account when developing a business.
- Enter new businesses – if the firm is interested in this kind of actions and if the intelligence process proves that it is viable.
- Getting to know your own business better - even if the internal structure of the firm is supported by a good communication system, the intelligence process can reveal less accessible details.

Even if the examples mentioned above are only a part of the whole system of implications generated by the implementation of a competitive intelligence process, they are relevant for sustaining the idea of this process' importance. Each of the mentioned results can lead to better positions on the market, more efficient production cycle, retention of customer and others. All those can bring, eventually, higher profits to the firm.

Thinking about the classic factors of production, we can find similar benefits from each of them. The quality of labor, the amount of capital and the properties of land can directly influence productivity and development perspective, same as the proper use of intelligence.

We believe that by adding a Competitive Intelligence process somewhere inside a production cycle, depending on the firm's profile

and characteristics, will bring added value and growth potential. We also consider that intelligence has to be understood and studied both as a process and as a product, in order for the management to know how valuable it can be in solving certain problems they might face. Therefore, this acknowledgment has to be made especially by firms from countries that don't have a developed intelligence culture.

Also, when talking about ways of adding intelligence to the combination of productive inputs, we should always take into account the organizational culture of the firms to which we refer. Thus, we believe that each Competitive Intelligence process should be build based on the organizational culture particularities, considering the home country's customs and habits, negotiation culture, employees typologies and basically every feature and detail that might influence the decision making process of a firm. By keeping that in mind, the one who implements the process will have a greater chance of success and higher results in the competitive market.

4. Conclusions

Intelligence can fit in the factors of production description, being able to play an important role in the whole business process. Its importance may not be at the level of the primary factors of production (land, labor and capital) but for sure it can be placed together with the newer ones (such as entrepreneurship or intellectual capital).

In the new economy, with an increased competitiveness global market and the consumer's wariness regarding their buying preferences and decisions, managers have to find ways to survive and perform. Technology was once a solution, and owning information was, until recently, an important leverage, but nowadays, when nearly everyone has access to technology and information, there is a need for other innovative means.

Competitive Intelligence can provide the answer for a lot of questions managers and entrepreneurs might have during their business process. It can fit in any organizational structure and can work with minimum resources even for small and medium sized businesses. By doing it in an ethical manner, it can only improve the quality of competitiveness globally, giving a tool to the business environment in order for it to evolve and achieve sustainable growth.

For Japan, France or USA, this acknowledgement step was long ago achieved, and now they focus on improving the process and getting it to further development states. On the other hand, it is the author's assertion that countries like Romania or others from Eastern Europe, with a still incipient intelligence culture, should focus on developing new ways of improving firm's competitiveness, both on a national and international level. The implications of this will surely be consistent, since competitiveness is one of the main motors of economic development and sustainability.

All in one, intelligence as a product can be an important asset for developing firms, being a cheap and efficient way to obtain durable competitive advantages. It fulfils the factors of production characteristics and I think that, if it will be considered as one, competitiveness and the competitive environment will move to a superior level.

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