KNOWLEDGE CAPITAL – INFLUENCED BY RATIONALITY OR ANIMAL SPIRITS?

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ABSTRACT: It is already a well-accepted concept in expansion, the economy, organization and management based on knowledge. It is said that the owners of knowledge, respectively the individual, organization and the society, will hold the power in the future. Thus, the knowledge become the economic and personal basic resource and all the activities from the economic sphere are prevalingly concentrated on the treatment of information and producing of knowledge goods. However, it is still difficult to explain on a strict scientific basis why people behave non-rational when facing with money decisions. Classic finance foundation lays on strict rationality and optimization of financial decisions. We affirm that monetary and financial decisions are significantly influenced by psychological factors. Behavioural Finance adds to the equation the psychological and emotional facets of the human decision. This emerging discipline has challenged the Efficient Market Hypothesis, arguing that markets are not rational, but are driven by fear and greed instead. The paper proposes a critical analysis, based on consistency criteria, regarding the controversy current state of the informational efficiency theory of the capital market. In this sense, the critical approach is one that shows the weaknesses, the vulnerable aspects that characterize the classical form of EMH theory. Also, the paper highlights the most significant criticisms levelled against EMH by psychologists and behavioural economists.

Key words: knowledge capital, economy, organization and management based on knowledge

1. INTRODUCTION: THE IMPORTANCE OF KNOWLEDGE CAPITAL

In these times we often hear “economy, organization and management based on knowledge”. In fact, these concepts modify the importance of the organization’s capitals, from the tangible to intangible ones.

From the old times, the richness and the power were associated to possessing physical resources; so, the necessity of having knowledge was limited. Richness and power in the XXI-st century result prevalently from intellectual intangible resources, from the knowledge capital. The holders of knowledge become the most important value of a country or an organization: the people who own valuable ideas become an inestimable value, their maintenance in organizations using different methods becoming an acute necessity.

We have been the witnesses of quick globalization of economic activity, we have noticed the incredible growths of the results obtained from science and technology, and of the massive growth in importance of nets and connecting – all produced by knowledge and their utilization.

As a matter of fact, in this developing economy, the possession of knowledge has become the key of competition and economic success: it has added a different value of economic production through the growth of productivity, and through the utilization of new technologies and new ideas - both looked like inventions and, likewise, through new application of already existent knowledge – which produced revolutionary modifications in all sectors and markets.

Although we are in the first phases of the knowledge revolution, the impact of this process becomes already visible in the market volatility, in the uncertainties regarding the direction of the economic activities, in incertitude of careers and work places that people feel etc.

The intellectual capital is the term that represents the combined intangible assets, which permit the organization to function in an efficient way. It is very difficult to be identified, and even more difficult to be efficiently used. Once it is found and exploited, the performance will surely grow. It represents all the non-monetary resources and without any physical form that can add value to the performances and the potential of the company. In the new economy the intangible assets, like knowledge, become the new centre of competencies.

We are in a world that emphasizes the economic value of intangible assets. We have to deal with “cognitive domains” where ideas worth billions, while products cost less.

It is considered that this change in knowledge signification began two hundred fifty years ago, transforming the society and economy. Knowledge are seen as the economic and personal basic resource. As a matter of fact, knowledge is the only resource which matter today.

Regarding the traditional factors of production - the land, labour and the capital – they did not disappeared, but they reached a secondary level. They can be obtained, with the condition that the knowledge exists. In this new sense, knowledge mean knowledge as utility, knowledge as the middle of obtaining economic and social results.
Although the social process of changing from past based on progress in knowledge, too, what is new now is, on aside, the speed of renewing the knowledge, the fact that the quantity of knowledge that we have at our disposal is doubled every five years and on another side, the nature of that force which dynamisms the social, economic and cultural changes, that exceed the world informational technologies.

Among the observations Karl Marx made, it is the fact that capitals are mobile, as a distinctive feature against the other factors of production, as nature and labour. The capital has the property to be attracted in the zones where it is best remunerated, and the knowledge have become currently the true capital of a developed economy. The ones who own the knowledge, even if not very advanced, they have the freedom to move.

To the world level, the stock of knowledge grows much more as before. Concomitantly with his amplification, there is in progress a less dependency of classic resources, gradually the knowledge becoming the main capital of organizations. This current revolution of knowledge consists in fact in conditioning the procurement of economic performance, by the existence and utilization of knowledge capitals, of course appealing to the others forms of capital, too.

The value of organizations is determined mainly by the intangible actives value: the value is mainly represented by the employees who own the knowledge, the ideas and the information. They become the most important assets of one firm. With another words, there is a modification in the firms’ actives structure, being necessary both types of actives, tangible the intangible.

The maximum value is obtained through their combination in certain proportions, which vary depending on the size of the firms, the context in which act etc. There are many ways to increase the potential value of people in an organization. Modern ways of investment in education is specially recommended: training, professional and specialized qualifications, activities related to knowledge, as well as forming the competencies related to carrying out certain activities.

The levels where the authors consider that the knowledge can be found in firms are: to the labour force (the human capital), in the requirements and preferences of customers (the customer’s capital), in its products, processes, capabilities and its system (the structural capital). As it follows, the value of knowledge actives can exceed significantly the value of tangible actives.

Within organizations, this inexhaustible capital, the employee’s knowledge, is in a native form and it needs important effort to identify, gather and direct the knowledge to the final product or service that will be offered to the client.

Knowledge, in opposition to the traditional factors of production, represents an inexhaustible source because they are not consumed by their utilization, on the contrary, in this way they become more productive.

Or, how Peter Drucker said: “the power comes from the transmission of the information to make it productive, not from its concealment”.

Knowledge has always meant power: power to survive, power to adapt, power to thrive in a hard environment. Ever since the first human clan enjoyed the warmth of the first tame fire, it’s been true that knowledge shared is knowledge multiplied. The more a group knows of what its members know, the better it can perform in the world. But it's also true that the more remote people feel from one another, the more risky knowledge sharing looks and the more tempting it is to hold knowledge for private advantage.

To keep up in today's markets, people have to be able to think on the spot and get the information they need to make a decision. And it turns out that allowing them to proceed in this fashion does not sacrifice quality.

“An individual without information cannot take responsibility; an individual who is given information cannot help but take responsibility.” That maxim, from Jan Carlzon (former chairman of SAS Airlines), is what we have to use to govern the change of our new culture. We know that we need to move to a networked organization that is built around the flow of information and knowledge rather than geography, so we have to look for a new way to get people to assume responsibility. Getting people to assume responsibility for making things happen is what knowledge sharing is all about.

Knowledge management is a general term applied to almost any project that an organization undertakes which is designed to preserve, transfer or exploit knowledge from one part of the organization to another.

Knowledge is both and social and contextual. The person who holds the knowledge also knows what it means, what its limits are and how it can be used. This surrounding context of tacit knowledge is sometimes lost when the information is saved somewhere else.

Even transmitting the information to someone else is not the same as knowledge transfer. The receiver must actually pick up the information and learn how to use it in appropriate ways.

## 2. HUMAN BEHAVIOUR: RATIONALITY OR ANIMAL SPIRITS?

We saw that knowledge, information are very important for the development of a company or even an economy. But in light of the global financial crisis of 2008-09 and the subsequent international recession, we can affirm that it becomes more difficult to understand how economy works. It is still hard to explain on a scientific basis why people behave non-rational when dealing with money.

The classic finance assumes people rationalize and optimize their financial decisions. One of the most influential classical theories in the past fifty years, Efficient Market Hypothesis (EMH), has attracted a considerable number of studies in empirical finance, particularly in determining the market efficiency of a financial market.
EMH losses of significance and the hypothesis of rationally fails to explain the excessive volatility of returns and trading volume observed in the major international markets in developed as well as in emerging countries [4].

The Efficient Markets Hypothesis is the idea that market prices incorporate all information rationally and instantaneously. As a synthesis of the most important premise of the informational efficiency concept concerning financial markets, these are:

- Investors are rational. Investors have risk aversion and only desire active which have the highest yield for a certain degree of risk. Still, contrary to the general perception, EMH does not imply that all market participants are rational. Indeed, markets can become efficient if a group of investors have an irrational behaviour and are correlated in behaviour, as long as there are rational investors looking for arbitrary opportunities.
- Markets are efficient, meaning that current courses reflect all public and available information.
- Yields are independent. The exchange of courses can be determined only by new information. The yield in day $t$ is not correlated with the yield in day $t+1$.
- Markets have a „random walk“. The probability of yield distribution is the same with the normal distribution (Gauss bell).

But, in reality, the prerequisites which lay at the basis of the theory of efficient markets are not real. The hypothesis that investors are fully rational agents which instantaneously process information in a correct manner in most unrealistic, and rationality is hard to define, human behaviour is often unpredictable.

The rationality of investors appears as a result of the fact that orthodox economic science still remains the prisoner of the mechanical paradigm, in which values, irrationality, lack of direct interest, intuition, are not considered valubales of the economic process [5].

Information can be difficult to interpret, technology and institutions are constantly changing, and also, the gathering and processing of information, as well as the realization of transactions require significant costs.

The new field of Behavioural Finance investigates the subtle and profound interactions within the human brain when faced with uncertainties of an economic decision. The most basic psychological traits of human being (fear, anger, greed and altruism) stamp an indelible mark on our decisions and rationality is hard to define, human behaviour is often unpredictable.

Our experiences influence the way we interpret and select available data, based on relevance and salience. If we add to the decision equation (of which righteousness can be assessed only ex post) the time pressure, the decisional stress is the sum of uncertainty of interaction between rational and non-rational.

Estimation of psychological reasoning of other market participants behaviour - since other participants decisions and actions can have a decisive effect on own success or failure (Games Theory, J. Nash) [17]. In this case, formation of expectations is subjected to time pressure and omniscient uncertainty.

3. THE CRITICAL ANALYSIS OF EMH – A BEHAVIOURAL APPROACH

The concept of market efficiency refers to information: at a certain moment, prices reflect all available information. This involves the fact that no processing, no matter how deep, can predict future trends. The interest of every investor is to obtain information about the actions of the quoted companies.

This information will allow it to evaluate the perspective of each investment opportunity and to invest in the portfolio which has the best perspectives. All information channels are efficient if they spread intelligence quickly and if every new information becomes public very quickly.
Many practical observations concerning the reaction of investors to new intelligence, but also the mechanisms for their encompassing in the price of stocks, come to highlight the aspects of “market inefficiency” and refer, among others, to:

1. The appearance of time gaps in incorporating information – certain financial investors can present a defensive attitude concerning important public information, which they hesitate to use, so as not to “fall pray” to better informed agents;
2. There is a quickness of reaction which is not the same for all additional or unpredictable information;
3. Investors have a different perception, more or less profound, or selective, concerning information;
4. The appearance of action inertia – some investor imitates those who react first to intelligence. This phenomenon, of bringing new and new investors in the “professionals net” continues, until the first, considering the course is over-evaluated, retire from the market. The contrary movement carries the same inertia.

An important argument concerning the impossibility of the existence of a perfectly efficient informational market is that information has a price and it is not available to all investors in the market at a given moment [15]. So, the price reflected by only partially; as these informed investors pay to obtain information, it is normal that the price does not fully reflect the information which they own, because on the contrary it would not be possible for them to cover the costs of obtaining the information in the first place. As a result, any model of capital market equilibrium must take information costs into account.

Investors will always have a risk aversion and also, they do not react to immediate information, but in most cases, they react late, guiding themselves to the trend (which implies past intelligence) in the reaction of present strategies.

We presented, in the above, several practical observations concerning the reaction of investors to the new information, but also mechanisms of incorporating them in the price of assets, which come to highlight aspects of market “inefficiency” and refers to: the occurrence of time gaps in incorporating information; the quickness of reaction is unequally distributed to any additional or unpredictable information; action inertia. One can distinguish between two categories of participants on the stock market, which obtain various portfolio investments, as they are either rational investors (“smart money”) which operate with relevant information, but also with regular participants (“noise traders”) which react to rumours and fashion.

People will not always behave in a linear way to new information, encompassing them immediately, as the EMH requires; people behave non-linear. Because of this, the prerequisite that investors are rational and thus, the modifications of courses is independent and that markets have a random slept movement cannot be accepted. The irregular assimilation of information, as it happens in reality, could lead to a tendency of random movement – “biased random walk”, called a fractal time series.

But the most enduring critiques of the EMH revolve around the preferences and behaviour of market participants. Several strays have been identified from the classical paradigm of EMH bound by investor behaviour, of which we mention: over-confidence (supreme trust) (Gervais and Odean, 2001); overreaction (DeBondt and Thaler, 1986: they revealed that when assets are ordered by them rentability in the last 3 – 5 years, assets which during the past period had a high yield tend to have a low yield during the following time span and vice-versa. They attribute these anomalies to the over-reactions to information.

In the formation of expectations, investor grant a high importance on past performances of companies and a low importance to the fact that these performances can be inversed; loss aversion (which refers to the tendency of people to strongly avoid loss as they lack to seek gains), herding, regret (the theory of the late Bell, 1982). These critics of the EMH argument the fact that investors are often irrational. Speculative economic bubbles are an anomaly, because the market appears to be driven by buyers operating on irrational exuberance, who take little notice of underlying value.

In forming expectations, investors rely on their ability to gather process and understand a mosaic of different information. This ability is subjected to error, in a systematic manner. Access to correct information can lead, however, to inappropriate decisions (wrong informed decisions vs. uninformed decisions).

An inappropriate decision can lead to under or over reaction to materially relevant market information. Under (late) reaction is a direct consequence of an excess of self-confidence in the ability to process and understand new information. The individual is mentally anchored in past opinions and is mentally closed to new information that contradicts the old set of beliefs. An interesting example of mental anchoring is the price discount posting in a sales period.

People buy compulsively not because of apparently reduced prices but they are certain they just find an excellent deal. Overreaction (early) reaction is a direct consequence of mental generalization and representation.

Through generalization, people tend to extrapolate existing information, sometimes based on a single observation and consider it representative for a large population of event (provisional stereotomy).

The most recent event has the greatest impact on autobiographic memory. Recent losses or gains are more salient in their emotional and social impact. People tend to discount the eventual implications of low probability high negative impact events.

These events, due to their apparent low probability, seem to happen less often. Their expected outcome can have, however, disastrous effects on the value of investor portfolio. High emotional impact events, although rare, have a major, indelible impact on the emotional registry of a person. Any subsequent decision reflects the historical record of successes and failures.
4. CONCLUSIONS

Classic finance analysis is, in general, reflective and reactive. Adding the behavioural finance perspective into the equation can help in understating how other market participants will react. Human behaviour is, in general, reactive and not proactive, and consequently difficult to frame and predict in a narrow set of rules.

Behavioural Finance can explain with relative ease why the individual took a certain decision, but find it very difficult to explain what decision will take that individual in the future.

Akerlof and Shiller [1] substitute the investors’ behaviour bias to the hypothesis of rationality in order to explain the volatility in stock returns. They attribute the dysfunction of the economy especially to what they call the „animal spirits” bias as an extension to the General Theory developed by Keynes. In this sense they argue that „it is necessary to incorporate animal spirits into macroeconomic theory in order to know how the economy really works”. The „animal spirits” can be comprehended as a non-rational behaviour driven by investors [4].

Human brain has limited capacity to process, assimilate and understand the huge volume of information and stimuli that assault us every second. The decisions and judgments we undertake daily (hundreds) are constrained by personal circumstances, time pressure, psychological and emotional factors, and are at the crossfire of a rational and non-rational influences.

We often ignore a good decision for the simple fact that we are, in general, more interested by simple, reasonable and feasible solutions to our dilemmas. Our perception, especially when it comes to money, can be distorted and biased by our history, present circumstances and future expectations. Our attitudes and decisions in the financial area are a cocktail of rational and non-rational motives. We reach a certain conclusion and implement the subsequent decision based on what we know now, anchoring ourselves in information that we considered relevant, losing the larger perspective. Financial decisions are sometimes suboptimal due to our simplistic, heuristic and emotional logic.

Although there is a low correlation between professional abilities and investment success, investors have high confidence that somehow, someday they will succeed in beating the markets, in a systematic way. Beating the index by outsmart moves, ahead of competition, finding undervalued and overvalued securities and implementing the buying and selling decision at the right timing is difficult, if not impossible, in the long sustainable way.

Orthodox economic science considers three external methodological premises which are debatable: the rationality of the individual, the idea that the methodological anchor in economic science is globally efficient (minimization of opportunity costs), the idea that the economic process must be cast away, at least as a tendency, towards equilibrium [5]. But, in reality, the prerequisites which lay at the basis of the theory of efficient markets are not real.

The hypothesis that investors are completely rational and they always process instantaneously and correctly all the available information which is surely unrealistic, as rationality is hard to define and human behaviour is unpredictable at many times.

The more and more important influence of information factors, but also the acknowledgement – which became an axiom – is in general non-linear and even more so in human behaviour, economic processes and stock market activity have led to the non-linear approach of stock market processes.

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6. REFERENCES


