Knowledge management – a source of sustainable competitiveness in the knowledge based economy

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KNOWLEDGE MANAGEMENT – A SOURCE OF SUSTAINABLE COMPETITIVENESS IN THE KNOWLEDGE BASED ECONOMY

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Abstract

Confirming the well known thesis *knowledge is power*, A. Toffler argued that the knowledge based society represents the acme of the human society development and P. Drucker said that the developed countries passing through the knowledge based society represents the biggest change of the modern world. That made possible and helped the emerging of the managerial revolution (defined as *knowledge applied to knowledge itself*) at the firm's level. Under these circumstances, knowledge has to be seen as a strategic resource – source of competitive advantages and of managerial performances as well. Considering this, a firm's management have to define a coherent behavioral model in order to seriously take into account and to valorize the knowledge management as a source of sustainable competitiveness into the knowledge based society.

Keywords: knowledge based society; competitiveness; knowledge management; managerial revolution.

Knowledge based society and the managerial revolution – the general framework of doing business

Confirming the well known thesis of Francis Bacon "knowledge is power", A. Toffler argued years ago that *the knowledge-based society* represents the acme of the human society development, when *knowledge* become *the core resource of the economy*, the last and the ultimate *source of power* (see Toffler, A., *Power-shift*, 1995). That's the reason why, just a few years later P. Drucker said that the *developed countries passing through the knowledge based society* represents *the biggest change of the modern world* (see Drucker, P., *Managing in the next society*, 2002).

In this conceptual and evolving framework, *The Lisbon European Strategy* (2004) defined the objective of *transforming Europe into the most competitive, dynamic and knowledge-based economy of the world* until 2010 to be the most appropriate objective in order to catch the train of the changes bring by the 21-th century and to gain from the global competition. For *Romania*, country which has defined *EU integration* to be its most important political goal, this objective (growing the economic competitiveness by supporting the knowledge based economy, capable to generate long term growth) can not represent something else than just another great challenge, which we find specified just like this into the programming documents of the macro-economic management (see *The Governance Program 2005-2008).*

There are some *specific features of the knowledge-based society*, which definitely distinguish it in qualitative terms from the previous models of societies and which are really challenges for a firm and its management (Drucker, 1999): (1) from a social perspective, the employee with studies occupies the central place: because the developed countries are transforming themselves into knowledge-based societies, they ask more and more for a university diploma in order for a person to get a job or a promotion; (2) the unprecedented growing of the weigh of the people with superior and medium special preparing, and of the general level of culture of the population; (3) the explosion of the number of scientific, specialty and general publications; the exponential multiplying of the sources of information dissemination, which store huge amount of scientific, technical, encyclopedia information and so on; (4) the access, practically without limits, of the whole population to mass-media – the most important vector for the information transfer; (5) enormous multiplying of the firms which offer intellectual, professional services – research and development; designing; technical, technological, marketing, management, legal, economic, environmental support; (6) generalizing of the concept and practice of permanent learning.

On the other hand, but into the same context, translating the term *knowledge based society* into the "language" of management, we find the term *managerial revolution*. As well as the industrial revolution leaded to the applying of knowledge on instruments (tools, processes and products), and the productivity revolution (made by F. Taylor) leaded to the applying of knowledge to human labor, *the managerial revolution*, represents – as P. Drucker emphasized – the third change into the dynamics of knowledge, when science is applied directly to science, "*knowledge is applied to knowledge itself.* This is the third and probably the last step in the transformation / evolution of knowledge" (see Drucker, P., *Societatea postcapitalistă*, Ed. Image, Bucureşti, 1999). Under these circumstances, the managerial revolution appears to be the result of the composing of two vectors, of which content and importance can be determined by analyzing the contribution that the intellectual capital brings to the success of the managerial process: (1) *knowledge* – representing the basics of the modern firm and management and being made efficient and effective through management; (2) *human factor* – which, in its double quality of participant to the managerial process – as ruling factor and as ruled factor as well, was, is and will be the only one capable to generate, use and valorize knowledge.

According to P. Drucker, there are at least two major aspects which make the managerial revolution different: (1) its *speed* – as well as the two prior revolutions, the managerial revolution sweep away the entire globe. It took 100 years, from middle 18-th century till middle 19-th century for the industrial revolution to became dominant and global; it took about 70 years, from 1880 till the end of the world war two for the productivity revolution to become dominant and global; but it took *less than 50 years – from 1941 till 1990 – for the managerial revolution to become dominant and global*; (2) the fact that now *knowledge* are systematically applied in the purpose of defining what new knowledge is necessary, if it is feasible, and what has to be done in order to make the knowledge efficient; in other words, *knowledge is applied to the systematic innovation*.

These two features mentioned above determine the need for new attitudes from firms and there management in order to gain and maintain the competitiveness into the global economy. In doing this, *time and space compressing* represents the major challenge, and the way firm handles this will reflect itself into the degree of firm's adjustment to a new way of thinking and acting.

Translating all these at firm's level, we have to mention that there are some ***postulates and principles referring to the knowledge-based economy*** which could be opportunities and threats as well for a firm and its management (see Useem, J., Our 10 Principles of the New Economy Slithly Revised, in *Business*, nr. 5, 2001)**: (1)** the value of an organization is more and more determined by the value of its intangible assets – value is mostly represented by the knowledge-based employees, by the ideas, knowledge and information which they and the organization possess; (2) substantial diminishing of the importance and impact of geographical distances on business placement and actions – with the exception of a few sectors strongly related to geography (such as mining or petroleum), the importance of the geographic factor into the economic activities has been considerably reduced, and the tendency is to continuously diminish; (3) considerably diminishing of the period necessary for innovation and for its penetration into real life – the speed of knowledge, products, technologies replacement has significantly accelerated; innovations appear rapidly and diffuse themselves fast, making time to compress; (4) knowledge workers become the most important asset of a company and country – because valuable ideas and knowledge are essential into the development process nowadays, people who generate and poses them become an inestimable value; the preservation of those people into the company, by using a variety of means become a stringent necessity; (5) accelerating the economic development and growth through the proliferation of networking – network creation, which integrate different kind of companies, oriented around the value chain vector generates rapid economic growth: the speed of technical, human and economic flows amplifies a lot, generating real explosive effects; (6) products value rises exponentially with the value of the market share – the effect of networking leads to a situation in which as bigger as the volume of one kind of product becomes, so its market share is, and its value rises; (7) rising importance of middle levels in the economy – the amplification of volume and complexity of information and knowledge determines the rapid growth of info-intermediaries and of there impact on functioning and performing of the economy; (8) buyers get great power, and sellers get new opportunities – the possibility for the buyers to rapidly obtain the best information they can get just through one "click" confers them a higher possibility to choose and rapidly procure the product / service they need; in the same time, there are some new opportunities for producers and sellers, because, by holding relevant information about markets they know that to produce, at what prices to sell and which are the best market shares; (9) the transaction with goods and services become more and more personalized – rapid and cheap access to information about the specifics of demand reflects into manufacturing and selling of personalized product / services, which determines a substantial diminishing of stocks and of waiting times; (10) availability of any product everywhere – you can order instantly by e-commerce on-line the product you wish and you can get it very fast; so, the gap between the wish to buy and the possibility to do it tends to diminishes to zero in some cases.

All these mutations demonstrate essential changes into the society, into the structure and dynamics of the economy, which has to be captured and valorized by the management into a new way of "doing business". So, at *the level of the firm* operating into the general framework defined by the coordinates that the knowledge based society and the managerial revolution have draw, *knowledge* must be seen as *strategic resource, source for competitive advantages* on the one hand, and for *managerial performance*, on the other (see Lopes, I., Martins, M., The New Business Models in the Knowledge Economy: the Strategic Way to value creation, in *The Electronic Journal of Knowledge Management*, 2006; Halawi, L.A., Aronson, J.E., McCarthy, R.V., Resource-Based View of Knowledge Management for Competitive Advantage, in *The Electronic Journal of Knowledge Management*, 2005; Bellinger, G., Castro, D., Mills, A., Data, information, Knowledge, and Wisdom, in *http://www.systems-thinking.org/dikw.htm*, 2004).

Sustainable competitiveness – the general target of the firm in order to survive

As *competitiveness* has become more and more a really "*dangerous obsession*" (see Krugman, P., Competitiveness: the dangerous obsession, in *Foreign Affairs*, March-April, 1994) for the entities operating into the global economic world (at macro, mezzo and micro level), firm's management has to look closer to the impact of different factors affecting firm's competitiveness. It has to evaluate them in order to integrate the positive effects they may generate, and to avoid / reject them if there impact is negative.

The emergence and development of the *knowledge based society* and the *managerial revolution* as the *operating framework for the management of the firm* come together with *the growing impact of the global competition* (for raw materials and consuming markets as well). Competition in the 21-th century's global economy will be complex, challenging, and filled with competitive opportunities and threats. This makes *searching for competitiveness* to become *a key variable for the long time success of the firm*; by this way, the entire managerial work will have to focus on a *permanent and global searching for competitiveness* (see Noe, T., Parker, G., Winner Takes All: Competition, Strategy and Structure of Returns in the Internet Economy, in *Journal of Economics & Management Strategy*, 2006; Schultze, U., Stabell, C., Knowing What You Don't Know? Discourses and Contradictions in Knowledge Management Research, in *Journal of Management Studies*, 2004).

The knowledge based society raises some new imperatives, challenges and opportunities for firms, generally speaking, because newer and better *knowledge* can lead to an estimate *rising of 70-80% in firm competitiveness* under the circumstances characterized by the transformation of the older economy into the new economy – with the help of information and technologies global influences. But, all this new knowledge depends, ultimately, by human – who generate, use, valorize and learn knowledge – so, he/she has to be in the center of any transformation / development process (see Building the Knowledge Society, Report to Government, *Information Society Commission,* 2005).

The knowledge based society will continue to affect business environments, making them more complex, dynamic and competitive. Moreover, this complexity and dynamism will increase at increasing rates. Under these circumstances, successful firms will cope with or exploit these changes by increasing their capabilities for correctly interpreting threats and opportunities, making decisions, acquiring and managing knowledge, innovating, and changing while simultaneously dealing with the needs for efficiency, flexibility, and employee commitment (see Huber, G.P., *The Necessary Nature of Future Firms: Attributes of Survivors in a Changing World*, Sage Publications, 2003). In this context, it must be identified a set of key variable and to catch them into a coherent model of management behavior.

Competitiveness has become a central concern in an increasingly open and integrated world economy but, despite its acknowledged importance, the concept of competitiveness itself is often misunderstood. As *Michael E. Porter* says (see Michael E. Porter, *Building the Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index*, Harvard University, 2004), most discussion of competitiveness is still focused on the macroeconomic, political, legal, and social circumstances that underpin a successful economy. It is well understood that sound fiscal and monetary policies, a trusted and efficient legal system, a stable set of democratic institutions, and progress on social conditions contribute greatly to a healthy economy. However, these broader conditions are necessary but not sufficient; they provide the opportunity to create wealth but they do not create wealth. Wealth is actually created at the microeconomic level of the economy, rooted in the sophistication of actual companies as well as in the quality of the microeconomic business environment in which a nation's firms compete. Unless these microeconomic capabilities improve, macroeconomic, political, legal, and social reforms will not bear full fruit.

Competitive pressures urge managers to consider the effect of organizational actions on the competitive advantage of their firms. *Competitive advantage* denotes *the ability of a company to outperform others*. Superior performance may result from successful differentiation from rivals' actions. Moreover, competitive companies establish a *strategic fit* between the outside environment and their internal resources and capabilities. Another way to outperform competitors, the resource-based view of strategic management argues, is the possession of valuable, rare, inimitable and non-substitutable resources. Overall, competitive advantage results in superior financial results, as indicated by various measures of profitability.

The productivity of a country is ultimately set by the productivity of its companies. An economy cannot be competitive unless companies operating there are competitive, whether they are domestic firms or subsidiaries of foreign companies. However, the sophistication and productivity of companies are inextricably intertwined with the quality of the national business environment. More productive company strategies require more highly skilled people, better information, more efficient government processes, improved infrastructure, better suppliers, more advanced research institutions, and more intense competitive pressure, among other things.

Companies in a nation must upgrade their ways of competing if successful economic development is to occur. Broadly, companies must shift from competing on endowments or comparative advantages (low-cost labor or natural resources) to competing on competitive advantages arising from superior or distinctive products and processes. If we take into consideration the well known Porter's diamond framework, it reveals that *almost everything matters* for competitiveness. This makes improving competitiveness a special challenge, because there is no single policy or grand step that can create competitiveness, only many improvements in individual areas that inevitably take time to accomplish.

Knowledge management – the specific way to accomplish competitiveness into the knowledge based economy

It is generally accepted that *a firm* might be defined as a *combination of tangible and intangible assets* in order to perform a specific activity with a view to covering a real or a potential demand on the market and to obtaining a net income from it. But the transition to the knowledge based society is the one that made possible and generated a big shift regarding the value of the firm: a study made in the USA in 2001 revealed that if in 1978 the accounting value of the firm represented 95% of the firm's market value, it now represents only 25% (see Nicolescu, O., Nicolescu, L., *Economia, firma şi managementul bazate pe cunoştinţe*, Ed. Economică, Bucureşti, 2005). It doesn't mean that the tangible assets have now no value at all, because no economy and no firm could operate without them. It only means that the structure of the assets of the firm has changed, and it is necessary to define in each case the optimum combination of those two kinds of assets.

Under these circumstances, we have to agree that "in the *current context* of (1) increasing interconnectedness between economic actors and between countries (including transition countries), (2) consistent critical externalities for all types of enterprises confronted with an increasing competition in the local and/or international market, (3) tremendous impact of the new information and communication technology on each company, in terms of strategic development and of organizational behavior, *strategic management relies increasingly on the intangible assets in achieving corporate or market goals*. These refer, on the one hand, to company advantages given by the access in real time to accurate information, by the intellectual capital of the firm's human resources, by the *good reputation and image* in the direct contact with clients, shareholders, or suppliers, and on the other hand, to the moral capital of the company, the ethical conduct of the managerial team, the transparency of the financial accounts by voluntary reporting to the interested circles, the respect of the employees' rights, the use of environment-friendly technologies, and last but not least, the corporate social responsibility promoted in contact with the members of the hosting community" (see Korka, M., Corporate Social Responsibility in Romania: From Theory to Practice, in *Transition Studies Review*, 12(1), 2005). But, if it's relatively simply to at least evaluate the visible assets of the firm and then to try to catch them into a competitive strategy, it's quite difficult to even distinguish and then to evaluate the invisible assets, and much more to use them profitably into a competitive strategy aiming to gain long term competitiveness.

So, firms have to realize how important it is to "*know what they know*" and to be able to make maximum use of the knowledge. This knowledge resides in many different places such as: databases, knowledge bases, filing cabinets and peoples' heads and are distributed right across the enterprise. All too often one part of an enterprise repeats work of another part simply because it is impossible to keep track of, and make use of, knowledge in other parts. So, enterprises need to know: what their knowledge assets are and how to manage and make use of these assets to get maximum return.

In terms of definitions, *knowledge assets* are the knowledge regarding markets, products, technologies and organizations, that a business owns or needs to own and which enable its business processes to generate profits, add value, etc.; on the other hand, *Knowledge management* is not only about managing these knowledge assets but managing the processes that act upon the assets, and these processes include: developing knowledge; preserving knowledge; using knowledge, and sharing knowledge

Therefore, what is Knowledge Management? There are a lot of definition regarding this term, each of them accordingly to one specific moment in the history of it; so: (1) "knowledge management encompasses management strategies, methods, and technology for leveraging intellectual capital and know-how to achieve gains in human performance and competitiveness" (see *CAP Ventures, http://www.capv.com/dss/knowledg.htm*); (2) "knowledge management is a discipline that promotes an integrated approach to identifying, managing and sharing all of an enterprise's information assets. These information assets may include databases, documents, policies and procedures as well as previously unarticulated expertise and experience resident in individual workers. Knowledge management issues include developing, implementing and maintaining the appropriate technical and organizational infrastructures to enable knowledge sharing, and selecting specific contributing technologies and vendors (see *Gartner Group, 29 August 1996, http://www.gartner.com*); (3) knowledge management can be defined as "the harnessing of a company's collective expertise wherever it resides and the distribution of that expertise to the right people at the right time. It's not a product but a process – the process of gathering, managing, and sharing your employees' knowledge capital" (see *Group Computing Online, http://www.groupcomputing.com*); (4) "knowledge management is the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge than can be widely shared throughout an organization and appropriately applied" (see Skyrme, D., *Knowledge Management – Making sense of an oxymoron*, Insigts, No. 22, 1997).

But, what is knowledge management? A few things are clear: knowledge management requires technology, business strategy, and people. It is the process of capturing the collective knowledge of the organization, analyzing it and transforming it into easily recognizable forms for mass consumption, and communicating the results to the organization by means of a readily accessible vehicle.

Perhaps the most significant shift nowadays is the beginning of "*knowledge conscious management*"; admittedly, it is not widespread but there is enough sustained discussion about knowledge management to indicate that the processes and approaches will become embedded in the way organizations work. There is a long way to go but the following are just some of the reasons why we think it will happen (see Oxbrow, N., Abell, A., Is there life after knowledge management? in *Information outlook*, vol. 6, no. 4, 2002):

- *Dynamic Markets* – we live in a volatile world. It is a world of dynamic market conditions, where speed and change have become truisms and organizations are adapting in order to function. Although all organizations will approach it differently, their focus will be on building an organizational capability to enable them to learn and adapt. *Chief Learning Officers* are as common as *Chief Knowledge Officers*;
- *Complex Organizations* – organizations are already complex and will become more so in the future. For many years organizational structures have been challenged and the slow change in the 1990s to flatter structures and empowerment has given way to a rapid change to project-based organizations, matrix management, fluidity of staff structures and changing employment contracts. When you combine the change in supply chain management and increased partnerships, knowledge exchange and the growth of intellectual assets become very real issues;
- *The Quality of Decisions* – decisions run organizations, whether they are the decisions to invest or divest; to grow in old markets or enter new ones; to introduce social support or *make your own luck* policies; to select one supplier or another; to form partnerships, or pursue a competitive stance. Strategic decisions are about the organization's future; operational decisions are about its current success.

  In modern organizations a number of things are becoming evident about the decision making process: (1) the speed of decision making is accelerating; timeframes are shorter than in the recent past; (2) a number of people are involved in the process but in the end the final decision is made by one person; the quality of the decision reflects the innate ability of the decision maker and how well contributions from a variety of experts can be harnessed; (3) political considerations in all organizations will play a central part in decisions; (4) strategic planning requires intelligent ways of predicting the future, while operational planning requires facts and focus; (5) decision making is being decentralized; corporate decisions are increasingly being pushed out to the operating unit closer to the market and the role of the center is becoming that of providing strategic leadership, direction and a common framework to enable communication, information management and common business processes;
- *Information Architecture and Content Management* – despite all the worry that knowledge management would become an IT solution looking for a problem, a human relations function or a

way for corporate communications to make its mark, information management has become an acknowledged part of the picture; it is certainly not the whole picture, but many organizations recognize that excellent information management is the key to success for many of the things they need to achieve.

The vast majority of academic research into knowledge management concludes that while there is a general difficulty for companies to explain what they mean when they use the term knowledge management, they are in a position to identify common aspects such as the *sharing of knowledge* and of *transforming individual into organizational knowledge*. They admit, however, that a lack of clarity over the concept while generating certain confusion, has led to a greater flexibility in its application in the private sector. It simply means different things in different contexts.

Knowledge management is inextricably linked to the *sharing of knowledge* between individuals and to the collaborative processes involved. The factors and environments which enhance this all relate to the human factor in the knowledge management process. In conclusion, we can say that, *at firm's level*, *knowledge* is not just about knowing something or poses an information, it is about how to *apply* that information to the specific realities that the firm confronts with. So, *organizational knowledge* – which can be *identified* and than *valorized* by *use and/or transfer* only if it is encapsulated into a coherent system, in processes, products, rules, and culture – can be defined as processed information embodied in routines and processes that allow action. Under these circumstance, excepting the monopolistic politics and another market dysfunctions, the *competitive advantage of the firm*, and its *sustainable competitiveness* can not be reached and maintained but as a result of what a firm knows, how it can use what it knows and how fast it can learn something new. That's why into nowadays business environment the *managerial performance* relies mostly on the capability of the firm to buy, codify and transfer knowledge faster and more effective than its competitors (see Myers, P.S., *Knowledge Management and Organizational Design,* Butterworth-Heinemann Publishing, 1996).

So, there is a general acceptance that sustainable competitive advantage in the 21st century will be accomplished thru knowledge management (see Halawi, L., Aronson, J., McCarthy, R., Resource-Based View of Knowledge Management for Competitive Advantage, in *Electronic Journal of Knowledge Management*, 2005). Large firms are becoming progressively more alert to the significance of knowledge for efficiency and competitiveness. The principal cause for this concern with knowledge management is the idea that *knowledge and its application* are the *means by which creativity can be promoted, innovation facilitated and competencies pulled in such a way as to advance overall organizational performance whether in the public, private or not-for-profit sectors*. Some of the *knowledge management drivers* include competition, customer focus, the challenge of a mobile workforce, equity in the workplace, and the global imperative. It is crucial to organizational survival. Nonetheless, knowledge management is complex involving great outflows of resources; as such knowledge management is becoming an ever more persistent subject within the business community.

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