

# Knowledge Economy and the Necessity of Knowledge Management

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## Abstract

This paper tries to present an existing relation between knowledge economy and knowledge management. We started by emphasizing the main principles of knowledge society and the consequences that determine the movement to a new economical paradigm. Further, we discussed organization competitiveness as being a critical success factor for modern organizations. At last we described the link between knowledge and sustainable competitiveness and presented knowledge management as the perfect "recipe" to obtain it.

**Keywords:** competitiveness, knowledge management, knowledge society, knowledge economy, sustainable, KM activities

**JEL Codes:** M1, M20, M21

## 1. Introduction

Today, when the entire socio-economical environment is characterized by profound changes, especially if we refer to the development of knowledge based societies, competitiveness has become one of the necessary conditions needed by a company in order to survive. In this context, we should try to understand why competitiveness became, only now, a critical success factor and how is it possible to increase it to a satisfactory level.

We think the answer for the first question is determined by analyzing the dynamics found on supply and demand markets, generated by using knowledge on a large scale, knowledge that is embedded in every product and service. Therefore, in order to be successful, a company must offer better products and services than the competition. Regarding the answer to the second question, we believe that it determines the appearance of new techniques, processes and systems, adapted for the use of knowledge. All these are to be treated by knowledge management, which targets to integrate these elements into a unitary organizational system, offering the proper framework for using knowledge.

## 2. Knowledge based economy, core of the knowledge society

Both Soete [Soete, 2006] and Ashok [Ashok, 2004] are sustaining the idea that we are moving to a new social paradigm, in which the importance of knowledge as input for economical processes has fundamentally changed. This dynamic leads to important changes in the way of how economy functions and it brings modifications for both economical and political environments.

In this context, we believe that knowledge can be perceived according to these general ideas:

- Knowledge is important as input for processes, both qualitative and quantitative. For example, Peter Drucker [Drucker, 2004] stated that "...knowledge will become the element that will bring equilibrium between labor and assets";
- Knowledge can be seen as a *product*. We are actually trying to develop new activities by trading knowledge products;

- For some authors, codified knowledge is more important than tacit knowledge, especially when it involves the construction of economical knowledge bases. For example, Abramovitz and David [Abramovitz, 1996] emphasized that the main characteristic of economical growth was the permanent increase of codified knowledge as a basis for the organization and its activities;
- Knowledge economy is based on the advances in ICT, because of the positive changes in physical constraints and because of the lower costs for collecting and disseminating information.

Of course, the question that will rise will be *how valid are these perspectives*. When we discuss about a "society of knowledge", we should be conscious about the fact that the entire economical activity is based on knowledge, not only in our society, but in *all human societies*. Analyzing the recent past, the industrial economy of the 19<sup>th</sup> century was intensively based on different type of knowledge, therefore we could have applied the expression "knowledge economy" even one hundred years before. So far, it was impossible to comprise the concept of "knowledge economy" into a general, recognized definition. Usually, this concept is defined by using very broad terms: "knowledge economies are directly sustained by the production and distribution of knowledge" [James, 2006]. This definition apparently covers everything, but actually it says almost nothing.

Starting from the well known ideas of Francis Bacon, where "*knowledge means power*", Alvin Toffler [Toffler, 1995] stated that, from a social perspective, "knowledge based societies represents the climax of human development, only when knowledge becomes the main economic resource and the most important source of power". In our opinion, *knowledge society should be described by the following characteristics*:

- The core of economical environment is represented by highly educated employees. Most of the companies are promoting „learning processes“, allowing their employees to climb the organizational hierarchy only after getting relevant diplomas;
- The cultural dissemination can be accomplished easily. Because of this, all companies will have to increase the competitiveness in order to survive on fastidious markets;
- The economical and educational environments are not separated. Therefore, many organizations invests in research facilities and offer educational scholarships;
- There is a proper environment for the development of R&D organizations;
- The concept of „sustainable learning“ is well implemented and practiced in many situations.

We also think that "knowledge society" brought profound changes on managerial level. These days, managers must take measures in order to adapt their employees, work procedures and, of course, their systems to the new socio-economical environment. All these changes are not new. Starting from the 90's, there were large debates about the "managerial revolution"<sup>38</sup>. If "industrial revolution" meant the use of knowledge in order to develop better tools and instruments and "productivity revolution" revolved around the discovery of new ways of working, "*managerial revolution*" represents the moment when science is directly applied to science. In other words, through knowledge, we are trying to determine knowledge.

"Managerial revolution" is distinguished by two major aspects, aspects that determine and justifies a new attitude in managerial behavior:

- **Speed** - One hundred years were necessary for the industrial revolution to become global, 70 years for the productivity revolution and only 20 years (1990 - present) for the managerial revolution;
- **The method of applying knowledge** - Knowledge is applied in order to determine new necessary knowledge. So, knowledge it is used for systemic innovation.

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<sup>38</sup> See Drucker [Drucker, 1993]

A knowledge based economy is determined by *principles that produce consequences*, principles that define *new challenges* and *opportunities*. Hence, figure 1 depicts the most important principles of a knowledge based economy and the consequences which are determined.

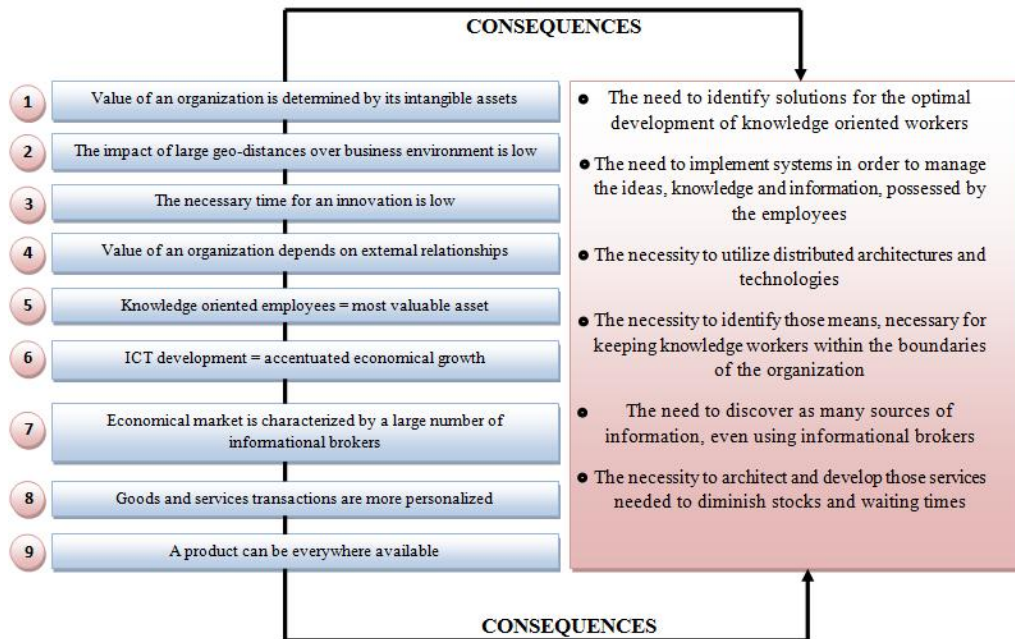


Figure 1: Principles and consequences of knowledge society

### 3. Sustainable competitiveness, necessary condition for the survival of the organization

According to Noe [Noe, 2007], for each economical entity, competitiveness defines an aspect which is taken in consideration by all managerial actions. The development of the knowledge based society, together with managerial revolution, lead to a continually increasing competition especially on the consumer markets. Therefore, the entire managerial level of an organization should be permanently oriented to search those parameters that determine the increase or the decrease of competitiveness.

Knowledge economy can create challenges, but in the same time will create opportunities. The possibility to easily identify knowledge can lead – with help provided by IC technologies – to an increase with 70 to 80% of organization competitiveness<sup>39</sup>. In order to use the advantage brought by the abilities to use knowledge, one company must possess those people, heavily trained, which are capable to create and harness knowledge. In these circumstances, we think that the successful organization will be that one which is able to adapt change through the following:

- **Permanent increase of the abilities** that are related to correctly identify threats and opportunities;
- **Permanent optimization** of the decision process;
- **Development of some methods** to create and utilize knowledge;
- **Developing balance** between innovation politics, flexibility and efficiency.

Although competitiveness became a central problem, the factors that determine it are not fully understood. Tim [Tim, 2007] emphasizes that many discussions about competitiveness are based on those macro economical, politic and social circumstances that determine a successful economy. It is understandable that the optimization of monetary and fiscal policies, together with an efficient social system and a series of democratic institutions, contribute to a healthy economy. All these conditions, although necessary, are not enough: they are merely defining the necessary environment for a company to produce wealth.

What we really should take into consideration is the fact that wealth is created on the micro economical level of the economy and the processes of creating wealth depends on the quality of

<sup>39</sup> Building the knowledge society, Report to Government, Information Society Commission, 2005

organizational decisions. The competitive advantage, necessary for a company to survive, will be obtained by using means different of those used by the competition. So, each company will try to discover (consciously or not) rare resources that are impossible to be imitated, copied, steered or replaced. Thus, all the promoters of "knowledge economy" will sustain that knowledge is the ultimate resource desired by the companies.

If we consider Porter framework [Porter, 1996], we'll notice how competitiveness is determined by a plurality of factors: organization strategy, structure, competition, market demand, industries proximity, infrastructure, qualified labor force, tangible assets, financial assets, etc. Although Porter framework describes many situations that count for competitiveness, it's easy to notice that knowledge is not, explicitly, among them. We believe that by positioning knowledge as a central point (see figure 2), it will be possible to reduce unpredictability. As a direct consequence, the entire decision making process will be enhanced.

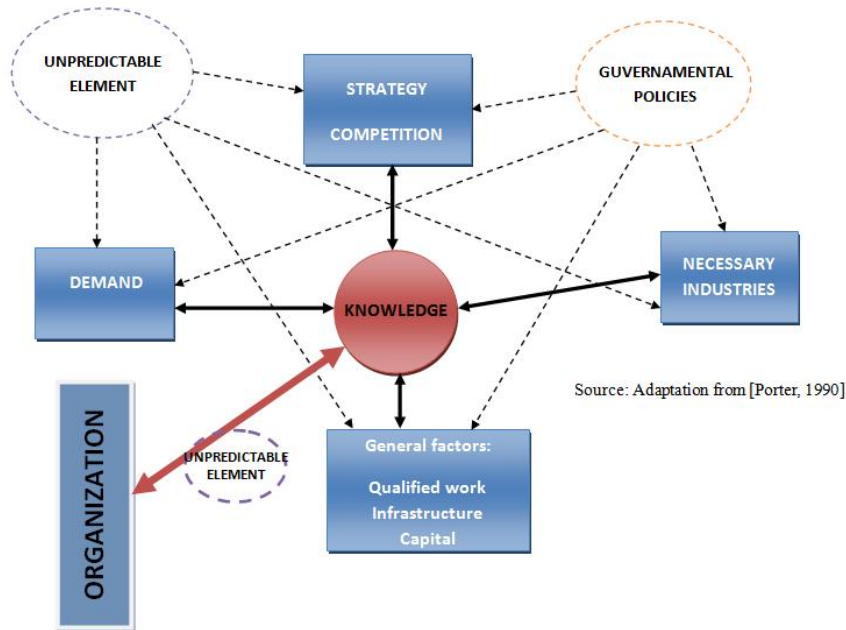


Figure 2: Porter Framework extended for knowledge society

#### 4. Knowledge management, perfect recipe to achieve sustainable competitiveness

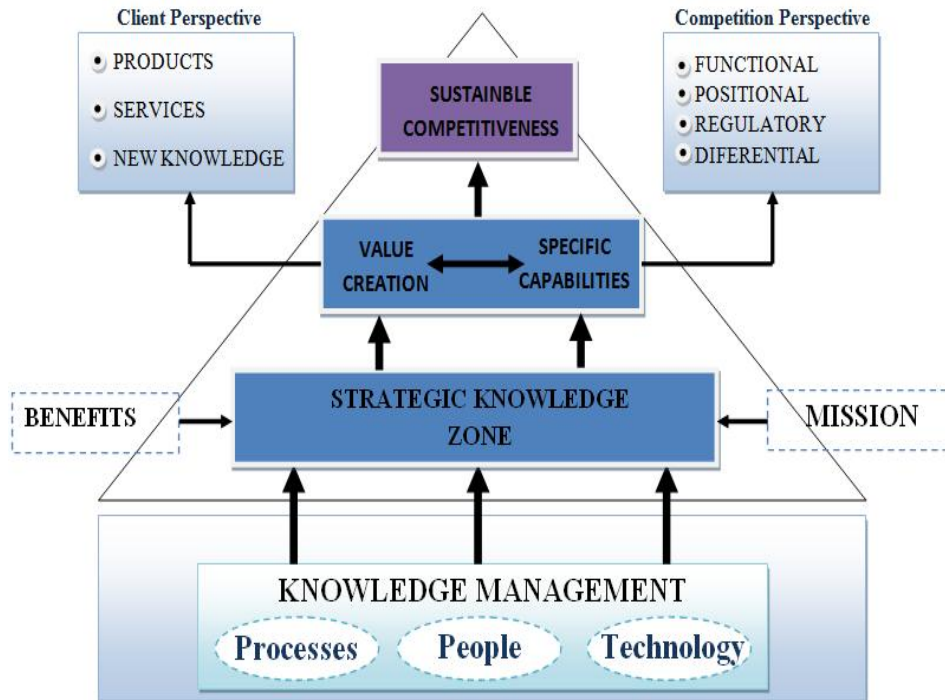
The importance of knowledge based activities increased during the last years. Likewise, these days, knowledge is recognized as one of the most important assets of an organization. Davenport and Prusak emphasized the idea that sustainable competitive advantage is based on *three factors*: organizational knowledge, efficiency of using it and the ability to infer new knowledge. We can define the link between knowledge and sustainable competitiveness starting with **RBV**<sup>40</sup> **framework**, described in [Pisano, 2000]. In this framework, companies represent warehouses full with resources. Organizational resources consist of assets, capacities and processes which allow the creation and implementation of all the necessary strategies, needed to improve efficiency. When these resources are rare, valuable, impossible to be reproduced and replaced, the company can obtain competitive advantage. According to Grant [Grant, 1996], all actions will be geared towards the use of these resources.

One of the rare resources that satisfies RVB framework is knowledge. Therefore, companies can be seen as social communities, whose roles are to integrate in goods and services the existent knowledge brought by the employees. As stated by Crossan [Crossan, 2000], knowledge is contained in multiple components of an organization: organizational culture, routines, policies, systems, documents, employees and teams. All these components are defining organizational capabilities, contributing directly to value creation. For many companies, a special challenge is to

<sup>40</sup> Resource Based View Framework

identify the knowledge that can be found in each component, knowledge that is relevant for their purposes and strategies.

Figure 3 presents the relation between knowledge management and strategic resources for obtaining sustainable competitiveness:



**Figure 3:** Knowledge management and the organizational competitiveness

Achieving high competitiveness by using knowledge management depends on understanding what infrastructure is needed for processes like knowledge acquisition, knowledge generation, knowledge transfer, use of knowledge. Gold [Gold, 2001] emphasizes that knowledge management involves the coordination of those activities based on knowledge with organizational systems and employees. Usually, these elements are grouped into *three categories: people, processes and technology*.

The development of a strategy based on the interaction between these three elements offers the possibility to identify strategic and also critical knowledge. By identifying strategic knowledge we define an important stage, used for obtaining added value and defining specific organizational capabilities. According to Osbourne [Osbourne, 2002], added value represents an intangible asset that positively influences business performance and competitive advantage. Although intangible, the dimension of this asset is concretely reflected in client attitude regarding company products and services. Knowledge oriented companies will consciously use knowledge for the development of new products and services.

Mazilescu [Mazilescu, 2009] has a very interesting point of view by saying that *companies dimension is directly proportional with their capacity of producing value*. Therefore, the attention should be focused especially toward the development of some unique and valuable capabilities, not only to tangible assets, products and services. Indeed, by focusing on products and services we can obtain, in the best case, a short term advantage. All organizations wishing to improve performance must develop new aptitudes and expertise, by using:

- **Employees "know - how"** regarding suppliers, clients, internal processes, functional abilities;
- **Learning abilities;**
- **Correct perspective** over what quality really means;
- **Cultural abilities;**
- **Reputation and collaboration networks;**
- **Contracts and licenses;**

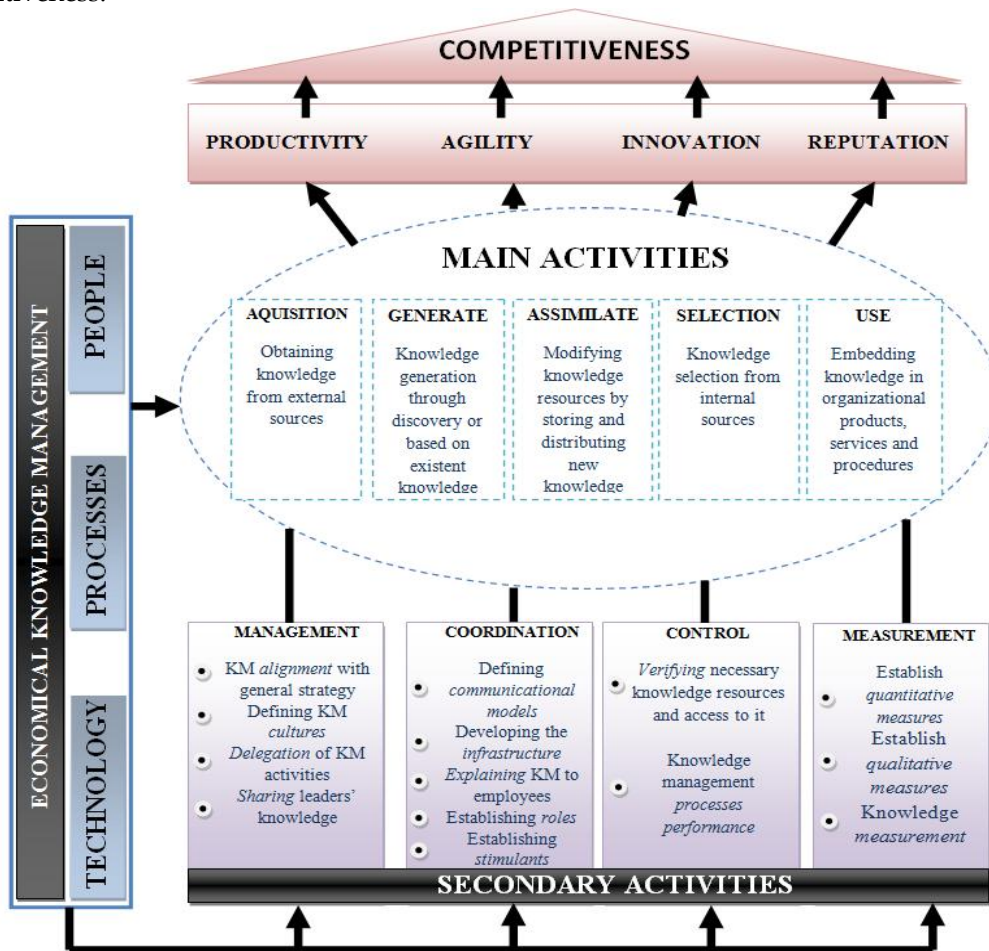
▪ **Negotiation techniques.**

By defining its own capabilities, an organization will obtain competitive advantage because these kinds of resources are very difficult to be copied. All knowledge embedded in processes and capabilities, developed over time, represents a resource that is difficult to be outsourced without owner's will.

Becket [Becket, 2000] highlights that *organizational mission* represents, as well, a necessary element for defining strategic organizational knowledge. The important functions of a company are based on this element and by knowing it the employees will have a vision, at least intuitive, about needed knowledge.

Strategic knowledge can be also obtained responding to the question: „what are the necessary organizational policies that will attract clients? [Crossan, 2002] “. If the employees' hold knowledge about client needs, they will be able to conclude what they need to do. This way, the company will have highly competitive parameters, like: product prices, quality, short times to satisfy client requests and availability. Of course, *there can be gaps between the current values of these parameters and the desired ones*, but even these gaps, through analysis, can *bring to surface* strategic knowledge. In this context, knowledge management is one way to strategically sustain the organization, allowing it to implement solutions well fitted on client needs.

Starting from the general framework presented in figure 3, it is possible to extend it (see figure 4), in order to represent how knowledge management activities can influence organizational competitiveness.



Source: Adaptation from Holsapple, [Holsapple, 2005]

**Figure 4:** Organizational competitiveness from KM activities perspective

In order to describe both main and secondary activities<sup>41</sup>, we have used the approach found in Holsapple [Holsapple, 2007] and Singh [Singh, 2001]. There are some situations when different authors use these terms but with different meanings. For example, in Davenport [Davenport, 1998], knowledge generation activity includes also knowledge acquisition. We chose Holsapple model because we think there is a big difference between obtaining knowledge from external sources and producing it using our own strength.

Another example regarding different meanings for knowledge management terms is found when acquisition activity defines not only how we obtain knowledge but also how we select it. In this case, it will be possible to obtain knowledge that we already know. The model described in figure 4 makes a *distinction between obtaining knowledge*, that is not in the organizational knowledge base *and selecting knowledge* from what we already have.

As we can notice, we emphasized on two kinds of knowledge management activities: main activities and secondary ones. From our point of view, the role of secondary activities is to guide the performance of all the main activities, according to the following ideas:

- **Measurement activities** imply the qualitative and quantitative measurement of knowledge resources. Also, it is used to *evaluate* the rest of the secondary activities;
- **Control activities** are used to ensure that the company posses necessary knowledge, both quantitative and qualitative. The quality can be controlled by using two perspectives:
  - *Validity of knowledge*, that is defined through accuracy and consistency;
  - *Knowledge utility*, that is defined through relevancy and importance;
- **Coordination activities** define guiding measures for knowledge management strategies. It implies an accurate guidance of the dependencies between resources, activities and employees;
- **Management activities** represent the central element of secondary activities. It can generate the form of the organizational culture, establishing the general framework for coordination, control and measurement.

In order to be competitive, an organization must adopt a positive attitude towards knowledge. This positive attitude is usually reflected in the characteristics of knowledge management program adopted by the organization. All nine activities, described in figure 3, should be the center for all socio-economical strategies that are developed inside the company. If these activities, or at least some of it, are performed better than in competitors' case, the organization will have a significant competitive advantage on the market.

## 5. Conclusion

After establishing that knowledge has a large impact over the competitiveness of a company, every company should identify *what knowledge represents* inside their industry. Both academic and business environment propose many definitions for knowledge concepts, including what knowledge is.

It is almost impossible, from this myriad of definitions, to infer a generally accepted one. As it will be noticed, many definitions treat knowledge as a process or as a sum of processes. In other words, knowledge management will challenge the organization to identify the set of processes that will make possible value addition in goods and services, by using intangible assets like knowledge or intellectual capital.

At last, we believe that each company should take in consideration the fact that knowledge management depends, extensively, on the development of intellectual capital and all learning processes should be highly enhanced and nurtured.

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<sup>41</sup> Knowledge management activities

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