THE KNOWLEDGE-BASED SOCIETY AND THE MANAGERIAL REVOLUTION

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Abstract: *The topic of the knowledge-based society and its implications on management is highly debated nowadays. Therefore, the aim of this study is to identify the logical connections between the knowledge-based society and the managerial revolution. The findings of this study reveal that the knowledge-based society and, more specifically, the knowledge-based economy, along with their main features and requirements regarding people's competences and skills, have a major influence on management, whether in private or public companies. In this society, the central resource of management is knowledge and the leading social groups are knowledge workers.*
Keywords: knowledge-based society, industrial society, managerial revolution, networking.
JEL classification: O_{30}, M_{10}.

1. Introduction

The topic of the knowledge-based society and its implications has been highly debated since the goal for Europe to "became the most competitive and dynamic knowledge-based economy in the world" was established at the Lisbon European Council in March 2000. In order to characterize the correlations between the knowledge-based society and the managerial revolution it is essential to reveal first the concept and key features of the knowledge-based society, as compared to the industrial society. The reason for this is that we need to establish the general context in which management is conceptualized in order to identify the possible changes owed to this (new, different) context.

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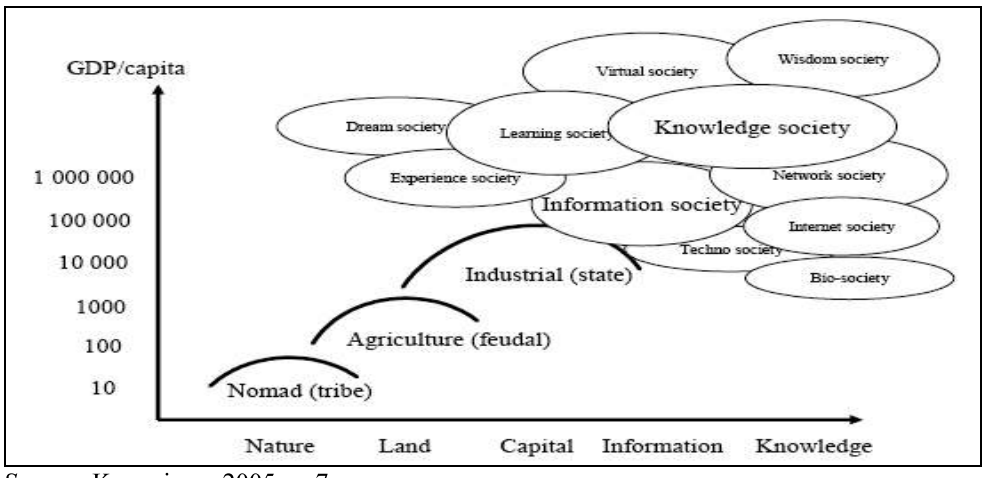
2. Concept and features of the knowledge-based society

Over the last years many researchers have studied the concept of the knowledge-based society, but there is no unanimous definition so far. The European Commission (2008) defines present society as the *information society*, "a society in which low-cost information and information and communication technology are in general use", or as the (*knowledge- based) society*, "to stress the fact that the most valuable asset is investment in intangible, human and social capital and that the key factors are knowledge and creativity". This definition highlights that the knowledge society is a complex phenomenon which has a pervasive impact on all aspects of human activity (European Commission, 2003). However, other authors make a distinction between the information society and the knowledge-based society concepts. For instance, in a literature review about the knowledge-based society, Kauppinen (2005) identifies some theoretical models of old societies and emerging new societies (Figure 1) and separately outlines the information society and the knowledge society.



Source: Kauppinen, 2005, p. 7

Fig. 1. Old societies and emerging new societies

Figure 1 illustrates different stages in the evolution of society, namely the nomadic society, the agrarian society, the industrial society, and very much correlated, the information society and the knowledge society. As

Kauppinen (2005) found, researchers have very different visions about the emerging societies, ranging from the information society to the knowledge society or to the learning society, virtual society, techno-society, dream society, network society, bio-society, and wisdom society.

The information society is a society in which the citizens are connected to each other through information networks and information values replace material ones.

The learning society is a society which provides the framework for learning through new technologies, networking, and virtual communication.

The virtual society is a more technologically advanced and equipped form of information society in which all societal functions (e.g. working life, leisure time, home life, hobbies, education, training and culture) can be realised virtually.

The techno-society is the society where new technology affects all areas of human life, and shapes people's personalities and culture.

The network society refers to a more qualitative change in people's lives, where people have greater cultural autonomy in relation to the material basis of their existence due to the internet, which has enabled widespread communication on a global scale.

The societies described above (namely the information society, learning society, virtual society, techno-society, network society) may all be considered in our view as models of the knowledge-based society because all are societies in which knowledge, along with information and communication technologies, creativity, networking and virtual communication, are the main driving forces. In this respect, Table 1 describes the different societies that humankind has experienced, with an eye to the main driving forces and organizational forms.

The knowledge-based society was conceived as a social phenomenon as well as an economic development (European Commission, 2003). Therefore, the concept of knowledge-based society is used in correlation (and not identification) with the concept of knowledge-based economy. This is because the intensive use of knowledge is the essence of several processes with economic impact on one hand, and the society is a concept larger than the economy or its progress on the other hand (Duca, G., Gaindric, C., 2007). As a result, the knowledge-based society brings economic effects, as well as consequences of a more complete realization of human personality (Duca, G., Gaindric, C., 2007).

Table 1

Driving forces and organizational forms in different societies

No.	Society type	Driving force	Organizational form
1.	Nomadic society	Nature	Family
2.	Agrarian society	Land ownership	Feudal: landowners and their subordinates
3.	Industrial society	Financial capital	Hierarchy and work sharing
4.	Knowledge-based society (or information society)	Knowledge, innovation (technology)	Networking

Source: Adapted from Kauppinen, 2005, p. 7-8.

Economic and social development is to a large extent influenced by social and human capital, which focuses on individuals and social relations and at the same time allows the analysis of specific contexts where new possibilities for social and human capital building emerge. Social and human capital are mutually supporting and producing beneficial economic effects (at different levels, such as individual, company, country, etc.) and social effects (in fields such as social inclusion, health, governance, etc.). The specific contexts (related to learning, workplace, networks and the gender dimension) create new possibilities for combining social capital, human capital and knowledge in new ways and under different conditions (European Commission, 2003). Knowledge, as embodied in human beings (as "human capital") and in technology, has always been central to economic development, but only over the last years its importance has been recognised, as that importance is continuously growing (OECD, 1996, p. 9). This is because knowledge is a construction of reality closely related to individual and social objectives and the use of which can have an impact on the state of the environment (European Commission, 2003). In other words, knowledge is "a dynamic human process of justifying personal belief toward the truth" (Takahashi, T., Vandenbrink, D., 2004, p. 64-65).

The economy of the knowledge-based society is significantly different as compared to the economy of industrial society. This economy, known as the knowledge-based economy, is directly based on the production, distribution and use of knowledge and information (OECD, 1996, p. 7).

The emphasis on knowledge, both as a resource and as a product, the business model focused on people, the disappearance of the company's frontiers, and the growing development of services are only some of the factors characterizing the knowledge-based economy and society (Nicolescu, O., et al, 2003). According to Duca and Gaindric (2007), the economy of the knowledge-based society has to rely on its own resources (new techniques and technologies) at a new level of knowledge. These resources are directly correlated with the process of information and knowledge, providing a new configuration for the society and the economy. As a result, a socio-cultural and economic metamorphosis, without precedent in the mankind known history, takes place now, under the pressure of continuous acceleration of all processes related to the society. "Humankind has the capacity to create far more information than anyone can absorb, to foster far greater interdependency than anyone can manage, and to accelerate change far faster than anyone's ability to keep pace" (Senge, P. M., 2006, p. 69). We may emphasize that the new configuration of the society and economy, in which knowledge is the main asset, require new competences and skills for people working, learning, thinking and creating in this society.

3. The knowledge-based society and the managerial revolution

The knowledge-based society and more specifically, the knowledge-based economy, along with their main features and requirements regarding the competences and skills needed, have a major influence on management, whether it refers to private or public companies. The major changes that take place globally within the knowledge-based society are reflected in the managerial field as well, and could be thought of as a managerial revolution. According to Drucker (1999), the managerial revolution is a transformation of knowledge in which knowledge is applied to knowledge. Thus the central resource of management is knowledge and the leading social groups are knowledge workers. This means that management is centred on knowledge-sharing, in order to discover how knowledge can be best applied to create new knowledge. However, new knowledge may be created using human brain in networks as a tool. Therefore, management relies on two core resources, namely knowledge and people (Figure 2).

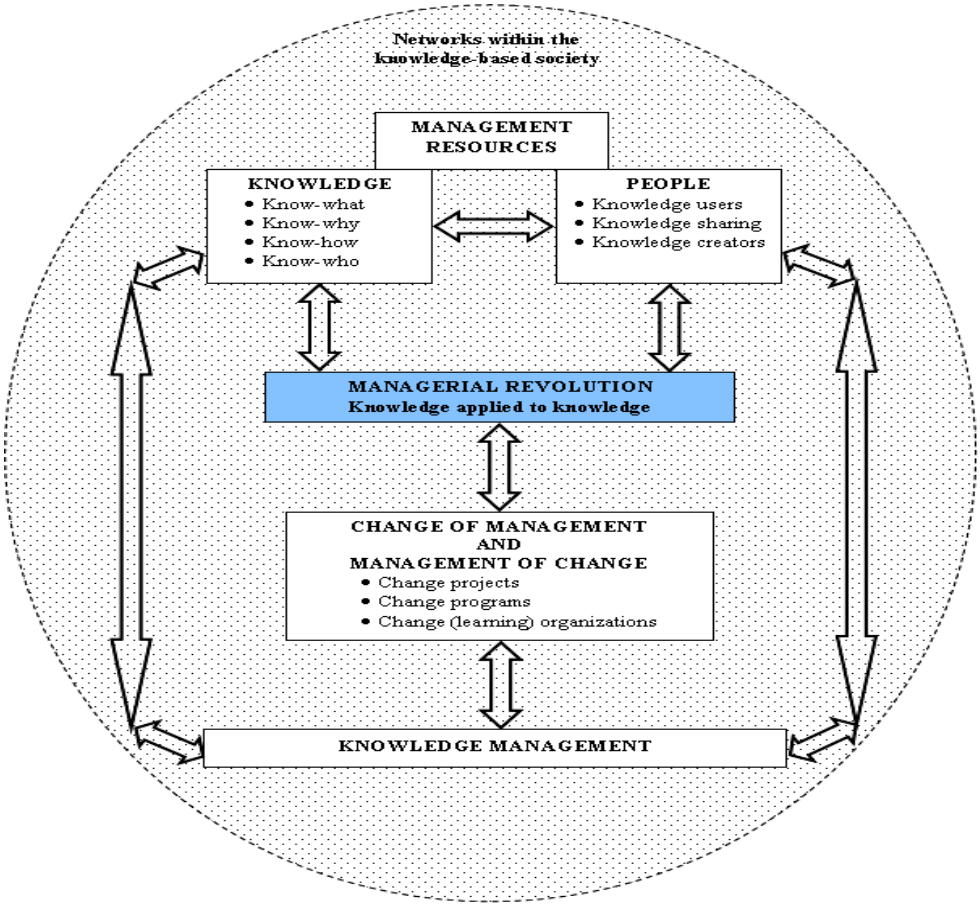


Fig. 2. The managerial revolution

With respect to knowledge it should be pointed out that there are different kinds of knowledge which are important within the knowledge-based society (OECD, 1996, p. 12): know-what, know-why, know-how and know-who.

Know-what denotes the knowledge about "facts" (e.g. how many service companies are registered in Romania or what services are provided). In this case, knowledge is close to what is normally called information, because it can be broken down into bits (codified and measured).

Know-why signifies the scientific knowledge of the principles and laws of nature, underlying the technological development in most industries.

This kind of knowledge may be (re)generated in specialised organizations (e.g. research laboratories and universities). It may be accessed by companies through interactions with these specialized organizations.

Know-how designates capability or skills to do something. Generally, this kind of knowledge used to be developed and kept within the border of an individual firm, but industrial networks allow sharing and combining elements of know-how.

Know-who entails information regarding who knows-what and who knows-how to do what. It involves the formation of special social relationships which permit access to experts and use their knowledge efficiently. The rapid changes within the society and economy represent the main rationale for using this kind of knowledge within modern organizations. This kind of knowledge is internal to the organization to a higher degree than any other kind of knowledge.

These four kinds of knowledge can be shared through different channels. Know-what and know-why, being more close to the notion of information, may be found in books, lectures, databases, or electronic documents. Know-how may be learned in situations where a trainee follows a trainer, relying upon him as the authority in the field. Know-who is socially embedded knowledge which cannot easily be transferred through formal channels of information. It may be learned in social practice, in day-to-day practice and in specialized educational environments (OECD, 1996).

As far as people are concerned, attention should be drawn to the significant role they have as capital of organizations within the knowledge-based society. People are not only knowledge users, but they are knowledge creators, which increases knowledge by sharing it in one or more networks. Within the knowledge-based society it is vital to participate in networks, as an individual, as well as a company, otherwise the possibilities to create knowledge and to develop will be particularly limited.

The managerial revolution is connected both with the change of management and with the management of change. Change of management refers to identifying methods and techniques to organize the sharing, exchange and use of knowledge (Takahashi, T., Vandenbrink, D., 2004, p. 64-76). This implies management through learning, emphasis on processes, excellence and not relative quality, networking and interdependence, transparency, and promotion of discomfort that leads to creativity (Moss Kanter, 2006). Management of change, as Moss Kanter (2006, p.14) states,

may be put into practice on three levels: (1) change projects, which are meant to solve a particular problem or need; (2) change programs, which are interdependent projects meant to strongly influence the organization; and (3) change (learning) organizations, which create the capacity for innovation and continuous improvement, through the desire of change. In such organizations, learning, innovation, collaboration and change are the main drivers of their activity.

The knowledge management comprises the approaches, methods, and techniques centred on using knowledge to create new knowledge (Nicolescu, O., et al., 2003). Since knowledge is the main asset within the knowledge-based society, its quality and productivity become vital, as Drucker outlines: "We need systematic work on the quality of knowledge and the productivity of knowledge – neither even defined so far. The performance capacity, if not the survival, of any organization in the knowledge society will come increasingly to depend on those two factors. But so will the performance capacity, if not the survival, of any individual in the knowledge society" (Drucker, P. F., 1994, p. 75-82).

As a result, knowledge management could address the issues of quality and productivity of knowledge. The reason for this is that knowledge management means "the systematic gathering, organising, sharing, and analysing of information in a company; there are specific software solutions to support this objective, typically involving data mining and some method of operation to push information to users" (E-Business W@tch, 2008, p. 281). This may create the premises for producing new superior knowledge which will further be applied to old knowledge generating new knowledge and this process of knowledge creation will infinitely continue, leading to a more developed society.

4. Conclusions

We have emphasized in this study that the knowledge-based society is both a social phenomenon and an economic development, which brings social effects (related to social inclusion, governance, health, etc.), as well as economic effects (related to production of goods and services, efficiency, effectiveness, etc.) due to the intensive use of knowledge. All the above mentioned issues lead us to the conclusion that the knowledge-based society and, more specifically, the knowledge-based economy, along with their

main features and requirements regarding people's competences and skills, have a major influence on management, whether in private or public companies. In this society, the central resource of management is knowledge and the leading social groups are knowledge workers. This means that management is centred on knowledge-sharing, in order to discover how knowledge can best be applied to create new knowledge. This new knowledge may be created using the human brain in networks as a tool. Therefore, management relies on two core resources, namely knowledge and people.

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