

KNOWLEDGE AS A DISTINCTIVE RESOURCE OF COMPETITIVE ADVANTAGE

Aurel BURCIU,

“Stefan cel Mare” University of Suceava
aurelb@usv.ro

Rozalia KICSI

“Stefan cel Mare” University of Suceava
rozaliak@seap.usv.ro

Abstract

The paper focuses on identifying factors that allow companies to gain competitive advantage in global competition, based on the sources of competitive advantage of nations. In the knowledge-based society, knowledge becomes a distinctive resource for any company that innovate in order to develop/strengthen some distinctive core-competencies against its competitors. However, there is a considerable amount of literature which unsatisfactory explains/clarifies the mechanism for processing various types of knowledge (explicit and tacit) and for innovating in order to maintain a certain competitive advantage in different markets.

Key words: competitive advantage; explicit knowledge; innovation; multinational corporations; tacit knowledge.

JEL Classification: F23

I. INTRODUCTION

A large and growing body of literature on Economics and Management widely approach the issue of competitive advantage of a nation or/and a company, but there isn't a very clear distinction, we believe, between the sources of competitive advantage of a nation and the sources of competitive advantage of a company. In fact, the wealth and the prosperity of individuals of a country (compared to the others of another country) are created by a complex of both micro, and macroeconomic factors. Except for a small number of countries that gain a high annual GDP per capita due to their specific resource endowment (such as, for example, the petroleum exporting countries), it can be said that competitive advantage has a powerful dynamic character. In the great majority of the world countries (developed economies), the creation of GDP is closely linked to innovative potential and the competitive position of different kinds of companies; today, medium and large enterprises, especially multinational corporations, have become a vector of economic prosperity in almost all countries of the world.

II. COMPETITIVE ADVANTAGE AND ECONOMIC PROSPERITY

Today's global competition between the main countries of the world arises and evolves, especially through ability of large and medium companies to acquire, process and sell knowledge. As Porter argues, the competitive advantage of a nation isn't inherited, and it can't be maintained and "preserved" in an unstable and uncertain global environment; national prosperity is created, not inherited, and the rise and growth of nations such as Japan, South Korea or China are suggestive examples. (Porter, 2008, pp. 170-172 et seq.).

The classical economics proposed several theories, starting with the theory of *absolute advantage* (Smith, 1776; Smith, 1962) and the theory of *comparative advantage* (Ricardo, 1959; Ohlin, 1933; Samuelson, 2000, etc.) to explain the creation and the distribution of wealth and prosperity between individuals and/or between nations. More recently, a new field to this issue has been opened up by the theory of *competitive advantage*; Porter (1990, 1998) suggested a more comprehensive "mix" of variables that allow nations and companies to achieve competitive positions in a global business environment. This so-called *Porter's Diamond* model has become a reference tool for analyzing the competitiveness of nations and firms; the model establishes six major determinants of competitive advantage, namely:

- *Firm strategy, structure and rivalry* in an economic/industrial sector, or type and *nature of domestic rivalry in particular fields*;
- *Demand conditions*, regarding the size, the consumer preferences and the level of sophistication;
- *Factor conditions*, namely natural resources endowment, transport and communication infrastructure, knowledge, etc.

- *Related and supporting industries*, highly competitive in international markets;
- *The government*, having a "catalyst" role and a great impact on the other determinants (education policies/infrastructure, social policies, fiscal policies, etc.)
- *Chance*, as a complex of factors such as new inventions, political decisions of some foreign authorities, technical changes, etc.

A detailed analysis of the six factors of Porter's Diamond reveals, we believe, that the generic-called *knowledge* resource is still an important factor that positively capitalizes the position of a nation/firm in a global market. Among other things, we try to argue that today's global competition is all about the *acquisition, development and maintenance of a stock of new knowledge*.

Alvin Toffler discussed about a first "wave" of progress linked to the agricultural revolution, and about a second "wave" of progress that began in 1776, coming along with the Industrial Revolution in England. During the 1970s, a third wave of progress was gradually forced by "information revolution" (the computers and computer networks have become ubiquitous in society and economy). Finally, the fourth "wave" of progress, as it was drafted by Maynard and Mehrtens (1993), have started in some countries such as USA, Canada, Japan, South Korea, Germany, etc. during the 1990s and continues today. In this wave of progress the knowledge has become a distinctive resource, but their exploitation requires extremely well qualified employees who, in addition, shall endeavour to permanently learn.

In other words, today, many firms of different kinds (like small enterprises and especially multinational corporations) struggle to acquire new knowledge, and to achieve a certain competitive advantage on this basis. Intuitive thinking, learning by experience and the permanent training of the employees have become realities of the today's business environment; this brings up the questions such as: "What is knowledge and what type of knowledge is more important for the firms?"; "What are the strategies used by multinational corporations to maintain a certain standing know-how, i.e. a certain own knowledge, as a factor of competitive advantage?"; "What is the relationship between LO (*learning organization*) and KM (*knowledge management*)?".

III. KNOWLEDGE AS AN INFINITE RESOURCE

In recent years, an increasing amount of literature on Management has argued that an amount/sum of some information doesn't automatically become "knowledge"; moreover, it is useful to distinguish between *knowledge* as all the facts that someone knows about a particular subject (Macmillan English Dictionary), and *knowledge* as a systematic process of *acquiring* and *using information* (we emphasize that knowledge as a process is always related to an individual, and to his mind, whether he is a member of an organization or not). The current studies (Solomon, 1999; Jones, 1999; Davenport&Prusak, 2000) show that an amount of information becomes knowledge under certain conditions that must be fulfilled:

- It has to transmit an informative content/message (the idea and the context in which it may be used);
- It has to be of present interest (from a historical point of view, we can talk about "old" knowledge or "new" knowledge, but its relevance is gained only by the process of mixing it in human activity);
- It must have a neutral content (the information that has become knowledge is typically independent of the subject, and it has a minimum of relevance in other contexts, too);
- It has to be multiplied, being used by others.

This approach of knowledge is based on a pyramidal structure; signs are at the basis of this pyramid, then is data (as a combination of two or more signs), and then is information (as a sum of two or more data); at the next level is knowledge, followed by wisdom and, finally, at the top is enlightenment. So, from this point of view, we can describe knowledge as a novelty achieved by a combination of two or more data; still, it isn't clear enough how the human wisdom is gained and how the enlightenment arises.

A well-known classification, proposed by Polanyi (1966), Nonaka (1995), and others, divides the knowledge in two main categories, as follows:

- *Explicit knowledge*, that can be acquired by a rational/cognitive process and can be transferred to other individuals by ordinary processes of teaching, learning, communication, etc.; it may be detached from the owner and it can be processed/used in various ways in organizations (examples: knowledge found in books, encyclopaedias, databases, etc.);

- *Tacit knowledge*, that is non-rational, intuitive; such knowledge arises from the experience or the intuition of individuals, and its transmission and processing become more difficult (we know by intuition or by experience how to perform various activities or how we must to behave in different social contexts, but sometimes it can be difficult to explain in words how we fulfil those actions).

In the literature on Management, issues like the importance of intuitive thinking, the emotional intelligence, the various processes through which the explicit knowledge can be converted into tacit knowledge and vice versa have attracted much attention in recent years; but, we believe that the mechanism for creating human experts in business organizations, which obviously is directly related to the conversion tacit-explicit (Maynard&Merthens, 1993; Nonaka, 1995), isn't enough clarified.

In everyday life of business organizations, we are witness to a continuous process of transforming/converting, of mixing and combining the two types of knowledge (tacit and explicit); the result of this process should be an extra performance gained by a firm in global competition, depending on the degree to which the process itself is supported or not by top management. The way the top management can support/require acquisition and exploitation of knowledge in its organization depends on the pattern of the organizational chart and the nature of daily relationship between "heads" and subordinates; the two elements, i.e. organizational chart and hierarchical relationships, may favour (or not) the development of an organizational culture focused on *exploitation of knowledge as a distinctive resource*. The term "enlightenment" means a kind of knowledge beyond wisdom, i.e. it is a form of *understanding specific to human experts that propels the organization to success* (we believe that only individuals and organizations that process extremely selective knowledge can hope to gradually achieve "the enlightenment", but the distinction between wisdom and enlightenment remains extremely unclear in the entire literature on Management).

Several studies on knowledge management (Damrau&Herman, 2014) show that about 80% of current stock of knowledge is tacit knowledge and only about 20% is explicit knowledge. Different types of knowledge existing in the society at one time can be accessed and processed by the small business, as well as by medium and large companies; however, it might be asserted that especially multinational corporations have coherent knowledge management strategies, and for this reason many studies on this issue refer to this type of organization. We also emphasize that a lot of medium and large enterprises try to motivate their human resources to permanently learn not only at the individual level, but at the organizational level, too. The concept of *learning organization* remains, we believe, directly connected to knowledge management and suggests some directions/strategies for lifelong learning in organizations (Senge, 2006).

IV. MULTINATIONAL CORPORATIONS IN GLOBAL ECONOMY

It is well-known that the multinational corporations (MNCs) and/or transnational firms are enterprises that entry and perform in one or more foreign countries economy by foreign direct investment; such companies could directly or indirectly control the creating value activities in mother countries as well as in host countries.

Most of MNCs develop long-term strategies, explore the markets and consumers demand, invest in their own human resources and gradually gain certain core competences in the specific markets. Such companies develop and apply efficient human resources and knowledge management strategies as important "snapshots" of the general strategy of the organization; for these companies (especially in the EU-USA-Japan Triad), the acquiring and processing of knowledge have gradually become a strategic goal.

The basic idea of knowledge management in Nippon companies comes from a strong accent on long time investments in their own human capital (life-long employment, job rotation, group synergy and group performance, etc.); this incentive to invest doesn't ignore the need to pay dividends, to reinvest the profit, stakeholders, etc. In the postwar period, one of the competitive advantages of Japanese companies was, and still is, their ability to manage/to induce the process of knowledge creation and exploitation; this is a dynamic process and requires creation, preservation and exploitation of knowledge as an upward spiral so that the expertise is spread to all members of the organization. It is true that, at first sight, the above-mentioned dynamic process seems to have a contradictory nature because it derives from concepts such as chaos and order, micro and macro, tacit and explicit, *all of these being a consequence of the interaction between individuals and the organization* (Haghirian, 2009). However, it is evident that distinctive approaches on knowledge management and human resources management can be found in American and/or European companies, too; such strategies are strongly influenced by the vision of top management in each corporation and doesn't depend on the cultural patterns of mother countries. Besides, it is known that certain organizational practices used to improve efficiency and productivity in global companies tend to spread quickly (concepts such as Total Quality Management, Quality circles, the uses of robots in many industrial sectors, scientific research and innovation, etc.). Many studies on practices of multinational corporations show a significant mutual influence, especially in the Europe-USA-Japan Triad (during the postwar decades different models of production systems have been shared and adapted, depending on the expected efficiency, legislative requirements, etc.) (Dunning&Lundan, 2008, pp. 503-549). For instance, we can say that the way the General Motors Company was founded and extended by successive acquisitions of small companies/enterprises (from the 1910s onward) has become a basic concept for Japanese Keiretsu, starting with the Toyota model and its practice of controlling the entire value chain of a product/service (Drucker, 2001, pp. 68-92). So, some practices or realities of Japanese corporate management have been strongly inspired by American or European corporate practice from the first half of the 20th century.

Like other authors (Haghirian, 2009, p. 204 et seq.), we want to emphasize that there are some particular features of knowledge management in Japanese companies compared to those from Europe and United States:

– In Japanese companies' decision makers focus on the management/exploitation of existing knowledge, as well as on supporting the creation of new knowledge, which then will be disseminated in the whole organizational structure.

– All the members of the Nippon organization are encouraged to freely share the tacit and explicit knowledge which are available into the company at a time (group has the precedence over individuals).

– As regards the dissemination of tacit knowledge, exploited through experience and everyday routine, it can be said that Japanese companies have a specific practice arising from primacy of the group rather than the individual (however, the same feature of knowledge management in companies from Europe or from the United States remains strongly dependent on the motivation of employees and the relationship between group and a management team; so, in some cases, organizational environment in European and American companies seems to be more permissive for the dissemination of tacit knowledge than in Japanese companies).

– In Japanese companies, the information becomes knowledge only when it is placed in a context of physical nature, in terms of time and space which they define it, as well as when it gains a sense or provides an answer to a questionable issue; as the case may be, according to the strategy in KM and LO, we can find similar/comparable situations in American or European business (the pattern of organizational charts and the social capital of companies influence to some extent the way the tacit knowledge is converted into the explicit knowledge and vice versa; anyway, we believe that the nationality of a MNC remains a secondary aspect when we speak of knowledge management).

A lot of evidence shows that today the most MNCs are managed at a national level, but the ownership of their capital is widely diffused to an international level (their shareholders are spread across the Globe); this remark is fully valid for Japanese, American or European corporate (Dunning&Lundan, 2008, pp. 6-7).

V. COMPETITIVE ADVANTAGE OF COMPANIES

In a general sense, it can be said that competitive advantage gained by a company in the market in which it operates is given by its core competences; simply said, the company can maintain/preserve an advantage in a market only if it manages to satisfy customers demand and to continuously improve its product/service. By core competences we understand those skills that enable a company to provide a benefit to its customers (Hamel&Prahalad, 1994; Crainer, 1998, pp. 90-93); such abilities are based on highly specialized knowledge achieved by the company, and its employees. However, studies on this issue are still lacking in the attempts to clarify how various kinds of tacit and explicit knowledge are converted in company's core competencies, and in consequence, in competitive advantage in the market.

Lubit (2001) draws our attention to four distinctive categories of tacit knowledge used by the employees in a company (in combination with different types of explicit knowledge, which are available to all), namely:

a) Tacit knowledge like skills or know-how (technical, organizational, in marketing, etc.) which are gained/developed by the employee by direct experience, with repetitive actions, etc.;

b) Mental models developed during the time by one or more employees of the organization, which have to individually or collectively solve certain practical matters; in order to find solutions to such problems, they recourse to abstraction and intuitive thinking;

c) A set of "common laws"/rules for the approach of problems which occur in the organization, in which case employees use systematic thinking, but also analogies, deductions or comparative analyses deriving from their own routine and mental models;

d) Tacit knowledge achieved by organizational routine, i.e. from behavioural models developed during the years (motivation of employees, R&D activities, decision-making mechanisms, applied marketing, etc.).

In our opinion, combining various categories of tacit and explicit knowledge by the groups and the teams in an organization is predominantly influenced by the strategy in KM and strategy in HRM initiated by the top management; however, there are other endogenous or exogenous factors that influence how different knowledge becomes innovations/inventions that give a certain competitive advantage to company.

By analogy with Porter's point of view on the competitive advantage of countries, we believe that the factors determining the competitive advantage of companies/firms, can be categorized as follows:

a) Factors which by their nature are mainly or exclusively endogenous, and are directly dependent on the type and quality of knowledge which the organization exploits (Figure 1 suggests this direct connection), or the type and quality of its own human resources. In this category of determinants of competitive advantage of firms, we can include: overall strategy of the organization and how to apply it; the character and integrity of the top management team members; the basic approach to KM, LO and HRM as part of the strategic architecture of the company; quality, training and motivation of companies own human resources.

b) Factors that are mainly or exclusively exogenous and which can make a significant contribution to the company's success (in the general sense, we can say that they are to be found in social,

economic and cultural environments of the company). In this category of determinants of competitive advantage of firms, we can include:

- the strategy and the practice of rival firms, as well as the practice of some companies in related sectors, because certain efficient management practices tend to generalize over the years;
- the material, educational and cultural infrastructure built by government to support business environment and in order to ensure social equality between different groups;
- chance that may occur in the field of technology, with regard to new scientific discoveries, etc. (we believe that this factor is, to a certain extent, endogenous too, because sometimes chance may arise within the organization, regarding innovations, inventions, changes in markets, etc.);
- the specificity of demand for goods/services created by the firm (sometimes this factor is endogenous, we believe, because companies may "create" demand from consumers).

Figure 1 outlines the factors having a great influence on the competitive advantage of firms, in that they enable/allow the companies to gain and preserve certain core competences with regard to a product or service offered to consumers.

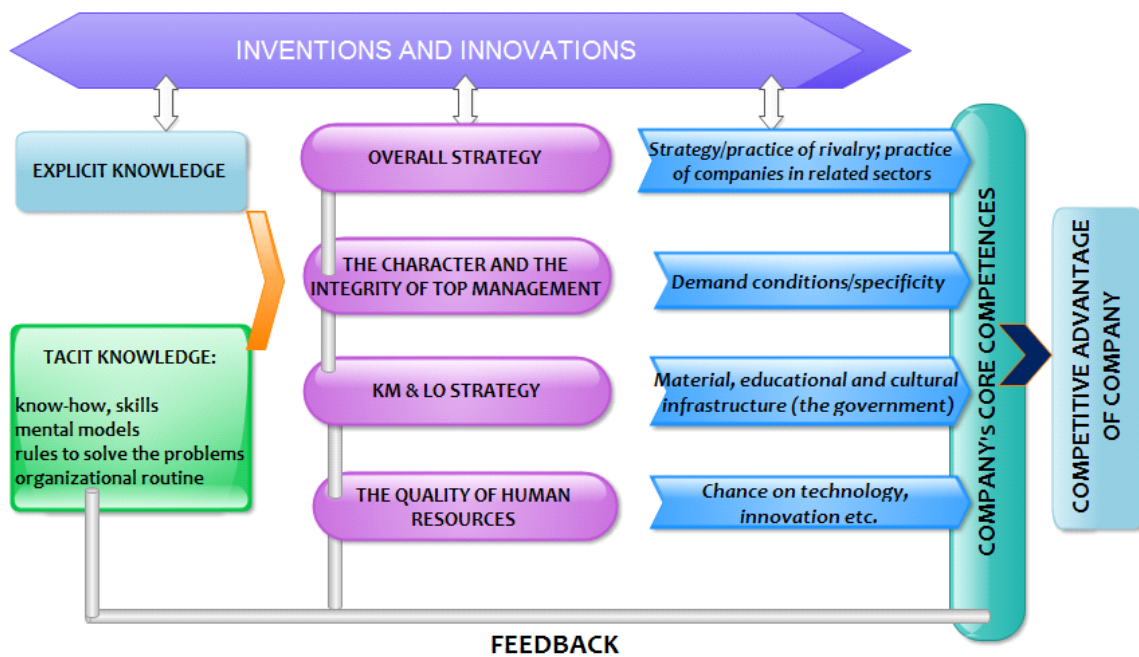


Figure 1-Factors that determine the competitive advantage of companies

As it can be seen in the figure, we consider that there are some endogenous and exogenous factors that exert a strong influence on the core competences of a company in specific markets; if the organization succeeds in maintaining/developing these competences, it will achieve a long-term sustainable competitive advantage. However, our approach brings up the conclusion that, no matter how we might group the factors that determine the core competences of a company, the competitive advantage has its roots in the type and quality of knowledge gained and used by that company. In other words, especially the four categories of tacit knowledge (on the left side in the figure) are the origins of any competitive advantage of business organizations. In addition, we note that there is a feedback relationship between knowledge and some core competences built up in any company during the time; for example, sometimes it is hard to say if certain tacit knowledge is the origin/cause of the company's core competences or, on the contrary, the continually and systematically exertion of some core competences becomes a cause of developing new tacit knowledge.

Previously, we mentioned that about 80% of existing stock of knowledge in the society is tacit knowledge, which reveals an almost infinite character of this type of resource for any business organization. As a result, various strategies, mechanisms and organizational procedures/practices have an "intermediate" position between the knowledge acquired and used by a company and its core competences developed during the time. From our point of view, different kinds of organizational strategies should focus on innovation and, in this way, on strengthening the company's own core competences; obviously, innovation requires to all of the members of any organization to further the knowledge and develop their skills, and therefore requires lifelong learning.

VI. CONCLUDING THOUGHTS

Today's global competition shows that the ability of both countries and companies to gain and preserve a certain competitive advantage has become one of the most challenging "puzzle" because the various kinds of knowledge and practices spread quickly. Obviously, we believe, the R&D and innovation activities in companies and/or countries are based on systematic learning and the creation of more valuable and hard to copy new knowledge. But it is hard to say to what extent the business organizations, by its own strategies and practices, could conduce to the improvement of prosperity, and to what extent macroeconomic policies or strategies reach the same goal. At the macroeconomic level, as well as at the micro one, various categories of knowledge has gained a special status in today's global competition; tacit knowledge has particularly become the basic determinant of the companies' competitive advantage, as well as the countries competitive advantage.

Among other conclusions, we want to emphasize that there isn't a distinctive "model" of knowledge management practices in Japanese companies; besides, we believe that it isn't clear enough if cultural patterns of a nation can exert an influence on KM, LO or other strategies of a company. Also, several studies have suggested that knowledge is a resource of competitive advantage of companies and/or nations, a little attention has been paid to the way this resource is converted into innovations/inventions and becomes a competitive advantage. The contribution of our study suggests a new approach to this issue; still several other questions remain to be addressed.

VII. REFERENCES

1. ****Macmillan English Dictionary*, Available: <http://www.macmillandictionary.com/>
2. Crainer, S. (1998), *Key management ideas*, third edition, Prentice Hall, UK
3. Damrau, J., Herman, L. (2014), *BPM & KM: They Converge Quite Nicely*, Society for Technical Communication, available at <http://tinyurl.com/opd6qhh>
4. Davenport, T.H., Prusak, L. (2000), *Working knowledge*, Harvard Business School Press, Boston
5. Drucker, P. (2001), *The Essential Drucker*, Elsevier Ltd
6. Dunning, J., Lundan, S. (2008), *Multinational Enterprises and the Global Economy*, Edward Elgar
7. Haghirian, P. (2009), *J-Management. Fresh Perspective on the Japanese Firm in the 21st Century*, iUniverse, Inc, New York
8. Hamel, G., Prahalad, C.K. (1994), *Competing for the future*, Harvard Business Press
9. Jones, A. B. (1999), *Knowledge Capitalism-Business, Work and Learning in the New Economy*, Oxford University Press, Oxford, 1999
10. Lubit, R. (2001), *Tacit knowledge and knowledge management: the keys to sustainable competitive advantage*, Organization Dynamics, vol. 29, no. 4, Elsevier Science
11. Maynard H. B., Merthens S. E. (1993), *Al Patrulea Val*, Editura. Antet, București
12. Nonaka, I., Takeuchi, H. (1995), *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, New York
13. Ohlin, B. (1993), *Interregional and International Trade*, Harvard University Press, Boston
14. Polanyi, M. (1966), *The Tacit Dimension*, The University of Chicago Press, USA
15. Porter, M. (2008), *On competition*, Harvard Business Review
16. Ricardo, D. (1959), *Opere alese*, vol. I, Editura Academiei RPR, București
17. Samuelson, P. (2000), *Economia politică*, Editura Teora
18. Senge, P. (2006), *The fifth discipline*, Random House Inc.
19. Smith, A. (1962), *Avuția națiunilor. Cercetare asupra naturii și cauzelor ei*, Editura Academiei RPR, București
20. Solomon, R. (1999), *A better way to think about business: how personal integrity leads to corporate success*, Oxford University Press, New York
21. Știrbu (Buta) S. (2012), *Capitalul uman în economiile celui de-al patrulea val*, Teză de doctorat, Universitatea „Al. I. Cuza” Iași