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## **KNOWLEDGE – THE SOURCE OF COMPETITIVE ADVANTAGE**

Knowledge is the main basis of competition. Companies should view knowledge as their most valuable and strategic resource. In order to build and sustain their competitive advantage, they must manage their intellectual resources and capabilities. The paper presents a general overview of the knowledge management, discusses knowledge definitions as well as the types of knowledge. It takes into consideration the transfer of knowledge and creating knowledge management culture.

### **1. INTRODUCTION**

Nowadays we can observe an economic transition from an era of competitive advantage based on information to one based on knowledge creation. According to Peter Drucker, land, labor and capital, the classical factors of production, have become secondary to knowledge as the main resource for the new economy. It is now said that value added in most businesses today is in the form of knowledge.

Recent progress and modernization in information technology have an important role for sudden emergence of knowledge management. These improvements have provided new tools to better perform the activity of using and sharing knowledge.

Knowledge originates in human beings; a computer can not create it. The only sustainable advantage of organization is what people know and what they do with it. It is the most important resource a company has that is worth more than land, labor and capital and unlike those traditional assets, knowledge does not diminish in value.

The ever-increasing interest in knowledge in recent years has been accompanied by a renewed discussion of organisational learning and knowledge management and, more specifically, the potential for an organization to generate competitive advantage on the basis of its knowledge assets.

The emergence of a knowledge era as an integral part of the global economy is leading to dramatic changes in the business environment. Knowledge and its manifestation in the expertise of people is nowadays seen as the greatest asset of value creation for organisations.

### **2. THE NATURE OF KNOWLEDGE**

The literature presents numerous definitions of knowledge and expertise, but none seem to be universally appropriate, as the definitions depend on the context in which they are used. For the purpose of this paper, knowledge is defined as follows: "Knowledge originates in the head of an individual and builds on information that is transformed and

enriched by personal experience, beliefs and values with decision and action-relevant meaning. It is information interpreted by the individual and applied to the purpose for which it is needed. The knowledge formed by an individual will differ from another person receiving the same information. Knowledge is the mental state of ideas, facts, concepts, data and techniques, recorded in an individual's memory"<sup>1</sup>.

Knowledge is a shared collection of principles, facts, skills, and rules<sup>2</sup>. Knowledge can be embodied into a firm's knowledge assets which consist of its core competences, technology, value-adding activities, processes, systems, procedures, technology, structures, products and services. Embodied knowledge can be regarded as constituting an organisation's knowledge assets through which competitive edge is achieved.

Knowledge can be either explicit or implicit. The former is tangible, being clearly stated and consisting of details which can be recorded and stored. Implicit or tacit knowledge is often unstated, based on individual experience and, therefore, difficult to record and store.

Invariably, both forms of knowledge begin as individual knowledge but, to substantially improve performance, are transformed into organisational knowledge, an often-difficult feat in the case of implicit knowledge. One of the most important roles of organisational learning and knowledge management is to ensure that individual learning leads to organisational knowledge.

Typologies of organisational knowledge can take many forms. Sanchez and Heene discuss know-how (practical knowledge), know-why (theoretical knowledge) and know-what (strategic knowledge), while Whitehill devises a typology centred on encoded (know-what), habitual (know-how), scientific (know-why) knowledge, among other things. Demarest also refers to commercial knowledge, defining this as "an explicitly developed and managed network of imperatives, patterns, rules and scripts embodied in some aspects of the firm, and distributed throughout the firm, that creates marketplace performance"<sup>3</sup>.

Knowledge can be specific or generic to varying degrees. This is particularly relevant in relation to the concepts of competences and core competences. Similar competences are usually common in competing firms within a specific industry and, in essence, represent the basic characteristics of successful companies operating within an industry<sup>4</sup>.

Beyond brand name and physical assets, a corporation gains knowledge from years of experience in such things as manufacturing, engineering and sales. This cumulative experience, together with information gathered from outside sources, constitutes one of the firm's critical resources.

In their analysis, both Badaracco and Hamel distinguish between different types of knowledge: Hamel argues that one type of knowledge, explicit knowledge, is of a rather

<sup>1</sup> S. Bender, A. Fish, *The transfer of knowledge and the retention of expertise*, "Journal of Knowledge Management", Vol. 4, No. 2, 2000, p.126.

<sup>2</sup> G. H. Stonehouse, J. D. Pemberton, *Learning and knowledge management in the intelligent organization*, „Participation and Empowerment: An International Journal", Vol. 7, No. 5, 1999, p. 131-144.

<sup>3</sup> M. Demarest, *Understanding knowledge management*, "Long Range Planning", Vol. 30, No. 3, 1997, p. 374-384.

<sup>4</sup> J. D. Pemberton, G. H. Stonehouse, *Organisational learning and knowledge assets*, "The Learning Organization", Vol. 7, No. 4, 2000, p. 185.

explicit and discrete type<sup>5</sup>. An example of this would be technical drawings and patents. Another type of knowledge, tacit knowledge, is more tacit, and of a more systematic kind. Explicit knowledge can be expressed in words and numbers and shared in the form of data, scientific formula, specifications and manuals. This kind of knowledge can migrate in the business community, and be accessible for most companies regardless of their cooperative activity. It is codified and stored in databases where it can be accessed and used easily by anyone in the company.

However, knowledge as being primarily tacit, is something not easily visible and expressible. Tacit knowledge is highly personal and hard to formalize, making it difficult to communicate or share with others. Subjective insights, intuitions, and hunches fall into this category of knowledge. Tacit knowledge is deeply rooted in an individual's actions and experience as well as in the ideals, values or emotions. There are two dimensions of tacit-knowledge. The first is the technical dimension, which encompasses the kind of informal personal skills or crafts often referred to as "now-how". The second is the cognitive dimension. It consists of beliefs, ideals, values, schema and mental models<sup>6</sup>.

### 3. KNOWLEDGE MANAGEMENT

Knowledge management is a business process. It is the process through which firms create and use their institutional or collective knowledge. Knowledge management has been used in many ways, representing different ideas such as computer storage systems and database mining, or management techniques similar to inventory control of parts. One of the best definitions of knowledge management comes from two current researchers, whom are both widely consulted practitioners in the field who states: a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information<sup>7</sup>.

Knowledge management caters to the critical issues of organizational adaptation, survival and competence in face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek a synergistic combination of data and information processing capacity of information technologies, with the creative and innovative capacity of human beings.

This is a strategic view of knowledge management that considers the synergy between technological and behavioral issues as necessary for survival in „wicked environments”.

Knowledge management involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organizational objectives. 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.

Knowledge management is not only about managing these knowledge assets but managing the processes that act upon the assets. These processes include developing knowledge; preserving knowledge; and sharing knowledge.

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<sup>5</sup> G. Hamel, *Competition for competence and interpartner learning within international strategic alliances*, "Strategic Management Journal", No. 12, 1991, p. 83-102.

<sup>6</sup> E. Civi, *Knowledge management as a competitive asset: a review*, „Marketing Intelligence and Planning", Vol. 18, No. 4, 2000, p.166.

<sup>7</sup> T. H. Davenport, L. Prusak, *Working Knowledge: How Organizations Manage What They Know*, "Harvard Business School Press", Boston, MA, 1998, p.35-90.

A company's knowledge management strategy should reflect its competitive strategy: how it creates value for customers, how that value supports an economic model, and how the company's people deliver on the value and the economics. Also, competitive strategy must drive knowledge management strategy. Executives must be able to articulate why customers buy a company's product or services rather than those of its competitors<sup>8</sup>.

Badaracco claims that the increased importance of knowledge in the business society may partly be a consequence of the emerging dense web of cooperative relationships, because such relationships speed up the global migration of transfer of knowledge<sup>9</sup>.

As employers are recognising the power of knowledge and expertise of their people, they are now confronted with the need to successfully manage the knowledge. However the transfer of knowledge and expertise is only one of many activities and tasks involved in effective knowledge management, which requires the interplay of various areas of an organisation. Whilst the importance of transferring people is especially important for the cross-border transfer of knowledge and expertise, information technology and advanced communication systems serve as the necessary environment<sup>10</sup>.

#### 4. KNOWLEDGE MANAGEMENT CULTURE

As people are at the heart of knowledge management, the success of knowledge management very much depends on a company's ability to effectively manage its employees. In this sense, knowledge management requires profound changes in compensation, training, education and especially culture. A culture needs to be created that values employees as the most important asset of an organisation. No knowledge management system can work without an organisation undergoing a significant cultural change<sup>11</sup>.

Greengard identified cultural barriers organisations are usually confronted with when adopting a knowledge management initiative. First, people do not like to share their best ideas, second, people do not like to use other people's ideas, and third, people like to consider themselves experts and prefer not to collaborate with others<sup>12</sup>.

In order to facilitate the flow of information throughout the organisation and subsequently the development of knowledge and in this sense to help in the creation of a learning organisation, the tradition of knowledge hoarding needs to be abandoned.

Knowledge management programs are of little value unless tied directly to easily seen business benefits, as people have no motivation to share their knowledge. By creating a knowledge sharing environment, employers, through effective encouragement and rewards, let employees know that their knowledge and expertise is valued, and hence to communicate and share their knowledge and expertise. This is also seen as potentially a major source of power in organizations.

<sup>8</sup> E. Civi, *Knowledge management as a competitive asset: a review*, „Marketing Intelligence and Planning”, Vol. 18, No. 4, 2000, p.166.

<sup>9</sup> J.L. Badaracco, *The Knowledge Link: How Firms Compete Through Strategic Alliances*, “Harvard Business School Press”, Boston, MA, 1999, p. 109.

<sup>10</sup> S. Bender, A. Fish, *The transfer of knowledge and the retention of expertise*, “Journal of Knowledge Management”, Vol. 4 . No. 2 , 2000, p.135.

<sup>11</sup> S. Greengard, *How to make KM a reality*, “Workforce”, Vol. 77, No. 10, 1998, p. 90.

<sup>12</sup> S. Bender, A. Fish, *The transfer of knowledge and the retention of expertise*, “Journal of Knowledge Management”, Vol. 4 . No. 2 , 2000, p.134.

Other barrier to knowledge sharing is associated with not liking to take on other people's ideas for fear it makes the recipient appear less knowledgeable and thus dependent on others. This causes the "not-invented-here syndrome" which can be the result of fear to admit not knowing everything<sup>13</sup>. People may prefer to learn and obtain knowledge for themselves even though another person in the organisation already has the knowledge. His process may result in delays in work processes and innovation, unnecessary time-consuming and costly training and development.

As human resource management provides broad strategies to influence the cultural assumptions and beliefs of employees<sup>14</sup> it should play a central role in the move towards a knowledge management culture.

## 5. THE TRANSFER OF KNOWLEDGE

Today and increasingly in the future, in a knowledge age where national boundaries are of less importance to business, the transfer of knowledge and expertise, and the creation of a "learning" organisation has become a critical factor to company success and competitiveness. According to this implies the transfer of knowledge and expertise throughout the organization within departments, plants, countries and across national borders. As Garvin suggests, for learning to be more than a local affair, knowledge must be developed, retained and spread effectively throughout the organisation, on a national as well as global scale<sup>15</sup>.

Garvin further supports his process by defining the „learning organisation as an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights". In this sense, Lank argues that organisations need to adapt quickly to the changing environment and must commit to permanent learning<sup>16</sup>.

Gilbert and Cordey- Hayes also suggest that the process of knowledge transfer is not a static one, it is dynamic, as such knowledge management becomes part of the process of continuous learning<sup>17</sup>. This is further emphasised by Allee, who views the renewal of knowledge as the key to competitive advantage, which includes not only creating new knowledge but also letting go of old knowledge. New knowledge is created by people who share and transfer their knowledge and expertise throughout the organisation from individual to individual, individual to a team or group, team or group to individual, or team or group to team or group.

According to Davenport and Prusak, the transfer of knowledge then involves both the transmission of information to a recipient and absorption and transformation by that person or group. To be of value to the organisation, the transfer of knowledge should lead to changes in behavior, changes in practices and policies and the development of new

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<sup>13</sup> K. M. Wiig, *Knowledge Management Foundations Thinking about Thinking - How People and Organizations Create, Represent, and Use Knowledge*, Arlington, TX, 1993, p. 249.

<sup>14</sup> C. Marshall, L. Prusak, D. Shpilberg, *Financial risk and the need for superior knowledge management*, "California Management Review", Vol. 38, No. 3, 1996, p. 95-96.

<sup>15</sup> D. A. Garvin, *Building a learning organisation*, "Harvard Business Review", July-August 1993, p. 78-91.

<sup>16</sup> E. Lank, *Leveraging invisible assets: the human factor*, "Long Range Planning", Vol. 30, No. 3, 1997, p. 406-412.

<sup>17</sup> M. Gilbert, M. Cordey-Hayes, *Understanding the process of knowledge transfer to achieve successful technological innovation*, "Technovation", Vol. 16, No. 6, 1996, p. 301-312.

ideas, processes, practices and policies. This makes it imperative for organisations to secure the efficient use and application of the transferred knowledge<sup>18</sup>.

In many organisations though, knowledge and expertise is held locally, for example in a particularly skilled computer technician or a global brand manager. Multinational organisations have always transferred either technical or managerial knowledge and expertise across national borders. However, with the increasing globalisation of business activities, many organisations will attempt to move towards a more global model, in which the transfer is seen at least as a two-way process or even a multi-way process, whereby knowledge and ideas are shared and disseminated between the firm's subsidiaries worldwide<sup>19</sup>.

The successful transfer of knowledge and expertise then around a business requires not just the establishment of networks but also the transfer of people. People have to be moved. In order to get deep-seated, deep-rooted ideas and knowledge into circulation and to understand particular operations in specific locations.

Furthermore, knowledge about how to use special equipment, machinery and tools, or how to manufacture certain products may require hands-on-experience, training-on-the-job, teaching and direct supervision from trainers<sup>20</sup>.

Whilst information technology should be seen as a necessary tool to knowledge transfer, new computing and telecommunications technologies allow organisations to communicate quickly and effectively with subsidiaries and business partners around the globe. This assists in capturing, organising and transferring information on a worldwide scale<sup>21</sup>. Certainly the improvements in information technology make it easier to collect, store and distribute information and hence can be a good facilitator of data and information transmission.

The gained knowledge and experience can be significant to the success and the competitive advantage of a company, and the strategic use of this knowledge can create a truly "learning" organisation at the crossborder level. The expatriates' experiences can be valuable for strategic decisions concerning overseas location and in helping companies to understand better how to design and improve the management of future overseas assignments. Furthermore, the availability of diverse national experiences could itself be seen as a source of competitive advantage. According to Dowling international meetings in various locations have proven to be important for encouraging interaction and building up personal networks, and in this sense foster innovation, organisational learning and the transfer of knowledge. In this regard, establishing a corporate identity and teamwork seems important to leverage of the multinational organisation<sup>22</sup>.

<sup>18</sup> T. H. Davenport, L. Prusak, *Working Knowledge: How Organizations Manage What They Know*, "Harvard Business School Press", Boston, MA, 1998, p.101.

<sup>19</sup> K. Moore, J. Birkinshaw, *Managing knowledge in global service firms: centers of excellence*, "Academy of Management Executive", Vol. 12, No. 4, 1998, p. 81-92.

<sup>20</sup> S. Bender, A. Fish, *The transfer of knowledge and the retention of expertise*, "Journal of Knowledge Management", Vol. 4, No. 2, 2000, p.131.

<sup>21</sup> D. Neef, *Making the case for knowledge management: the bigger picture*, "Management Decision", Vol. 37, No. 1, 1999, p. 72-78.

<sup>22</sup> P. J. Dowling, D. E. Welch, R. S. Schuler, *International Human Resource Management: Managing People in a Multinational Context*, "South Western College Publishing", Cincinnati, OH, 1999, p. 170.

## 6. CONCLUSIONS

Competitive success is governed by an organisation's ability to develop new knowledge assets. While these exist in many forms, organisational learning is an integral feature of any learning organisation that exploits its knowledge resources to generate superior performance.

To this end, knowledge management has become a fundamental concept for those interested in the ever-changing events of the business world. Organizations must strategically assess their knowledge resources and capabilities, and need to establish their knowledge strategy to sustain competitive advantages.

Learning and knowledge management are two key aspects of judging a successful company. It is as important yardstick where this learning and knowledge reveal themselves. Lyles argues that learning has to be reflected in structural elements and outcomes, which means that learning is both actions, outcomes and changes in the state of the knowledge.

In knowledge companies, knowledge is more easily transferred and made accessible to workers throughout the organizations. When people have access to organizational knowledge, they can understand their environment and give it meaning. They can find new and better ways to perform, work together, break down barriers, share a vision, fill gaps of knowledge, increase productivity, satisfy customers and ultimately compete.

Knowledge is currently being touted as the basis of future competitiveness. In the information age knowledge, rather than physical assets or resources is the key to competitiveness. Entrepreneurs are no longer seen as the owners of capital, but rather as individuals who express their tacit knowledge by "knowing how to do things". With knowledge now being viewed as a significant asset, the creation and sharing of knowledge has become an important factor within and between firms.

## REFERENCES

- [1] Badaracco J. L., *The Knowledge Link: How Firms Compete Through Strategic Alliances*, "Harvard Business School Press", Boston, MA, 1999.
- [2] Bender S., Fish A., *The transfer of knowledge and the retention of expertise*, "Journal of Knowledge Management", Vol. 4 . No. 2, 2000.
- [3] Civi E., *Knowledge management as a competitive asset: a review*, „Marketing Intelligence and Planning", Vol. 18, No. 4, 2000.
- [4] Davenport T. H., Prusak L., *Working Knowledge: How Organizations Manage What They Know*, "Harvard Business School Press", Boston, MA, 1998.
- [5] Demarest M., *Understanding knowledge management*, "Long Range Planning", Vol. 30, No. 3, 1997.
- [6] Dowling P. J., Welch D. E., Schuler R. S., *International Human Resource Management: Managing People in a Multinational Context*, "South Western College Publishing", Cincinnati, OH, 1999.
- [7] Garvin D. A., *Building a learning organisation*, "Harvard Business Review", July-August 1993.
- [8] Gilbert M., Cordey-Hayes M., *Understanding the process of knowledge transfer to achieve successful technological innovation*, "Technovation", Vol. 16, No. 6, 1996.
- [9] Greengard S., *How to make KM a reality*, "Workforce", Vol. 77, No. 10, 1998.

- [10] Hamel G., *Competition for competence and interpartner learning within international strategic alliances*, "Strategic Management Journal", No. 12, 1991.
- [11] Lank E., *Leveraging invisible assets: the human factor*, "Long Range Planning", Vol. 30, No. 3, 1997.
- [12] Marshall C., Prusak L., Shpilberg D., *Financial risk and the need for superior knowledge management*, "California Management Review", Vol. 38, No. 3, 1996.
- [13] Moore K., Birkinshaw J., *Managing knowledge in global service firms: centers of excellence*, "Academy of Management Executive", Vol. 12, No. 4, 1998.
- [14] Neef D., *Making the case for knowledge management: the bigger picture*, "Management Decision", Vol. 37, No. 1, 1999.
- [15] Pemberton D., Stonehouse G. H., *Organisational learning and knowledge assets*, "The Learning Organization", Vol. 7, No. 4, 2000.
- [16] Stonehouse G. H., Pemberton J. D., *Learning and knowledge management in the intelligent organization*, "Participation and Empowerment: An International Journal", Vol. 7, No. 5, 1999.
- [17] Wiig K. M., *Knowledge Management Foundations Thinking about Thinking - How People and Organizations Create, Represent, and Use Knowledge*, Arlington, TX, 1993.

### WIEDZA – ŹRÓDŁO PRZEWAGI KONKURENCYJNEJ

Wiedza uważana jest za podstawę konkurencyjności. Przedsiębiorstwa powinny postrzegać wiedzę jako strategiczny i najbardziej wartościowy ze swoich zasobów. Chcąc budować i utrzymywać konkurencyjność, przedsiębiorstwa muszą skutecznie zarządzać kapitałem intelektualnym oraz zdolnościami.

Niniejsza praca przedstawia zagadnienie zarządzania wiedzą, przegląd definicji samej wiedzy jak również rodzaje wiedzy. W pracy zwrócono także uwagę na kwestię transferu wiedzy oraz tworzenia kultury zarządzania wiedzą.