

EVALUATING HUMAN CAPITAL IN A KNOWLEDGE – BASED APPROACH

Theoretical
article

Keywords

Human Capital
Intellectual Capital
Knowledge Assets

JEL Classification

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Abstract

The widespread enthusiasm for a knowledge-based approach to understanding the nature of a business and the possible basis for sustained competitive advantage have renewed interest in human capital evaluation or measurement. While many attempts have been made to develop methods for measuring intellectual capital, none have been widely adopted in the business world.

In the knowledge-based organizations, and generally, in the information society, human capital is recognized as the fundamental factor of overall progress, and experts agree that long-term investment in human capital has strong drive-propagation effects at the individual, organizational, national and global level.

In this paper, we consider that a knowledge-based approach can offer new possibilities and answers to illustrate the importance of evaluation the human capital and knowledge assets by consistently generating added value in the business world.

1. Knowledge and knowledge management

The purpose of knowledge management (KM) is to create a common space for individuals to interact for exchanging and creating knowledge (Alavi and Leidner, 2001). Individuals within organizational subunits can apply to knowledge to solve their problems at work in various contexts (Kankanhalli et al., 2005). More and more organizations have begun to introduce KM processes and invest heavily in technologies to support these KM processes for leveraging knowledge resource. However, most KM projects have failed. The high failure rate of KM projects may be largely ascribed to the fact that many organizations only focus on information technologies (IT) (Hsu et al. 2007).

If we are looking from a practical perspective, knowledge management requires certain organizing principles – a general framework – which will help us to classify different activities types and functions, which are needed to the work implying knowledge, both inside and outside of an organization. These general frameworks are to be found in form of theories and models for knowledge management. We can find in the specialized literature many models regarding knowledge management. From all these models we identified certain models that we think can be very well applied in almost any type of economical organization.

2. Knowledge Management models (Cristea and Capatana, 2009)

2.1. Von Krogh and Roos model

This model brings a clear distinction between individual knowledge and social knowledge, following an epistemological point of view regarding knowledge management. According to this model, the following aspects should be analyzed:

- Why and how the knowledge gets to the employees of a company
- Why and how the knowledge reaches the organization

- What does knowledge mean for the employee/organization?

- What are the barriers for organizational knowledge management?

The cognitive perspective states that a cognitive system, no matter if it's human or artificial, creates representations (models) of the reality, and the process of learning appears when this representations are somehow manipulated (used in different inferences).

A cognitive epistemology sees organizational knowledge as a system with self-organization characteristics, where information is coming from the exterior (we obtain information through senses and we are using it order to create mental models), (Von Krogh and Nonaka, 2000). In this perspective, the brain can be perceived as a machine based on logic, which doesn't permit opposite declarations. So, the organization gathers information from its environment, which is a logic process, and everything is based on the mobilization of individual cognitive resources. Von Krogh and Roos are following in their models the principles of knowledge - based approach. In their organizational model, the knowledge is to be found both in the mind of the people and in the connections between them.

Compared to the cognitive approach, which sees knowledge as an abstract entity, in this case it is impossible to have knowledge without a knower. This is very well fit on the concept of tacit knowledge, which is very difficult to abstract. Krogh and Roos examined the nature of knowledge management from the perspective of: employees, communication, organizational structure, links between members and management of human resources (Von Krogh and Ross, 1998).

2.2 „Nonaka - Takeuchi” model

This model was obtained after the research on the success of some Japanese corporations, about obtaining creativity and innovation. They discovered that this

success didn't come from a mechanical processing of some objective knowledge, but from extremely subjective elements (metaphors and symbols).

The two researchers mention that a key factor of Japanese companies comes from the approach to tacit knowledge. West cultures consider the knower and the element which is known as separate entities. In contrast, oriental culture believes in unity: mankind and nature, body and mind, own person and the others. In such an environment, knowledge is mainly found not at the individual but in groups, and it's easy to convert, shared and transferred.

2.3. "Choo" model

It is a very good model to manage knowledge based on elements used to create new senses for an optimized decision inference. Choo model centers on how informational elements are selected and introduced in company actions. This actions results from the concentration and absorption of information coming from the external environment in every cycle, illustrated in figure no 2.

Knowledge creation can be perceived as a transformation of personal experiences into knowledge through dialog and sharing. Elements of this model can be found in important theories like: game theory, economic behaviour and chaos theory. The capacity of human mind to formulate and solve complex problems it is quite small compared to the problem dimensions, of which solutions are necessary for a rational behaviour.

2.4 „Wiig" model

The base of this model is represented by the principle: „if we want to have useful and valuable knowledge", these must be organized. Knowledge should be differently organized, accordingly to the way it will be used. For example, in our own mental models we have the tendency de deposit our knowledge using semantic networks. This model addresses also the problem referring how relevant can be knowledge, coming

from the necessity to integrate both kinds of cultures, in order to obtain better instruments. Knowledge creation begins always at the individual level. Starting from this personal knowledge, mostly tacit, we will obtain organizational knowledge. The availability on every company level represents the essence of Nonaka model (figure no 1). Knowledge creation takes place as a continuum in all structures of the organization. According to Nonaka and Takeuchi model, there are four modes to convert knowledge, which represents „the engine" of the whole process to create knowledge (Nonaka and Takeuchi, 1995).

3. New challenges for Human Capital in a knowledge-based organization

In the knowledge-based organizations, and generally, in the information society, human capital is recognized as the fundamental factor of overall progress, and experts agree that long-term investment in human capital has strong drive-propagation effects at the individual, organizational, national and global level.

The human capital shows the quality side of human resources: knowledge, skills and abilities of employees in the organization. In M. Armstrong's view, human capital is a component of intellectual capital that is "the accumulation and flow of knowledge available to an organization" (Armstrong, 2003).

According to Armstrong's conception (Armstrong, 2003), intellectual capital has three components: *human capital* - knowledge, skills and abilities of employees in the organization; *social capital* - accumulation and knowledge flows arising from the networks of relationships inside and individuals (human capital) are those who generate, store and retain knowledge, such knowledge is enhanced by interactions between individuals (social capital), generating institutional knowledge that possess the organization (organizational

capital). Although knowledge and skills of employees are those that create value, however, organizational effectiveness depends on proper recovery of human knowledge. This knowledge must be developed, collected and traded to create organizational capital. Outside the organization; *organizational capital* (structural capital) - institutional knowledge held by an organization, stored in the database, manuals etc.

4. References

- [1] Armstrong, M, 2003, *Managementul resurselor umane-manual de practic*, Ed. Codecs, Bucuresti, p. 47
- [2] Alavi, M. and Leidner, D.E. (2001), "Review: knowledge management and knowledge management systems: conceptual foundations and research issues", *MIS Quarterly*, Vol. 25 No. 1, pp. 107-36.
- [3] Cristea, D., Capatana, A., Perspective son knowledge management models, The Annals of "Dunarea de Jos" University of Galati, *Economics and Applied Informatics. Years XV - no 2*, 2009 - ISSN 1584-0409
- [4] Hsu, M.H., Ju, T.L., Yen, C.H. and Chang, C.M. (2007), "Knowledge sharing behaviour in virtual communities: the relationship between trust, self-efficacy, and outcome expectations", *International Journal of Human-Computer Studies*, Vol. 65 No. 2, pp. 153-69
- [5] Kankanhalli, A., Tan, B.C.Y. and Wei, K.K. (2005), "Contributing knowledge to electronic knowledge repositories: an empirical investigation", *MIS Quarterly*, Vol. 29 No. 1, pp. 113-43.
- [6] Nonaka, I, Takeuchi, H., 1995, *The knowledge creating company: how Japanese companies create the dynamics of innovation*, Oxford University Press,
- [7] Von Krogh, Nonaka I., 2000, *Enabling knowledge creation: how to unlock the mystery of tacit knowledge and release the power of innovation*, Oxford University Press,
- [8] Von Krogh, Roos, J., 1998, *Knowing in firms: understanding, managing and measuring knowledge*, Sage Publications, London.

Appendices

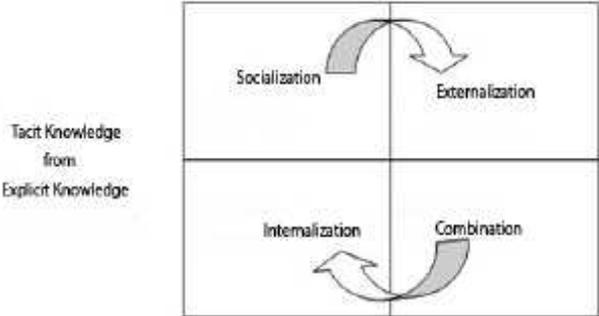


Figure No 1: Knowledge conversion

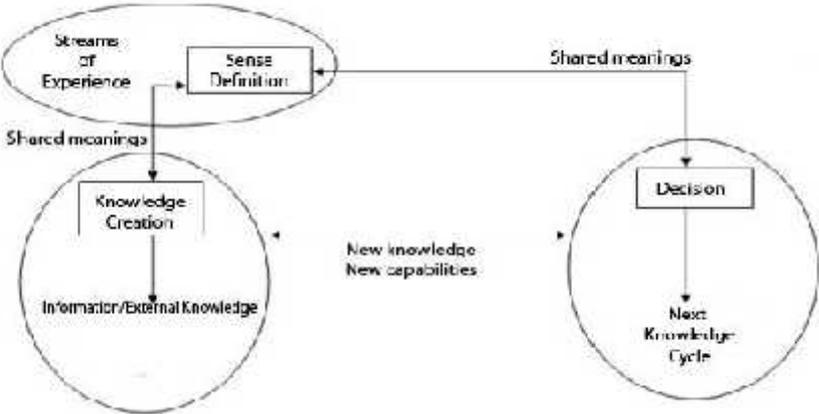


Figure No 2: „Choo” knowledge management model

Table No 1
 Wiig Matrix

Knowledge form	Knowledge type			
	Facts	Concepts	Warning	Methodological
Public	Measuring	Stability, Equilibrium	When stock value exceeds the request, the price drops	Searching for values in variables outside norms
Shared	Forecasts analysis	Heavy market	A small addition will not generate sell problems	The identification of some errors from the past
Personal	The value of the variable is the most suited	The company has very good references	The suspicion that an analyst made a mistake	What are the most recent tendencies