THE RELATIONSHIP BETWEEN KNOWLEDGE ASSETS AND ORGANIZATIONAL STRATEGY DEVELOPMENT

Rifat KAMASAK
Yeditepe Üniversitesi, Ticari Bilimler Fakültesi
26 Ağustos Yerleşimi, Kayışdağı Cad., 34755, Ataşehir, İstanbul.
E-mail: rkamasak@yeditepe.edu.tr

Murat YUCELEN
Yeditepe Üniversitesi, Ticari Bilimler Fakültesi
26 Ağustos Yerleşimi, Kayışdağı Cad., 34755, Ataşehir, İstanbul
E-mail: murat.yucelen@yeditepe.edu.tr

Abstract

Knowledge assets represent the fount of an organization's competences and capabilities that are deemed essential for its growth, competitive advantage and human development. The aim of this research is to define, within the context of Turkish firms in the both the manufacturing and services industries, what constitutes a knowledge asset, and to identify any perceived links and influence between knowledge assets and strategic management. To achieve this, a survey based on the questionnaire developed by Paul James (2005) was conducted. The research revealed important insights regarding the perception and mindset of Turkish managers. The most important knowledge assets were determined as experienced people, ability to learn, know-how, information technology, human skills, social relations and networks, on-line journals and databases, intellectual property rights, registered designs, web content, copyrights, organizational procedures. However, regression analysis found that only experienced people, learning ability, know-how, information technology and human skills as knowledge assets have significant relationship and effect on organizational strategy development.

Keywords: *Knowledge assets, knowledge management, organizational strategy development*

JEL Classification: M19

1. INTRODUCTION

Since the 1960's, just after Drucker used the terms "knowledge work" and "knowledge worker", there has been a growing interest in knowledge and its management which have been gaining momentum (Wiig, 1997). Although the interest was initially focused on information technology, more recently the nature of the issue has shifted to knowledge management which includes some other aspects of social sciences such as the human, sociology, communications, learning, business and strategy (Stephens, 2001).

Knowledge is a key resource in a rapidly changing global market where the development of innovative services, products and solutions is required to attract and retain customers and get ahead of the competition (Spender, 1996). For this reason, knowledge management as an emerging discipline is becoming increasingly important to organizations seeking to improve their efficiency and competitive abilities (Davenport and Prusak, 2000).

For knowledge to be managed more effectively and efficiently, its sub-components, namely "the knowledge assets" have to be clarified thoroughly. Although discussions about knowledge

management and intellectual capital often use the term "knowledge assets", the review of the literature on these topics has failed to find an agreed definition.

The aim of this research is to define, within the context of Turkish companies, what constitutes a knowledge asset and which are perceived as the most important, and to identify how knowledge assets influence the development and execution of organizational strategies.

2. KNOWLEDGE AND ITS MANAGEMENT

For the purposes of this research paper it is deemed to be useful to clarify what knowledge is. Smith, Collins, and Clark (2005) defined organizational knowledge as the validated understanding and beliefs in a firm about the relationship between the firm and its environment. Keskin (2005) defines knowledge as an organized combination of data, integrated with a set of rules, procedures, and operations that have developed through experience and practice. Walczak (2005) provided a similar concept to this definition, but considers an additional issue; high quality decision making.

Most writers distinguish between explicit and tacit knowledge (Nonaka, 1991; Polanyi, 1966). Nonaka (1991, 1994) defines explicit knowledge as the knowledge which has been codified and expressed in formal language. Whereas tacit knowledge is harder to express, represent and communicate, explicit knowledge can be easily gathered, stored, and disseminated. Tacit knowledge is intuitive, unarticulated and cannot be verbalized. This dimension of knowledge highly involves people because it is mostly developed by the people in the organization and stored in them (Li and Tsai, 2009). According to Nonaka, Toyama and Konno (2000), knowledge is created in social interactions amongst individuals and organizations, contingent upon a particular time and space, and it is related to human action.

Knowledge and the capability of creating and utilizing knowledge are considered to be the most important source of a firm's sustainable competitive advantage (Nonaka *et al*., 2000). Moreover, Nonaka *et al*. (2000) claimed that knowledge is created through the interaction and intersection between tacit and implicit knowledge. Nonaka *et al.* (2000) also distinguish knowledge assets as the inputs, outputs and moderating factors of the knowledge-creating process.

3. KNOWLEDGE ASSETS

Nonaka *et al.* (2000: 20) regard the knowledge assets as the basis of knowledge-creating process and define them as "firm-specific resources that are indispensable to create values for the firm". Nonaka *et al.* (2000) also developed a taxonomy of knowledge assets which comprised four types: experiential, conceptual, systemic, and routine knowledge assets:

Experiential knowledge assets - are the ones that are gained through mutual hands-on experience of the members of the organization, and between the members of the organization and its stakeholders. Skills, know-how, care, love, trust, facial expressions and gestures are among the examples of experiential knowledge assets.

Routine knowledge assets - are another type of tacit assets that have become routine and reflected in the actions and practices of the organization. Know-how, culture and the way of performing the day-to-day business are considered as routine assets.

Conceptual knowledge assets - are more explicit in nature and they are transmitted through images, symbols and language. They are based on the perceptions customers and members. Examples include brand equity, concepts, and designs.

Systemic knowledge assets - are another type of explicit knowledge which is systemized and arranged. They include clearly stated technologies, product specifications, manuals, and documentations.

3.1. Identifying and Managing Knowledge Assets

In order to make use of knowledge assets and to manage knowledge creation and exploitation effectively organizations must be able to identify and quantify these resources. Hence, a company has to map its stocks of knowledge assets while keeping in mind that they are dynamic, and new knowledge assets can be created from existing ones (Nonaka *et al*., 2000). The importance of knowledge assets depends on the goals, objectives and the strategy of the specific organization. A very important knowledge asset of one company may be useless for another one. Therefore, the knowledge assets should be analyzed at the basis the company's goals and objectives.

A useful framework is provided by Li and Tsai (2009) that has two features, the impact of knowledge assets on sustainable competitive advantage and their impact on appropriability. Appropriability is defined as quality of being imitable or reproducible. The skills, abilities or knowledge that is deeply embedded in a particular organizational culture and that cannot be extracted and re-established elsewhere have weak appropriability. To find out whether a knowledge asset has an impact on sustainable competitive advantage the following questions might help (Li and Tsai 2009: 290):

- *Is the knowledge asset valuable, rare?*
- *Can the knowledge asset be easily imitated and substituted by competitors?*

The writers have stated patents, formulas, manufacturing skills, styles of products, products/services expertise, organizational culture, technological capabilities, management systems, close and long-term relationships with strategic partners, reputation as assets having a strong effect on sustainable competitive advantage. Examples of knowledge assets that have greater impact are, "patents, unique manufacturing processes, crucial formulae, and employees' expertise, which can produce high added value, in-house-developed skills and facilities, primary processes, excellent manufacturing systems, closer relationships than competitors with pivot customers and suppliers" (Li and Tsai 2009: 290).

4. METHODOLOGY

The literature review indicated that there has been limited research into what constitutes a knowledge asset, and into what the complete life cycle of a knowledge asset may be. This is particularly true in the Turkish business context where there has been little research into Knowledge Management itself. Hence, the nature of the research is exploratory and theory-building.

4.1. Sample and Demographics

The study focused on a broad set of Turkish firms in both the manufacturing and the services industries. A total of 1000 firms, namely, the first 500 and the second 500 largest firms announced by Istanbul Chamber of Industry (ISO) annually have composed the sample frame of this research. Since strategic management is performed and executed by the firms' owners and senior managers, it was noticed to ensure that the participants were at the middle and top level managerial positions.

The survey was conducted on-line and a total of 213 responses were obtained from the managers of the largest 1000 firms, resulting in a response rate of 21.3 percent. A predominant 69 percent of the respondents were top level managers and the remaining 31 percent was mid-level managers (Table 1).

Table 1. Composition of the respondents based on the managerial positions

Position	Composition	Number	Percentage
Top level		147	%69
Mid-level		66	%31

While male respondents were at the majority with 73%, females comprised only 27% of the sample. 51% of the respondents were between 30-40 years of age, whereas, 42% were between 41-50 and 7% were above 51 years of age (Table 2).

Table 2. Composition of the respondents based on gender and age

Gender/Age	Composition	Number	Percentage
Male		155	%73
Female		58	%27
30-40		109	%51
41-50		89	%42
51+		15	%7

The sectors in which the majority of the respondents work are, finance and banking, food, drugs, automotive and automotive parts, textile, electronics, and construction as shown in Table 3.

Table 3. Composition of the respondents based on the industry

Industry	Composition	Number	Percentage
Finance and Banking		44	%20,6
Food		32	%15
Drugs		35	%16,4
Automotive		29	%13,6
Textile		27	%12,7
Electronics		18	%8,5
Construction		12	%5,7
Others		16	%7,5

4.2. Measurement Instruments

Survey method was used to collect data. A questionnaire developed by Paul James (2005) was conducted for data collection purposes and the questionnaire consisted of a total number of 37 items. The first 31 items were used to reveal "what the knowledge assets are" and "which knowledge assets were perceived as the most important" by the firms. The last 6 questions were aimed "to explore the knowledge asset influence on the development of an organization's strategy". The questionnaire asked the respondents to indicate the most important or the least important knowledge assets they perceive for the first 31 items and it also asked agreement or disagreement about the statements for the last 6 questions on a five point Likert scale.

4.3. Findings

In order to reveal the understanding of Turkish firms from the knowledge assets and to diagnose the most important knowledge assets, descriptive statistics were used. However, the relationship between knowledge assets and organizational strategy development was analyzed by regression method. Participants were presented with a list of potential knowledge assets developed from the literature search. They were asked to indicate the extent to which they agreed, in the context of their organization, that items from the list were knowledge assets and rank them from the most important to the least important ones. Based on the first 31 questions, participants described the most important knowledge assets as, experienced people, ability to learn, know-how, information technology, human skills, social relations and networks, on-line journals and databases, intellectual property rights, registered designs, web content, copyrights, organizational procedures. The predominant view was that knowledge assets were people, and that knowledge management was about people and not technology. The details are shown in Table 4.

Table 4. The most important knowledge assets described by the respondents

Knowledge assets	Frequency	$\bar{X}$
Experienced people	213	4.94
Ability to learn	213	4.83
Know-how	213	4.71
Information technology	202	4.70
Human skills	201	4.67
Social relations and networks	187	4.38
On-line journals and databases	173	4.22
Intellectual property rights	162	4.16
Registered designs	158	4.03
Web content	142	3.98
Copyrights	134	3.94
Organizational procedures	117	3.86

Three assets occurred in the top knowledge asset list of everyone; experienced people, ability to learn, and know-how. Among these assets, people's experience was deemed as the most important knowledge asset by the respondents. Of the Top 5 knowledge assets ranked by importance, three

are people (experienced people, ability to learn and human skills); and two, are know-how and IT are created by people. The influence of existing knowledge assets in developing organizational strategies was also investigated by regression analysis. Regression analysis found significant relationship between only experienced people, learning ability, know-how, information technology and human skills as knowledge assets, and organizational strategy development. The results can be seen in Table 5.

Table 5. Regression analysis results

Dependent Variables	Adjusted R^2	F	β	P values
Experienced people	0.67	987.12	0.82	0.001*
Learning ability	0.52	528.39	0.73	0.003*
Know-how	0.36	437.26	0.61	0.027*
Information technology	0.28	337.59	0.56	0.025*
Human skills	0.23	282.72	0.49	0.034*

**p<0.05 Predictors: (Constant), Organizational strategy development*

5. RESULTS AND DISCUSSION

The study revealed some noteworthy results. Firstly, when people described knowledge assets, human related knowledge assets were deemed as the most important ones rather than technical and IT related knowledge assets and organizational procedures and routines. Although Grant (1991: 122) emphasizes the importance of organizational procedures and routines as "routines are to the organization what skills are to the individual and to an organization its routines and procedures are its capabilities", procedures and routines ranked lower as important knowledge assets than people and their skills. This possibly indicates that the basis of participants' responses for this specific topic were personal and not organizational opinions. However, the findings mainly support the view of Peter Drucker about the position of people in knowledge creation:

> "In the knowledge society into which we are moving, individuals are central. Knowledge is not impersonal, like money. Knowledge does not reside in a book, a databank, a software program; they contain only information. Knowledge is always embedded in a person; carried by a person; created, augmented, or improved by a person; applied by a person; taught and passed on by a person; used or misused by a person. The shift to the knowledge society therefore puts the person in the center." (1993, p. 210)

This view simply emphasizes the uniqueness of human skills and abilities in creating knowledge. The study did not only highlight the importance of human related knowledge assets but it did also uncover that the description of knowledge assets was context dependant. According to James (2005: 127) "theory underpinning practice is only of tangible value when designing the practice. When the practice is actually executed, the underpinning theory is of little real value to the

executer". In this case, copyrights, patents and registered designs which relate to intellectual property are also context dependant. They do not apply to all organizations but they were described as knowledge assets by the respondents.

The research also revealed that knowledge and knowledge assets were strategic variables to organizations since a clear and significant relationship between some of the knowledge assets and organizational strategy development was found. The data indicated that especially, experienced people, learning ability, know-how, information technology, and human skills as knowledge assets have an influence on strategy development which means organizations need knowledge assets to execute their strategies, and to formulate and evaluate them. It can be noted that whilst human related knowledge assets were quiet important in creating knowledge, IT skills were for distribution of knowledge in organizations.

Consequently, strategic side of knowledge should not be ignored by organizations. Taking a knowledge (centric) view of an organization can also help in understanding: what the organization does; what its core competences are; and where value adding occurs. It should not be forgotten that many companies (e.g. Google, Apple, Virgin) have created knowledge by their human related skills, distributed knowledge with their IT technologies in order to increase their creativity, and produced know-how as a source of core competency. It is obvious that the balance between knowledge and resources will continue to shift towards the knowledge and perhaps knowledge will not only be the most important factor in creating competitive advantage for the organizations but also will be the unique asset in determining the standard of living for nations.

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