Segmentation of network competence elements in the sphere of public utilities service provider companies
– Work in Progress Paper –

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Abstract

In our research we analyze the characteristics of public utilities service providers on a market undergoing liberalization, with special attention to relationship marketing and the circle of competences that enable its successful application. Our analysis focuses on the exploration of the relationship between individual and organizational elements of network competences. Our model of analysis examines the layeredness of network competence elements and the cause-and-effect relationship existing between them.

Key words: relationship marketing, network competences, public utilities

Introduction

Relationship marketing, as a concept, can hardly be examined without the phenomenon described nowadays as network economy: the notion of business networks. The emergence of business networks is one of the organizational answers to the transformed economic challenges, which are the results of the development of the information society. This notion focuses on flexibility, quick organizational learning and tailor-made service of consumers. The business network, as an economic organization, is a set of cooperations, which are organic (i.e.: taking place more than once) and active (i.e.: the interactions in a cooperation are supplementary to each other and have a synergic connection). These relationships define the attitude of the players towards each other as well as third party players outside the network (Håkansson and Snehota 1995. in Dubois–Pedersen 2002.). Today, companies analyzing the sources of sustainable edge in the competition put more and more emphasis on having stronger relationships with customers, suppliers and other stakeholders as building and maintaining long-term and strong relations can have a crucial role ensuring a favorable position in the competition (Gruen 1997; Morgan–Hunt 1999).

Learning in networks

In the concept of network cooperations knowledge and learning appear as a crucial factor accelerating the innovation process (Bertola–Teixeira 2003). Instead of the narrow model where innovation is interpreted as only radical technological improvement. In this concept innovation includes changing products, services and production processes, the realization of new attitude in marketing, the usage of new channels of supply and distribution, the change in attitude and organization of management as well as acquiring new organizational skills and abilities. In this knowledge-creating process only providing access to information is not sufficient: to stay in the competition knowledge diffusion and accumulation is needed, which is maintained through interactive learning.

In order to realize learning organizations can choose between two basic models: (1) knowledge based on their own experiences and experiments, and (2) learning from other organizations and integration of other market players' knowledge into the organization. The analysis of network cooperations needs this latter approach: either the examination of transfer of knowledge embedded in products and processes or the assessment of other forms of knowledge diffusion that overarch organizational boundaries (Håkansson et al 1999).

Knowledge diffusion—from the approach of organizational learning—can be assessed by a two-fold dimension (Nonaka 1994):
- hidden knowledge transforms into explicit knowledge and then embedding again as hidden knowledge on the one hand;
- on the level of social interaction between individuals, during which individual knowledge transforms into organizational knowledge, while organizational knowledge transforms into individual knowledge on the other hand.

Berger and Luckman (Huysman 2000) define four phases of the process of organizational learning—integrating knowledge from outside the organization (fig. 1). The first phase is perception, during which knowledge outside the organization becomes knowledge of particular members of the organization. The second phase is externalizing, where individual knowledge is externalized, communicated towards other members of the organization. The next step is objectifying, where the externalized and communicated knowledge is objectified within the company: everyone approves it. The next phase is internalizing, when members of the organization learn the knowledge and accept it as their own.
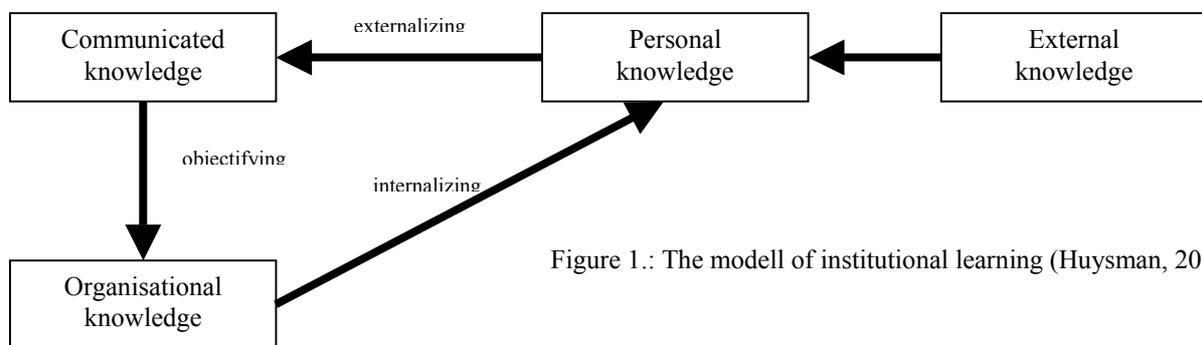
| Communicated knowledge | ←*externalizing*— | Personal knowledge | ←— | External knowledge |

objectifying

internalizing

| Organisational knowledge |

Figure 1.: The modell of institutional learning (Huysman, 2000)

Network cooperation between organizations has a significant role in this interactive learning process and its advantages can be categorized into two aspects: (Vatne–Taylor 2000): social aspect of cooperations; economic aspect of cooperations

The first aspect is related to the role of the informal (inter-organizational) institution in the learning process, which institution is formed as a result of the cooperation. The innovation process includes communication and information flow, which are usually realized through interaction between individuals. These interactions, however, differ from usual market transactions as they are carried out through continuous and interactive relations, which help coordination of cooperations and the exchange of qualitative information. The inter-organizational relations that are based on interactive relations result in an 'informal institution'. The players of this alignment develop and improve together the communication codes, behavior styles, confidence towards each other, the applied business practices and routines and the unwritten rules of business behavior, and at the same time accelerate the learning process.

The second aspect emphasizes the advantages of the necessary specialization developing during cooperations. The actors involved in the network cooperation specialize themselves by distributing tasks (leaving some areas to other, more qualified partners). Specialization makes it possible for particular organizations to develop competences that can be hardly copied by the competition on the one hand and, with the flexible combination of the knowledge resulting from specialization they can cost-effectively introduce and realize new products and production processes on the other hand.

In the learning process described above the role of business relationships is influenced by three important factors (Håkansson et al 1999; Skaates–Seppänen 2000; Ritter 2000):
- the characteristics of organizations in the cooperation, which can be seen in the heterogeneity of available resources and complementary range of competences;

-   the characteristics of cooperations, their technical content, their innovative nature and the 'age' of cooperations;
-   the effect of particular bilateral cooperations on each other.

In order to be able to determine and handle these factors the most important task of the management of an organization is to develop competences that can support the learning process to be realized in an inter-organizational context and the exploitation of network relations' innovation potential.

The concept of competence

Organizational competence is the grand total of individual and collective skills, professional knowledge and capacities, which show a very colorful picture in professional literature. (Awuah 2001; Conceição–Heitor 2002)

In the approach of strategic management the aim of organizational learning is to develop competences for the basis of the company's future operation. The key role of organizational competences—defined as core competence—was first determined by Hamel–Prahalad (1990; 1994) as a special knowledge made up of professional knowledge and technologies, with the help of which the organization can create values acknowledged by customers, can make itself different for the competition and can expand its activities to new products and markets. They emphasized that these competences are created as a combination of knowledge existing within a company, they are visible in individuals as members of the organization, their development needs investment and without using them they disappear. Drejer (1999) defines four basic elements of these competences:

-   technology, as the grand total of physical systems and tools;
-   human beings, which operate technology and carry the skills and the knowledge;
-   the organization, which includes formal organizational setup and the operated management systems;
-   organizational culture, which is the formal appearance of the organization.

During the analysis of the structure of competences approaching from a different point of view three levels of competences can be determined, which are built upon each other hierarchically (Banerjee 2003):

-   simple competences, which include the knowledge of the usage of existing resources (e.g.: existing human resources, or existing sales channels);
-   second order competences, which include the architecture of skills for re-combination of used simple resources (simple competences) integrated into the organization.
-   third layer competences, which are organization-specific rules, traditions and processes, which play a role in re-combination of the architectural knowledge of second order competences.
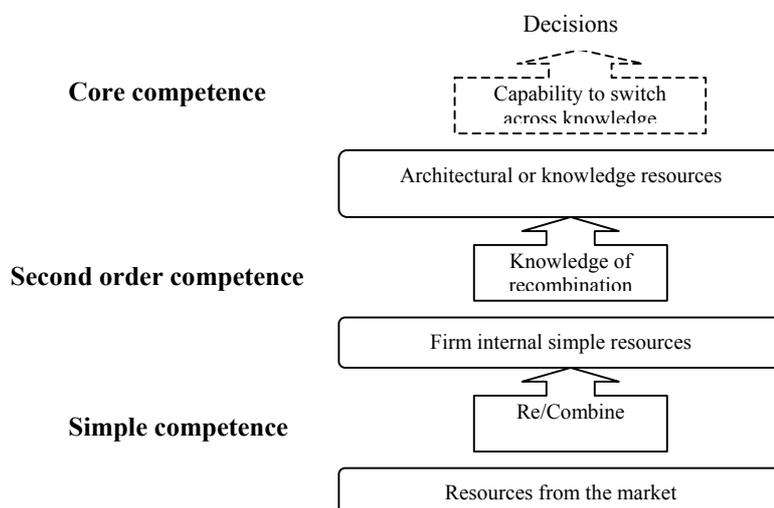

Figure 2: Structure of competences (Banerjee 2003)

This model regards these latter competences as core competences. The structured model shows that while simple competences can be definitely learned, the copying of higher-level competences is not possible due to their complexity. To learn from another organization requires the competences for handling inter-organizational relations, as an infrastructure background requirement capable of handling inter-organizational learning.

Network competence

"Competence may be regarded as a form of capital which dominates other factors in creating a rent for the firm" (Carlsson–Eliasson 1991 p.42). The economic or business competence of a firm is the "ability to generate and take advantage of business opportunities" (Carlsson–Eliasson, 1991 p.43). So competence means both having knowledge and using this knowledge!

Gemünden and Ritter (1997 p.297) defined from this point of view network competence "as the resources and activities of a focal company to generate, develop, and manage networks in order to take advantage of single relationships and the network as a whole".

A company has to manage not only its (single) relationships, but a portfolio of all relationships. Thus network competence is a pre-condition for efficient relationship management, because network competence deals with a wider frame. A company needs knowledge about networks to gain advantages of them. This knowledge should cover: potentials and risks; possible functions at the area innovation process; best practice in networking; political competence; and know-how about partners. In addition all these, the firm needs company-specific characteristic such as efficient and flexible internal ways of communication and financial support for network activities. So the knowledge, skills, and abilities of a company are the resources for the network management.

Network competence focuses on the management of the company, based on special resources. Gemünden and Ritter assume that the total degree of network competence is more than simply summarising the components. A network consists of nodes (customers, suppliers, competitors, universities, etc.) and connections between the nodes (relationships).

The bases for intensive networking are permanently looking for potential partners – and having the best partners possible in the right time – and searching for synergies. If relationships are established, the network is stable. Network competence can be seen as a factor for stability in technology-oriented networks. A high degree of network competence enables the actors to discuss alternative ways of integrating and monitoring external partners in order to implement the best way. The developed strategic aims for each single relationship can be communicated to and adopted by external partner. A high level of network competence can ensure terminating inefficient relationships as well as increasing the level of interaction with high-potential partners on the other hand. "Thus, a high degree of network competence leads to a balanced, well-organised, strategically suitable and long-term oriented network." (Gemünden et al, 1997. pp.300) And what more, a high degree of network competence enables companies to reach innovation targets in the best way possible with regard to the current situation.

To conclude, the proposition by Gemünden at al (p.300)*: "A company's network competence has a positive impact on a company's network configuration and on the effectiveness of the network in terms of innovation success."*

Network competences at public utilities services providers

We analyze the characteristics of public utilities service providers in our research on a market undergoing liberalization. Special attention is paid to relationship marketing and the circle of competences that enable its successful application.

In our opinion the analysis of public utilities services is a field which is hardly present in professional literature: the theoretical questions of marketing activities of communal service providers are only touched upon in professional literature, while single empirical research can only be found in very small numbers. The main reason for this may be that traditional approaches focused mainly on the characteristics of services and the resulting marketing activities. This way they tried to justify a general service-marketing concept, and at the same time they admitted that the services are very heterogeneous and generalization has its limits. The other possible reason is that public utilities service providers all around the world have been in a national or a regional monopolistic position for a very long time, this way they were not forced to apply a marketing-based approach. By today, the attitude of organizations working on a liberalized market has changed and marketing has appeared in a field with very special characteristics, the analysis of which raises very interesting questions. In the United States, for example, as a result of the liberalization of the energy market, public utilities service providers started to develop their own marketing strategies.

On the market that we have examined, due to national pricing and national monopoly of public utilities services consumers could receive the service cheaply on the one hand and they were exposed to the service providers on the other hand. By today the situation has changed: among the new circumstances the companies that are mainly still in partly monopolistic position have to face new challenges. Public utilities service providers have admitted that there is a competition on the market. This competition will be fiercer and when the total liberalization of this market will be carried out, the traditional range of tools will not be enough. Experiences show that similarly to other organizations the main aim of public utilities service providers is to develop consumer confidence and loyalty. Taking onto consideration the limited possibilities of public utilities service providers in the field of marketing activities the question is: what are the strategies that can still make their consumers satisfied and how can their loyalty be improved? According to representatives of relationship marketing those will have an edge in the competition for consumer loyalty, who are able to develop long-term relationship with their consumers and partners (Berry 1983; Gumesson 1994). Thus in the case of these organizations there is a special emphasis on building network relationships, a precondition to which is the existence of network competences.

Model and methodology

Our analysis focuses on the exploration of the relationship between individual and organizational elements of network competences (Ritter et al 2002) supposing the following:
(1) The elements of network competences—as individual and organizational competences—are not supplementary to each other, but rather they can be handled as hierarchically built upon each other; in the case where individual competences are missing organizational competence cannot develop or it can develop only in a limited way; multicolliearity can be identified between the elements of network competences.
(2) The success of particular organizational relationships can differ due to the hierarchy between particular elements of competence, which refers to the limits of exercisability of network competence.
In our model, in order to describe network competences, we applied the model of Ritter (1999), who defined the two main groups of network competences as network management

qualifications (as individual competences) and network management tasks (as organizational competences).

The description of network management qualifications are carried out with two dimensions in the model: specialist qualifications and social qualifications.

Special qualifications include the following:

- technical skills, which are necessary to understand the partners and fulfill their needs and requirements;
- economic skills, which are materialized in the skill of analyzing inputs available to the network and the profits that can be achieved;
- skills in legal matters, which contain the skills to record the established relationships in a contractual form;
- network knowledge, which means the knowledge of members and resources present in the network;
- experiential knowledge, which during the interaction with outside partners helps to avoid and prevent critical situations and to find the necessary solutions.

While special qualifications mainly describe the network management skills that the organization should possess, social qualifications focus on the skills of individuals taking part in the cooperation from the organization's part. Social qualifications include communication skills, the ability to handle conflicts, empathy, emotional balance and the ability for cooperation.

With regards to network management tasks the model defines two well-separated dimensions: relation specific tasks, which are mentioned in professional literature as tasks appearing within the contact of two players on the one hand, and cross-relational tasks, which describe the management tasks for the whole network system of relationships on the other hand.

The definition of relation specific tasks is carried out according to the following factors:

- initiating relation activities, which include the identification and persuasion of potential partners and creating the basis for starting the cooperation.
- exchange activities, which include the promotion of free flow of products, services, money, information, know-how and workforce between the two organizations.
- coordination activities, which help in the harmonization of activities of the two organizations.

The definition of cross-relational tasks is carried out according to the following factors:

- planning activities, which describe the desired future state of the network. From a network management point of view this includes internal, network and environment analysis.
- organizational activities, which signify the communication process within the company on the one hand. During this the allocation and selection of concepts directed towards the utilization of relationships and the realization of these concepts are carried out. These activities include the allocation of resources to specific company relationships as well as harmonizing management activities of particular partners on the other hand.
- staffing activities, which mainly mean ensuring human resources necessary for specific relationships and the responsibility of sustaining the relationships as well as preventing and handling conflicts within the organization.
- controlling activities, as network activities mean the control of network output, quality control of partners, control of human resources, including of course network management as well.

Our model of analysis examines the layeredness (hierarchy) of Ritter's network competence elements and the cause-and-effect relationship existing between them (Figure 3). According to this model network qualifications are needed for successful network management task execution, as a precondition to it. During the testing of the model we examined the network

management skills of the individuals managing organizational relationships and their connection to the success of network management tasks carried out by the organizations. This latter is an important element of our analysis as carrying out network management tasks and/or the activities directed to them do not mean its success and the availability of the whole network competence.

We carried out the testing of the model at four public utilities service providers, where we explored the cooperation areas of organizations involved with the help of structured interviews. The aim of this phase is to identify the professional fields and individuals directly managing the relationships of the companies. The exploration of the fields handling the cooperations is done according to the following aspects (Möller–Halinen 1999):

- fields of organizational handling of supplier relationships;
- fields of organizational handling of customer relationships;
- fields of organizational handling of relationships with the competition;
- fields of organizational handling of relationships with other players (government, NGO, higher education institutions, research institutes)

The hierarchy of network competences is examined from two aspects:

- the existence of network management skills, with the help of questionnaires to direct leaders of professional fields handling particular relationships;
- the success of execution of network management tasks in every given field of relationship related to the whole of the organization with the help of face-to-face surveys of executive leaders of the organizations.

During the analysis we examine the structure of statistic relationship with the help of correlation between changes of factors of individual competence and organization specific competences. The hierarchy between individual competences and organization specific competences is determined as a result of the tendential correlation of changes of given factors.
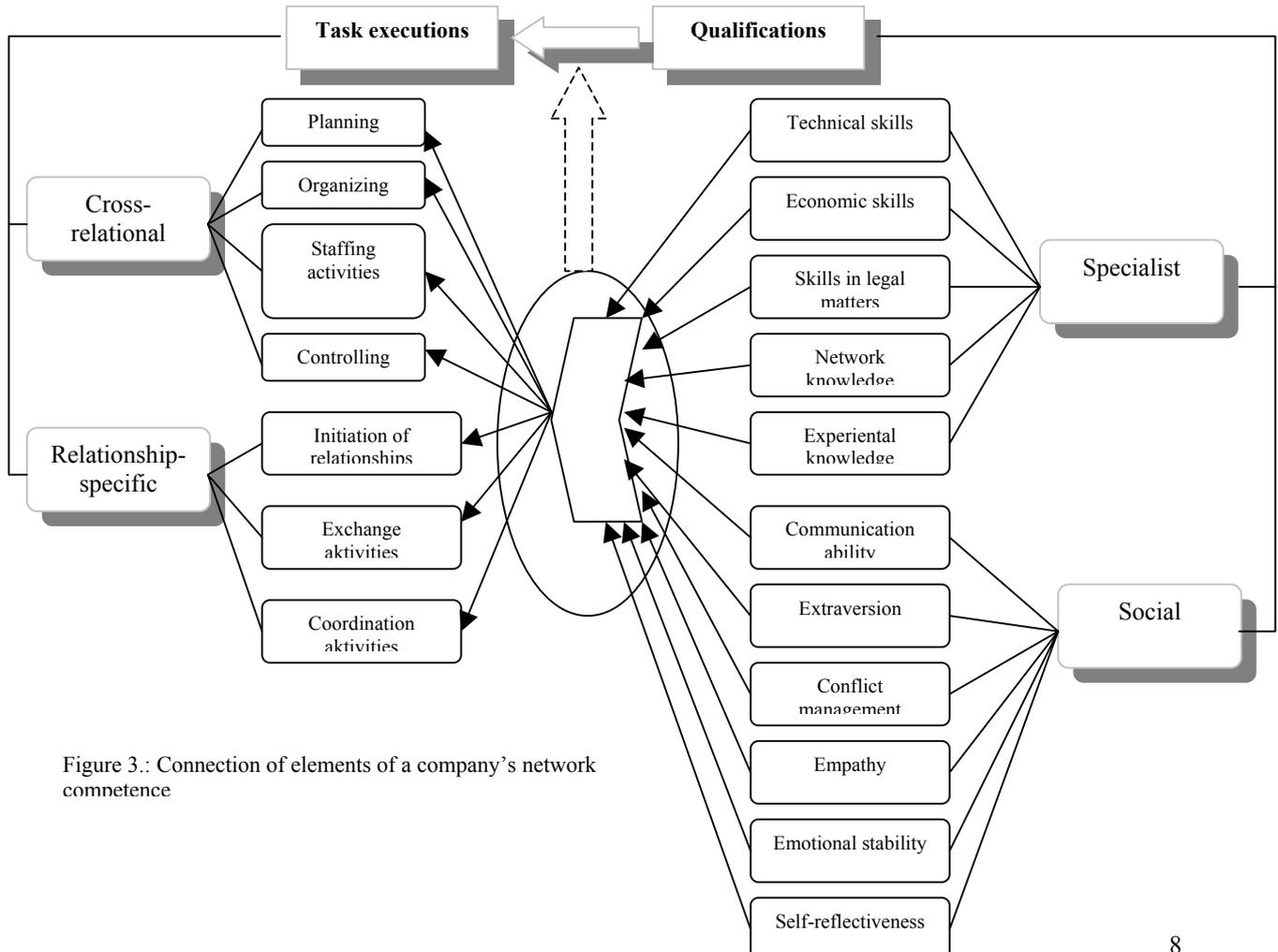

Figure 3.: Connection of elements of a company's network competence

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Expected output

If, as a result of the analysis, we can prove that there is a clear hierarchy in network competences then this will have two results:
- On the one hand we can identify the reason for potentially low level of network competences in terms of professional fields of relationship, which clearly shows the 'lagging behind' fields of relationships where development resources should be activated.
- On the other hand the mode of necessary developments will be clear, as while the exclusive development of network management skills needs concentrated on the job or off the job human resources development methods, execution of network management tasks needs the application of high level organizational development methods and techniques.

References

Awuah Gabriel Baffour (2001): "A firm's competence development through its network of exchange relationships", in *Journal of Business & Industrial Marketing*, Vol. 16. No. 7. p. 574 – 599.

Banerjee, P. (2003): "Resource dependence and core competence: insight from Indian software firms", in *Technovation* 23. p. 251 – 263.

Berry, Leonard L. (1983): *Relationship Marketing*, in Berry-Shostack-Upah Ed., *Emerging Perpectives on Services Marketing*, American Marketing Association, Chicago.

Bertola, P. – Teixeira J.C. (2003): "Design as a knowledge agent. How design as a knowledge process is embedded into organisation to foster innovation", in *Design Studies* 24 (2003) p. 181 – 194

Carlsson, B and Eliasson, G. (1991): „The nature and importance of economic competence" Working papers, Swedish Board for Technical Development.

Conceição, Pedro – Heitor, Manuel V. (2002): "Knowledge interaction towards inclusive learning: Promoting systems of innovation and competence building", in *Technological Forecasting & Social Change* 69. p. 641 – 651

Drejer, Anders – Riis, Jens Ove (1999): „Competence development and technology. How learning and technology can be meaningfully integrated", in *Technovation* 19 (1999), p. 631 – 644

Dubois, Anna – Pedersen, Ann-Charlott (2002): „Why relationships do not fit into purchasing portfolio models – a comparison between the portfolio and industrial network approaches", in *European Journal of Purchasing & Supply Management* 8 (2002) p. 35 –42.

Gemünden, Hans Georg – Ritter, Thomas. (1997): Managing Technological Networks: The Concept of Network Competence. In Gemünden-Ritter-Walter(1997): *Relationships and Networks in International Markets,* Pergamon, UK

Gemünden, Hans Georg. – Ritter, Thomas – Walter A (1997): Relationships and Networks in *International Markets*, Pergamon, UK

Gruen, Thomas W. (1997): "Relationship Marketing: "The Route to Marketing Efficiency and Effectiveness", in *Business Horizons* Vol. 40, n. 6, p.32-38.

Gummesson, E. (1994): „Making relationship marketing operational", in *International Journal of Service Industry Management*, Vol. 5, n. 5, p. 5-20.

Håkansson, Håkan – Havila, Virpi – Pedersen Ann – Charlott (1999): "Learning in Networks", in *Industrial Marketing Management* 28, p. 443-452

Huysman, Marleen (2000): „An organizational learning approach to the learning organization", in *Europea Journal of Work and Organizational Psychlolgy*; Psychology Press Ltd., Sussex

Morgan, Robert M. – Hunt, Shelby (1999): „Relationship-based competitive advantage: The role of relationship marketing in marketing strategy", in *Journal of Business Research* 46, pp. 281-290 (1999)

Möller, Kristian K. – Halinnen, A. (1999): „Business Relationships and Networks: Managerial Challange of Network Era", *Industrial Marketing Management* Vol 28. p. 413-427

Nonaka, I. (1994): "A Dynamic Theory of Organizational Knowledge Creation." *Organization Science* 5 (1): p. 11-37

Prahalad C. K. – Hamel, G. (1990): "The Core Competence of the Corporation", in *Harvard Business Review*, Vol. 68. No. 3. p. 79 – 91

Prahalad C. K. – Hamel, G. (1994): *Competing for the future*, Harvard Business Press, Boston, 1994.

Ritter, Thomas – Wilkinson, Ian F. – Johnston, Wesley J. (2002): "Measuring network competence: some international evidence", in *Journal of Business & Industrial Marketing*, Vol. 17. No 2/3. p. 119-138 .

Ritter, Thomas (1999): "The Networking Company, Antecedents for Coping with Relationships and Networks Effectively", in *Industrial Marketing Management* Vol. 28, No 5, p. 467 – 479.

Ritter, Thomas (2000): "A Framework for Analyzing Interconnectedness of Relationships", in *Industrial Marketing Management* 29., p. 317 – 326

Skaates, Maria Anne – Seppänen, Veikko (2002): "Managing relationship driven competence dynamics in professional service organisations", in *European Management Journal* Vol. 20, No 4. p. 430 – 437

Vatne E. –Taylor M. (2000): *The networked firm in a global world Small firms in new enviroments*, Ashgate Publishing Company