Knowledge Management Systems: A Comparison of Law Firms and Consulting Firms

Petter Gottschalk
Norwegian School of Management
petter.gottschalk@bi.no

Abstract

This paper reports results from a survey of Norwegian law firms on the use of information technology to support inter-organizational knowledge management. Two predictors of IT support were significant: firm cooperation and knowledge cooperation. Inter-organizational trust was not a significant predictor. Software and systems most frequently used include word processing, electronic mail and legal databases. It has been argued that law firms are old fashioned and not ready for extensive use of information technology. An impression is created that other professional service firms such as consulting firms are much more advanced. To evaluate the relative performance of law firms in the area of IT support for knowledge transfer an identical survey was conducted among a limited number of consulting firms in Norway. Survey results indicate that the average IT use in consulting firms was slightly higher than in law firms, but the most interesting differences were found in the different systems and software used rather than the level of IT use. Consulting firms are high-level users of general information sources on the Internet, while law firms are high-level users of structured information in databases.

Keywords: inter-organizational knowledge management, information technology use, survey research.

Introduction

Little empirical research has been conducted on information technology (IT) support for knowledge management. Most published research develops recommendations for successful knowledge management without empirical basis (e.g., Davenport et al., 1998; Fahey and Prusak, 1998). The study presented in this paper complements existing research by focusing explicitly on the use of IT to support knowledge management in law firms, while contributing to the body of empirical knowledge management research (e.g., Alavi and Leidner, 1999; Ruggles, 1998). This research makes a contribution to the emerging knowledge-based view of the firm applied to professional service firms. This paper explores some important and contemporary issues concerning knowledge management by viewing organizations as knowledge systems, and it reports results from a major survey of Norwegian law firms and a minor survey of Norwegian consulting firms on IT support for inter-organizational knowledge management. The research is concerned with potential predictors of IT support and potential differences between law firms and consulting firms. This research relates to informing clients as it is concerned with providing a client with information in a form, format, and schedule that maximizes its effectiveness (Cohen, 1999).

Research Aspects

Firm Cooperation

A law firm can be understood as a social community specializing in the speed and efficiency in the creation and transfer of legal knowledge (Nahapiet and Ghoshal, 1998). Edwards and Mahling (1997) categorized the types of knowledge involved in the practice of law as administrative data, declarative knowledge, procedural knowledge, and analytical knowledge. Administrative data includes all of the nuts and bolts information about firm operations, such as hourly billing rates for lawyers, client names and matters, staff payroll data, and client invoice data. Declarative knowledge is knowledge of the law, the legal principles contained in statutes, court opinions and other sources of primary legal authority; law students spend most of their law school careers acquiring this kind of knowledge. Procedural knowledge involves knowledge of the mechanics of complying with the law's requirements in a particular situation: what documents are necessary to transfer an asset from Company A to Company B, or what forms must be

filed where to create a new corporation. Declarative knowledge is sometimes labeled know-that and know-what, while procedural knowledge is labeled know-how (Nahapiet and Ghoshal, 1998). Finally, analytical knowledge pertains to the conclusions reached about the course of action a particular client should follow in a particular situation. Analytical knowledge results, in essence, from analyzing declarative knowledge (i.e. substantive law principles) as it applies to a particular fact setting.

Treating professional service firms such as law firms as KM setting seems to make sense (Lamb, 1999). IT used to support KM may well revolutionize law firms (Whitfield-Jones, 1999), as effective IT support for KM can serve as a competitive advantage and as a valuable professional aid to law firms.

Law firms increasingly enter into cooperative interorganizational relationships with other law firms (Wall Street Journal Europe, 1999). Some law firms are nodes in formal networks such as Eurojuris, Lex Norvegica, American Law Firm Association (ALFA), Proteus, and Multilaw, while others expand their informal firm cooperation.

The term network has become the vogue in describing contemporary organizational arrangements (Nohria, 1992). While it may be true, from a network perspective at least, that every market may be considered a network and that no business is an island, firms increasingly adopt a network organization. In this case, the notion of a network refers to an organizational form with distinct structural properties, regardless of whether it is considered to be an intermediary form between or beyond markets and hierarchies (Sydow and Windeler, 1998). According to Easton (1992), one approach to networks is to regard them as aggregations of relationships.

Knowledge Cooperation

A knowledge network can be defined as a group of persons and activities that cooperates and exchanges information. Seufert, Krogh and Bach (1999) use the term knowledge networking to signify a number of people, resources and relationships among them, who are assembled in order to accumulate and use knowledge primarily by means of knowledge creation and transfer processes, for the purpose of creating value. According to Palmer and Richards (1999), learning will in the future take place in knowledge networks rather than within organizations. This is supported by both Kraatz (1998), who found that networks can promote learning, and by Larsson, Bengtsson, Heriksson and Sparks (1998), who found different strategies of learning in knowledge networks.

One advantage of knowledge networks among law firms is that they share a common language (Nahapiet and Ghoshal, 1998). According to the Wall Street Journal Europe (1999), law firms look to join forces. Alliances between law firms are motivated by the increase in cross-border business, and networks help law firms go global. In Norway, the local, well established law firms feel threatened by international law firms which often are involved in both auditing and consulting and which seem to be advanced in their IT support for knowledge management (DN, 1999). Local law firms´ response is increased use of IT and search for membership in knowledge networks. It is believed that information-technology-enabled partnerships between law firms in their core business activity of legal advice will strengthen their competitive position.

Interorganizational Trust

According to the research literature, trust seems to be the most dominating facilitator of interorganizational knowledge exchange (Cummings and Bromiley, 1996; Grandori and Soda, 1995; Hansen, 1999; Nahapiet and Ghoshal, 1998; Wathne, Roos and Krogh, 1996; Aadne, Krogh and Roos, 1996). Trust may be defined as the confidence in the goodwill of others (Ring and Van de Ven, 1994).

Most cooperative interorganizational relationships among strangers emerge incrementally and begin with small, informal deals that initially require little reliance on trust because they involve little risk (Ring and Van de Ven, 1994).

Information Technology Use

A knowledge network may require the support of a technical infrastructure, a communications network and a set of information services, i.e. an information architecture. The information and communication system provides partners with the ability to directly communicate with each other (Monge, Fulk, Kalman, Flanagin, Prsnassa and Rumsey, 1998). Information systems have long been considered important vertical integration mechanisms within firms; more recently they have come to be seen as powerful horizontal integrators for managing interdependence between firms (Grandori and Soda, 1995). Grandori and Soda (1995) further claim that IT networks deserve a place among interorganizational coordination mechanisms. Their contention is based, firstly, on the spectacular cost reduction in communication the networks bring about, which thereby support many forms of wide-spread network use otherwise hardly feasible. Secondly, because IT networks may be employed as a stand-alone coordination mechanism - based on machines rather than on human or organizational means - in an interfirm relationship.

Research Model and Hypotheses

Based on the reviewed literature, the research model in figure 1 and three research hypotheses were developed. Firstly, law firms that cooperate more extensively with other law firms will use IT more extensively to share knowledge with other law firms. Firm cooperation can take on many forms, such as case-based in Norway, case-based internationally, and national and/or global networks. Recent developments in technology have considerably increased the opportunities for knowledge combination and exchange (Nahapiet and Ghoshal, 1998). Information and communication systems provide the ability of partners to directly communicate with each other (Monge et al., 1998). Secondly, knowledge networks between law firms will be supported by IT (Gandori and Soda, 1995; Monge et al., 1998). Thirdly, interorganizational trust influences the extent of interfirm knowledge cooperation. The willingness to provide different types of knowledge is partly determined by trust (Aadne et al., 1996; Wathne et al., 1996). Trust also influences the choice of contacts (Nahapiet and Ghoshal, 1998). Hence,

Hypothesis 1: The greater the extent of firm cooperation between law firms, the greater the extent of information technology use to support inter-organizational knowledge management.

Hypothesis 2: The greater the extent of knowledge cooperation between law firms, the greater the extent of information technology use to support inter-organizational knowledge management.

Hypothesis 3: The greater the extent of trust between law firms, the greater the extent of information technology use to support inter-organizational knowledge management.

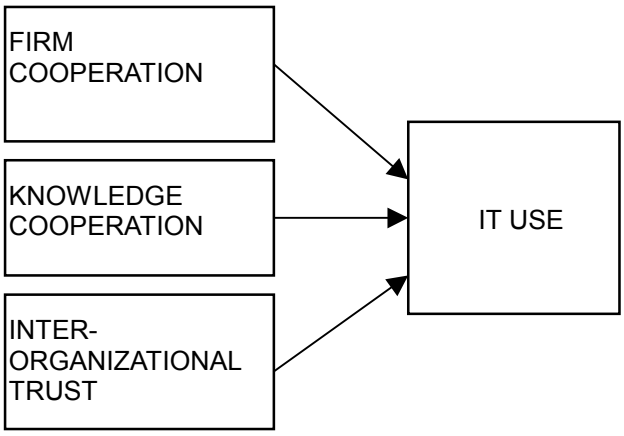

Figure 1: Research Model

Research Method

The sample was comprised of 247 law firms in Norway. The desired informants in this research were lawyers with special interest or responsibility for IT. Out of 247 questionnaires mailed, 90 were returned, providing a response rate of 37%. One lawyer responded per firm, and most of the responding lawyers were partners. On average, the responding law firms had ten lawyers, and the respondent had been in the firm for ten years.

Construct	Measurement of Construct	Alpha
IT Use	Six items on knowledge transfer, receipt and coding	.97
Firm Cooperation	Nine items on national, international, multinational and global networks	.87
Knowledge Cooperation	Four items on administrative, declarative, procedural and analytical knowledge	.93
Inter-organizational Trust	Nine items including predictability, reliability and commitment	.81

Table 1: Reliability of Constructs

Four multiple item scales were used to measure the constructs: one for the dependent variable and three for independent variables as listed in Table 1. They all have acceptable reliability. Table 2 contains descriptive statistics and correlations between study variables. Conservative tolerance values for collinearity and multicollinearity were not exceeded, and the highest VIF value in the sample was 1.24.

Variable	Mean	s.d.	IT Use	Firm Co.	Kno-led.	Trust
IT Use	2.39	1.52	(.97)			
Firm Cooperation	1.82	.94	.70**	(.87)		
Knowledge Coop.	2.42	1.30	.71**	.39**	(.93)	
Inter-org. Trust	3.79	.64	.16	.18	.27*	(.81)

Note: The statistical significance of the correlations is ** for p<.01 and * for p<.05; N=79.

Table 2: Descriptive Statistics and Correlations

Principal component analysis was applied to extract three factors from the twenty-two independent items. Twenty items loaded on the pre-specified factors, and no items loaded significantly on any other factors. However, due to the limited sample, the results of the principal component analysis have limitations.

Research Results

The hypothesis testing was carried out using multiple regression. Table 3 lists the results of multiple regression analysis between the three independent variables and the dependent variable. The full multiple regression between three independent variables explained 68 % of the variation in use of IT to support KM, that is, the adjusted R-square was 0.68. With an F-value of 48, the multiple regression equation was significant. Two predictors of IT use, firm cooperation and knowledge cooperation, were significant.

Predictors	Beta	t-test
Firm Cooperation	.496	6.594**
Knowledge Cooperation	.525	6.859**
Inter-organizational Trust	-.054	-.747

Note: The statistical significance of the t-tests is ** for p<.01 and * for p<.05; N=79.

Table 3: Regression between Use of IT and Predictors

The extent of law firm cooperation had a significant impact on IT use to support inter-organizational knowledge management. Law firm cooperation may take place at the national, international, multinational and global levels. The extent of knowledge cooperation had the strongest significant impact on IT use to support inter-organizational knowledge management. Knowledge cooperation is concerned with the sharing of administrative knowledge, declarative knowledge, procedural knowledge and analytical knowledge. Finally, the extent of inter-organizational trust did not have any significant impact on IT use to support inter-organizational knowledge management. It is interesting to note that the average level of trust between law firms is relatively high (3.79) with a relatively low standard deviation (.64).

It seems that inter-organizational knowledge management is at an early stage in Norwegian law firms as indicated by the low mean scores in table 2. To the extent inter-organizational knowledge management takes place among law firms, information technology is used to a limited extent, achieving an average score of 2,39 on a scale from 1 (low) to 6 (high). Although inter-organizational trust was not a significant predictor, it is interesting to note that the average trust is relatively high.

This study seems to support the discussion by Ring and Van de Ven (1994) concerning inter-organizational relationships. They argue that most cooperative inter-organizational relationships among strangers emerge incrementally and begin with small, informal deals that initially require little reliance on trust because they involve little risk.

Very few Norwegian law firms seem to be involved in knowledge networks as defined by Sydow and Windeler (1998), who argue that the notion of a network refers to an organizational form with distinct structural properties. Only a few law firms are nodes in networks such as Eurojuris, Lex Norvegica, American Law Firm Association (ALFA), Proteus, and Multilaw. The largest number of respondents indicating one network, were Eurojuris firms.

Information was collected on software and systems used to support inter-organizational knowledge management in law firms. As seen in table 4, the firms' responses indicate that word processing was the dominant software, followed by electronic mail and external legal databases. A separate column reflects reports from those law firms that scored more than three on the IT support scale. IT-intensive law firms were identified to investigate changes in technology use as law firms mature regarding their IT applications. When the two columns in table 4 are compared, IT-intensive law firms seem to have a relatively more extensive use of electronic mail and internal databases.

Four types of information-technology-enabled inter-organizational partnerships have been identified in the research literature: transaction processing, inventory movement, process linkage, and knowledge linkage (Alavi et al., 1997). When classifying the different software products and systems in table 4, both transaction processing and inventory movement seem irrelevant for law firms. Process linkage (P) and knowledge linkage (K) seem relevant. In table 4, high usage software and systems may be classified as both P (ranks 1, 4, 5 and 7) and K (ranks 2, 3, 6 and 8). Process and knowledge classification were introduced here to investigate maturity, as Alavi et al. (1997) claim that K is the most advanced form of partnership. Table 4 illustrates that IT provides limited support for the advanced form.

Software and systems used by law firms	IT P/K	All law firms	IT-intensive law firms
Word processing (e.g., Word)	P	5.0	5.5
Electronic mail (e.g., Outlook)	K	3.8	5.8
External legal data bases (e.g., law base)	K	3.4	4.3
Spreadsheets (e.g., Excel)	P	3.0	4.2
Internal data bases (e.g., standards)	P	3.0	4.5
Other external data bases (e.g., property)	K	2.2	3.0
Accounting systems (e.g., IFS)	P	2.0	2.5
Presentations (e.g., Powerpoint)	K	2.0	3.0
Others things on internet	K	2.0	3.0
Other firms' web pages on internet	K	2.0	3.1
Other office products (e.g., Access)	P	1.9	2.3
Groupware (e.g., Lotus Notes)	K	1.9	3.8
Law firm's own web-pages on internet	K	1.9	3.7
Law firm's own extranet	K	1.7	1.8
Library system (e.g., Bibjure)	K	1.6	1.9
Law firm's own intranet	K	1.5	2.5
Document systems (e.g., Jasper)	P	1.4	1.5
Expert systems (e.g., artificial intelligence)	K	1.3	1.7
Other law firms' web-pages on extranet	K	1.3	1.7

Table 4: Software and Systems used in Law Firms

The strong relationship found between firm and knowledge cooperation on the one hand, and use of IT on the other, provides strong support for Grandori and Soda's (1995) suggestion that information systems can be powerful horizontal integrators for managing interdependence between firms. They claim that IT networks deserve a place among inter-organizational coordination mechanisms, firstly because of the spectacular cost reduction they bring about, and secondly, because IT networks may be employed as a stand-alone coordination mechanism.

Aadne et al. (1996) found that the willingness to provide different types of knowledge and information to other firms is often determined by inter-organizational trust. A separate, simple regression between inter-organizational trust and knowledge cooperation did not, however, confirm their finding. This is surprising, since trust seems to be the most frequently mentioned facilitator of inter-organizational knowledge exchange in the research literature (Cummings and Bromley, 1996; Grandori and Soda, 1995; Nahapiet and Ghoshal, 1998).

The software and systems items in table 4 represent the extent to which each of them are used for inter-organizational knowledge management. Treated as statistical items, they all load on one factor with a reliability of 0.85. This measurement scale represents an alternative dependent variable. To predict the extent of software and systems use, the same three independent variables were used. The regression equation was significant, explaining 16% of the variation in software and systems use. This time, only knowledge cooperation was a significant predictor. Compared with the previous regression, this supplementary regression confirms the dependence of IT use on knowledge cooperation, rather than firm cooperation or inter-organizational trust.

One problem with the analysis presented in this paper is that it makes causal claims based on cross-sectional data. This paper argues that firm cooperation and knowledge cooperation cause IT support, but it could also be the case that IT support reinforces firm cooperation and knowledge cooperation. It could be argued that the variables form a complex in which each facilitates the action of the others. Although this may be the case, a field study of the largest law firm in Norway (Gottschalk, 1999) supports the direction of causality applied in this study.

The low correlation between trust and the other variables may seem to result from lack of variation in trust, rather than indicating no relationship. As listed in Table 2, standard deviation for inter-organizational trust is much lower than for the other variables. It could be argued that a different sample with more variation would lead to a discernible relationship.

Comparison with Consulting Firms

It has been argued that law firms are old fashioned and not ready for extensive use of information technology (Whitfield-Jones, 1999). An impression is created that other professional service firms such as consulting firms are much more advanced (Halvorsen and Nguyen, 1999). To evaluate the relative performance of law firms in the area of IT application, an identical survey was conducted among a limited number of consulting firms in Norway. Twenty questionnaires were

mailed to consulting firms in Oslo, nine were returned, representing a response rate of 45%. Table 5 compares descriptive statistics of consulting firms with law firms in the inter-organizational survey.

Variable	Consulting firms	Law Firms	t-statistic for difference
IT Use (dependent)	3.0	2.2	1.552
Firm cooperation (independent)	2.0	1.8	.923
Knowledge Cooperation (independent)	2.4	2.3	.206
Inter-Organizational Trust (independent)	3.6	4.8	6.998***

Note: * if p<.10, ** if p<.05, *** if p<.01

Table 5: Descriptive Comparison of Consulting and Law Firms

It is interesting to note that the average IT use in consulting firms was higher than in law firms, but this difference is not statistically significant. The only significant difference between the two kinds of professional service firms was concerned with inter-organizational trust. Consulting firms do not share the same level of inter-firm trust as law firms.

To predict IT support for knowledge management, multiple regression was applied. The multiple regression equation was significant, explaining 63% of the variation in IT use. Out of the three potential predictors, only the extent of firm cooperation was significant. Hence, IT support for inter-organizational knowledge management increased in consulting firms when firm cooperation increased.

Information was collected on software and systems used to support inter-organizational knowledge management in law firms and consulting firms. As seen in table 6, the firms' responses indicate that word processing was the dominant software, followed by electronic mail and external legal databases in law firms. A separate column reflects reports from consulting firms. When the two columns are compared, consulting firms seem to have a relatively more extensive use of electronic mail, internal data bases, other firms' web pages, presentations and groupware.

Software and systems used by law firms and consulting firms	Law Firms	Consulting Firms
Word processing (e.g., Word)	4.9	5.3
Electronic mail (e.g., Outlook)	3.5	5.8
External data bases (e.g., law base)	3.3	1.7
Spreadsheets (e.g., Excel)	2.9	5.1
Internal data bases (e.g., standards)	2.7	1.5
Other external data bases (e.g., property)	2.1	1.3
Accounting systems (e.g., IFS)	2.1	1.2
Other firms' web pages on internet	2.0	3.7
Other office products (e.g., Access)	1.9	2.4
Presentations (e.g., Powerpoint)	1.9	5.0
Others things on internet	1.8	4.0
Groupware (e.g., Lotus Notes)	1.7	2.3
The firm's own web-pages on internet	1.7	4.2
The firm's own extranet	1.7	2.0
Library system (e.g., Bibjure)	1.6	1.8
The firm's own intranet	1.4	3.2
Document systems (e.g., Jasper)	1.4	1.8
Expert systems (e.g., artificial intelligence)	1.3	1.0
Other firms' web-pages on extranet	1.3	1.8

Table 6: IT support for Knowledge Management

Electronic mail and word processing are used to a greater extent in consulting firms, while databases are used to a much greater extent in law firms. Consulting firms do more frequent search of other firms web pages, and they make presentations using software like PowerPoint much more frequently. Overall, consulting firms are frequent users of the Internet, while law firms are frequent users of databases. One explanation for this difference is the precision in knowledge requirements, where law firms seem to have a higher level of precision, thereby requiring access to predefined information in structured data repositories such as databases.

The results for consulting firms are based on a very weak sample size, and provide only descriptive statistics. Future

research should be based on a much larger sample size. Future research should also be concerned with issues that can influence conclusions: (1) Survey participants were either interested in or responsible for technology at subject firms. Does this create an inherent bias? How might their opinions/perceptions differ from non-technical employees? From a knowledge standpoint, are these people best able to answer important questions about what is driving knowledge sharing among their organizations? (2) How relevant are comparative observations between law firms and consulting firms? They are both categorized in the research literature as professional service firms, but how do they differ?

The conclusion that law firms seem to have a higher level of precision for knowledge management requirements versus consulting firms may not be warranted. There are different conclusions that can be drawn from the fact that consulting firms are higher Internet users while law firms are higher database users.

Conclusion

The inter-organizational study documents that the extent of law firm cooperation and the extent of knowledge cooperation had a significant impact on the use of IT to support inter-organizational KM. The extent of inter-organizational trust did not have any significant impact.

The consulting firm study indicates that law firms are not lagging behind other professional service firms in their use of IT to support inter-organizational knowledge management. However, the very limited sample can only be considered part of a case study.

This research has made a contribution to the knowledge-based view of the firm applied to professional service firms. It is suggested that future research focus on two in-depth perspectives of the current research. First, work processes in which firms cooperate, should be investigated. Second, the role of specific technologies in inter-organizational KM should be investigated. In addition, future research should attempt to improve instruments to measure constructs in this research.

References

Aadne, J. H., Krogh, G. & Roos, J. (1996). Representationism: the Traditional Approach to Cooperative Strategies. In: Krogh, G. and Roos, J. (eds.), *Managing knowledge - Perspectives on cooperation and competition*, SAGE Publications, UK: London.

Alavi, M. & Leidner, D.E. (1999). Knowledge Management Systems: Issues, Challenges, Benefits. *Communications of AIS*, 1 (7), 2-41.

Alavi, M; Yoo, Y. & Vogel. D.R. (1997). Using information technology to add value to management education. *Academy of Management Journal*, 40 (6), 1310-1333.

Cohen, E. (1999). Reconceptualizing Information Systems as a Field of the Transdiscipline Informing Science: From Ugly Duckling to Swan. Journal of Computing and Information Technology, 7 (3), 213-219.

Cummings, L.L. & Bromiley, P. (1996). The Organizational Trust Inventory (OTI) - Development and Validation. In: Kramer, R.M. and Tyler, T.R. (editors), *Trust in Organizations - Frontiers of theory and research*, SAGE Publications, USA: Sage Publications.

Davenport, T.H., Long, D.W.D. & Beers, M. C. (1998). Successful Knowledge Management Projects. *Sloan Management Review*, Winter, 43-57.

DN (1999). Kraftig vekst for revisoradvokater (Strong growth for auditing attorneys). *Dagens Næringsliv* (the Norwegian equivalent of Wall Street Journal), January 27, p. 6.

Easton, G. (1992). Industrial networks: A review. In: Axelsson, B. and Easton, G. (editors), *Industrial Networks - A New View of Reality*, Routledge, UK: London.

Edwards, D.L. & Mahling, D. E. (1997). Toward Knowledge Management Systems in the Legal Domain. *Proceedings of Group 97*, Published in May 1997 by the Association for Computing Machinery (ACM), USA: Phoenix Arizona, 158-166.

Fahey, L. & Prusak, L. (1998). The Eleven Deadliest Sins of Knowledge Management. *California Management Review*, 40 (3), 265-276.

Gottschalk, P. (1999). "Knowledge management in the professions: lessons learned from Norwegian law firms". *Journal of Knowledge Management*, 3 (3), 203-211.

Grandori, A. & Soda, G. (1995). Inter-firm Networks: Antecedents, Mechanisms and Forms. *Organization Studies*, 16 (2), 183-214.

Hansen, M. T. (1999). The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge accross Organizational Subunits. *Administrative Science Quarterly*, 44, 82-111.

Kraatz, M. S. (1998). Learning by association? Interorganizational networks and adaptation to environmental change. *Academy of Management Journal*, 41(6), 621-643.

Lamb, R. (1999). Using Intranets: Preliminary Results from a Sociotechnical Field Study. *Proceedings of the 32nd Hawaii International Conference on System Sciences*, USA: Maui, Hawaii, January 5-8, 1-10.

Larsson, R., Bengtsson, L., Henriksson, K. & Sparks, J. (1998). The Interorganizational Learning Dilemma: Collective Knowledge Development in Strategic Alliances. *Organizational Science*, 9 (3), 285-305.

Monge, P. R.; Fulk, J., Kalman, M. E., Flanagin, A. J., Prnassa, C. & Rumsey, S. (1998). Production of Collective Action in Alliance-

Based Interorganizational Communication and Information Systems. *Organization Science*, 9 (3), 411-433.

Nahapiet, J & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23 (2), 242-266.

Nohria, N. (1992). Is a Network Perspective a Useful Way of Studying Organizations? In: Nohria, N. and Eccles, R.G. (editors), *Networks and Organizations*, Harvard Business School Press, USA: Boston.

Palmer, J. & Richards, I. (1999). Get knetted: network behaviour in the new economy. *Journal of Knowledge Management*, 3 (3), 191-202.

Ring, P. S. & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, 19 (1), 90-118.

Ruggles, R. (1998). The State of the Notion: Knowledge Management in Practice. *California Management Review*, 40 (3), 80-89.

Seufert, A., Krogh, G. & Bach, A. (1999). Towards knowledge networking. *Journal of Knowledge Management*, 3 (3), 180-190.

Sydow, J. & Windeler, A. (1998). Organizing and Evaluating Interfirm Networks: A Structurationist Perspective on Network Processes and Effectiveness. *Organization Science*, 9 (3), 265-284.

Wall Street Journal Europe (1999). European Law Firms Look to Join Forces. *Wall Street Journal Europe*, July 6, 4.

Wathne, K., Roos, J. & Krogh, G. (1996). Towards a Theory of Knowledge Transfer in a Cooperative Context. In: Krogh, G and J Roos (editors), *Managing knowledge - Perspectives on cooperation and competition*, SAGE Publications, UK: London.

Whitfield-Jones, C. (1999). Business as usual or the end of life as we know it? *Managing Partner*, May, UK: London.