

TRUST IN KNOWLEDGE-BASED ORGANIZATIONS

Kirsimarja Blomqvist¹

ABSTRACT

Knowledge-based organizations base their competitiveness on knowledge and specific knowledge-related capabilities. The nature of knowledge is an important determinant enhancing understanding of firm behaviour and related organizing.

In knowledge-based view of the firm trust is implicit. In this paper the role and nature of trust in knowledge-based organization is explored. Knowledge-based view of the firm, nature of knowledge and its implications for organizing are discussed. Thereafter the relationship between knowledge work, motivation and trust is analyzed. Paper concludes with an analytical framework and synthesis of the role and nature of trust in knowledge-based organizations.

I. INTRODUCTION

Trust can be increasingly critical for knowledge-based organizations (Miles et al. 2000; Adler, 2001 and Blomqvist, 2002 & 2005). Basically trust has been seen as a threshold condition for any efficient communication and cooperation. It may also lower the transaction costs, but also increase transaction benefits (Blomqvist et al. 2002). At its simplest, trust can be seen as actor's willingness to accept vulnerability, and an antecedent for attitudes and behaviour enabling action in conditions of uncertainty and risk. It can be seen as a direct antecedent or a mediator for several outcomes, which are fundamental for knowledge-based organizations.

In global competition the sources of competitive advantage are rarely sustainable. According to knowledge-based view of the firm knowledge firm-specific routines and processes supporting efficient and effective knowledge creation and integration may accrue competitiveness (see also Teece et al, 1997). Could trust be a source of competitiveness for knowledge-based firms? Could it have the power to enhance and differentiate those understanding its nature and dynamics?

In contemporary organizations trust is simultaneously critical yet an intriguing and paradoxical issue. Knowledge work and interaction is characterized by complexity, uncertainty and risk. For people to be willing to share their knowledge, and to participate in implementation of other people's ideas, trust matters (Creed & Miles, 1996; Miles et al. 2000, Clegg et al. 2002). Yet based on extant literature the levels of trust in large corporations and institutions have been decreasing (Schoorman et al. 2007, Fukuyama, 1995 and Tyler, 2003).

¹ Kirsimarja Blomqvist, School of Business, Lappeenranta University of Technology P.O. BOX 20, 53851 LAPPEENRANTA, FINLAND, E-mail: kirsimarja.blomqvist@lut.fi

We need trust more than ever, yet it seems that we have less natural opportunities for interpersonal trust to evolve. Globalization, fast technological change and development of efficient information technology have opened new opportunities and acted as drivers for new forms of virtual organizing. Simultaneously our conception of time has changed (e.g. Lahno, 2002, Blomqvist, 2002 and 2005). Cooperation within and between organizations is increasingly organized in temporary groups and project-based mode among knowledge workers who may not have a shared past nor shadow of the future (Meyerson et al. 1996; Axelrod, 1984). Cooperation is seen more like a tentative option and source of flexibility, rather than permanent organising and long-term arrangements. In many cases there is not enough time for repeated interpersonal interaction on which the traditional, slowly evolving trust is based.

Researchers from various fields have taken an interest to trust and there is an ample body of interesting research available and ongoing. However much of the literature on trust does not cumulate and there is no agreement on the conceptualization or operationalization of the concept of trust (Blomqvist, 1997). There is also surprisingly little empirical or analytical research focusing on the relationship of trust and knowledge, or trust and innovation (with the few exceptions, see Clegg et al. 2000; Adler, 2000; Ellonen et al. 2006).

My research objective is to analyze the role and nature of trust in knowledge-based organization. Researchers in organization have taken an interest on the interplay of different levels of trust, yet there is not much research available (Möllering, 2006). In this paper the impersonal and interpersonal trust, as well as various trust-building processes are seen as complementary and essential for modern knowledge-based organization.

The paper is organized so that I first discuss the knowledge-based view of the firm, nature of knowledge and its implications for organizing. Second I analyze the relationship between knowledge work and trust. Third the role of trust in knowledge-based organizations is analyzed. The concept of trust and its interpersonal and impersonal antecedents in organization, as well as the different yet complementary trust-building processes and their impact on motivation are discussed. Paper concludes with an analytical framework and synthesis of the role and nature of trust in knowledge-based organizations.

II. KNOWLEDGE –BASED ORGANIZATION

The knowledge-based view (KBV) of the firm addresses the issues of the existence, the boundaries, and the internal organization of the multi-person firm. The starting point is that knowledge is critical for firm competitiveness, and the nature of knowledge is an important determinant enhancing understanding of firm organization and behaviour. (Foss, 1996; Grant, 1996; Foss, 2005)

According to KBV the locus of knowledge is not only in specialized functions and higher organizational levels, but knowledge is contextual, local and personalized, and thus related to all individuals working for the firm. Collective knowledge is the most secure and strategically significant kind of organizational knowledge (Conner and Prahalad 1996). Firm can thus be seen as a distributed knowledge system (Tsoukas, 1996) or a social community for voluntary action (Kogut and Zander 1992 & 1996).

The economics of knowledge production imply that if production requires the combination of many different types of specialized knowledge, which are subject to economies of scale and scope, then the efficiency in knowledge application depends upon the ability to integrate many different types of knowledge and, the ability to utilize knowledge to full capacity (Grant & Baden-Fuller, 2004).

Knowledge creation calls for knowledge integration across dispersed knowledge and diverse professionals in non-redundant networks. In knowledge-based competition the power of firms is seen to lie in their ability to efficiently develop and utilize tacit knowledge and create conditions under which multiple individuals can integrate their specialist knowledge (Grant 1996).

The basic premises of knowledge-based view i.e. tacit and collective nature of valuable knowledge, path-dependent and specialized knowledge as well as economics of scale and scope in knowledge production all imply the critical role of trust in knowledge-based organizations.

In knowledge-based view of the firm trust is implicit (Nonaka and Takeuchi 1995; Nonaka et al. 2000; von Krogh 2001 and Miles et al. 2000). Trust is mentioned as one of the elements in higher-order principles, yet its role and nature remains vague (Kogut & Zander 1992 and Foss 1996; 2005). It can also be seen as an element in concern and care (von Krogh 1998), BA (Nonaka & Toyama 1995; Miles et al. 2000, Nonaka et al. 2005) and a relational element in social capital supporting value creation from intellectual capital (Nahapiet & Ghoshal 1998). Trust is inherent in much of the research in knowledge-based view of the firm yet it has not been explicitly analyzed or modelled.

Managing knowledge

A change from vertical mode of control and command towards a horizontal model of flexible knowledge integration involves cognitive, social and emotional challenges (Ghoshal & Gratton, 2002). Instead of strong bonding to one's own group both employees and managers have to learn to understand the perspective of the others, appreciate complementarities and value the inter-dependency.

Economics of knowledge imply also strong collaboration. Inter-personal and inter-functional collaboration requires a strong sense of self and simultaneously respect for others. An ability to integrate the needed knowledge from internal and external sources calls for horizontal processes and adaptive forms of organizing, such as task forces and cross-border projects.

Without sufficient trust firm internal costs for transactions may actually increase, and firms could lose much of their potential strength (on transaction costs and benefits, see Blomqvist et al. 2002). Instead of being a social community of voluntary action the knowledge-based firm could turn into markets and sub-optimizing of competing units (Moran & Ghoshal 1996).

Traditional forms of control function poorly and may even work against knowledge creation. In paternalistic bureaucracies effective knowledge creation is suppressed to a culture of authority, deference and dependence (Adler & Heckscher 2006). For effective knowledge creation knowledge worker's identities cannot be subsumed or dependent to others. Space for individual initiatives and collective action is needed for a full use of the

potential knowledge and related competencies. Spender (1996) argues that in managing knowledge it is essential to provide the “context in which employees at every level become independent agents, take responsibility, experiment and make mistakes and learn as they strive for continuous improvement in every aspect of the firm’s total transformation process” (Spender 1996, 48).

Kogut & Zander (1992) and Foss (1996) discuss higher-order organizing principles that give employees such incentives that they will invest in accumulating useful social knowledge. According to Kogut and Zander (1992), and Foss (1996) the higher-order organizing principles are such as contractual agreements, cooperation, information exchange, commitment, shared language, values and trust. Osterloh et al. (2002) discuss the discussion extrinsic and intrinsic motivation and related knowledge exchange as well as organizing. By *extrinsic* motivation they mean indirect employees need satisfaction through e.g. monetary compensation. *Intrinsic* motivation supports employee needs’ immediate satisfaction through activity, self-defined goals as well as personal and social norms for their own sake.

Grundeis (2006) models the management uncertainty about employee performance and related choice of trust or control (see Figure 1). According to his model choice of trust as an organizing principle would make it possible to accept some degree of uncertainty and grant knowledge workers higher autonomy. Increased autonomy would support employee intrinsic motivation, which would enhance performance, supporting trust placed by the supervisor (Osterloh et al. 2002). Management choice of organizing principles is also tied to their basic assumptions about the world, and more specifically about the employees and their trustworthiness (Schein, 1992).

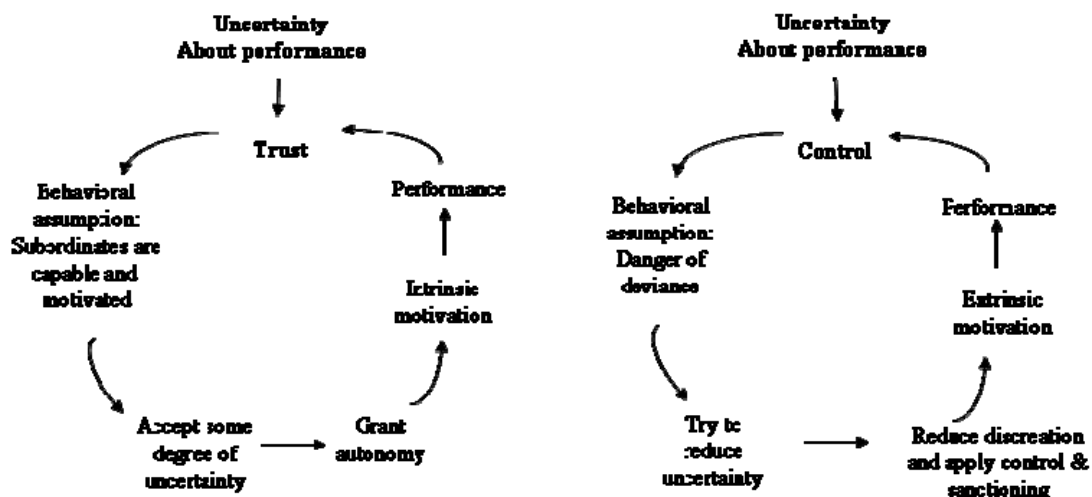


Figure 1. Trust and control as alternative logics for organizing (Grundeis, 2006)

An ability to build trust is critical for knowledge-based organizations, which rely on dispersed explicit and tacit knowledge (see e.g. Adler, 2001; Blomqvist 2002, 2005 etc, Miles et al., 2005). Trust even been seen as a key organizing principle, relatively more important and effective than price or markets making knowledge creation and innovation possible ((Bradach & Eccles, 1991; Creed & Miles, 1996; Adler, 2001; McEvily et al., 2003; Adler & Heckscher, 2006).

III. TRUST AND KNOWLEDGE WORK

At its simplest trust can be understood as the *actor's willingness to be vulnerable* (Mayer et al, 1998) or *actor's expectation of the other party's competence and goodwill* (Blomqvist, 1997). The relevant *competence* (substance knowledge, skills and know-how) is a necessary antecedent and base for trust in professional relationships, where the complementary knowledge and resources are among the key motives behind cooperation. Signs of *goodwill* (moral responsibility and positive intentions toward the other) are also necessary for the trusting party to be able to accept risk and a potentially vulnerable position.

Blomqvist (2002) has later added the component of self-reference and suggests that in knowledge-intensive context trust is composed of *capability, goodwill and self-reference* (earlier Luhmann, 1979). The word "reference" in the context of self-reference refers to an actor's ability to understand and use others as a reference. At firm-level strong self-reference is depicted in clear corporate values and strategy. Self-reference enables connection and cooperation with diverse and complementary actors. Instead of a word competence capability is used to emphasize the time dynamics in relevant competences.

Capability, self-reference and goodwill are evaluated and experienced through communication and behaviour. They are vital for the evolution of trust as they signal about the trustworthiness of the trustee.

In Alvesson's insightful book on knowledge-intensive firms knowledge work is characterized by highly qualified individuals using intellectual and symbolic skills, but also extensive communication for coordination and problem solving. It involves information and power asymmetry as well as idiosyncratic services and subjective quality assessment (Alvesson, 2004, 237).

Alvesson's characterization of knowledge work relates to every aspect of trust. Trust correlates with effective communication, commitment, problem solving and risk-taking. Inter-dependent tasks with information and time asymmetry, intangibility and complexity involve risks where trust may act as a threshold condition making it possible to take the risks involved. Trust is relevant in e.g. leadership, team work, R&D, selling services of high tech goods, consulting, IT and change management, outsourcing and alliances. Conditions for the meaningfulness of trust are risk, vulnerability, interdependency, power and information asymmetry as well as complexity. The higher the risk, the higher the need for trust is. Trust can be seen as embedded in all knowledge work.

Complex knowledge demands high quality interaction for knowledge integration. Their tasks are often complex demanding high responsiveness, high-quality interaction and understanding of the inter-dependency. An individual knowledge worker needs to be self-

confident and trust in her/his knowledge and insights as a member of the community to be able to communicate with others (Blomqvist, 2005).

Meaningful knowledge creation involves integration of knowledge from non-redundant networks (see also Alvesson 2005; Blomqvist 2005; Adler & Heckcher 2006). To be good in their profession knowledge workers need to think independently and be able discuss openly controversial and even conflicting insights. They have to be able to understand and respect very different professionals and groups without losing their sense of self and self-respect (Adler & Heckscher 2006). Meaningful knowledge is highly personalized. It is not neutral to issues of power and conflict, neither (Blackler, 1995). Therefore it can be risky and trust is needed. Knowledge is less about truth and reason and more about the practice of intervening knowledgeable and purposefully in the world (Spender 1996, 64). A strong self-reference and ability to relate with very different ideas and personalities is important for knowledge creation.

Trust is a predisposition for an individual to be able to work effectively for knowledge creation and integration. It is also a predisposition for his/her willingness to disclose tacit knowledge. Highly personalized knowledge can not be revealed without personalized interaction and certain kind of bareness. For an individual to transfer her understanding of the world, her perspectives, values, fears and wishes, highly open and trusting communication is demanded. Individual's tacit knowledge may not be possible for her/him to articulate without a specific time and space, where individuals connect at a higher level. An individual sharing her knowledge with others learns herself and understands more, and may be also able to articulate her ideas more clearly in the interaction and related dialogue (Spender, 2003).

An ability to connect at deep level with those different from oneself to be able to integrate asymmetric knowledge is already a valuable capability demanding also an ability to build fast and individual-based trust. It demands an ability to see the value in another's knowledge, i.e. calculative trust and absorptive capacity. If diverse experts with non-redundant knowledge are able to connect, there must be a frame breaking phase for sense making. In order to be able to create new and meaningful knowledge, also affect-based trust and emotions are involved. Collective knowledge creation demands highly personalized interaction, where interpersonal trust is not based on role-based categorization only, but at interpersonal affect, and joy of understanding and creating new meaningful knowledge together (Blomqvist, 2002 and 2005).

Thus trust in self and a strong self-reference makes it possible to connect with very diverse groups yet retain one's identity (Blomqvist 2002 & 2005). A self-referential individual understands also the limits of her/his knowledge and therefore appreciates the knowledge of others. S/he can connect at the equal level and does not retain the passive role of a paternalistic bureaucracy and vertical coordination (see e.g. Adler & Hecksher, 2006).

A person with strong self-reference creates also trust in others. An ability to communicate and create trust among others is also vital for a knowledge worker. Especially in the complex and multi-disciplinary environments the limits of individual's bounded rationality and absorptive capacity are always limited and "a leap of faith" is involved in knowledge interaction. There is always information asymmetry and interpersonal trust among diverse professionals is needed.

IV. TRUST IN KNOWLEDGE-BASED ORGANIZATIONS

For most employees trust is critical for their well-being and commitment. For the organization, trust is critical in making various types of transactions and related information processing viable. Organizational trust has been defined as the positive expectations individuals have about the intent and behaviors of multiple organizational members based on organizational roles, relationships, experiences and interdependencies (Shockley-Zalabak et al. 2000, 35).

Organizational trust has mainly been measured as interpersonal trust in colleagues (lateral) and trust in supervisors (vertical). Only partial measures for impersonal trust and no comprehensive measure has been available (Vanhala et al. 2008, forthcoming). Most researchers in organization science still today emphasize the interpersonal trust and e.g. Handy (1995, 46) claims that the role of interpersonal trust always remains, noting that “trust is and never can be an impersonal commodity”. Here it is argued that interpersonal and institutional (impersonal) levels of trust can be complementary and in close interplay with each other. Due to organizational and management challenges, organizations cannot rely on inter-personal trust only, but demand complementary mechanisms and impersonal, institutional type of trust to support the knowledge creation and transfer. Here organizational trust is seen to consist of both interpersonal and impersonal trust.

Interpersonal element of organizational trust

A general expectancy of trust or distrust (propensity or disposition to trust) can be an important behavioural determinant at individual level. Individuals’ propensity to trust as well as generalized and specific attitude towards the trustee has an impact on experienced trust (Rotter, 1972).

Interpersonal trust between an employee and a supervisor as well as between team-members or inter-unit interaction is an important predictor both for immediate and mediated positive outcomes (Bilisma & Koopman 2003; Gillespie & Mann, 2004; Burke et al. 2007). In organizational context also the object-specific trust, i.e. expectation of the other party’s competence and goodwill is critical (Blomqvist, 1997).

Impersonal element of organizational trust

The impersonal element of organizational trust refers to organizational members’ trust in impersonal organizational factors. It consists of e.g. shared institutionalized values and generalized norms for interaction (Fukuyama, 1995), governance mechanisms (Barney & Hansen, 1994) as well as consistent legitimated institutional systems (Luhmann, 1979; Giddens, 1990, Lane & Bachmann, 1996; Bachmann, 2003).

Reputation, contracts, rules, roles, processes and structures support predictability and enhance impersonal trust (McKnight et al 1998; Atkinson & Butcher, 2003; Kosonen et al. 2008). E.g. procedural justice in decision making and distributive justice in resources and incentives support impersonal trust (Tan & Tan, 2000; Kim & Maubourgne, 2003). Also trust to top management, i.e. CEO and management group capability and goals can be seen as impersonal trust in contrast to interpersonal trust (Costigan et al, 1998; McKauley & Kuhnert, 1992). Psychological contract as an institutionalized practice or part of organizational culture may also be seen as an element in impersonal trust (Whitener 1997).

Interplay of interpersonal and impersonal elements of organizational trust

Personal and impersonal elements of organizational trust impact each other as employees learn what kind of behaviour is rewarded (punished) in their organizations (Whitener et al 1998). The experienced trust in the interpersonal interaction may transfer to the perceived impersonal trust when the trustor draws on proof sources from which trust is transferred to a target (Granovetter, 1985; Luhmann, 1988; Misztal, 1996 and Lahno 2002). A new manager with a trustworthy character and trusting personality may introduce a “trusting” culture that will be learned and diffused into the organization. Supervisors act as role models and their actual behaviour signals what type of behaviour is accepted and encouraged. In **Figure** the antecedents for impersonal and interpersonal elements of organizational trust are characterized.

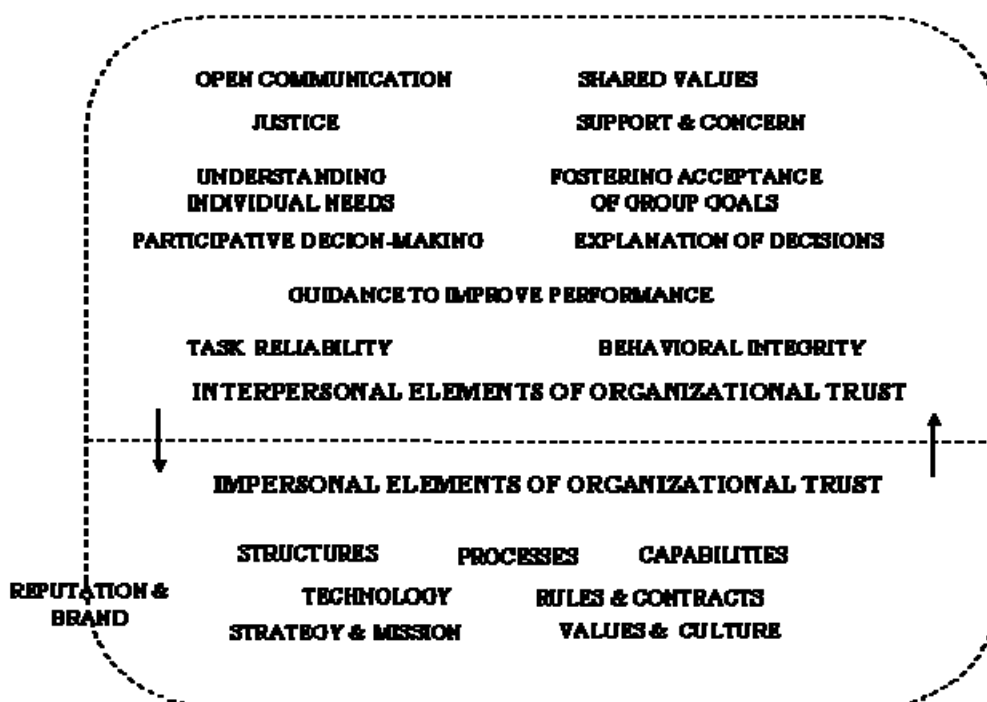


Figure 2. Antecedents for interpersonal and impersonal organizational trust

The impersonal organizational trust creates a shared context and enhances trust at inter-unit, inter-personal and individual levels. Organizational culture (coordination, communication and decision-making) encourages or discourages managerial trustworthy behaviour.

Impersonal governance mechanisms such as contracts, protection of intellectual property or market-based incentives may also support the evolution of inter-personal trust (Barney & Hansen, 1994). Also Pearce and Branyicki (1998) suggest that institution-based trust may enhance inter-personal trust, e.g. standardized employee treatment enhances inter-personal trust in employee-employer relationships. The interplay between interpersonal and inter-organizational trust is dynamic e.g. if either one deteriorates, this will have a negative impact on the other.

Trust building processes

Doney and Cannon (1998) discern different types of cognitive processes for trust building. These processes are based on different theoretical frameworks and have different basic assumptions about human beings. In the following these cognitive processes presented are complemented with identification and affect-based processes for trust building. Identification supports collective goals and affect adds the emotional aspect vital for collective knowledge creation (von Krogh, 1998; Blomqvist, 2002 & 2005).

In a *calculative trust building process* the trustor calculates the costs and rewards and most individuals are seen as opportunistic seeking to increase their self-interest (Dasgupta, 1988; Williamson, 1985). It supports extrinsic motivation and even deterrence-based trust. This calculative approach can be seen as rational and related to the capability dimension of trust. According to this view incentives to maximize self-interest lead to trustworthiness. Such incentives can be e.g. shared profits, joint decision-making, reward and control systems, and norms for individual initiative, achievements and advancement. However, if too strongly emphasized, it may work against intrinsic motivation and internalized values for knowledge sharing and collective contribution (see Osterloh et al. 2002).

In a *capability process* the trustor assesses a target's ability to fulfill his or her promises as individuals. This is logical for complementary knowledge creation. The assumption behind this approach is that people differ in their competence, ability and/or expertise and, thus, the ability to deliver (Barber, Butler & Cantrell, 1983, Blomqvist, 1997). This is related to the capability dimension of trust and according to this view trust is seen as analytical and reflective instead of naïve or blind.

In *prediction process* the trustor develops confidence that a target's behavior can be predicted and believes that individual (organizational) behavior is consistent and predictable (Deutch, 1960; Lewicki & Bunker, 1995). This relates to self-reference dimension of trustworthiness describing identity and integrity. Especially the impersonal elements of organizational trust support predictability and consistency, but employees expect predictability also from their supervisors (e.g. task predictability). Reputation, i.e. consistency of actor's past, present actions as well as values and norms support the evolution of trust through the prediction process.

In the *intentionality process* the trustor evaluates a target's motivations to see if the other is motivated to seek joint gain (Rempel & Holmes, 1986). It involves an expectation of willingness to share and contribute for common good and intrinsic motivation contrary to calculative process based on self-interest (see also Adler & Heckscher, 2006). This is related to the goodwill dimension of trust. An employee builds a psychological contract with an employer where s/he builds expectations on mutuality and support. Psychological contract may build both interpersonal and impersonal trust. Understanding another party's intention and motivation is essential in collaboration for collective knowledge creation.

In the *identification process* individuals see themselves as one with another person or group of people. Identification enhances concern for collective processes and outcomes (Nahapiet & Ghoshal, 1998).

In the *affect-based process* emotions affect the experience of trust and the trustor connects emotionally with the target (Jones & George, 1998). In addition to the cognition the affective and emotional aspects become critical for the social work processes related to

collective knowledge creation (see e.g. von Krogh, 1998; Ashkanasy, 2002; Spender, 2003; Alvesson, 2004).

It is proposed that organizational life is complex and multifaceted. Different trust-related processes may have different yet complementary function in supporting the evolution of trust. Some processes support more directly the knowledge worker extrinsic motivation and self-interest, whereas others, such as intentionality-based process, identification- and affect-based processes support the socially embedded and norm-based trust.

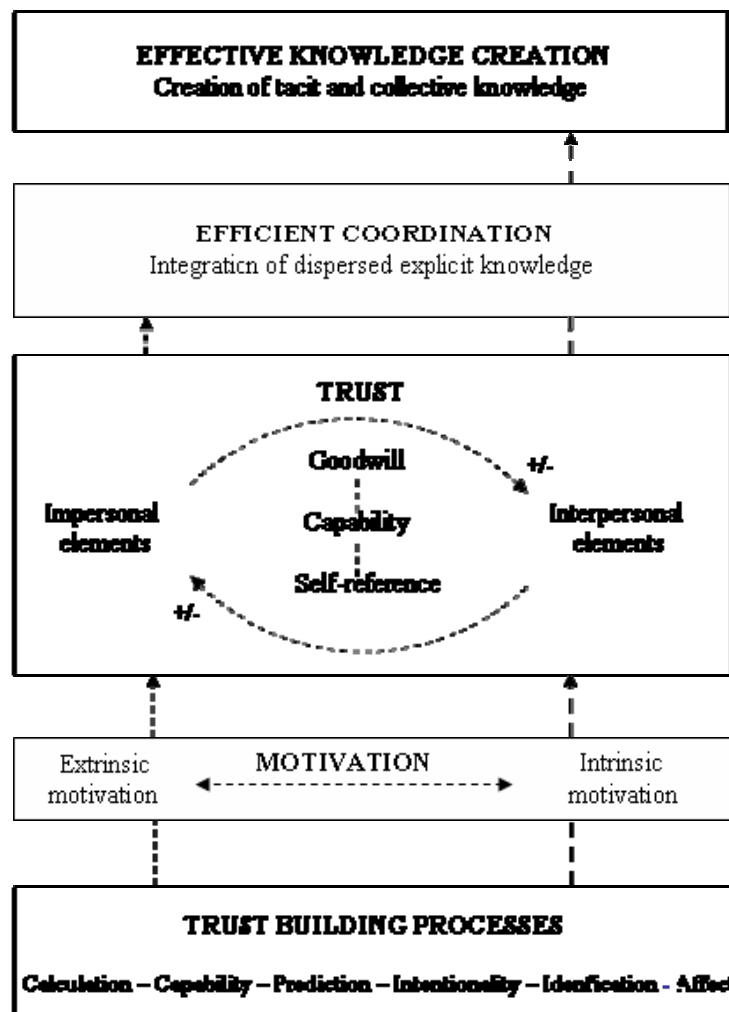


Figure 3. Trust in knowledge-based organization

Based on research on trust it is seen as beneficial to knowledge-based organizations. Its basic benefit can be seen in lowering transaction costs and increasing transaction benefits (Blomqvist et al. 2002). Trust is therefore expected to enhance integration of explicit knowledge. Trust can also be seen as most effective in reducing social complexity (Luhmann, 1979) and impacting actor motivation (Nahapiet & Ghoshal, 1998).

For trust to be a source of competitiveness and differentiate a firm from others, a variety of trust building processes would be needed. Suitable bundle of trust-building processes would always be context-specific, but the trust-building processes supporting intrinsic motivation (especially capability, intentionality, identification and affect) would be more

valuable for supporting intrinsic motivation and the creation of tacit and collective knowledge (see Figure 3).

Trust related motivation and knowledge work outcomes

Trust is a valuable means for organizing, but complex. Its paradoxical nature have been highlighted e.g. by Nooteboom (2006), who sees trust going beyond self-interest but having limits, and being both rational and emotional. Different trust building processes build on different bases of trust and human motivations. The experience of trust and evaluation of trustworthiness can be understood as a complex judgement based on values, attitudes, information and emotions (Lewis & Weigert, 1985; Lewicki et al. 1998; Dietz & Den Hartog 2006). Each individual evaluates and weighs elements of trustworthiness somewhat specific to his/her disposition and propensity to trust and related risk. Experience and evaluation of trustworthiness can vary from calculated weighing of perceived gains and losses to identification and an emotional response based attachment.

In knowledge-based organizations both economic and rational or even calculative, and social and norm-based motivations are seen as complementary. It is also assumed that for effective trust building the different bases of trust and related trust building processes complement each other. Trust building processes can be used to support organizing, yet the emphasis on different bases of trust and effectiveness of trust building processes is expected to be context specific and vary e.g. based on task as well as professional, organizational or national cultures (Blomqvist, 2002; Zaheer & Zaheer, 2006).

For effective knowledge work also the nature of motivation is critical (Osterloh et al. 2002). It is expected, that the more complex, tacit and collective the nature of knowledge and related knowledge work, the more important the trust building processes related to intrinsic motivation supporting trust-related processes.

V. DISCUSSION AND CONCLUSIONS

Knowledge-based view of the firm views collective tacit knowledge as a source of competitiveness accruing from firm as a social organization based on voluntary interaction. Especially the collective and tacit knowledge is seen as a source for competitiveness. Organizational integration and new organizational forms within and between organizations, as well as physical and virtual communities are seen critical in supporting efficient and effective leverage of dispersed knowledge.

Despite of these premises, knowledge-based view of the firm is rather silent about the role and nature of trust in knowledge related processes. Knowledge can be more or less valuable depending on its nature and management. Use of trust as an organizing principle can be more effective than relying on markets or hierarchy (Bradach & Eccles, 1991; Adler, 2001). If knowledge workers are seen as capable and intrinsically motivated, trust can be a very effective means of organizing and supporting creation of tacit and collective knowledge.

Different disciplines approach trust with different basic assumptions about human. Approaching trust from complementary disciplinary perspectives may be useful. Especially in complex knowledge-intensive business the emotional and rational aspects complement each other. The emotional aspects of trust make it fragile yet powerful in creative work involving high uncertainty, risks and intrinsic motivation. However sustainable performance in knowledge intensive cooperation requires also analytical and reflective trust. Trust that is not justified could be blind or naïve.

Practical implications

In this paper an active approach to trust is taken and it is proposed that the evolution of organizational trust can be supported. Interpersonal and impersonal elements of organizational trust, as well as different trust-building processes complement each other and impact knowledge work outcomes. They also support extrinsic and intrinsic motivation.

For trust to be a source of organizational competitiveness, a holistic and comprehensive development is needed. A strategic approach to trust building must consider different dimensions of trust, as well as related trust-building processes. Different types of trust are complementary and an organization actively supporting development of impersonal and interpersonal elements of trust can build stronger organizational trust among employees and other stakeholders. Even if there would be an aspiration to develop (trust capital and) trust in all stakeholders it is important to start by developing firm-internal trust in employees because of the interaction between internal and external norms and values.

Further research

Researchers interested in trust see that the nature of trust is changing, from incremental investments to swift or fast trust, where actors have neither shared history nor a shadow of the future (Jarvenpaa, 1998; Blomqvist, 2005). In addition there is an interest to understand its dynamics and active trust based on behaviour and performance (Möllering, 2006; Bachmann 2006) in virtual as well as different cultural contexts.

A more encompassing theory on trust in knowledge-based organizations incorporating interpersonal and impersonal elements, as well as multi-disciplinary approach trust and trust-building processes is needed. This paper is an attempt to synthesize the present knowledge towards this direction.

REFERENCES

- Adler, P. (2001). 'Market, hierarchy, and trust: The knowledge economy and the future of capitalism', *Organization Science*, vol. 12 no. 2, pp. 215-234.
- Adler P.S. and Heckscher C. (2006), 'Towards Collaborative Community, in The Firm as a Collaborative Community' in Heckscher C. and Adler P.S. (ed.) *Reconstructing Trust in the Knowledge Economy*, 11-101.
- Alvesson, M. (2004), *Knowledge Work and Knowledge-Intensive Firms*, Oxford University Press Inc., New York
- Ashkanasy N.M. (2002). Studies of Cognition and Emotion in Organizations: Attribution, Affective Events, Emotional Intelligence and Perception of Emotion in *Australian Journal of Management*, 27, 11-21.
- Atkinson, S. Butcher, D. (2003), 'Trust in managerial relationships', *Journal of Managerial Psychology*, vol. 18 no. 4, pp. 282 – 304.
- Arrow, K.J. (1974). *Limits of Economic Organization*. New York: Norton
- Axelrod R. (1984). *The evolution of cooperation*. Basic books, New York.
- Barber, B. (1983), *The logic and limits of trust*, Rutgers University Press, New Brunswick, NJ.
- Bachmann, R. (2003), 'Trust and Power as Means of Coordinating the Internal Relations of the Organization: A Conceptual Framework in The Trust Process in Organizations' in Nooteboom, B., Six, F. and Elgar, E.(ed.) *Empirical Studies in the Determinants and the Process of Trust Development*, Cheltenham, UK.
- Barney, J.B. and Hansen, M. H. (1994), 'Trustworthiness as a source of competitive advantage', *Strategic Management Journal*, vol. 15, 175-190.
- Bartlett, C. A., Ghoshal, S. (2002), 'Building Competitive Advantage Through People', *MIT Sloan Management Review*, vol. 43 no. 2, pp. 34-41.
- Hildebrand, B. and Biemans, W.G. (2003), 'The relationship between internal and external cooperation literature review and propositions', *Journal of Business Research*, vol.56 no. 9, pp. 735-743.
- Bigley G.A. & Pearce J.L. (1998), 'Straining for Shared Meaning in Organization Science: Problems of Trust and Distrust', *The Academy of Management Review*, vol. 23, no.3, pp. 405-421.
- Bilisma, K. and Koopman, P. (2003), 'Introduction: trust within organizations', *Personnel Review*, vol. 32, no.5, pp. 513-333.
- Blackler, F. (1995), 'Knowledge Work and Organizations', *Organization Studies*, vol. 16, no. 6, 1021-1046.

- Blois, K. J. (1999), Trust in Business-to-Business relationships: 'An Evaluation of Its Status', *Journal of Management Studies*, vol. 36, no. 2, March, pp. 197-217.
- Blomqvist, K. (1997), 'The Many Faces of Trust', *Scandinavian Journal of Management*, vol.13 no.3, 271-286.
- Blomqvist K. (2002), 'Partnering in the Dynamic Environment: The Role of Trust in Asymmetric Technology Partnership Formation', *Acta Universitatis Lappeenrantaensis* 122.
- Blomqvist K., Koivuniemi J., Hara V. and Äijö T. (2004) Towards networked R&D management: the R&D Approach of Sonera Corporation as an Illustration, *R&D Management*, 34 (5).
- Blomqvist K. (2005), 'Trust in a Dynamic Environment - Fast Trust as a Threshold Condition for Asymmetric Technology Partnership Formation in the ICT Sector' –a book chapter in *Trust in Pressure*, Investigations of Trust and Trust Building in Uncertain Circumstances, Edward Elgar Publishing, Inc. pp.127-147.
- Bradach, J. L., Eccles R.G., (1991) Price, authority and trust: from ideal types to plural forms in Thompson, G., Frances, J. Levacic, R, Mitchel, J. (ed.) *Markets, Hierarchies and Networks: The Coordination of Social Life Markets*, Sage Publications, London, Thousand oaks, New Delhi, pp. 277-292.
- Burke C.S, Sims D.E., Lazzarra E.H. and Salas E. (2007), 'Trust in leadership: a multi-level review and integration', *The Leadership Quarterly*, vol. 18, pp. 606-632.
- Burt , R.S., (1997), 'The Contingent Value of Social Capital', *Administrative Science Quarterly*, vol. 42.
- Butler J.K. Jr. and Cantrell, R.S. (1984), 'A behavioral decision theory approach to modeling dyadic trust in superiors and subordinates', *Psychological Reports*, vol. 55, pp. 19–28.
- Chesbrough, H. W. (2003), 'The Era of Open Innovation', *MIT Sloan management review*, vol. 44 no. 3, pp. 35-41.
- Chiles, T. and McMackin, J. (1996), 'Intergrating Variable Risk Preferences, Trust amd Transaction Cost Economics, *Academy of Management Review*, vol. 21, no. 1, pp. 73-99.
- Clegg C., Unsworth K., Epitropaki O. and Parker G. (2002). 'Implicating Trust in the Innovation Process'. *Journal of Occupational and Organizational Psychology*, vol. 75, pp. 409-422.
- Creed, D. and Miles, E. (1996), Trust in Organizations. A Conceptual Framework Linking Organizational Forms, Managerial Philosophies, and the Opportunity Costs of Control in R. M. Kramer and T. Tyler (Eds.), *Trust in organizations*. Frontiers of Theory and Research. Thousand Oaks: Sage Publications, London, pp. 16-38.

Conner, K. R. and Prahalad, C.K. (1996), 'A Resource-Based Theory of the Firm: Knowledge versus Opportunism', *Organization Science*, vol. 7 no. 5 (Sep. - Oct., 1996), pp. 477-501.

Costa, A.,C. (2003). 'Understanding the Nature and the Antecedents of Trust within work Teams', in B. Nooteboom and F. Six (eds). *The Trust Process in Organizations: Empirical Studies of the Determinants and the Process of Trust Development*, pp. 105-124. Cheltenham: Edward Elgar.

Costigan, R.D., Ilter, S.E. & Berman, J.J. (1998), 'A multi-dimensional study of trust in organizations', *Journal of managerial issues*, vol. X no.3, pp. 303-317.

Das, T.K. and Teng, B-S (1998), 'Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances', *The Academy of Management Review*, vol. 23 no. 3 (Jul., 1998), pp. 491-512.

Deutch, M. (1960), 'The Effect of Motivational Orientation upon Trust and Suspicion', *Human Relations*, vol. 13, pp. 123-129.

Dietz G. and den Hartog D. (2006), 'Measuring trust inside organisations', *Personnel review* vol. 35 no.5, pp.557-588.

Douglas W.E. Creed and R.E. Miles (1996), 'Trust in Organizations – a conceptual framework linking organizational forms, managerial philosophies, and the opportunity costs of control', in R. M. Kramer and Tyler, T. (Eds.), *Trust in Organizations*, Frontiers of Theory and Research, London: Sage Publications.

Doney, P. M.; Cannon, J. P. and Mullen, M. R. (1998), 'Understanding the influence of national culture on the development of trust', *Academy of Management Review*, vol. 23 no. 3, pp. 601-620.

Dyer, J. H. & Singh, H. (1998), 'The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage', *The Academy of Management Review*, vol. 23 no. 4 (Oct., 1998), pp. 660-679.

Ellonen R., Blomqvist K., Puumalainen K. and Jantunen A. (2008, forthcoming), 'HRM Practices, Innovativeness and Performance – The Mediating Role of Organizational Trust', *International Journal of Learning and Intellectual Capital*, vol. 4 no.3.

Connell, J. Ferres, N. Travaglione, T. (2003), 'Engendering trust in manager-subordinate relationships: Predictors and outcomes', *Personnel Review*, vol. 32 no. 5, pp. 569 – 587.

Foss, N. J. (1996,. 'Knowledge-Based Approaches to the Theory of the Firm: Some Critical Comments', *Organization Science*, vol. 7 no. 5 (Sep. - Oct., 1996), pp. 470-476.
Foss, N. (2005). *Strategy, Economic Organization and the Knowledge economy*, The Coordination of Firms and Resources, Oxford University Press, Oxford.

Fukuyama, F. (1995), *Trust. The Social Virtues and the Creation of Prosperity*, The Free Press, USA.

- Ghoshal, S., Bartlett, C. & Moran, P. (2000). 'Value Creation' in *Executive Excellence*, Nov. 10th.
- Ghoshal, S., & Gratton, L. (2002), 'Integrating the enterprise', *MIT Sloan Management Review*, Vol. 44, No. 1, pp. 31-38.
- Giddens A. (1984), *The Constitution of Society*. Cambridge: Polity Press
- Gillespie, N. and Dietz, G. (2005), 'Trust repair after an organisation-level betrayal', Proceedings of the EIASM Workshop on Trust within and between Organizations, Amsterdam.
- Gillespie N. & Mann L. (2004), 'Transformational Leadership and Shared Values: The building blocks of trust', *Journal of Managerial Psychology*, vol.19 no 6, pp. 588-607.
- Goodman, R.A. and Goodman, L.P. (1976), 'Some Management Issues in Temporary system: A Study of Professional Development and Manpower - The Theater Case.' *Administrative Science Quarterly*, vol. 21, no. 3, pp. 494- 501.
- Granovetter M. (1985), 'Economic action and social structure: the problem of embeddedness', *American Journal of Sociology*, vol. 91, pp. 481-510.
- Grant, R. (1996), 'Toward a knowledge-based theory of the firm', *Strategic Management Journal*, 17, 109-122.
- Grant, R., Baden-Fuller, C. (2004), 'A Knowledge Accessing Theory of Strategic Alliances', *Journal of Management Studies*, vol. 41 no.19, pp. 61-84.
- Grundeis J. (2006). Examining the Relationship between Trust and Control in Organizational Design in Organization Design, The Evolving State-of-the-Art edited by Richard M. Burton, Bo Eriksen, Dorthe Dojbak Håkonsson and Charles C. Snow, Springer, 43-65.
- Handy, C. (1995), 'Trust and the virtual organization', *Harvard Business Review*, (May-June), vol. 70, pp.40-50.
- Jarvenpaa, S.L., Knoll, K. and Leidner, D.E. (1998), 'Is Anybody Out There? Antecedents of Trust in Global Virtual Teams', *Journal of Management Information Systems*, vol. 14 no. 4, pp.29-64.
- Jones G.R. and George J.M. (1998), 'The Experience and Evolution of Trust: Implications for Cooperation and Teamwork', *The Academy of Management Review*, vol. 23no. 3, pp. 531-546.
- Kim, W. and Mauborgne, R. (2003), 'Fair process: management in the knowledge economy', *Harvard Business Review*.
- Kogut, B. and Zander, U. (1992), 'Knowledge of the firm, combinative capabilities, and the replication of technology', *Organization Science*, vol. 3 no. 3, 383-397.

- Kogut, B. and Zander, U. (1996), 'What Firms Do? Coordination, Identity, and Learning', *Organization Science*, vol. 7, no. 5 (Sep. - Oct., 1996), pp. 502-518.
- Kosonen M., Blomqvist K. and Ellonen R. (2008), 'The Impersonal Nature of Trust' a book chapter in *Encyclopedia of Networked and Virtual Organizations*, Idea Group Publishing, forthcoming.
- Kramer, R. (1999), 'Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions', *Annual Review of Psychology*, vol.50, pp. 569-598.
- Von Krogh, G. (1998), 'Care in knowledge creation', *California Management Review*, vol. 40 no. 3, pp.133-153.
- Adler, P. and Kwon, S-W. (2000) ' Social Capital: The good, the bad , and the ugly' in Lesser. L. (ed.) *Knowledge and Social Capital: Foundations and Applications*. Boston, Butterworth Heinemann, pp. 89-115.
- Lane, C. and Bachman, R. (1996), 'The Social Constitution of Trust: Supplier Relations in Britain and Germany', *Organization Studies* , vol.17 no 3. pp. 365-395.
- Lahno, B. (2002), 'Institutional trust: a less demanding form of trust?' Originally in *Revista Latinoamericana de Estudios Avanzados (RELEA)*, Caracas, 16.
- Lewicki , R.J. and Bunker, B., (1996), 'Developing and maintaining trust in work relationships' in Kramer, R. and Tyler, T. (ed.) *Trust in Organizations: Frontiers of Theory and Research*, Sage, Newbury Park, CA, pp. 114-139.
- Lewicki R. J, McAllister D.J. and Bies. R.J. (1998), 'Trust and Distrust: New Relationships and Realities', *The Academy of Management Review*, vol. 23 no.3, pp.438-345.
- Lewis D.L. & Weigert A. (1985), 'Trust as a Social Reality', *Social Forces*, vol.63 no. 4, pp. 967-985.
- Lorenz, E.H. (1988) , 'Neither Friends nor Strangers: Informal networks of subcontracting in French industry' in Gambetta, D. (ed). *Trust: Making and breaking cooperative relations*. Cambridge, M.A: Basil Blackwell., pp. 194-210.
- Luhmann N. (1979), *Trust and Power*, Chichester: Wiley
- Mayer R.C, Davis J.H. and Schoorman F.D. (1995), 'An Integrative Model of Organizational Trust', *Academy of Management Review*, vol. 20 no.3, pp.709-734
- McAllister D. (1995), 'Affect- and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organizations', *The Academy of Management Journal*, vol. 38 no.1, pp. 24-59.
- McCauley, D.P. and Kuhnert, K.W. (1992), ' A theoretical review and empirical investigation of employee trust in management', *Public Administration Quarterly*, vol. 16 no. 2, pp. 265-285.

- McEvily, B. Perrone, B. Zaheer (2003), 'Trust as an Organizing Principle', *Organization Science*, Vol. 14 no. 1, January–February, pp. 91–103.
- McKnight, D., Cummings, L. & Chervany, N. (1998), 'Initial trust formation in new organizational relationships', *Academy of Management Review*, vol. 23 no.3, pp. 473-490.
- Meyerson, D., Weick, K.E., Kramer, R.M. (1996), 'Swift Trust and Temporary Groups' in Kramer R.M. and Tyler, T.R. (ed.) *Trust in organizations: Frontiers of Theory and Research*, Sage Publications, London, pp. 166-195.
- Miles, R.E., Snow, C.C. and Miles, G. (2000), 'TheFuture.org', *Long Range Planning*, vol. 33, 300-321.
- Miztal, B.A. (1996), *Trust in Modern Societies*, Oxford: Blackwell.
- Möllering, G. (2006), 'Trust, institutions, agency: towards a neoinstitutional theory of trust' Bachmann, R. and Zaheer, a. (ed.) *Handbook of Trust Research*, pp. 355-376.
- Nahapiet, J., Ghoshal, S. (1998), 'Social capital, intellectual capital, and the organizational advantage', *The Academy of Management Review*, vol. 23 no. 2 (April 1998), pp. 242-266.
- Nonaka, I. & Takeuchi, H. (1995), *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Nonaka, I. & Toyama, R. (1995), 'A firm as a dialectical being: towards a dynamic theory of a firm'. *Industrial and Corporate Change*, vol. 11, no. 5, pp. 995-1009.
- Nonaka, I. Toyama, R. and Nagata, A. (2000), 'A firm as a knowledge-creating entity: a new perspective on the theory of the firm', *Industrial and Corporate Change*, vol. 9, no. 1, pp. 1-20.
- Nonaka, I., Toyama, R., Konno, N.(2005), 'Seci, Ba and Leadership: a Unified Model Of Dynamic Knowledge Creation', *Long Range Planning*, vol. 33, pp. 5-34.
- Nooteboom, B. (1999), *Inter-firm Alliances: Analysis and design*. London, Routledge.
- Nooteboom, B. (1993), 'Firm size effects on transaction costs', *Small Business Economics*, vol. 5 no. 4, pp. 283-295.
- Nooteboom, B. (2002), *Trust: Forms, Foundations, Functions, Failures and Figure*. Cheltenham: Edward Elgar Publishing
- Osterloh M., Frost J. and Frey B.S. (2002). 'The Dynamics of Motivation in New Organizational Forms'. *International Journal of Economics of Business*, vol. 9 no. 1, pp. 61-77.
- Putnam, R. (1993), *Making democracy work: Civic traditions in modern italy*, Princeton, NJ, Princeton University Press

- Rempel, J. K. & Holmes, J. G. (1986), 'How do I trust thee?', *Psychology Today*, vol. 20 no.2 , pp. 28-34.
- Rotter, J. (1967), 'A new scale for the measurement of interpersonal trust', *Journal of Personality*, vol. 35, pp. 651-665.
- Rousseau, D.M. (1985), 'Issues of Level in Organizational Research: Multi-Level Perspectives' in Cummings, L.L., Staw, B.M (Eds.), *Research in Organizational Behavior*, vol. 7. JAI Press, Greenwich, CT, pp.1-38.
- Rousseau , D.M. (1998), 'Why Workers Still Identify with Organizations', *Journal of Organizational Behavior*, vol. 19, no. 3 (May, 1998), pp. 217-233.
- Rousseau D.M, Sitkin S., Burt R.S. and Camerer C. (1998), 'Not so different at all: A cross-disciplinary view of trust', *Academy of Management Review*, vol. 23, pp.393-404.
- Schoorman, F.D., Mayer, R.C. and James, H.D. (2007), 'An Integrative Model of Organizational trust: past, present and future', *Academy of Management Review*, vol. 32 no.2, 344-354.
- Shockley-Zalabak P., Ellis K and Winograd G. (2000), 'Organizational trust: What it Means, Why it Matters', *Organizational Development Journal*, vol. 18 no 4, pp.35-48.
- Sitkin, S.B. and Pablo, A.M. (1992), 'Reconceptualizing the Determinants of Risk Behavior', *The Academy of Management Review*, vol. 17, no. 1 (Jan., 1992), pp. 9-38.
- Spender, J.-C. (1996), 'Making Knowledge the Basis of a Dynamic Theory of the Firm', *Strategic Management Journal*, vol. 17, Special Issue: Knowledge and the Firm (Winter, 1996), pp. 45-62.
- Spender, J.-C. (2003). 'Exploring uncertainty and emotion in the knoweldge-based theory of the firm', *Information Technology & People*, vol. 16, no. 3, pp. 266-288.
- Tan, H.H. and Tan, C.S.F. (2000), 'Toward a differentiation of trust in supervisor and trust in organization in Genetic', *Social and General Psychology Monographs*, vol. 126 no.2, pp.241-260.
- Teece, D.J., Pisano, G. and Shuen, A. (1997), 'Dynamic Capabilities and Strategic Management', *Strategic Management Journal*, vol. 18 no 7, pp. 509-533.
- Tsai, W. and Ghoshal, S (1998), 'Social Capital and Value Creation: The Role of Intrafirm Networks', *The Academy of Management Journal*, vol. 41, no. 4 (Aug., 1998), pp. 464-476.
- Tsoukas, H. (1996), 'The Firm as a Distributed Knowledge System: A Constructionist Approach', *Strategic Management Journal*, vol. 17, Special Issue: Knowledge and the Firm (Winter, 1996), pp. 11-25.
- Tyler, T. R. (2003), 'Trust within organisations', *Personnel Review*, vol. 32 no. 5, pp. 556-568.

Zaheer A., McEvily B., Perrone, V. (1998), 'Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance', *Organization Science*, vol. 9 no. 2, March-April, pp.141-159.

Zaheer, S. and Zaheer, A. (2006), 'Trust across borders', *Journal of International Business Studies*, vol. 37, pp.21-29.

Zucker L.G. (1995), 'Production of trust: Institutional sources of economic structure, 1840-1920', *Research in Organizational Behavior.*, vol. 8, pp. 53-111.

Whitener, E. (1997), 'The impact of human resource activities on employee trust', *Human Resource Management*, vol. 7 no. 4, Winter 1997, pp. 389-404.