Chapter XXIV
Social Capital Theory

Hossam Ali-Hassan
York University, Canada

ABSTRACT

Social capital represents resources or assets rooted in an individual’s or in a group’s network of social relations. It is a multidimensional and multilevel concept which has been characterized by a diversity of definitions and conceptualizations which focus on the structure and/or on the content of the social relations. A common conceptualization of social capital in information systems research consists of a structural, relational and cognitive dimension. The structural dimension represents the configuration of the social network and the characteristics of its ties. The relational dimension represents assets embedded in the social relations such as trust, obligations, and norms of reciprocity. The cognitive dimension represents a shared context which facilitates interactions and is created by shared codes, language and narratives. For a single or multiple members of a network, social capital can be a source of solidarity, information, cooperation, collaboration and influence. Social capital has been and remains a sound theory to study information systems in research areas affected by social relations and the assets embedded in them.

INTRODUCTION

Social capital which represents in a sense the goodwill, such as sympathy, trust and forgiveness, engendered by the fabric of social relations and which could facilitate action, has gained increasing attention from researchers in sociology, political science, economics and organizational science (Adler & Kwon, 2002). This chapter looks at the different and diverse perspectives used to define social capital and its value, sources and characteristics. A popular multi-dimensional model of social capital developed by Nahapiet and Ghoshal (1998) is then explored, followed by a summary of its use in information systems research. This chapter then addresses the issue of social capital levels of analysis and the general benefits and risks social capital can carry along with its potential for future information systems research.
The term “Social Capital” originated from the areas of sociology and political science and originally appeared in Hanifan (1916) study of rural schools community centers. It appeared later in community studies where networks of strong personal relationships provided the basis for trust, cooperation and collective action which were key for the survival and functioning of city neighborhoods (Jacobs, 1965). Then at the individual level, Loury (1977) studied the resources intrinsic in family relations and community social structure and their role in the development of young children. The concept was then applied to a wide range of social phenomena such as the development of human capital, economic performance of firms, geographic regions, and nations (Nahapiet & Ghoshal, 1998). Now it can be found in a wide range of social science disciplines, such as sociology, political science, and economy (Adler and Kwon, 2002), in addition to organizational and management sciences (Huysman & Wulf, 2004).

Definitions

Social capital is used to describe relational resources embedded in personal ties, which are useful in the development of individuals in community social organizations and has been conceptualized either as a set of social resources embedded in relationships or more broadly as including, in addition to social relationships, the norms and values associated with them (Tsai & Ghoshal, 1998). An example of definitions which focused on the social resources embedded in relationships is Burt’s (1992) who defined social capital as “friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital” (p. 9). An example of definition which focused on the norms and values associated with the social relations is Woolcock’s (1998) who defined it as “the information, trust and norms of reciprocity inherent in one’s social network” (p.153).

Adler and Kwon (2002) compiled a list of twenty different definitions for social capital in the key literature, highlighting the diversity in its streams of research. These definitions focus either on the relations an actor maintains with other actors and/or on the structure of relations among actors in a collectivity. They also focus on the social ties and relationships and/or on the characteristics and content of those ties and the assets they represent. Examples of such definitions of social capital include:

- the ability of actors to secure benefits by virtue of membership in social networks or other social structures (Portes, 1998, pp.6)
- features of social organization such as network, norms and social trust that facilitate coordination and cooperation for mutual benefits (Putnam, 1995, pp.67)
- the sum of the resources, actual or virtual, that accrues to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition (Bourdieu & Wacquant, 1992, pp.119)
- a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure (Coleman, 1988, pp.S98).

The diverse definitions can be synthesized into: “Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor’s social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor” (Adler & Kwon, 2002, pp.23).

Despite that most authors agree that the main proposition of social capital theory is that networks of relationships are a valuable resource for social action, social capital does not have a precise and
universally accepted definition. This indicates that it is not a unidimensional concept (Putnam, 1995). Agreeing with the belief that social capital has many dimensions, Nahapiet and Ghoshal (1998) defined social capital “as the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit” (p.243) and identified three dimensions for it: the structural, the relational and the cognitive dimensions of social capital. The adoption of this definition of social capital and its three dimensions has facilitated the conceptualization and measurement of social capital in multiple studies in the area of management and information systems. A detailed description of Nahapiet and Ghoshal’s (1998) different dimensions of social capital and their significance follows later in the chapter.

In summary, social capital has a wide range of definitions which focus on two aspects: social networks (e.g. Burt, 1992) and the resources embedded within the networks (e.g. Bourdieu, 1986). Social capital theory premise is the benefit an actor, individual or collective, can reap from those social relations and their embedded resources. However, it is important to note that some researchers on that same topic, such as Granovetter (1982), used the term social network theory instead of social capital, highlighting the commonality between the two.

Key Literature

A number of seminal researchers have made a significant contribution to the development of the literature on social capital theory and they include: Bourdieu (1986), Burt (1992), Coleman (1988, 1990), Granovetter (1973, 1982), Portes (1998), Putnam (1995), and Woolcock (1998). A couple of highly cited papers in the area of management and information systems (IS) are Nahapiet and Ghoshal’s (1998) article which includes a model of dimensions and items of social capital and Adler and Kwon’s (2002) article which is a synthesis of the vast and diverse research on social capital.

BASIC CONCEPTS

According to Coleman (1988) social capital is defined by its function and it is not a single entity but a variety of different entities consisting of some aspect of social structures, which facilitate action of individual actors within the structure. Those actors could be persons or corporate. What makes social relations a useful capital resource for individuals are the three forms of social capital: (i) obligations and expectations, (ii) information channels, and (iii) social norms. The first form of social capital, obligations and expectations, depends on two elements, the trustworthiness of the social environment (the chances obligations for previous favors or actions will be repaid), and the extent of obligations held. The differences in these social structures (trustworthiness of social environment and extent of obligations) come from different sources such as the cultural differences in the tendency to ask for or give aid, in the closure of social networks, in the actual needs for help, in the sources for aid and in the degree of affluence. Individual actors in social structures with high level of outstanding obligations have more social capital to draw on. Individuals however differ in the amount of social capital they can draw on. The second value of social capital, or its second form, is the potential for information that is inherent in social relations. Information, which is an important basis for action, is costly and requires attention which is a scarce supply. Information comes from social relations which have been established and maintained for other purposes. Finally, the third form which is the social norms, when they exist and when they are effective, can be a powerful yet fragile form of social capital. A prescriptive norm within a collectivity is where one would forgo self-interest and act in the interest of the collectivity, and is reinforced by social support, status, honor and other rewards. These norms can be supported by either internal or external sanctions and by rewards. All social relations and social structures facilitate some
Social Capital Theory

form of social capital, but certain kinds of social structure can be more beneficial for certain forms of social capital. Closure of social networks is one property of social relations, which is necessary but not sufficient for the emergence of effective norms. A closure can be described as actor A having social relations with actors B and C, and actors B and C also linked by a social relation between them. An open structure is when actors B and C have social relations with actors D and E respectively but not between them. In the case of open structure, the lack of relation between B and C, prevents them from combining forces to sanction A. Whereas in the case of closure, B and C can combine forces to provide a collective sanction for A and facilitate the existence of effective social norms. Closure is also important for the trustworthiness of social structure, necessary for the proliferation of obligations and expectations. Closure can facilitate the rise of reputation and collective sanctions that would ensure trustworthiness and prevent defection from an obligation.

Burt (1992) has also focused on the structure of social networks and highlighted the benefits of both closure relationships and bridging relationships. When a set of people are connected by strong direct or short indirect (via a third party) connections, Burt refers to that as a closed network, or cluster. A bridge on the other hand is a relationship for which there is no effective indirect connection through third parties; a bridge is a relation spanning a structural hole (Burt, 2005). A structural hole is the lack of a direct or indirect relationship between clusters of people. A third common characteristics of network relations is the tie strength defined by Granovetter (1973) as the combination of the amount of time, the intimacy, the emotional intensity and the reciprocal services characterizing those ties. According to Burt (2005), a social network characterized by strong ties, high density, and network closure, fosters trust, norms, control, individual relationships, consistency, trustworthiness, availability, accuracy, richness and affordability of information, and cooperation (Burt, 2005). On the other hand, a social network characterized by weak internal ties, low density, structural holes, and with a high degree of brokerage (connections to other networks) has access to alternative opinion/practice, information variation, creativity, and new idea generation.

**SOURCES OF SOCIAL CAPITAL**

There is a general consensus that social capital is derived from social relations (Adler & Kwon 2002). Almost all definitions of social capital include some form of network of relationships (Bourdieu, 1986; Nahapiet & Ghoshal, 1998), friends, colleagues and more general contacts (Burt, 1992), social structure (Coleman, 1990), social network (Woolcock, 1998) and other related terms. Without social relations and social networks, social capital does not exist. Most literature on social capital sources hence focus on social relations and can be divided into two main categories; the research that locates social capital in the formal structure of the social network ties, and the research that focuses on the content of the ties. Adler and Kwon (2002) examined the sources of social capital, and for them, social capital is the resource available to actors as a function of their location in the structure of their social relations. They distinguished three forms of social structure, each based on a different type of relation: (i) market relations where goods and services are exchanged for money, (ii) hierarchical relations where obedience to authority is exchanged for material and spiritual security, and (iii) social relations where favors and gifts are exchanged. The social relations represent the social structure dimension where social capital lies. However, the market and hierarchical relations contribute to the emergence of social relations due to the repeated interactions, and thus contributing indirectly to the formation of social capital.
Network structure features include among other things network closure, structural holes and tie strength, while network ties features include for example norms of reciprocity, trust, and shared values and beliefs. According to Adler and Kwon (2002) an actor’s social network provides the opportunity, motivation and ability for social capital transactions. The different types of networks with their internal, external, direct, indirect, formal and informal ties create the opportunity for social capital benefits. Even the structure of the network also contributes to the development of social capital. Network closure, (Coleman 1988) provides the internal cohesiveness within a community or organization, while structural holes (Burt 1992), or the sparse network with few redundant ties, provide access to cost effective external resources, hence both yielding benefit (Adler & Kwon, 2002). The motivation for actions which would enhance social capital transactions, such as helping others, comes from trust and shared norms such as collective goals, obligations, and reciprocity. Finally, ability represents the competencies and resources that actors mobilize via their social relations (Adler & Kwon, 2002).

**CHARACTERISTICS**

Social capital is not characterized as a property of an individual but as embedded in the relationship with others (Burt 1997). It is relation specific, neither fully interchangeable (Coleman, 1988), nor easily transferable (Nahapiet & Ghoshal, 1998). It increases with use instead of decreasing (Adler & Kwon, 2002) and deteriorates when the social relationships it is based on are not developed or maintained (Nahapiet & Ghoshal, 1998). Like other types of capital, it is considered a productive resource (hence being called capital), helping individuals achieve career success (Burt, 1992; Podolny & Baron, 1997), helping workers find jobs (Granovetter, 1973, 1995; Lin et al., 1981), facilitating a firm’s business operations (Burt, 1992; Coleman, 1990; Tsai & Ghoshal, 1998), and enhancing intellectual capital in a firm (Nahapiet & Ghoshal, 1998). Once developed, it can be exchanged for other capital, such as economic and human capital (Bourdieu, 1986).

**DIMENSIONS AND MEASUREMENT**

In their comprehensive review of social capital, Adler and Kwon (2002) developed a conceptual model of social capital. In that model, the sources of social capital lie in the social relations, located in the ties’ structure and content. The structure features could be closure or structural holes and tie contents most commonly are shared norms and beliefs, and abilities. Social relations provide the opportunity, motivation and ability to create social capital. Narayan and Cassidy (2001) developed another framework to measure social capital in their survey in Ghana and Uganda. Their measurements were based on the World Values Survey, the New South Wales Study, the Barometer of Social Capital, Columbia, and the Index of National Civic Health, USA. Their dimensions of social capital are group characteristics, generalized norms, togetherness, everyday sociability, neighborhood connections, volunteerism, and trust. Other examples of social capital measures are Putnam’s (2000) which include organization of society, citizen’s involvement in society actions, voluntary actions, informal socializing, and social trust.

A widely used social capital framework or model was the one developed by Nahapiet and Ghoshal (1998) to study the impact of social capital on the creation of intellectual capital. Their model was developed based on the notion of resources available in the network of relationships (Bourdieu, 1986), the concept of “weak ties” (Granovetter, 1973), and social status (Burt, 1992). Nahapiet and Ghoshal identified three clusters of social capital, which they labeled “dimensions” of social capital: the structural, the relational...
and the cognitive dimensions of social capital (Figure 1).

Each dimension incorporates a number of features. The structural dimension refers to social capital as the social network of relationships; its features include network ties and network configuration. The network ties represent the actual dyadic relationship between two nodes, and could represent a friendship, business relationship, or other social relationships. It also represents the medium across which the relationship exists, such as face-to-face, telephone, e-mail and so on. According to the authors, it refers to the “overall pattern of connections between actors” or “who you can reach and how you can reach them” (pp.244) and its most important facets are the presence or absence of network ties, the network configuration, and the pattern of linkages in terms of density, connectivity, and hierarchy. Nahapiet and Ghoshal (1998) also included appropriable organization as an additional facet of the structural dimension, or the use of an existing network for another purpose than the one it was created for. The relational dimension refers to the assets rooted in the relationships such as trust, trustworthiness, sanctions, norms, expectations, obligations, identity and identification. This dimension refers to those “assets created and leveraged through relationships” (p.244) and a history of interactions. The cognitive dimension reflects the common understandings that consist of shared codes and language and shared narratives. It captures what Coleman (1990) calls the “public good aspect of social capital”. It includes shared vision and common values in an organization. According to Nahapiet and Ghoshal (1998) this dimension refers to the “resources providing shared representations, interpretations, and systems of meaning among parties” (p.244). Among the three dimensions, the cognitive dimension is the least discussed in the mainstream literature and least included in empirical studies on social capital however its inclusion is valuable in the context of knowledge sharing and transfer. Despite being separately identified with distinct facets, the three dimensions are highly interrelated.

**SOCIAL CAPITAL MODELS IN INFORMATION SYSTEMS RESEARCH**

Compared to the other models, the one developed by Nahapiet and Ghoshal, has the advantage of being simple with three clear key dimensions and with flexibility in the selection of features. It has been adapted and used in multiple IS empirical studies. Tsai and Ghoshal (1998) used it to evaluate the value creation (product innovation) at a large multinational electronics company. Liao and Welch (2003, 2005) used it to study entrepreneurship and venture creation. Levin and Cross (2004) used a modified version of it, replacing the cognitive dimension with knowledge, to study the mediating role of trust in knowledge transfer. Wasko and Faraj (2005) used to examine individual motivation, social capital and knowledge contribution. Chou et al (2006) used it to study IT outsourcing.
decisions. Kankahalli et al (2005) found a positive relation between reciprocity and electronic knowledge repositories use. Yli-Renko et al (2001) studied the relation between social interaction and relationship quality and knowledge acquisition. Chiu et al (2006) examined the relation between multiple dimensions of social capital and quantity and quality of knowledge sharing. Each of these studies was based on some dimensions of Nahapiet and Ghoshal’s framework, but each one measured the items or characteristics particular to the context and goal of their study. Some studies have also measured social capital based on other models and dimensions. A sample list of information systems or management related empirical studies measuring social capital, its dimension(s), item(s) and dependent variable(s) can be found in table 1.

**LEVELS OF ANALYSIS**

Social capital has been conceptualized and operationally defined at many different levels of analysis (Tsai & Ghoshal, 1998), including individual (e.g. Burt 2005; McFadyen & Canella, 2004; Perry-Smith, 2006) and collective, such as family (e.g. Coleman, 1988), organizational units (e.g. Hansen, 1999), organization (e.g. Burt, 1992; Chou et al., 2006; Nahapiet & Ghoshal

### Table 1. Sample of empirical studies measuring social capital

<table>
<thead>
<tr>
<th>Study</th>
<th>Social Capital Dimension(s)</th>
<th>Items</th>
<th>Dependent Variable(s)</th>
</tr>
</thead>
</table>
| Nahapiet & Ghoshal (1998) | Structural (S), cognitive (C) and relational (R) | S: Network ties (access, timing, referrals), network configuration (density, connectivity, hierarchy), appropriable social org  
C: shared codes and language, shared narratives  
R: trust, norms, obligations & expectations, identification | New intellectual capital (+ 4 full mediators: access to parties, anticipation of value and motivation to combine/exchange intellect cap and combination capability) |
| Walker et al. (1997)     | Structural equivalence       | Same relationships between firms in a network                        | Formation of an industry network                                                      |
| Patnayakuni et al. (2006)| Structural (S), cognitive (C) and relational (R) | S: digitization, relational asset specificity & cross-functional application integration.  
C: relational interaction routines and data consistency. R: long term orientation | Supply chain integration (full mediator)then organizational performance                  |
| Arling & Subramani (2005)| Structural                   | face-to-face prominence, face-to-face information diversity, computer-mediated prominence, computer-mediated diversity | Social capital                                                                        |
| McFadyen & Canella (2004)| Structural                   | Number of relations and strength of relations                        | Knowledge created (citations)                                                         |
| Brookes et al. (2006)    | Conductivity (interactions), trust, respect, longevity (age of relation), common experience, wider social context (outside project) | Project social capital                                                  |                                                                                       |

*continued on following page*
## Table 1. continued

<table>
<thead>
<tr>
<th>Study</th>
<th>Social Capital Dimension(s)</th>
<th>Items</th>
<th>Dependent Variable(s)</th>
</tr>
</thead>
</table>
| Wasko & Faraj (2005)                     | Structural (S), cognitive (C) and relational (R) and individual motivation (IM) | S: Centrality  
C: self rated expertise and tenure in field  
R: commitment and reciprocity  
IM: reputation and enjoying helping | Knowledge contribution in electronic network of practice |
| Huang & DeSanctis (2005)                 | Structural                                                       | Closeness (and interactions) and centrality                          | Knowledge sharing (messages in forum)                     |
| Sherif et al. (2006)                     | Structural (S), cognitive (C) and relational (R) (case study)     | S: Network ties connectivity and density  
R: social norms, obligations, expectations, trust & identity  
C: common language and shared narrative | Social capital |
| Tsai & Ghoshal (1998)                    | Structural (S), cognitive (C) and relational (R) (case study)     | S: Social interaction ties  
C: Shared vision  
R: trust and trustworthiness | Resource exchange and combination (full mediator) and product innovation |
| Borgatti & Cross (2003)                  | Social network                                                  | Knowing area of expertise , positive evaluation, having access to, cost, physical proximity | Information seeking (learning) |
| Chiu et al. (2006)                       | Structural (S), cognitive (C) and relational (R)                 | S: Social interaction ties  
R: trust, norms of reciprocity and identification  
C: shared language and vision | Quality of knowledge sharing and knowledge quality |
| Levin & Cross (2004)                     | Tie strength  
Benevolence- and competence-based trust (mediators)              | Inter-unit tie strength and type of knowledge                         | Receipt of useful info |
| Hansen (1999)                            | “Knowledge network”                                              | Network path length, number of network connections                    | Knowledge sharing (Project completion time)               |
| Hansen (2002)                            |                                                                  | Social interaction, relationship quality, customer network ties       | Knowledge sharing (Quantity of knowledge and project completion time) |
| Kankanhalli et al. (2005)                |                                                                  | Cost (loss of knowledge power, codification effort), extrinsic benefit (org reward, image, reciprocity), intrinsic benefits (knowledge self-efficacy, enjoyment in helping others), context (pro-sharing norms, generalized trust, identification) | Electronic knowledge repository (EKR) use |
| Yli-Renko et al. (2001)                  |                                                                  | Social interaction, relationship quality, customer network ties       | Knowledge acquisition (full mediator) and knowledge exploitation (new product dev, tech distinctiveness, sales cost) |
| Chou et al. (2006)                       | Structural (S), cognitive (C) and relational (R) (case study)     | S: Technical source and funding ties, human capital tie, business interdependencies tie  
R: trust (reputation, experience, pre-existing relationship  
C: prior knowledge and experience | IT outsourcing decision |
| Newell et al. (2004)                     | Structural (case study)                                          | External bridging and internal bonding                                 | Knowledge integration                                      |
| Perry-Smith (2006)                       | Structural (S)                                                  | Network ties (weak), network centrality, closeness.                   | Individual creativity                                      |
| Liao & Welsch (2003)                     | Structural (S), cognitive (C) and relational (R)                 | S: Number of ties  
C: Recognition  
R: Support | Entrepreneurial growth aspirations |
Social Capital Theory

1998), inter-organizational arrangement (e.g. Baker, 1990), inter-firm networks (Uzzi, 1997), community (e.g. Coleman, 1988; Putnam 2000), society (e.g. Putnam, 1995), country (e.g. Knack & Keefer, 1997) and geographic region (e.g. Cooke, 2007; Fukuyama, 1995). The different levels of analysis are also evident in information systems research where social capital has been conceptualized and studied at the individual level (e.g. Wasko & Faraj, 2005), team level (e.g. Arling et al., 2005) and firm level (e.g. Patnayakuni et al., 2006). Few key researchers however directly addressed the question of whether social capital is an individual or collective concept. Putnam said that it is both an individual and collective property which has a private and public face and which can be simultaneously a private and a public good, while Portes defined it as being individual, and Bourdieu recognized individual social capital as a collective resource used for individual purposes (Yang 2007). This divergence can be resolved by treating social capital as the “properties of a collective entity that an individual member can make use for advancing his or her own interests” (Yang, 2007, pp.21).

Although many researchers take it for granted that social capital is collective since social relations between multiple actors is a necessary condition for its existence, many social surveys in fact measured social capital implicitly at the individual level (Yang 2007). Some researchers, for example Reagans and Zuckerman (2001) who wanted to study social capital at the R&D team level, have aggregated individual level social capital items or measures into a collective one. Similarly, Leana and Van Buren (1999) definition of organizational social capital includes the characteristics of individual social relations within the firm, along with members’ levels of collective goal orientation and shared trust, leading to successful collective action. This discrepancy is due to the difficulty of measuring a collective construct and the need to collect data at the individual level, such as employee or manager and aggregating the result to a collective level, such as team or network of organizations.

POTENTIAL BENEFITS AND RISKS

It is important to note that social capital, like any other type of capital, carries benefits and risks, the former being more emphasized in the literature than the latter. According to Adler and Kwon (2002), social capital has three direct benefits. The first is information from a broader source of information with quality, relevance and timeliness. The second is that it is a source of influence, control and power. The third benefit is solidarity. Nahapiet and Ghoshal (1998) highlighted two main consequences of social capital for action. The first is that it increases the efficiency of action by reducing the costs of transactions and second, it encourages cooperative behavior which facilitates the development of new forms of association and innovation, leading to the development of intellectual capital. Moreover, social capital facilitates the resolution of collective problems since it facilitates cooperation and information dissipation (Putnam, 2000).

However, social capital can carry certain risks. The investment in establishing and maintaining social relationships may be cost inefficient. The ingroup solidarity or embeddedness may reduce the flow of new ideas into a group, causing parochialism and inertia (Gargiulo & Bernassi, 1999). Tight-knit communities may create free-riding problems and obstruct entrepreneurship (Portes, 1998). Strong identification with the smaller group may result in fragmentation of the broader whole (Adler & Kwon, 2002). Effective norms, which are a powerful form of social capital facilitate certain actions but constraint others; they can prevent innovativeness in an area, such as deviant actions that harm others but also deviant actions that can benefit everyone (Coleman, 1988).

To weigh the benefits and cost of social capital on an organization, there is need to focus mainly
Social Capital Theory

on the net impact on the structural dimension of social capital, which is the key dimension in the Nahapiet and Ghoshal (1998) model. On one hand, a social network characterized by strong ties, high density, and network closure (relational embeddedness), fosters trust, norms, control, individual relationships, consistency, trustworthiness, availability, accuracy, richness and affordability of information, and cooperation (Burt, 2005). On the other hand, a social network characterized by weak internal ties, low density, structural holes, and with a high degree of brokerage has access to alternative opinion/practice, information variation, creativity, and new idea generation (Burt, 2005).

FUTURE TRENDS

As a socio-technical domain, information systems research has and will benefit from adopting the social capital theory. This theory has been applied in multiple information systems research areas which include knowledge sharing (e.g. Levin & Cross, 2004; Wasko & Faraj, 2005), knowledge acquisition and exploitation (Yli-Renko et al., 2001), supply chain integration (e.g. Patnayakuni et al, 2006), project management (Brookes et al, 2006), innovation (e.g. Ahuja, 2000) and others. However there is still a great potential for IS research to adopt social capital as a theory. Balijepally at al (2004) identified four general information systems research areas where social capital is a sound potential theoretical basis for studies and they are: IS outsourcing, software development, IT-based interorganizational linkages and organizational knowledge management. According to Balijepally at al (2004) social capital can be the basis for analyzing outsourcing relationships and partner selection and governing structures. Business process outsourcing and offshore outsourcing are two emerging phenomena which would benefit from social capital research. Moreover, in the area of software development where the shift is to team-based collaborative approaches, reflected in the agile software development methodologies, social capital can be used to study the resources embedded in the social relations between agile project team members such as trust and shared norms and their impact on the project success. Social capital with its induction of cooperative behavior and reduction in transaction cost can be studied as an asset in IT-based interorganizational linkages. Finally, organizational knowledge management research can benefit from the study of social networks, which are a major conduit for information and knowledge along with the role of shared narratives and language, trust and obligations as resources for knowledge sharing. A currently emerging information systems area where social capital is a suitable theoretical lens is social computing or web 2.0. The structural dimension of social capital can be used for example to study the impact of online social networking tools on online and offline social relations (Ellison et al, 2007) while the relational dimension can be used to study the motivation for participation in online communities (Parameswaran & Whinston, 2007).

CONCLUSION

In this chapter there was an attempt to synthesis seminal research on social capital and focus on the relevant literature for information systems research. A summary of key concepts was introduced and a framework developed by Nahapiet and Ghoshal (1998) was presented. It was followed by an inventory of information systems research which has conceptually and empirically relied on the social capital theory to explore the relation between information technology and relevant concepts like collaboration, knowledge sharing, creativity and technology use. Given that most literature focus on the potential benefits of social capital, it was important to point out the embedded risks that it can carry. The contention about
whether social capital is an individual or collective entity was briefly addressed along with the different levels of analysis, highlighting that social capital can be treated as a collective entity with collective benefits or a collective entity used by individual members of a social network for their own benefits. At the group level however, social capital is mainly measured at the individual level and then aggregated. Finally, social capital theory does not only provide a theoretical perspective for information systems research, but can also be used to study practical implications of technology.

Implications for Information Systems Research

Social capital theory presents itself as a sound perspective for studying any information system related topic affected by social relations and the resources embedded in them. It has been effectively used to study the relation between information and communication technology (ICT) and its effects on social network and relationships between individuals, teams, business units and even firms. It also provides a lens to study the assets embedded inside those social networks such as trust, reciprocity, mutuality and support and the benefits they can generate. Social capital theory is valuable in research areas with a focus on communication, collaboration and information flow such as knowledge creation, knowledge sharing and innovation.

Implications for Practice

Social capital can be a valuable asset for organizations and managers should try to foster it by encouraging social interactions between employees, business units, regional offices and even with business partners. However, as discussed earlier, managers should consider the value of the two key characteristics of the social network structure or the structural dimension of social capital: bonding or network closure and bridging or structural holes given that each one has a different contribution to the organizational goal and each requires a different type of investments (Adler & Kwon, 2002). Managers can use information technology such as online social networks, virtual communities, chat rooms, videoconferencing and other technologies to create the opportunity for social interactions. Finally, technology can be used to map internal and external social networks at individual or collective levels and provide managers a better understanding of how information, knowledge and other assets can be flowing.

REFERENCES


Social Capital Theory


Sherif, K., Hoffman, J., & Thomas, B. (2006). Can technology build organizational social capital? The case of a global IT consulting firm. *Informa-
Social Capital Theory


KEY TERMS AND DEFINITIONS

**Cognitive Dimension:** Represents the shared context and understanding necessary for sharing information in a social network.

**Network Closure:** A social network characterized by a high number of ties between nodes.

**Open Structure:** A social network characterized by a low number of ties between nodes.

**Relational Dimension:** Represents the assets rooted in the social network such as trust and reciprocity.

**Social Capital:** Resources found in social relations that would benefit individuals and communities in the form of support, solidarity, access to information and influence.

**Social Network:** The network of ties which represent relationships between individuals (nodes) in the form of friendship, business relationships or other social relations.

**Structural Dimension:** Represents the configuration and characteristics of the ties of a social network.

**Tie Strength:** Defined by the amount of time, the intimacy, the emotional intensity and the reciprocal services between two network nodes.