SOCIAL CAPITAL AND IT AS PREDICATES OF COLLECTIVE MINDFULNESS AND BUSINESS RISK MITIGATION: A GROUNDED THEORY DEVELOPMENT

Completed Research Paper

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Abstract

This study explores the idea that an organization's internal social capital may underpin its corporate risk mitigation dynamic. We examine factors such as standard work routines, dense personal networks and shared understandings existing within the organization as antecedent to two specific aspects of Collective Mindfulness, being Commitment to Resilience and Deference to Expertise. We further examine the role played by the information systems platform deployed by the firm in amplifying these dynamics. We then examine the impact of these two aspects of collective mindfulness on the Risk Mitigation efforts essayed by employees vis-à-vis both the marketing and the operational functions of the firm. All these dynamics are explored using grounded theory methodology and the case study approach, based on interview data collected at a global commercial receivables management firm. Finally, managerial implications and future avenues of research flowing from insights presented in this paper are discussed.

Keywords: Social Capital, Collective Mindfulness, IT Appropriation, Risk Mitigation, Commitment to Resilience, Deference to Expertise, Internal Social Capital, Organizational Social Capital.

Introduction

The social capital perspective has been employed to examine issues as diverse as employee turnover (Shaw et al. 2005), organizational alliances (Tsai and Ghoshal 1998) and market networks (Walker et al. 1997). It has also been used to examine the antecedents and effects of IT usage, something that has produced entire areas of research such as knowledge management and collaboration engineering. A wide range of organizational outcomes, such as innovation (Inkpen and Tsang 2005), organizational learning (Uzzi and Lancaster 2003) and group dynamics (Oh et al. 2004) have been examined in the context of social capital, information technology or the conjoint effect of these two artifacts.

One issue that has failed to receive much attention in prior literature is of the social capital underpinnings of Collective Mindfulness. This is curious, since Collective Mindfulness has been developed in prior literature explicitly as a collective property and in an organizational setting, that of high risk organizations (HROs). Also, whereas much research conducted from a social capital perspective is concerned with organizational and corporate outcomes, few if any papers explicitly make the link between social capital and corporate risk mitigation.

These are the two gaps in the literature which are addressed by our study. Firstly, we examine an organization's internal social capital as antecedent to two specific aspects of Collective Mindfulness, being

"Commitment to Resilience" and "Deference to Expertise." Whereas these two aspects of Collective Mindfulness have been widely studied in the literature, and are recognized as being collective organizational properties, they have never, as far as we know, been examined from a social capital perspective. Our research supplies this gap in the literature. Based on prior literature, we develop Commitment to Resilience in terms of adaptability and operational flexibility and examine how these qualities are underpinned by the organization's internal social capital. We then examine the role of the IT system used by organizational personnel in amplifying the relationship between the organization's internal social capital and its organizational commitment to resilience. Similarly, we develop Deference to Expertise in terms of the willingness and ability of personnel to avail of expertise existing within the organization to deal with operational situations, and the role of information technology in facilitating access to such expertise and thereby of moderating that relationship.

The second gap in existing literature which this paper addresses is of social capital as a predicator of a corporate firm's risk mitigation dynamic. Studies have occasionally explored factors like knowledge management (Lessard and Zaheer 1996) related to social capital as factors that may mitigate risk, and addressed issues related to interpersonal risk (Edmondson 2002); yet there is virtually no literature that approaches the question of risk mitigation explicitly from a social capital perspective. By drawing a link between constructs pertaining to organizational social capital and the organizations risk mitigation dynamic, we supply this gap in the literature.

This paper is structured as follows: the next section presents a resume, in four subsections, of the broad streams of management literature upon which this study is based. The following section describes the focal firm's business environment, the data collected and the methodology employed to analyze the same. We then present the model depicting our interpretation and understanding of the dynamics described above and a set of propositions based on that. The concluding section deals with the limitations and managerial implications of this study

Conceptual background

Our research draws upon four streams of management literature: Social capital, Collective Mindfulness and Risk Mitigation

Social Capital

Social capital is defined as "the sum of the actual and potential resources derived from the network of relations possessed by an individual or social unit" (Nahapiet and Ghoshal 1998). It refers to a mutually understood sense of perceived obligations, expectations and normative conduct that emerges through social processes and interactions (Adler and Kwon 2002; Poppo and Zenger 2002). Thus, social capital promotes mutually beneficial norms such as flexibility, solidarity, and information exchange that can be appropriated for individual or organizational benefit (Poppo and Zenger 2002).

Prior research recognizes that social capital may exist and be appropriable at the organizational level (Leana and Van Buren 1999; Oh et al. 2004). Organizational social capital is defined as "a resource reflecting the character of social relationships within an organization" which is "realized through members' levels of collective goal orientation and shared trust" (Leana and Van Buren 1999). Thus, social capital accrues from relationship networks, whether social, market or hierarchical (Adler and Kwon 2002), and may reside in individuals or collectivities. The antecedents and impact of social capital in organizational settings have received much attention. Nahapeit and Ghoshal (1998) study social capital as antecedent to intellectual capital in organizations, while Tan and Sia (2006) study its impact on organizational culture in the context of outsourcing relationships. Tsai (2000) investigates its role in resource flow and the evolution of inter-unit linkages, while Patnayakuni, Seth & Rai (2006) aver that work routines and informal interactions enable information flow.

We add to this literature in organizational social capital by developing an understanding of the manner whereby social capital that exists internally within an organization, residing in dense personal networks and relationships, standard work routines and shared understandings and semantics among organizational members, may produce certain functional qualities (commitment to resilience and deference to expertise) identified in prior literature as characteristic of collective mindfulness in organizations. We extend this analysis to present an understanding of how these functional qualities, with their social capital related underpinnings, support a business firm's risk mitigation dynamic.

Collective Mindfulness

As a construct pertaining to management research, Collective Mindfulness developed from research on high reliability organizations (HROs). High reliability organizations are those that function in complex, potentially hazardous environments (Perrow 2009; Roberts 1990) where even marginal error can have catastrophic consequences for the organization itself or even for society at large (Roberts et al. 1994). In such environments characterized by zero error tolerance, risk mitigation processes are often crucial for the organization's survival (Grabowski and Roberts 1999). Traditionally, HROs were viewed as characterized by two predominant features: complex environments, generally interpreted in the sense of being technologically complex; and high interdependence of processes and roles, termed tight coupling (Roberts 1990). However, high levels of technology are becoming increasing commonplace and roles and work processes have undergone significant transformations with the emergence of phenomena like outsourcing and virtual teams. Consequently, recent management literature indicates that a much wider set of organizations (Butler and Gray 2006; Grabowski and Roberts 1999) are now being examined in the light of insights gleaned from research in HROs. Examples of HROs include aircraft crew operations, fire-fighting crews and air traffic control operations (Grabowski and Roberts 1999).

Reliability in such situations has been defined as "the capacity to continuously and effectively manage working conditions, even those that fluctuate widely and are extremely hazardous and unpredictable" (Bigley, 2001). Literature on HROs posits numerous qualities or functionalities that would conduce to instituting reliability in HROs. For instance, Grabowski identifies four characteristics that do so, including prioritization of safety and reliability; designing for redundancy in personnel and technology; instituting a decentralized organizational culture; and fostering interpersonal trust among potential actors. One such framework that has gained wide acceptance in the literature is that proposed by Weick (1999), which posited Collective Mindfulness as a critical factor conducing to reliability in HROs. and identified five processes characterizing the construct: Preoccupation with failure; Sensitivity to operations; Reluctance to simplify interpretations; Commitment to resilience; and Fluidity of decision-making structures.

"Preoccupation with failure" is attentiveness to minor errors that other organizations may not notice or ignore. Failure being catastrophic in HROs, organizational personnel must be sedulous in detecting minor errors or the possibility thereof, drawing lessons from such instances, and disseminating them within the organization (Weick et al. 2000; Zhao and Olivera 2006). "Sensitivity to operations" refers to ensuring that close attention to operations is an enterprise-wide habit in HROs (Weick et al. 2000). HROs deploy resources to ensure that many actors comprehend events and use their separate expertise to analyze them. This implies intense, ongoing interaction among them about operations and workplace characteristics (Weick et al. 2000; Zhao and Olivera 2006). A "reluctance to simplify interpretations" emphasizes the caution with which HROs must address every detail of the external environment, being careful to make no simplified assumptions (Weick 2005). This implies both greater effort over minor issues and ready availability of many types of expertise (Weick et al. 2000). Prior literature recognizes that flexibility rather than set routines renders an organization more reliable in volatile environments (Bigley and Roberts 2001) and that the constant reevaluation of procedures and structures that ensues from the effort to address every detail of the environment engenders organizational flexibility (Weick et al. 2000).

"Commitment to Resilience" is often understood in terms of "the capacity to cope with unanticipated dangers after they have become manifest; learning to bounce back" (Weick et al. 2000). In HROs, which cannot afford the luxury of hindsight, resilience is additionally associated with advanced levels of prognostication and the ability to improvise responses to emerging situations, often by rapid pooling of available expertise (Weick et al. 2000). A capacity for improvisation increases foresight, since "the capacity to act on an issue enhances the ability to attend to such an issue in a mindful manner" (Levinthal and Rerup 2006). Thus, adaptability and flexibility are critical components of organizational commitment to resilience, a view that we develop in this paper.

"Fluidity of decision-making structures," also known as "Deference to expertise" (Weick and Sutcliffe 2006), refers to the "readiness to relax formal structure so that authority for action can flow in times of crisis to the individuals and units having the requisite expertise to deal with the problem at hand" (Swanson and Ramiller 2004). Apart from supplying solutions, a readiness to migrate decision making or advice-giving arguably institutionalizes operational flexibility and adaptability, since organizations must ensure that appropriate search and access mechanisms are available to their personnel. We address this point, which has not been explicated in prior research.

In relation to these five processes that characterize Collective Mindfulness in organization, Weick (2005) indicates that the first three processes are preemptive and the latter two are mitigative, by making the observation that an HRO's "attempts to prepare for the unexpected through attention to failure, simplification and operations, coupled with their attempts to respond adaptively to the unexpected through resilient action and deference to expertise, make perfectly good sense" (Weick 2005, p.435). These insights are consonant with our own observations, when we find the latter two processes apposite to the risk mitigation dynamic of the firm; further, our understanding of these processes in terms of adaptability and flexibility is also harmonious with this insight.

Appropriation of Information Technology

The foundational concern of the field of Management Information Systems is to examine the antecedents and effects of the use of information technology in various settings. While much of the literature on antecedents is based on the technology acceptance model (Davis 1989) and its extensions, there is some literature which approaches that issue from the social capital perspective; for instance, status-seeking and the expectation of pleasure or entertainment, in addition to perceptions of utility, have been identified as actuators of technology adoption (Venkatesh and Brown 2001).

However, the imprint of the social capital perspective is found to a greater degree in the stream of literature connected to the effects of the usage or appropriation of information technology. This stream of research is concerned with issues as diverse as collaboration technologies (Katz and Te'eni 2007), knowledge management (Dong-Gil and Dennis 2011; Nunamaker et al. 2001); virtual and distributed teams (Ahuja and Carley 1999) and a myriad other fields of inquiry. These areas of inquiry are typically concerned with performance outcomes as impacted by the use of information technology; in other words, the moderating effect of information technology is generally the underlying theme. Issues directly related to social capital, such as trust (Jarvenpaa and Leidner 1999), team cohesiveness (Jarvenpaa et al. 2004), skill development (Majchrzak et al. 2005) and interpersonal traits (Brown et al. 2004) have engaged the attention of researchers in the context of the use or appropriation of information technology. The appropriation of information technology has been shown to have an impact not only on group and organizational outcomes but also on work processes within the group and organization (Wayne and Zhang 2004). IT appropriation may cause new practices and process structures to be put in place (Knox et al. 2007), may cause a move from technology adoption to technology adaptation (Majchrzak et al. 2000), modify face-to-face behavior between individuals subsequent to use (Hoxmeier and Kozar 2000). These effects are directly relevant to our study, as is the literature linking information technology to competitive advantage, as when Rai (2010) examines leveraging IT capabilities and process capabilities to enhance inter-organizational relationships, and when Pavlou (2010) examines how the capacity of IT to enhance improvisation capability leads to competitive advantage expressly in turbulent environments.

There, thus exists a vast body of literature that approaches the subject of technology appropriation from the social capital perspective and is concerned with group effects and organizational outcomes. We add to this literature by examining the effect of organization's information systems on the processes whereby two aspects of collective mindfulness, namely commitment to resilience and deference to expertise, arise from and are sustained by the internal social capital of the organization. We posit that the use of information technology by organizational personnel enhances or amplifies these processes and ultimately conduces to improved market risk mitigation by the corporate firm.

Risk Mitigation

Literature in the field of risk mitigation has identified numerous types of uncertainty, developed various typologies to enhance our understanding of these, and presented theories of the way firms respond to these uncertainties. One key dimension often used as the basis to analyze or prognosticate firm response is the level at which the uncertainty exists, ie., whether the uncertainty is firm-specific or endemic to the market (Beckman et al. 2004; Brealey and Myers 2003). This is sometimes referred to as systematic (market) risk and non-systematic (unique) risk (Brealey and Myers 2003). In the former case, research on risk mitigation has often approached the question from the perspective of reducing the difference between revenue expectation and actual inflow (Fama and Jensen 1983; Miller and Reuer 1996). In the latter case, a large body of literature has inquired into the determinants of risk taking behavior in market environments and differentiated between situations of where market risk is of demand uncertainty and where it is of competitive uncertainty (Burgers et al. 1993).

While this literature focuses on uncertainty that is ambient or circumstantial, a major stream of research enquires into uncertainty as arising from the initiatives and actions essayed by organizational personnel in the search for rent or other benefits (Lessard and Zaheer 1996; Mosakowski 1998; Sitkin and Pablo 1992; Song et al. 1999). Palmer and Wiseman (1999) present a typology of risk that combines these two approaches, by parsing out two dimensions of risk: proactive risk, which refers to managerial risk taking; and organizational risk, which refers to income stream uncertainty.

Apart from improved financial and performance outcomes, the impact of a perception of risk on factors such as organizational learning (Ingram and Baum 1997) and team participation (Edmondson 2002) have been examined in prior literature. A variety of organizational and individual responses to various types of uncertainty have also been identified, including strategic initiatives such as market networking (Beckman et al. 2004; Gulati 1995). However, there is a paucity of literature that views interpersonal factors such as relationships, interaction, social capital or collective mindfulness as factors that could form the basis of a response to uncertainty, rather than as factors that are impacted by perceptions of uncertainty. One study that does so is Lessard & Zaheer (1996), who examine the role in risk reduction of operational flexibility in the volatile field of currency markets. Another is Grabowski & Roberts (1999) who examines the role of factors such as communication, trust, reciprocity and company culture on risk mitigation in virtual organizations.

We add to this sparse literature by approaching the question of risk mitigation in a risky corporate environment from the perspective of social relationships. We examine how social capital can underpin collective processes characteristic of mindfulness in organizations, which in turn serve to mitigate the firm's business risk. We examine the impact of these processes on business risk associated with both the sales and the operations functions of a corporate firm operating in a risky market environment.

Data and Methodology

The corporate which is the setting and focus of our study is a private Global Commercial Receivables Management (GCRM) firm which provides commercial debt collection services in the United States and nearly 200 countries worldwide. It operates through its offices in the US, China, Korea and Europe and a global network of more than 400 affiliate attorneys and agencies.

The Commercial Receivables Management industry focuses on providing services to commercial establishments that have supplied goods or services to a customer and have not received payment within the stipulated period. Such firms have little or no expertise in debt collection; they therefore engage a professional receivables management firm to contact and interact with the defaulter and recover the dues. As the cases handled are exclusively those of defaulters, the business environment in this field is, by its very nature, risky. Our focal firm operates in this risky environment and outperforms the market in its field: it manages to collect, in terms of dollar revenue, approximately 53% of debts that are assigned to it by its clients, whereas the industry average, according to company officials, is around 47%. Approaching the question from the perspective of social capital theory, we present an understanding of the dynamics that underlie this performance.

The case study approach and the grounded theory methodology enunciated by Glaser and Strauss (1967) were employed in conducting this study. We followed that procedure in conjunction with Eisenhardt's (1989) theory building approach. While some argue that grounded theory approach requires entering the field without any preconceived notions so that "data can speak for itself," other scholars question whether this is at all feasible and whether it is even desirable (discussions at Grounded Theory Methodology Workshop held in conjunction with ICIS 2008, Paris). As Eisenhardt (1989) indicates, prior preparation in terms of outlining the major constructs of interest allows one to not only engage in theoretical sampling but also allows delineating the scope of the study. This approach, where one starts with some prior construct understanding, has been employed in several MIS studies (Levina and Ross 2003; Levina and Su 2008; Levina and Vaast 2008), and has also been proposed recently in the literature as Front-end-loaded GTM or FGTM (DeLuca et al. 2008). It was this approach we followed when we entered the field with a grasp of existing literature on social capital and collective mindfulness.

Our dataset comprises of a number of semi-structured interviews that we had with various personnel belonging to the focal firm. Twenty-two people belonging to a range of managerial levels and functional areas within the firm were interviewed and around sixty-six hours of interviews were recorded. Those interviewed included the President, Vice-President and CEO of the company; the Director of the IT department and one of his project managers; and the Executive Director of human resources. From the domestic marketing department, which handles the US clientele, we interviewed the Director of marketing, two Regional Vice-Presidents, and two Relationship Managers who service the clients. From the domestic operations department, which handles debtors and makes collections in the US, interviewees included the VP and Asst. VP of operations and two Collectors. Among those handling international business, we interviewed the Director of global markets; the Vice-Presidents of global marketing and international collections; and two personnel handling the collections function.

Most interviewees were interviewed for several hours over multiple sessions. Even as the interviews progressed, certain patterns emerged and ideas regarding underlying dynamics came forward. This resulted in continuous interplay between data collection and data analysis, which allowed us to refine our thinking and to explore new ideas in subsequent interviews with the respondents.

After being recorded, the interviews were transcribed; we pored over the transcriptions and coded various respondent statements into constructs that helped us categorize and identify the commonalities that came up during the interviews. This was done in a manner similar to that described by Thomas (2001), by first identifying various possible constructs and then the possible relationships existing between them. We thus developed an understanding of the functioning of the company and the factors that impact its operational performance and organizational outcomes. We relied on the inductive generation of theory from data to gain a theoretical insight into the processes underlying the operations of the company. We thus built a tentative theory and created a working model based on this understanding. We then returned to the data and, in the procedure described by Eisenhardt (1989) and also used by Levina and Vaast (2008), sought further confirmation of our ideas in the statements made by the respondents. We thus progressively refined our understanding and developed the model presented in this paper.

Data Analysis

The model described here presents an understanding of the processes whereby business risk is mitigated by the firm under focus. We posit that two constructs identified in prior literature (Weick et al. 1999) as characterizing Mindfulness in organizations, being "Commitment to Resilience" and "Deference to Expertise," arise from the internal social capital of the focal firm; that the use of IT conduces to this phenomenon; and that these two constructs in turn conduce to improved levels of Risk Mitigation in the company's relations with clients (its marketing function) and debtors (its operational function). The Model is depicted in figure-1 and the constructs employed therein, with their functional definitions, are listed in table-1. These functional definitions are derived from prior literature in the manner delineated for each of these constructs at the beginning of the data analysis section pertaining to it.

Table 1. Functional Definitions of the Constructs used in the Model

Sl. No	Construct	Definition	References
1	Organizational Internal Social Capital	Internal social capital of the organization, abiding in standard work routines, dense personal networks and shared understandings among organizational personnel.	Leana & Van Buren (1999), Nahapiet & Ghoshal (1998)
2	Commitment to Resilience	Willingness and ability to respond adaptively to non-routine or unexpected contexts.	Levinthal and Rerup (2006), Weick (2005)
3	Deference to Expertise	Willingness and ability to resort in times of need to those having requisite expertise to help.	Butler (2006) Swanson & Ramiller (2004)
4	Risk Mitigation	Reduction of the extent of uncertainty about "whether potentially significant and/or disappointing outcomes of decisions will be realized"	Sitkin and Pablo (1992, p.10)

Social capital is a resource "derived from the network of relations possessed by an individual or social unit" (Nahapiet and Ghoshal 1998). It is therefore something that must exist between a set of individuals, and which can be a potent resource for collective benefit; the concept of group or collective social capital is well established in management literature (Bolino et al. 2002; Oh et al. 2004). Leana and Van Buren (1999) develop the concept of organizational social capital existing at the level of the larger collective, and define it as "a resource reflecting the character of social relationships within an organization," which is "realized through members' levels of collective goal orientation and shared trust" (Leana and Van Buren 1999, p.538). Based on this, and drawing on the understanding of social capital as abiding in dense personal networks, trust-based relationships and mutually understood norms (Adler and Kwon 2002; Nahapiet and Ghoshal 1998; Poppo and Zenger 2002), we define organizational internal social capital as social capital existing between members of the organization, abiding in standard work routines, dense personal networks & shared understandings.

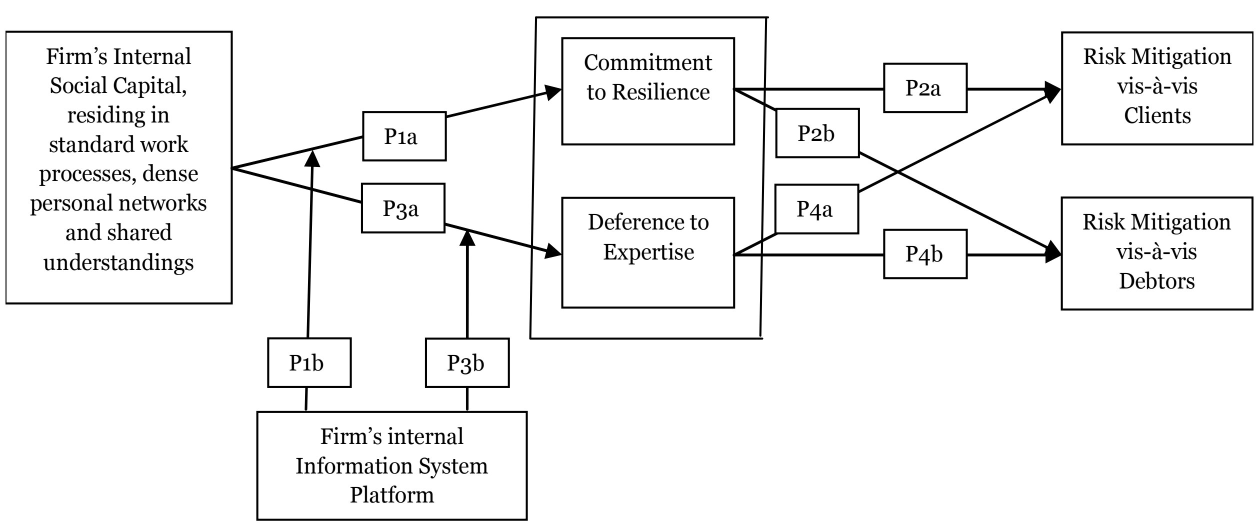

Figure 1. Model capturing a risk-mitigation dynamic in the focal business firm

Table 2. Data indicating that the firm's Internal Social Capital abides in standard work routines, dense personal relationships and shared understandings		
Sl. No	Representative quotations	1st order construct
1	If (an external entity) calls up & someone is sick or on holiday, that doesn't mean (the external entity) has to wait; the beauty of the way it is set up is that they would be called back	Standard work routines (Structural social capital)
2	(Information) sharing is mechanically done......by the (employee who) files his contact report in (the IT system). Then anyone who wants ....can access it.	
3	I was on the phone when the (external entity) called me back, and in such cases, the system automatically jumps the call to another team member.	
4	When calls come in, whoever is free picks up.	
5	Helping each other is very much our culture. Every employee is both required to and seems to desire to help other departments, our clients, and each other.	Dense personal networks (Relational Social Capital)
6	This is a small environment. If you help me out today, next week you need help I will be there. You need to have that rapport to have success.	
7	You do not and cannot know everything about the work system or the technology. I can go back and ask (colleagues when I need help).	
8	(Top management may) tell a story about something they experienced, how they handled it. Not necessary at that moment I go through that situation. If I do, I can fall back on something they've learned.... (it) gives you some insight.	
9	A lot of employees share the company's core values and are good at being self-managed at following them.	Shared understandings and semantics (Cognitive Social Capital)
10	There is a shared language across the company, maybe 75% shared understanding. There is a shared culture across the company.	
11	....We do you have a common language. We understand it properly 99.9%. I can go into the file, read the note and know exactly what happened.	
12	Specific words, terms, acronyms and jargon are well understood....Everyone understands everyone else very nicely.	

Prior literature (Nahapiet and Ghoshal 1998) identifies three dimensions of social capital, viz. structural, derived from the structure or pattern of social connections; relational, which is created and leveraged through interpersonal relationships; and cognitive, which refers to shared understandings, worldview and semantics, which often arise from operating in shared contexts. Respondent statements amply evidence the existence of all these dimensions of social capital, and table-2 tabulates a representative sampling of these. The standard work routines that have been established, and as we shall see in later section have also occasionally developed informally, are a strong manifestation of the existence structural social capital. Statements indicating the existence of dense personal networks and relational social capital among company personnel are pervasive in the data, as are statements indicating that shared understandings and semantics obtain among company personnel, indicating the existence of cognitive social capital. These qualities and dimensions of social capital underpin the various first order constructs derived from data and elucidated in succeeding sections.

Commitment to Resilience

While "Commitment to Resilience," a key aspect of collective mindfulness (Weick et al. 1999), is often understood in terms of the ability to rebound from failure (Fiol and O'Connor 2003), several researchers have viewed it in terms of adaptability and flexibility: Levinthal (2006, p.505) defines resilience as "the ability to contain and manage real-time unexpected events in an adaptive, flexible fashion" and Fiol 63 (2003, p.63) associates commitment to resilience with "a willingness to engage in experimental activities," while Weick (2006, p.519) views it as being "about stability as a goal and vividness as the means to achieve it." We use this perspective, of organizational commitment to resilience being manifested in adaptive, flexible behavior, and define it, as mentioned in table 1, as being the willingness and structural ability to respond adaptively to non-routine contexts. This quality enables the organization to garner custom and clientele by providing services customized to specific, non-standard client requirements, and enables personnel to deal competently with cases and situations that they have no prior experience of.

For a collections management firm, operational flexibility, defined as the ability and willingness to adapt to changes (Dwyer et al. 1987), is important due to the diversity of situations and customers that obtains. Almost every respondent identifies flexibility as a core value of the firm and numerous statements attest to its presence and market value: "We try to sell our flexibility, our ability to customize pretty much everything to a client's needs." Tan and Sia (2006) identify four dimensions of flexibility in an outsourcing context, including 'modifiability' and 'robustness.' They define 'Modifiability' as a firm's ability to customize existing product attributes or alter service composition to suit clients and 'Robustness' as the ability to manage variations and tolerate external changes.

Certain practices prevalent in the focal firm indicate the existence of both these attributes. The firm customizes its services to meet client stipulations: "Information on how clients want their file handled is communicated to the collector, so that he can handle their files in the required manner." This customization relies heavily on the firm's IT system for its implementation: "Our (IT system supports) listing "special handling instructions" attached to the client number (which) shows up on every file of that client when we pull them up on the system. A special screen shows them ..." Similarly, the company customizes the format, mechanism and frequency of reports presented to clients, again relying on information technology for the purpose: "Client reporting is customized, whether it is setting up a series of Qs so that reports get sent to clients or training them to access reports online…"

Table 3. Data indicating that the firm's internal social capital conduces to operational flexibility and that this dynamic is facilitated by the use of IT.

Sl. No	Representative quotations	1st order construct
1	Flexibility: end of story. We can build a response for most situations.	Flexibility
2	If we find out what our (client) lacks, we'll work to build that service for them	
3	We try to sell our flexibility, our ability to customize pretty much everything to a client's needs.	
4	Information on how clients want their file handled is communicated to the collector, so that he can handle their files in the required manner.	Customization of services and reporting routines
5	I spoke to the client and he wants this to be done this way or he would like to see this change made (We do that).	
6	We find out what are their reporting needs are (and meet them).	
7	Our (IT system supports) listing "special handling instructions" attached to the client number (which) show up on every file of that client when we pull them up on the system. A special screen shows them ...	IT Facilitation of customization
8	If our IT staff understands the client's needs and expectations, we can set up systems or data capturing methods to gather that information.	
9	Client reporting is customized, whether it is setting up a series of Qs so that reports get sent to clients each day or training them to access reports online	
10	Standing in is part of company's process…. when someone goes on vacation, they… turnover their work to someone else	"Standing in"
11	If the client calls up (when someone is away) that does not mean he has to wait; the beauty… is that (the client is serviced by someone else)	
12	We need to trust each other to be able to handle our customers professionally	
13	If a coworker is not at his desk and I get a client call, I can pull up the system and see what he did.	IT facilitation of "standing in"
14	I read the old case notes (on the system) carefully. I try to make sure that I continue on the same track that the previous collector was going.	
15	(The system) captures all types of notes…what is a wonderful thing, is that it "connects" (you) to a certain customer (whom you are interacting with).	

16	Trust of sharing work-related information is very strong within a group	Normative information sharing
17	Talking about clients is (necessary); clients (need to) be updated as needed. Everyone has to know what is happening.	
18	Sometimes clients tell you things you feel you should share with (others)	
19	I may find out (information pertaining to) somebody else's geographical area (Sales territory). So we share that information with each other.	
20	I don't think we can really, fairly service our clients if we cannot (internally understand each other and work well together).	
21	Sharing is mechanically done...... by the sales person (who) files his contact report in (the IT system). Then anyone who wants to have, can access to it.	IT facilitation of information sharing
22	The system requires the entry of notes, the details of what happened. Everything we do is captured in the notes.	
23	Collectors are required to record every conversation...with clients and debtors in the system; everything (that emerges when) we handle the files.	
24	We have folders in our system for each client, where employees are supposed to put client specific documents and stuff.	
25	With IT, you get better internally at handling situations that come up....We are able to compare and improve things.	

If these utilities relate to "modifiability," then the established norm and company work ethic of "standing in" for coworkers meets the "robustness" criteria. Respondent statements repeatedly indicate that coworkers are willing and able to competently stand in for each other: "We trust each other to be able to handle our customers professionally and handle them well" and that this capability is a source of operational robustness and resilience: "If a client calls up (when someone is away) that does not mean he has to wait; the beauty... is that (the client is serviced by someone else)." The norm of personnel "standing in" for each other is strongly supported by the firm's IT system: "If a coworker is not at his desk and I get a client call, I can pull up the system and see what he did." The system contains the information required for the new person to deal competently and seamlessly with the external party: "(The system) captures all types of notes...what is a wonderful thing, is that it "connects" (you) to a certain customer (whom you are interacting with)."

Numberless statements indicate that this operational robustness draws on social relationships, established norms and mutual understandings regarding mutual assistance and the ready sharing of information: "Talking about clients is (necessary); clients (need to) be updated ... everyone has to know what is happening." Willingness to both share information and aid colleagues is repeatedly evident: "Every employee is both required to and seems to desire to help other departments, our clients, and help each other" and is aided by firm-defined routines connected to the IT system: "Sharing is mechanically done...... by the sales person (who) files his contact report in (the IT system). Then anyone who wants to have, can access to it" and again: "The system requires the entry of notes, the details of what happened. Everything we do is captured in the notes." Thus the IT system facilitates information gathering and retrieval and thus strongly supports operational robustness.

It is thus clear that organizational Commitment to Resilience, manifested in standard practices such as customization and standing in, is predicated on social capital internal to the organization; and that these practices are strongly supported and their effect enhanced by the firm's information system:

> *P-1(a): Organizational internal social capital conduces to operational flexibility in the organization and thus to Commitment to Resilience therein*
>
> *P-1(b): The effect of organizational internal social capital on operational flexibility is amplified by the use of information technology*

Commitment to Resilience and Risk Mitigation

Prior research recognizes the positive effect of collective mindfulness on risk mitigation (Butler and Gray 2006; Roberts et al. 1994), and also that organizations with rigid command structures and high levels of role specificity engender a bureaucratic mindset which limits organizational flexibility (Adler et al. 1999;

Bigley and Roberts 2001). One respondent made a statement exactly reflecting this: "Role rigidity can cause miscommunication between company and client. If everybody stepped outside their roles a little but, those gaps would be eliminated." Consonantly, work routines in the firm lend themselves to both interdepartmental interaction and to personnel from several departments being in contact with external entities: "Everybody touches the clients in some capacity: inside sales, outside sales, other collectors."

Table 4. Data indicating that Commitment to Resilience enhances Risk Mitigation vis-à-vis external entities

Sl. No	Representative quotations	1st order construct
1	Role rigidity can cause miscommunication between company and client. If everybody stepped outside their roles a little, those gaps would be eliminated, and there would be continuity.	Role (operational) flexibility
2	If you have good relations with the operations people, you are more likely to quickly get the answer you want to help your client. That's as important as the outside relationship, the (internal) relationship.	
3	The better (RMs understand collectors problems), the better they can explain to clients what we can do and (avoid) what we do NOT do well.	
4	There is (enough delegation of responsibility) to satisfy people who want the authority to take action.	Employee Empowerment
5	We do not (demand follow-up reports). Its more, "let me know if I need to get back to it. Otherwise, handle it, resolve it."	
6	We empower people to make day-to-day decision in handling the accounts	
7	I decide what to recommend; no one internally tells me what to recommend	
8	Good encounter for client is when the first person they talk to is able to answer and help them. Bad encounter is getting shunted around, people not having the competence or authority to answer or help you.	Client Satisfaction
9	The issues clients bring to us has to be handled at the level (of their entry).	
10	We give lot of freedom to the RM's to do what they need to do to make sure that the clients' needs are satisfied.	
11	(satisfied clients) are more likely to answer questions, reveal requirements and forthcoming internal changes	Client-side Risk Mitigation
12	Client interactions help me get response faster & resolve issues with debtors	
13	Strong relationship with client allows occasional mishaps to be overlooked	
14	Good relationship with a customer gets you an opportunity to correct things that might have not gone right.	
15	We say "Mr. Client….can you (pass on the claims) to us earlier, because that increases the chances of collection?"	
16	Employees have confidence to be innovative (in designing solutions) and are assured of company support	Debtor-side Risk Mitigation
17	Employees have discretionary power even to $5000 if it benefits the client	
18	Collectors have a lot of empowerment and autonomy on making decisions of files, they recommend to close, sue, decide further action.	
19	If we feel that a certain debtor could respond better to another person, we switch calls. We say, why don't you be the second voice? Maybe he will respond better to you than to me.	

The importance of having an understanding of the scope and limitations of other departments is recognized: "The better (RMs understand collectors problems), the better they can explain to clients what we can do and (avoid) what we do NOT do well" as is the importance of receiving cooperation from other departments: "If you have good relations with the operations people, you are more likely to quickly get the answer that you want to help your client. That's as important as the outside relationship, the (internal) relationship." Also recognized is the role of employee empowerment to client satisfaction: "Good encounter for client is when the first person they talk to is able to answer and help them. Bad encounter is getting shunted around, people not having the competence or authority to answer or help you" and consonantly, several statement indicate that company personnel are empowered to make commitments and design innovative solutions to deal better with both clients and debtors. Operational flexibility in this context is clearly related to role flexibility and empowering employees to be innovative.

Numerous statements testify that client satisfaction emerging from these factors significantly helps mitigate risk vis-à-vis the client. Client satisfaction result in repeat business and cross-selling of other services; satisfied clients provide access and references to other potential clients; they more readily share their own information and cooperate with company personnel. These dynamics produce a benign cycle that not only reduces order uncertainty but also reduce non-collection risk at the debtor end: "Client interactions help me get a response faster and resolve issues with the debtors." The most potent manner in which client satisfaction mitigates business risk is by making available better quality claims. Several respondents authoritatively inform us that the single most important determinant of collection outcome is the age of the claim: long-standing debts are far less likely to be collected than recent ones. Satisfaction with previous collection success induces clients to assign claims to the debt collection company at an early date, in the hope of quick success. This mitigates risk at the debtors end (by making collection more likely) and thereby also serves to indirectly mitigate client-side risk by enhancing client satisfaction. Employee empowerment and role flexibility serve to mitigate risk on the debt collection side also. Personnel are empowered to design innovative solutions to debtors in order to receive payments, and also to offer substantial waivers if it elicits significant payment. Collections personnel also avail informally of the help of coworkers in dealing with debtors, something that helps collection since a different range of experience is accessed.

Thus, both client-side (marketing) risk and debtor-side (operations) risk are mitigated through mechanisms related to organizational Commitment to Resilience, which we have defined in preceding section in terms of operational flexibility. Based on this discussion, we propose that:

> *P-2(a): Organizational Commitment to Resilience, defined in terms of operational flexibility, enhances Risk Mitigation vis-à-vis the company's clientele.*
>
> *P-2(b): Organizational Commitment to Resilience, defined in terms of operational flexibility, enhances Risk Mitigation vis-à-vis the company's collection operations.*

Deference to Expertise

The ability to privilege expertise over formal structure when required to deal with operational situations has been recognized consistently as a major component of Mindfulness. Weick (2006, p.519) defines "Deference to Expertise" as "efforts to stabilize attention by routing decisions to experts who are best able to hold on to the intended (goal)" and states that it is "made possible by underspecified structures." Similarly, Butler (2006, p.216) views it as "migration of decisions to expertise resulting from the under-specification of structures" and Swanson (2004, p.516) views it as the "readiness to relax formal structure so that authority for action can flow in times of crisis to the individuals and units having the requisite expertise to deal with the problem at hand." The construct thus requires that expertise exist and that organizational personnel have the motivation and means to access it. Based on this understanding, we define deference to expertise as "the willingness and ability to resort in times of need to those having requisite expertise to help"

The company recognizes that people with long tenure and experience have a rich understanding of the field: "A lot of our understanding of industry processes comes from tenured people" and encourages long tenure: "Part of our company culture is longevity of tenure." Long tenure leads to high levels of trust, comfort and cooperation. It also results in the specific expertise of others being generally known: "I have legal experience, so when the lady handling (this client) wasn't sure about (something), I was there." Further, the company ensures that required skills are available; as one respondent said: "I was hired two years ago because they needed a French speaking executive."

Statements indicating that, when carrying out their work, respondents often privilege expertise over structure and hierarchy obtain regularly: "I don't consult my boss about attorney work since he has not been involved with it. I go to Charley or one of the senior collectors" and again: "I have some legal experience, so when the lady handling our legal desk for this client wasn't sure about something, I was there.” These are consonant with the standard understanding of under-specification of structures being operationally beneficial that obtains in the Mindfulness literature (Swanson and Ramiller 2004; Weick et al. 2000; Weick and Sutcliffe 2006). Thus, policies such as encouraging long tenure and hiring those possessing specific skills like a foreign language ensure that required expertise is available in-house, and personnel are willing and able to access or provide such expertise, disregarding formal structures when expedient. This arises from the organization’s internal social capital, manifest in dense personal networks, trust, solidarity and norms of cooperation.

Table 5. Data indicating that the firm’s Internal Social Capital conduces to the willingness and ability of personnel to avail of in-house expertise, and that IT facilitates access to such expertise.

Sl. No	Representative quotations	1st order construct
1	Part of our company culture is the longevity of tenure.	Long tenure
2	A lot of our understanding of industry processes comes from tenured people .....We have strength in the knowledge of the people doing the actual work.	
3	Those collectors have been around a while and I trust them (to guide me).	
4	I don’t consult my boss about attorney work since he has not been involved with them. For that, I go to Charley or one of the senior collectors.	Bypassing of formal structure
5	I know the (client’s) system, so when in need, the collectors come to me	
6	I have some legal experience, so when the lady handling our legal desk for this client wasn't sure about something, I was there	
7	People come to me and say “Can you make this call to Germany because you can speak German?”	
8	I use these media to interact with (colleagues): phone, email, comp system	IT facilitation of communication and access to expertise
9	(For communication, we) utilize e-mail, phone calls and (IT system)	
10	Everyone seems to support (the system) as the one source of customer information. So they are pretty diligent about updating the notes there.	
11	Chat records and e-mails that you send out get recorded in the client’s “history” on the system we use	

Further, the ability to access and share such expertise within the firm is enhanced by the firm’s IT system. Most respondents report that the IT system is a primary mode of internal communication, apart from its role as the defined platform for information sharing. Notably, since the system captures all information about contact with external entities, personnel are able to identify coworkers who have handled specific cases or clients in the past and approach them for assistance or advice. The system also supports the chat function which makes access to remotely located colleagues easier. Based on the preceding discussion, we propose that:

> *P-3(a): The organization’s internal social capital enhances the willingness and ability of organizational personnel to access expertise regardless of formal structure when expedient.*
>
> *P-3(b): The organization’s IT system enhances the ability of personnel to access expertise existing within the organization*

Deference to Expertise and Risk Mitigation

In the context of Risk Mitigation with regard to external entities, deference to expertise, as defined in preceding sections, is manifest in the willingness and ability of organizational personnel to avail of the expertise of other personnel, regardless of formal structure, when dealing with operational situations.

Table 6. Data indicating that Deference to Expertise enhances Risk Mitigation vis-à-vis external entities		
Sl. No	Representative quotations	1st order construct
1	Whatever happens, we bring it back and share it with everyone. All the time.	Sharing of experiences
2	Specific, unique incidents & stories are shared within the immediate group.	
3	Our department is a closely knit group and a lot of story sharing goes on.	
4	(Co-workers) would explain their success stories or failures to the others… this happened to me and this is what I did.	
5	I feel comfortable going to anyone, high or low, and saying: I came across that before, this is what I did.	Open door policy
6	(Superiors often) tell a story about something they experience and how they handled that. If I do (go through that situation), I can fall back on something they've learned. Just the communication gives you some insight.	
7	If something comes up that I feel the (people of another department) need to know to do their jobs better, I make time to do that sharing.	
8	If we feel that a certain debtor could respond better to another person, we switch calls. We say, "Why don't you be the second voice? Maybe he will respond better to you than to me."	Sharing of expertise
9	If a debtor constantly hangs up on me, I may ask co-worker to try and see if he reacts differently to a different voice or name.	
10	There are always questions (from external entities) that you cannot answer, but you can get the answer from experienced people	
11	You do not and cannot know everything about the work system or the technology. I can go back and ask (colleagues).	
12	Because of (story-sharing about a client), we know when a client may be a little high-maintenance	Client-side risk mitigation from sharing of experiences and expertise
13	Whenever operations people meet with a typical or unique case, they should share it with (other depts.). Then when client says something (similar) to a salesperson (it will ring warning bells).	
14	If something comes up that you don't understand, there are always other people on the team that may have run into this before. We answer each other's question and help each other out on a daily basis.	
15	I like to hear what somebody else's method is, and say, "Oh maybe I could work that into my method."	Debtor-side risk mitigation from sharing experiences and expertise
16	Sometimes debtors throw things you never heard of before, but somebody on your team would have run into it. Good rapport helps you deal with it.	

Sharing of anecdotes is an important mechanism whereby lessons drawn from expertise are imparted to others; this is very common within the organization ("Whatever happens, we bring it back and share it with everyone. All the time") and is recognized as conducing to improved performance: "(the others) tell a story about something they experience and how they handled that.....If I do (go through such a situation), I can fall back on something they've learned." Notably, this sharing of stories occurs regardless of hierarchy ("I feel comfortable going to anyone, high or low, and saying: I came across that before, this is what I did.") or formal structure ("If something comes up that I feel the (people of other department) need to know to do their jobs better, I make time to do that sharing"). Personnel not only avail of the experiences of colleagues but also harness their skills in dealing with operational situations: "If we feel that a certain debtor could respond better to another person, we switch calls. We say, 'Why don't you be the second voice? Maybe he will respond better to you than to me.'"

Several statements indicate that these dynamics help personnel to deal more efficiently with external entities and thus help mitigate risks vis-à-vis both clients and debtors. For instance, one respondent avers with regard to clients that: "Whenever operations people meet with a typical or unique case, they should share it with (other depts.). Then when client says something (similar) to a salesperson (it will ring warning bells)," and another says with regard to debtors that "Sometimes debtors throw things you never heard of before, but somebody on your team would have run into it. Good rapport helps you deal with it." Thus, expertise is freely sought within the company, normative mechanisms enabling access obtain, and these dynamics result in mitigation of risks vis-à-vis both clients and debtors. We therefore propose that:

P-4(a): Deference to Expertise enhances Risk Mitigation vis-à-vis the firm's sales function

P-4(b): Deference to Expertise enhances Risk Mitigation vis-à-vis the company's operational function

Managerial implications and future research

This research makes a contribution to management theory in two ways: firstly, it studies two aspects of Collective Mindfulness from a Social Capital perspective, something that has not been ventured in prior literature, and examines the role of IT to this dynamic; secondly, it delineates processes whereby social capital and relationship-based artifacts may be harnessed to mitigate corporate risk.

The theoretical connection drawn here between social capital and collective mindfulness should be of some interest to researchers in a variety of MIS fields, including those working in the area of HROs. The various mechanisms whereby internal social capital may be fostered in such organizations in order to engender mindsets and behavior pertinent to collective mindfulness should be examined. The role played by information technology in sustaining and amplifying the effect of social mechanisms on collective mindfulness opens up a wide field of inquiry and will surely engage researchers. An equally interesting and little-explored area is that of using mechanisms related to social capital in mitigating risk; this could be explored in other risky contexts, such as the outsourcing of processes or functions that are of strategic importance to the firm. Perhaps the applicability of transaction cost theory or agency theory in conjunction with social capital could be explored in this context. Finally, we have examined two specific facets of collective mindfulness with reference to social capital, information technology and business risk mitigation. The work can be extended by analyzing the other three characteristics of collective mindfulness with regard to these streams of inquiry.

These theoretical contributions have practitioner implications that should be of interest alike to managers involved in HROs and other business managers. Managers may wish to establish mechanisms that foster operational flexibility, such as those that enable organizational personnel to stand-in for each other or have knowledge and access to expertise residing within the organization. A large portion of this dynamic would, in most organizations, be predicated on mindsets, shared understandings and normative expectations. Managers and future researchers may wish to examine the paradigms of such operational flexibility in a variety of organizational settings. Managers and researchers alike would be interested in the potential returns to be had from investment in facilitative information technology, and in examining the precise IT functionalities in various settings that would yield optimal outcomes. Of particular interest to corporate managers would be our delineation of the processes whereby relationships can play a role in mitigating corporate risk. Prior literature on this topic is both sparse and tangential. We anticipate that this could prove to be a rich field of inquiry for researchers as well,

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