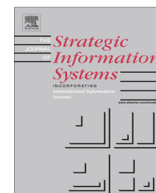




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Linking dimensions of social media use to job performance: The role of social capital

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ABSTRACT

Organizations are increasingly adopting new technologies, such as social media, that afford employees a repertoire of uses not simply focused on work, but also on socialization and entertainment. Knowledge regarding the impact of such diverse technologies on job performance, however, is currently limited. This study adopts a technology use lens to study the effect of three categories of social media use – social, hedonic, and cognitive – on job performance, as mediated by three dimensions of social capital. The research was conducted via a large-scale survey within a multinational Information Technology company. Social and cognitive uses of technology were empirically shown to have a positive, albeit indirect, effect on employees' routine and innovative job performance. Hedonic use of the technology, while having a direct negative impact on routine performance was shown to positively contribute to the development of social ties, leading to a mitigating positive influence on innovative performance. This interesting positive side of hedonic use, along with all findings from our study, are discussed and used to offer insights to future research and practice.

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Introduction

New technologies bring capabilities not previously available to organizations. Indeed, technological innovations like social media have enriched organizations and enabled a multitude of uses and capabilities from creating new business models and marketing techniques, to improving demand predictions, enabling new management practices and learning practices, and enhancing innovation, knowledge sharing, collaboration and communication (Aral et al., 2013; Bughin and Chui, 2013; Urquhart and Vaast, 2012). It is not surprising then that social media has been broadly characterized as fundamentally changing the way we communicate, collaborate, consume, and create (Aral et al., 2013, p3). Social media's amplified importance is also reflected by a growing body of literature on this topic (Claussen et al., 2013) and yet existing scholarship only represents a fraction of what can be revealed about social media's present and future impact in the workplace. Further research is needed to fill knowledge gaps on social media and its use (Aral et al., 2013). Accordingly, the research question addressed in this paper is as follows: *if, and to what extent, does the impact of social media on routine and innovative job performance vary depending on how it is used?* This question is all the more interesting because social media can be used in a multitude of ways, not all immediately perceived as conducive to performance.

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A topical example is the great debate within management circles about the potentially negative effect of some social media uses on employee productivity. As a consequence of this concern, many companies have banned social media applications like Facebook, Twitter, YouTube, and Instagram from the workplace (Economist, 2011; Fister Gale, 2013; Microsoft, 2013). In response to these restrictions and prohibitions, this paper takes a critical look at the consequence these drastic measures may yield. In particular, we focus on the possibility that in-office restriction of social media use – even the seemingly disruptive hedonic use – may prevent companies from achieving business benefits (Bughin and Chui, 2013; Fister Gale, 2013; Huy and Shipilov, 2012; Microsoft, 2013; Miller and Tucker, 2013).

The importance of use context

While the term “social media” is an umbrella term for a range of tools and applications, several common threads exist. First, these tools are social in nature, supporting interactions among people. Second, they are commonly referred to as grassroots technology, with use emerging from employees and percolating up the organization. Finally, many social media tools can be used both at work and at home, obscuring the boundary between these two contexts. These characteristics raise an interesting question concerning *how* social media is used by different people, and how these different uses affect job performance.

IT usage is a core variable in IS research and practice. Researchers are interested in IT usage because it is often seen as a strong indicator of IS success (DeLone, 2003; DeLone and McLean, 1992; Petter et al., 2008), and it plays an important role in models of IS acceptance, implementation, and decision making outcomes (Barki et al., 2007; Burton-Jones and Straub, 2006). Practitioners are interested in IT usage because it is necessary for deriving benefits from- and assessing the business value of – IT (Boynton et al., 1994; Straub et al., 1995). Individual-level IT usage has been conceptualized as a three-way system comprised of the individual user, an IT artifact, and a task (Barki et al., 2007; Burton-Jones and Straub, 2006). According to this view, IT usage occurs when an individual uses features of an IT artifact to accomplish a task that is associated with a predefined individual or organizational goal. Drilling deeper into the notion of differentiated usage, affordances theory indicates that the actions available (afforded) to a person depend upon, and emerge from, an interaction between the person's abilities and the properties of objects in the person's environment (Chemero, 2003; Gibson, 1977; Stoffregen, 2003). Perceiving affordances depend on one's goals (Chemero, 2003; Gaver, 1991; Stoffregen, 2003). Hence, a social media application such as Facebook can be perceived as providing an affordance of entertainment for those using it to browse posts or play games, or it can be perceived as affording access to knowledge and expertise by those using it to solicit advice from their community of friends. Hence, IT usage is a complex phenomenon that requires additional conceptualizations (Barki et al., 2007; Burton-Jones and Straub, 2006).

Returning to social media as the IT artifact of interest, while there appears to be anecdotal evidence that the use of specific tools can positively impact employee productivity and performance within the workplace (e.g. Fister Gale, 2013; Gray et al., 2011; Microsoft, 2013; Wu, 2013), there is still a need to understand the relationship between *different use contexts* of social media and their impact on performance. For example, the usage of LinkedIn can afford a socialization benefit as well as knowledge sharing and dissemination. Similarly, YouTube can be used for entertainment as well as training and recruitment. Consequently, this paper takes a use-focused approach to understanding the impact of social media on organizations.

Social media use, social capital, and job performance

In what follows, we describe a study that links three key dimensions of social media use to employee performance: *social* use, *hedonic* use, and *cognitive* use. These dimensions refer, respectively, to the use of social media to build and maintain social relations; the use of social media to relax and entertain; and the use of social media to create and distribute user-generated content. We link these three use dimensions to two critical aspects of job performance: *routine* job performance and *innovative* job performance. Routine job performance refers to activities carried out in a consistent and dependable fashion; innovative job performance refers to activities that extend beyond routine requirements to provide novel and useful outcomes (Katz, 1964). The link between uses and job performance lies in the various ways in which social media can be used to enhance individuals' social capital. This social capital, as both this paper and others have argued, ultimately impacts the nature and quality of employee job performance (Adler and Kwon, 2002; Burt, 2005; Seibert et al., 2001; Teigland and Wasko, 2003, 2009).

This paper proceeds as follows. First, a literature review and research model discussing dimensions of social media use, social capital and job performance is provided. Next, the paper details its working hypotheses in light of established theories. Empirical data gathered from a study of a large multinational Information Technology company employees' interactions with social media is then presented and analyzed. Then, a discussion of this study's findings and its corresponding recommendations concludes the paper.

Literature review and research model

This research originates from the view that social media use can exert a positive effect on social capital, and that social capital, in turn, has a positive effect on individual job performance. This high level mediated relationship flow is shown in Fig. 1.



Fig. 1. Research model.

The general idea is that employees use social media in various ways and for different purposes, including building and maintaining social ties via LinkedIn or Facebook, sharing stories and experiences through blogging, and microblogging (or tweeting), collaborating through wikis and shared sites, sharing pictures on Instagram and videos on YouTube, tagging and commenting on their colleagues' content, rating the quality of the food in the nearby restaurant on Yelp, and so on. By using these tools, the employees' social networks grow, as does their understanding of their colleagues, including their unique characteristics (e.g. expertise, knowledge and taste). These ties, and the benefits they carry, are referred to as social capital (Nahapiet and Ghoshal, 1998). Social capital provides a source of information, knowledge, support and other valuable resources that ultimately lead to improved job performance (Adler and Kwon, 2002). In the following section, we further develop this model based on three dimensions of social media use, three dimensions of social capital, and two types of job performance. We will present hypotheses to link these dimensions based on established scholarship and theory.

Three dimensions of social media use

Technology use is at the heart of many models explaining the acceptance, impact, and success of information systems. Yet, an important limitation of these models lies in their undifferentiated treatment of behaviors toward the use of the technology, with models often being criticized for treating use behaviors generically (Barki et al., 2007; Burton-Jones and Straub, 2006; Jasperson et al., 2005; Orlikowski and Iacono, 2001; Venkatesh et al., 2008). This criticism becomes all the more relevant as technology evolves and lends itself to different use behaviors and contexts, as social media does.

In order to explore the nature of social media's use within organizations, we turn to Uses and Gratification (U&G) theory (Katz et al., 1973). U&G research is concerned with the social and psychological origins of needs, which generate expectations of the media and lead to differential patterns of media exposure (or engagement in other activities), resulting in needs gratification (Katz et al., 1974). A chief tenet of U&G theory of user behavior is that media use is selective and motivated by an individual's rational self-awareness of his/her own needs, and his/her expectation that those needs will be satisfied by particular types of media and content (Ruggiero, 2000). Since the theory provides a link between choices and their outcomes, it is an appropriate framework for understanding media use motivation and impact at work (Lometti et al., 1977; Stafford et al., 2004).

Traditional U&G studies have identified three major types of needs that can be gratified by different media: *social needs*, such as the need to strengthen contact with family, friends, and acquaintances; *hedonic needs*, such as the affective need for pleasurable and emotional experiences; and *cognitive needs*, such as the need to seek information, knowledge and understanding (Blumler, 1979; Katz et al., 1973; Lometti et al., 1977; McQuail, 1994). Recent studies have found support for all three categories of needs through social media use (e.g. Ali-Hassan and Nevo, 2009; Brandtzæg and Heim, 2009; Papacharissi and Mendelson, 2011; Quan-Haase and Young, 2010; Raacke and Bonds-Raacke, 2008; Shao, 2009; Whiting and Williams, 2013). As it embeds different use dimensions within the same media, social media presents a unique context in which to study technology usage and its impact on job performance.

In this paper, we conceptualize three dimensions of social media uses that correspond to the above needs: social use, hedonic use, and cognitive use. *Social Use* is defined as using social media to build new social relations (i.e. making new friends), identify individuals with shared interests, and stay in touch with existing friends and acquaintances (Ali-Hassan and Nevo, 2009; Brandtzæg and Heim, 2009; Papacharissi and Mendelson, 2011; Quan-Haase and Young, 2010; Raacke and Bonds-Raacke, 2008). *Hedonic Use* refers to using social media for fun (Brandtzæg and Heim, 2009), passing time (Quan-Haase and Young, 2010), relaxing and escaping (Papacharissi and Mendelson, 2011) and entertainment (Shao, 2009). *Cognitive Use* of social media focuses on creating and sharing content and accessing content produced by other individuals (Ali-Hassan and Nevo, 2009; Brandtzæg and Heim, 2009; Papacharissi and Mendelson, 2011; Raacke and Bonds-Raacke, 2008; Shao, 2009), including sharing opinions, stories, ratings, debates, personal photos and videos (Leung, 2009; Papacharissi and Mendelson, 2011).

Three dimensions of social capital

Social capital represents resources or assets rooted in an individual's or group's network of social relations. We adopt Adler and Kwon's (2002) definition of social capital, which is based on a comprehensive synthesis of the literature. According to this definition, 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" (p 23). A review of recent social capital literature by Kwon and Adler (2014) indicates that the concept has matured and blossomed into a whole field of research. They claim that due to a preponderance of evidence from multiple fields like management and organizational research, the basic thesis underlying this definition is no longer in dispute.

A common approach for measuring social capital focuses on structural social capital and examines the emerging bridging and bonding ties (Burt, 1997; Putnam, 2000). For example, Ellison et al. (2007) developed a framework to study the relationship between Facebook use and bridging and bonding social capital. In the context of social networking sites, Koroleva et al. (2011) provide a more detailed view of social capital by focusing on the unique benefits it carries. However, as Kwon and Adler (2014) highlight, there is value in understanding both relations and cognition that go beyond the structural dimension. In this study, we chose to use the framework developed by Nahapiet and Ghoshal (1998) who conceptualized social capital using three dimensions: the structural, the relational and the cognitive. The structural dimension refers to the individual's social ties and network of relationships. The relational dimension refers to the assets rooted in the relationships such as trust and trustworthiness. The cognitive dimension reflects the common understandings that consist of shared codes, language, and narratives.

We choose this framework for two reasons. First, it is almost certainly the most widely used and well established social capital framework. It has been commonly adapted and used in the literature, including in multiple IS empirical studies (e.g. Chiu et al., 2006; Chua et al., 2012; Robert et al., 2008; Sun et al., 2012; Wasko and Faraj, 2005). Second, its multi-faceted conceptualization of social capital fits well with the complexity of social media use in organizations. As Koroleva et al. (2011) note, the structural dimension focuses on the availability of resources while the cognitive and relational dimensions describe a person's ability to tap into these resources. We believe that both aspects are important to study the links between social media use and job performance.

The impact of information technology on social capital has been addressed in a few studies (e.g. Ellison et al., 2007; Huysman and Wulf, 2004), particularly in the context of the Internet (e.g. Wellman et al., 2001). The general idea is that technology allows individuals to stay connected over distance and time, and facilitates interaction, collaboration and knowledge exchanges that enhance social capital. This paper investigates the specific links between the different use dimensions of social media and social capital. Social capital, in turn, is an important resource for employees and determinant contributor to individual job performance.

In the following section, we more fully describe each social capital dimension and hypothesize relationships concerning dimensions of social media use based on relevant theory and logic. Relationships that do not have strong literature support will be tested for completeness purposes, but will be hypothesized as non-significant. The conceptual model showing relationships among the constructs, alongside the hypothesized paths, is shown in Fig. 2 below.

The structural dimension of social capital (Hypotheses 1–4)

The *structural dimension* of social capital refers to the overall pattern of connections and interactions between individuals, and is characterized by the number and strength of the existing network ties between individuals and by the network's configuration (Burt, 1992; Nahapiet and Ghoshal, 1998).

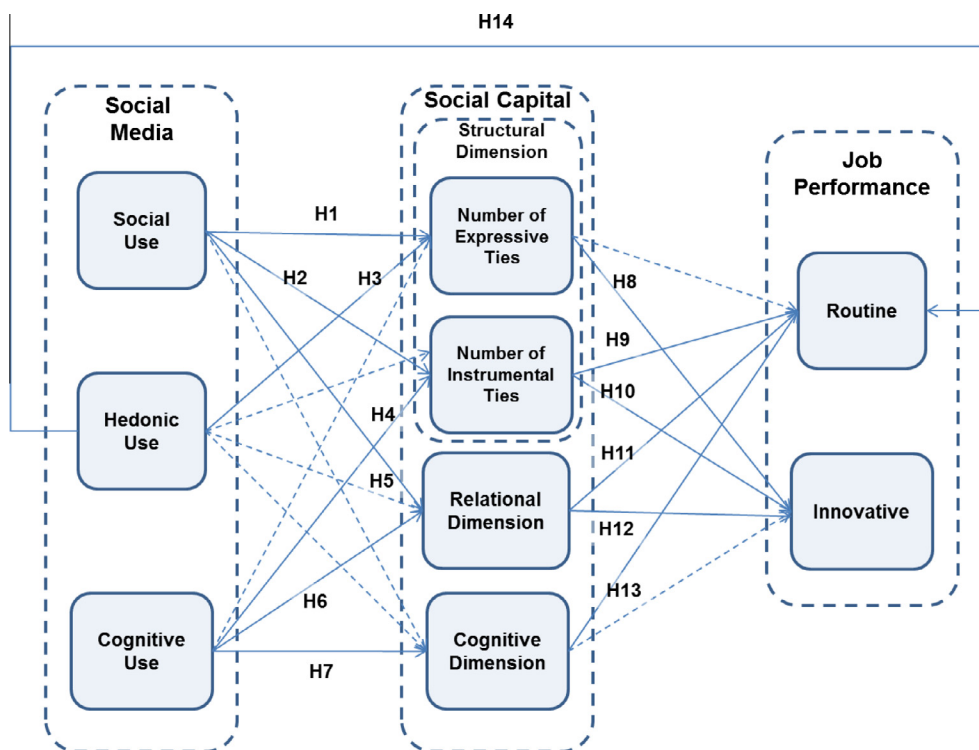


Fig. 2. Conceptual model.

The social network literature addresses two types of social ties, namely *expressive* and *instrumental* network ties, as part of the structural dimension of social capital (Ibarra and Andrews, 1993). *Expressive network ties* are ties that provide friendship, emotional, and social support (Granovetter, 1973; Ibarra and Andrews, 1993). They are intimate links connecting people who share personal characteristics (Marsden, 1988), and tend to involve frequent interactions between individuals (Granovetter, 1973; Krackhardt, 1990). Expressive network ties are symmetrical (reciprocal) and tend to cluster in dense interconnected cliques that carry the potential for conformity, persuasion and influence (Ibarra and Andrews, 1993) and provide affective support (Umphress et al., 2003). *Instrumental network ties*, in contrast, are weaker and asymmetrical (non-reciprocal) and can casually arise in a work environment, for example, by linking people with different personal characteristics (Ibarra and Andrews, 1993). These types of ties tend to be well suited for the access of information and resources. They are further-known for their search benefits, including the facilitation of advice seeking (Granovetter, 1973; Hansen, 1999).

Using social media to explicitly create and maintain social relations either directly, for example through social networking tools, or indirectly, for example through communities of interest, can positively impact structural social capital (Wu, 2013). Past studies show that the Internet is a positive force that helps individuals cultivate both expressive and instrumental ties (Anderson and Rainie, 2010). Similarly, Ellison et al. (2007) found a relationship exists between the use of online social networking sites and the development of expressive ties. A similar relationship has been found for using internal organizational social networking systems (Steinfeld et al., 2009). These studies are consistent with previous findings that show the use of media, such as the telephone and fax, for socialization purposes is sufficient to maintain expressive ties between individuals who know each other well, but who are no longer in physical contact (Wellman and Tindall, 1993; Wellman et al., 1996). Accordingly, we hypothesize that

H1. There is a positive relationship between employees' *social use* of social media and their number of *expressive ties*.

Social use of the technology can also increase the number of instrumental ties in a person's network (Burt, 1992) because of their access to a larger pool of socially dissimilar individuals who belong to different communal worlds (Constant et al., 1996; Wellman et al., 2001). Likewise, this technology allows chance connections between individuals to occur and bridging ties to emerge at work (Ellison et al., 2007; Stets and Burke, 2000). Finally, many social media tools have sophisticated search engines and management capabilities that allow users to find others and form connections (Wu, 2013). Building on the above, we hypothesize that:

H2. There is a positive relationship between employees' *social use* of social media and their number of *instrumental ties*.

The next dimension of social media use, *hedonic use*, refers to using the technology for fun and entertainment. Research has shown that traditional "solitary recreation" using technology, such as heavy solitary involvement in online gaming, can reduce socialization (Wellman et al., 2001). This finding is consistent with earlier results showing that watching broadcast television leads to a reduction in social interactions (Putnam, 1995). However, social game playing differs from these predecessor technologies in that it does not lead to social isolation, and supports the creation of "electronic friendships" (Colwell and Payne, 2000). For example, Nevo et al. (2012) investigated how virtual worlds were used for brainstorming, to seek information, and to interact with colleagues at work. A literature review of gamification, or the use of elements of game playing in non-gaming applications, found that positive experiences like motivation, engagement, or enjoyment, were reported in all studies, including studies conducted in an organizational context (Hamari et al., 2014).

Social media-based entertainment, unlike television and standalone computer games, is characterized by (and in many cases is based on) interactions with other individuals. This interaction can have a positive impact on the structural social capital of the players¹ by increasing the number of social relations, particularly expressive ties, since individuals tend to play with friends or the people they play with become friends (Longman et al., 2009). For example, a study of a multiplayer online role-playing game found that this environment provided an opportunity to create emotional relationships and strong friendships (Cole and Griffiths, 2007). Based on the arguments above, we hypothesize that:

H3. There is a positive relationship between employees' *hedonic use* of social media and their number of *expressive ties*.

Although there are some indications that the use of social media for hedonic purposes can provide opportunities for "chance connections" and building new contacts among individuals (Ellison et al., 2007; Stets and Burke, 2000) we do not expect this to be a significant outcome in the context of work, where employees may avoid hedonic use of social media with colleagues they do not know. Therefore we do not hypothesize a relationship between hedonic use of social media and the number of instrumental ties.

Finally, cognitive use of social media to generate and share content increases employees' visibility and highlights their characteristics, including their expertise, knowledge, opinions, preferences, and hobbies, among others. Given that social tie formation is driven by similar interests and shared activities (Zeng and Wei, 2013), the ease with which content can be generated and published through social media, coupled with its interactive and collaborative nature, increases the

¹ Note that we will address the potentially negative direct effect of using social media for game playing on job performance in a later hypothesis.

likelihood that employees will build social relations. For example, an avid blogger (or microblogger) covering technology news and developments may quickly be recognized as the organization's expert on the topic, which might increase the likelihood of becoming connected with other employees who share the same interest. Publishing presentations, images or videos could expose employees and their interests in their workplace, thus opening the door for establishing connections with others co-workers via comments and tags. In addition, self-disclosure of personal information, photos, stories, and so on, provides opportunities to create new instrumental ties between individuals (Law and Chang, 2008; Stets and Burke, 2000). Finally, working on a collaborative content generation tool, like a wiki, forces people to interact and potentially build instrumental social relations. Thus, we hypothesize that:

H4. There is a positive relationship between employees' *cognitive use* of social media and their number of *instrumental ties*.

The above evidence mostly ties cognitive use to instrumental ties. We therefore do not expect a significant relationship between cognitive use and expressive ties.

The relational dimension of social capital (Hypotheses 5 and 6)

The *relational dimension* of social capital focuses on the nature and quality of relationships between team members, and consists of trust, obligations, team norms and team identification (Nahapiet and Ghoshal, 1998). *Trust* is the key component of the relational dimension that has been the most widely studied (Daniel et al., 2003). Trust is the willingness of a party to be vulnerable, and entails the expectation that the other will perform a particular action irrespective of the trustor's ability to monitor or control them (Mayer et al., 1995).

Social use of the technology can enable the development of relational social capital in numerous ways. First, it facilitates social interactions and social networks at work that could generate trusting relationships (Granovetter, 1985; Gulati, 1995; Hsu et al., 2007). Second, it provides the necessary platform or context for repeated interactions and social exchange, including the exchange of personal experiences and advice (Blau, 1964; Whitener et al., 1998). Third, social usage supports the development of familiarity and bonds, which in turn support relational social capital (Hsu et al., 2007; Rousseau et al., 1998). Fourth, information on the network ties that lie between two individuals may lead to relational social capital through common ties (Burt and Knez, 1995; Levin and Cross, 2004). Indeed, Cao et al. (2012) found that using social media at work to maintain and strengthen communication with colleagues had a positive effect on trust among co-workers. Ellison et al. (2015) found that the use of Enterprise Social Network Sites (ESNS) exposed a coworker's network of social relations, leading to "identity warranting" that provided signals of credibility and built trust. Based on the arguments above, we hypothesize that:

H5. There is a positive relationship between employees' *social use* of social media and their *relational* social capital.

The use of social media to collaborate, generate, and share content is characterized by open communications, in-depth feedback, some degree of personal conversation, and storytelling, all of which have been shown to help build relational social capital in the context of virtual teams (Henttonen and Blomqvist, 2005; Jarvenpaa et al., 1998). Whitener et al. (1998) linked the creation of relational social capital to communication attributes such as the frequency of the communication, the adequacy of the explanations provided, and the openness of the communication. The cognitive use of social media at work, with its focus on content and collaboration, incorporates these communication attributes; thus, it is expected to positively impact relational social capital. Beyond these communication attributes, the more an individual generates and shares valuable content, the better known he or she becomes. Furthermore, given the bottom-up and voluntary nature of social media use in the workplace, any content contribution, for example in the form of advice, can be considered benevolent, which increases his or her relational social capital (Abrams et al., 2003; Mayer et al., 1995). Hence, we hypothesize that:

H6. There is a positive relationship between employees' *cognitive use* of social media and their *relational* social capital.

In the absence of either an adequate theoretical foundation or strong empirical findings, we hypothesize a non-significant relationship between the hedonic use context and relational social capital.

The cognitive dimension of social capital (Hypothesis 7)

The cognitive dimension of social capital reflects a shared context and common understanding that facilitates interactions among parties. It refers to resources that provide shared representations, interpretations, and systems of meaning among parties, and consists of shared codes, language and narratives (Nahapiet and Ghoshal, 1998). Among the three dimensions of social capital, the cognitive dimension has received the least amount of scholarly attention in the workplace context, perhaps due to a lack of consensus on its definition, sub-dimensions and measurement (Nahapiet and Ghoshal, 1998; Zheng, 2010). Some studies have represented the spirit of this dimension as a group's common context and understanding, and measured a groups' shared vision (e.g. Tsai and Ghoshal, 1998), shared culture (e.g. Inkpen and Tsang, 2005), shared language (Chiu et al., 2006), and shared knowledge (e.g. Levin and Cross, 2004). In this study, we treat the cognitive dimension of social capital as

shared context and adopt Hinds and Mortensen's (2005) vision of it as an emergent state that develops in a team when its "members have access to the same information and share the same tools, work processes and work cultures" (pp. 293).

For a shared context and understanding to develop, employees need to know who their co-workers are, what their expertise is, what they are working on, what problems they are facing, what solutions they have developed, and so on. They also need to be aware of the social environment that they work in. Traditionally, technology was limited in its ability to convey such contextual details along with the information it transmitted. However, certain technology such as web-conferencing systems, which like social media are rich in content, provide social cues, facilitate self-disclosure, promote inclusion, spread awareness, and convey contextual information (Hinds and Bailey, 2003). We argue that the cognitive use of social media can help develop shared context and understanding by facilitating communication and interaction between individuals. Thus, we hypothesize that:

H7. There is a positive relationship between employees' *cognitive use* of social media and their *cognitive social capital*.

Here, again, we do not have an adequate theoretical foundation or strong empirical results to hypothesize a link between the social and hedonic social media use contexts and cognitive social capital. Consequently we hypothesize both relationships as non-significant.

Job performance

In this section, we explore the link between social capital and individual job performance. Individual job performance is an appropriate dependent variable as firms wish to maximize the value of their investments in social media technologies.

A conceptualization of individual job performance was provided by Katz (1964), who defined it as consisting of two components: routine activities to be carried out in a consistent and dependable fashion, and innovative activities that extend beyond routine specifications to provide novel and useful outcomes. The first component, sometimes labeled *routine job performance*, represents the performance of mandatory job-related tasks, duties and responsibilities, all of which are coordinated and rewarded by the organization (Janssen and Van Yperen, 2004; Sparrowe et al., 2001). Routine job performance includes, among others, working all assigned hours, completing duties on time, complying with rules and regulations (O'Reilly and Chatman, 1986), adequately performing essential responsibilities (Sparrowe et al., 2001), and fulfilling all duties required by the job (Janssen and Van Yperen, 2004).

The second component of individual job performance is based on discretionary behavior that goes beyond the formal job description (Sparrowe et al., 2001) and has been interpreted in the literature as *innovative job performance* (e.g. Janssen and Van Yperen, 2004; Scott and Bruce, 1994)². Innovative job performance is defined as the production or adoption of creative and useful ideas, which are implemented at work (Amabile et al., 1996; Scott and Bruce, 1994). It deals with problems, opportunities and unusual situations and incorporates, among other things, the generation and adoption of ideas, coalition building, and the acquisition of the power necessary to successfully implement new innovations (Kanter, 1988). These tasks are performed by individuals concurrently, or in sequence, and represent the core of organizational innovation.

The relationship between social capital and job performance has been examined in a few empirical studies (e.g. Burt, 1997; Lesser and Storck, 2001; Seibert et al., 2001; Wasko and Faraj, 2005). While some relationships between different dimensions of social capital and job performance are well established in scholarship, we present a number of hypotheses below that combine to form an integrated model which completes the indirect relationship between social media use and individual job performance.

The structural dimension of social capital and job performance (Hypotheses 8 to 10)

Researchers have observed that expressive ties via interpersonal communication channels in organizations are closely related to the innovation rate, and that high performing knowledge workers have friendship networks overlapping with their business networks (Davenport, 2008; Kanter, 1988). Expressive ties have also been positively linked to innovation due to frequent social interactions and familiarity with other members (Landry et al., 2002; Tsai and Ghoshal, 1998). Socialization leads workers to share their intricate technical experience and mental models through observation, practice, and imitation (Amar and Juneja, 2008). Finally individuals who experience a high number of expressive ties with others develop an emotional space where they can experiment with new approaches (Losada and Heaphy, 2004). Accordingly, we hypothesize that:

H8. There is a positive relationship between employees' number of *expressive ties* and their *innovative job performance*.

Instrumental ties are a source of informational benefit, such as advice from colleagues at work (Hansen, 1999; Ibarra and Andrews, 1993), and are often used to exchange work-related information (Wu, 2013). The extant literature has linked information access, such as that afforded by instrumental ties, to both routine and innovative job performance (Seibert et al., 2001; Teigland and Wasko, 2003), organizational performance (Gold et al., 2001; Gray and Meister, 2004), and innovation in general

² Some researchers have also discussed *extra-role job performance*, which takes the form of organizational citizenship (MacKenzie et al., 1998; Williams and Anderson, 1991), altruism (Sparrowe et al., 2001), courtesy and civic virtue (Becker and Kernan, 2003). In this paper, we stay true to Katz (1964) original two part conceptualization.

(Cross et al., 2010; Majchrzak et al., 2004). According to Sparrowe et al. (2001), informal networks at work are a conduit of resource exchanges that are instrumental in facilitating individual job performance, such as task-specific knowledge and advice, assistance, guidance, strategic information, and confidential information about work-related issues. Moreover, the more connections an employee has the more relationships he/she has to draw upon in obtaining useful resources to solve work-related problems and to accumulate knowledge. Further, the larger the network, particularly in instrumental ties, the more diverse, less redundant and more useful the information is. Finally, a higher number of ties increases an employee's awareness of others' expertise and his/her ability to reach the right people at the right time and access relevant information to respond to new challenges and opportunities (Cross and Cummings, 2004). Accordingly, we hypothesize that:

H9. There is a positive relationship between employees' number of *instrumental ties* and their *routine* job performance.

In addition to the above, a literature review of the relationship between structural social capital and innovation by Zheng (2010) found that an employee's number of ties has a positive influence on innovation as more instrumental ties lead to an exposure to a larger amount of external and non-redundant information and ideas and to the identification of colleagues with complementary knowledge. Hence,

H10. There is a positive relationship between employees' number of *instrumental ties* and their *innovative* job performance.

The relational dimension of social capital and job performance (Hypotheses 11 and 12)

In an environment with high levels of relational social capital, an individual has an enhanced ability to solve problems due to open communication and more effective information sharing (Boss, 1978). Relational social capital is commonly cited as the hallmark of effective relationships in disciplines including psychology, sociology, management, economics, and political science, and has been shown to lead to superior work processes (Dirks, 1999). It has also been shown to reduce ambiguity and uncertainty, making way for cooperative and productive activities and superior levels of performance (Dirks and Ferrin, 2001). One explanation is that an individual's trust of another is a belief of his/her ability, benevolence and integrity and leads to risk-taking in the relationship, such as cooperating or sharing information leading to positive outcomes such as increased individual performance (Dirks and Ferrin, 2001; Mayer et al., 1995). Finally, information obtained from trustworthy sources like friends tends to be seen as more credible and provides social support in the form of confidence building (Mehra et al., 2006). When the knowledge is believed to be coming from a credible source, it is perceived to be useful and worthy of consideration and the recipient is more open and receptive to it and more likely to use it for work related purposes. Whereas when the credibility of the source is perceived to be low, the recipient is likely to challenge, resist and discount the advice or knowledge and not use it at work (Boh, 2008).

In the IS literature, the prevailing view is that relational social capital has a direct effect on cooperation and performance through increasing confidence and security in a relationship, reducing transaction costs, and promoting open, meaningful, and valuable information exchange (Jarvenpaa et al., 1998, 2004). Thus, we hypothesize that:

H11. There is a positive relationship between employees' *relational* social capital and their *routine* job performance.

The relationship between relational social capital and innovation has also been studied with a positive relationship generally resulting (e.g. Tsai and Ghoshal, 1998; Wasko and Faraj, 2005) from open communication, collaboration and knowledge sharing (Zheng, 2010). High levels of relational social capital have been associated with enhanced idea generation, promotion and implementation (Clegg et al., 2002). According to Thompson and Heron (2006), organizations strong in relational capital, demonstrated through higher levels of cooperation, trust, reciprocity and commitment between individuals and between teams, benefit from other forms of capital like knowledge sharing. Moreover, the psychological contract, affective commitment and knowledge-sharing behaviors, which are three forms of relational capital, work together to enable innovative performance. Finally, in environments with higher levels of relational social capital, attempts to innovate are perceived as less vulnerable to employees' pursuit of self-interest, and require less effort for protection or mitigation (Landry et al., 2002; Tsai and Ghoshal, 1998). Accordingly, we hypothesize that:

H12. There is a positive relationship between employees' *relational* social capital and their *innovative* job performance.

The cognitive dimension of social capital and job performance (Hypothesis 13)

The value of the cognitive dimension of social capital lies in the ability of individuals to exchange and combine knowledge in the creation of intellectual capital (Nahapiet and Ghoshal, 1998). Within a shared context, knowledge can be properly created, shared, transferred, and utilized (Faraj and Wasko, 2001; Nonaka and Toyama, 2003; Sambamurthy and Subramani, 2005). Indeed, for knowledge to have value, it must include elements of human context (Jennex, 2008). According to Hinds and Mortensen (2005), a shared context moderates the relationship between geographic distribution, task, and

interpersonal conflict, by reducing the likelihood of misunderstandings. A shared context also provides the necessary foundation to understand others and make sense of their behaviors (Hinds and Mortensen, 2005; Levina and Vaast, 2008). Given the value of effective collaboration and knowledge combination, we hypothesize that:

H13. There is a positive relationship between employees' cognitive social capital and their routine job performance.

We did not find a strong theoretical foundation to link the cognitive dimension of social capital to innovative job performance. A synthesis of the research literature by Zheng (2010) found consistently positive relationships between both structural and relational dimensions of social capital, and innovation. The relationship between the cognitive dimension of social capital and innovation, however, was not established (Zheng, 2010). A possible explanation is that while shared context is useful for routine jobs that require knowledge exchange and common understanding, it might be distracting for innovators insofar as it compromises their ability to detect problems or opportunities due to groupthink. Hence, we hypothesize a non-significant relationship between the cognitive dimension of social capital and innovative job performance.

The hedonic use of social media and job performance (Hypothesis 14)

We have thus far proposed that social capital fully mediates the relationship between social media use and job performance. However, we include one exception to this general rule, based on compelling evidence from both practice and the literature. This exception concerns the link between the hedonic use of social media and routine job performance. There is a great deal of anecdotal evidence suggesting that using information technology in the workplace for hedonic purposes is likely to negatively impact individual job performance. This outcome is due to the amount of time wasted on using these tools for fun and entertainment. Indeed, many organizations have banned the use of certain social media tools like Facebook and YouTube out of fear of reduced employee efficiency. Proper time management has been shown to be associated with increased job performance, and wasted time could lead to wasted opportunities (Barling et al., 1996). Time taken for hedonic use of social media will leave less time for employees to perform company specific work tasks and lead to a reduction in employees' efficiency (Teigland and Wasko, 2003, 2009).

An additional potentially negative impact of hedonic social media use is the likelihood of employee distraction. Distraction-conflict theory can be used to explain how distraction can create an attentional conflict or a situation where an individual feels the tendency, desire or obligation to allocate attention to multiple exclusive inputs (Baron, 1986; Sanders et al., 1978). In an environment with complex tasks, such as knowledge work, even a low level of distraction can lead to reduction in job performance (Nicholson et al., 2005). Thus, we hypothesize that:

H14. There is a negative relationship between the hedonic use of social media and routine job performance.

We have summarized all the constructs used in this study, their descriptions, and literature sources in Appendix A.

Research methodology

The model was empirically tested using a cross sectional survey within an organizational setting. The following section describes the research methodology and approach in detail.

Research context

The sampling frame for this survey was a social media community of interest comprising of 1700 employees of a large multinational Information Technology company. The goal of this community of interest was to share information about social media developments both within and outside of the organization, as well as to share general news about the technology via discussions, blogs and wikis. Membership in this community was diverse, ranging from people with very limited social media exposure who were simply interested in learning about the phenomenon to those who had used and continue to use various social media tools for their work. At the time of the study, the company encouraged its employees to use social media internally and made a number of social media tools, including blogs, wikis, social tagging and networking tools, available to all employees. The company further allowed social media use to grow organically with minimal supervision. In the survey, respondents were told that social media "refers to applications loosely labeled as Web2.0 or social software and include blogs, wikis, social networking, microblogging, tagging, podcasts, media sharing, social bookmarking, virtual worlds and others".

Construct definition and initial item development

The research instrument was developed using a multi-phase process of validation and refinement. Measurement scales for most constructs were adapted from existing ones. Scales for **innovative job performance** and **routine job performance** were adapted from existing scales by Janssen and Van Yperen (2004), with minor modifications made to accommodate the self-reported format of this study. It is important to note that self-reporting of innovative and/or routine job performance is

common (e.g. Teigland and Wasko, 2003, 2009; van Emmerik, 2008), particularly when there is no access to objective performance measures for confidentiality reasons. Likewise, researchers have not found the perfect individual performance measure since each type of measure suffers from its own type of biases, making self-reported measures no less reliable than other measures (Teigland and Wasko, 2009).

The **number of expressive ties** scale was adapted from Law and Chang (2008) and Hansen et al. (2005) and the **number of instrumental ties** scale was developed based on Ibarra and Andrews (1993). The **relational** social capital scale from Leana and Pil (2006) was selected and adapted for this study because it measures perceptions of trust among all co-workers in general, not simply trust of individual ones, and thus it was found to be the most compatible with this study's needs.

Measurement scales for the three **social media uses** were developed for this paper. For the **social use** scale, four items were developed to reflect the meaning of the construct, and two were taken from Chiu et al. (2006)'s social interaction ties. Knowledge sharing scales were the basis for the **cognitive use** component of social media, specifically van den Hooff and Huysman (2009)'s knowledge sharing instrument and Bock et al. (2005)'s intention to share implicit knowledge scale. Additional items were added to reflect the consumption of content and collaborative generation of content. Finally, the **hedonic use** of social media items was borrowed from Nevo and Nevo (2011)'s usage of virtual worlds scale and Agarwal and Karahanna (2000)'s heightened enjoyment from using the web scale.

After the content domain was defined, seven experts were solicited for their insights into the potential problems that can result from ambiguous or poorly defined operationalizations. Particular attention was paid to the new scales that were developed specifically for this study. As a consequence of this step, a number of items were reworded to ensure their content validity and clarity, while others were removed to maintain instrument parsimony.

A card sorting procedure was completed to ensure construct validity and domain coverage, as well as to identify ambiguous items (Moore and Benbasat, 1991). Given the novelty of the social media measures and scales in this study, five rounds of card sorting were completed by a total of 40 judges, none of whom had prior exposure to the study. All constructs/items were included in all five rounds. In the first two rounds respondents were not provided any information about the expected constructs and labels and were asked to both group and label constructs. In the following three rounds, respondents were provided with the labels for the constructs and were asked to assign items to matching constructs. In the final round, which included 20 judges, the percentage of the items properly sorted was 89.3%, the raw agreement was 81.7%, while their inter-rater reliabilities as measured by Cohen's Kappa was 0.79 ($p < 0.0001$). This significant and substantial agreement provided support for the content, convergent, and discriminant validity of the items.

The survey instrument was pilot tested with 80 respondents from the sampling frame for further appraisal and purification (Lewis et al., 2005), as well as to assess the reliability of the item measures (Moore and Benbasat, 1991) and the variable distributions (Dillman, 2007). The items loaded strongly on their respective factors, indicating a unidimensional structure of the instrument (Hair et al., 1998). The exceptions were three items that were reworded, and one that was removed.

Respondents

Upon completion of the pilot study, the survey was sent to the remaining 1620 community members. 307 individuals responded to the final survey, for a response rate of 18.95%³.

The respondents' profiles showed a general variability in level of education, gender, age, years of experience, years with the company, and years in current positions (details in Appendix B). The gender was skewed toward men, reflective of the fact that 70% of the company employees are male. The majority of respondents were from North America. The average number of years in their current position, number of years with the company, and number of years of general work experience, was 5.2, 9.7, and 18.8 years, respectively. The responses exhibited a large variation in job titles and involvement in social media. When asked about their professional involvement with social media, the majority of respondents indicated they used social media to support their consulting activities (either general or sales related), and to facilitate their development and technical support activities. When asked to indicate their extent of use of social media outside the workplace, 25% selected "heavy use", 45% chose "intermediate use", 28.4% selected "casual use", and only about 1% indicated they did not use social media outside of the workplace ("no use").

Measurement validation

Prior to conducting any analysis, the data were checked for completeness. Sixty-seven incomplete responses were removed, leaving a final data set of 240 usable responses. To check for bias due to the removal of the data, all responses (mean of each construct) and demographics measures were compared, with no significant differences found between the two groups.

A component-based approach, Partial Least Square (with SmartPLS 2.0.M3), was selected for this study. PLS is advantageous because it permits the modeling of latent variables, and the simultaneous assessment of the measurement model (psychometric properties of the scales used) and structural model (strength and direction of the relationships between variables). As well, it has a high tolerance for deviation from normality, and is convenient for theory development (Basselier and Benbasat, 2004; Chin, 1998a,b).

³ The pilot data was used only for instrument validation and testing and was not included in the final analysis.

Table 1
Item-total correlations and coefficient alphas.

	Mean	Standard deviation	Cronbach alpha	Composite reliability
SM social use	4.666	1.382	0.900	0.923
SM cognitive use	5.579	1.181	0.902	0.927
SM hedonic use	3.352	1.531	0.926	0.947
Number of expressive ties	4.264	1.306	0.891	0.920
Number of instrumental ties	5.630	0.952	0.875	0.909
Relational social capital	6.150	0.809	0.886	0.917
Cognitive social capital	4.605	1.035	0.823	0.881
Innovative job performance	4.826	1.099	0.912	0.932
Routine job performance	5.768	0.963	0.843	0.891

N = 240.

Internal consistency reliability

The internal consistency of the scales was examined, including the scales' composite reliabilities and coefficient alphas (shown in Table 1). The Cronbach's alphas and composite reliabilities for all scales were above 0.8, considerably higher than the recommended 0.7, indicating internally reliable scales (Hair et al., 1998).

Discriminant validity

Exploratory factor analysis was conducted to further assess the construct validity of the scales (Moore and Benbasat, 1991). The result of a principle component analysis with Varimax rotation generated 9 factors for the 9 constructs (see Appendix C), with an Eigen value of 1.308 explaining 71.5% of the total variance. The majority of items loaded strongly on their respective factors, indicating a general unidimensional structure of the instrument (Hair et al., 1998). Two measures were cross-loaded and were subsequently dropped. In the second stage of measurement validation, a confirmatory factor analysis (CFA) was conducted to further assess the discriminant validity of all construct measures (Gefen and Straub, 2005; Lewis et al., 2005). The outcome of the CFA showed that all items loaded significantly on their respective constructs and no items were cross-loaded (all t-values were significant at $p < 0.001$, 2-tailed). All item loadings were greater than the suggested level of 0.70 (Hair et al., 1998), with the exception of a single item (relational social capital item 5), which was dropped from the scale in further analysis. The results of the CFA indicated adequate discriminant validity levels. Average Variance Extracted (AVE) analysis was conducted using the bootstrap technique in PLS. As a rule of thumb, the square root of the AVE of each construct should be greater than the correlation of that construct with other constructs, and should further exceed 0.50 (Chin, 1998b; Gefen and Straub, 2005). These conditions were met (Table 2), further indicating satisfactory discriminant validity of all constructs. The final list of survey items is shown in Appendix D.

Based on the above tests, it was concluded that the scales were reliable and valid and were suitable for hypotheses testing.

Common method bias

Since the data collected in this study came from a single source, it may be subject to common method variance or bias. Following Podsakoff et al. (2003) and Singleton and Straits (2005), a number of proactive steps were taken to minimize the

Table 2
Construct correlations.

	Social use	Cognitive use	Hedonic use	Num. of inst. ties	Num. of exp. ties	Relational capital	Cognitive capital	Innovative perf.	Routine perf.
Social use	0.843								
Cognitive use	.460**	0.847							
Hedonic use	.423**	.021	0.904						
Num. of inst. ties	.410**	.459**	.138*	0.817					
Num. of exp. ties	.404**	.299**	.329**	.524**	0.835				
Relational capital	.200*	.357**	.001	.550**	.363**	0.887			
Cognitive capital	-.067	.112	-.161*	.090	.017	.228**	0.806		
Innovative perf.	.304**	.206**	.116	.329**	.300**	.192**	-.049	0.834	
Routine perf.	.103	.124	-.177**	.254**	.037	.353**	.232**	.095	0.855

N = 240.

** $p < 0.01$.

* $p < 0.05$.

The diagonal is square root of AVE.

risk of common method bias during the survey instrument design and execution. First, the survey items were worded in a way to reduce social desirability, including through the avoidance of phrases such as “wasting time”. Second, the items were tested for clarity in the pre-testing phase. Third, the order of the questions in the online survey was randomly generated, and thus differed for each respondent. This step helped to reduce priming effects. Fourth, the respondents remained anonymous to decrease evaluation apprehension.

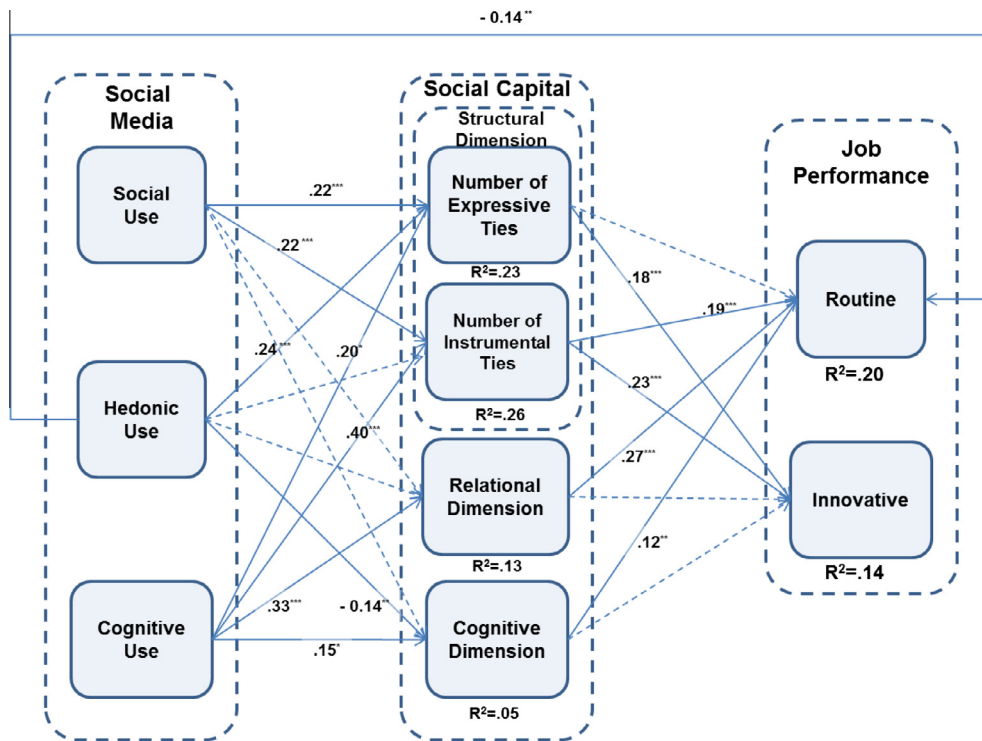
A number of post-hoc statistical tests were conducted to assess the severity of the common method bias. The Harman’s single-factor test generated nine un-rotated factors. The largest amount of covariance explained by a single factor was 24.7%. This result suggested that common method bias was unlikely to contaminate the results (Liang et al., 2007). A second test was conducted to control for the effect of an unmeasured latent methods factor in PLS. Items were allowed to load on both their theoretical construct and a latent common methods factor, and then the significance and magnitude of the loadings were examined. As shown in Appendix E, the majority of the common method loadings were not significant, with an average variance of 0.049. The average explained variance of the theoretical constructs was 0.846, with all loadings highly significant. Given these results, we are confident that common method bias did not affect the results.

Findings

Correlation tests for the items in each of the nine first order latent variables showed significant results (all at $p < 0.01$, except one pair at $p < 0.05$). The structural model of the PLS regression was used to test the hypotheses, while bootstrapping was used to assess the significance of the hypothesized relationships and the amount of variance in the dependent variables attributed to explanatory variables (Chin, 1998b). The results of the analysis are presented in Fig. 3 and summarized in Table 3.

Control variables

Several control variables were collected in this study to rule out rival hypotheses and potentially aid in the interpretation of the results. In particular, age, gender, education, country of residence, organizational tenure (number of years at the organization), positional tenure (number of years in current position), professional tenure (number of years of work experience), and extent of social media use outside the workplace. Each control variable was included in the model and the relationships to the dependent variables were tested. None were found to be significant and no significant change in R-squared was observed. Therefore, control variables were left out of the final model.



N=240, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Fig. 3. Empirical model.

Table 3
Path coefficients and hypotheses testing.

Hypothesis	Path from	Path to	Coefficient	Sig. level	Supported?
H1	Social use	Number of expressive ties	0.22	0.001	Yes
H2	Social use	Number of instrumental ties	0.22	0.001	Yes
H3	Hedonic use	Number of expressive ties	0.24	0.001	Yes
H4	Cognitive use	Number of instrumental ties	0.40	0.001	Yes
H5	Social use	Relational social capital	0.05	ns	No
H6	Cognitive use	Relational social capital	0.33	0.001	Yes
H7	Cognitive use	Cognitive social capital	0.15	0.05	Yes
H8	Number of expressive ties	Innovative job performance	0.18	0.001	Yes
H9	Number of instrumental ties	Routine job performance	0.19	0.001	Yes
H10	Number of instrumental ties	Innovative job performance	0.23	0.001	Yes
H11	Relational social capital	Routine job performance	0.27	0.001	Yes
H12	Relational social capital	Innovative job performance	0.02	ns	No
H13	Cognitive social capital	Routine job performance	0.12	0.01	Yes
H14	Hedonic use	Routine job performance	-0.14	0.01	Yes
<i>Significant non-hypothesized relations</i>					
	Hedonic use	Cognitive social capital	-0.14	0.01	
	Cognitive use	Expressive ties	0.20	0.05	

Mediation

In testing for mediation, when examining first the direct effects of the three social media uses on job performance we found that all six relationships are significant (details in Appendix F). When the four social capital mediators were introduced, these relationships either completely disappear, indicating a full mediation effect, or their power is reduced, indicating a partial mediation effect between social media use and job performance (Baron and Kenny, 1986). In order to test further the significance of the mediation effect we conducted a series of Sobel (1982) tests. The Sobel tests enable us to directly assess the statistical significance of the indirect effect, that is, the difference between the total effect and the direct effect of the independent variable on the dependent variable (Song et al., 2014). We found all mediations to be significant and that in most cases social capital fully mediates the relationships between the different uses of social media and the two forms of job performance, supporting our hypotheses that social media use is positively related to job performance but only through social capital. The first exception to this is the relationship between the hedonic use of social media and routine job performance which is, as hypothesized, simultaneously direct and negative, and indirect and positive, indicating that the negative impact of hedonic use of social media is partially mitigated by social capital. The other exception is the partially mediated relationship between the social use of social media and innovative job performances, which insinuates a possible direct relationship between these two constructs. We discuss the implication of this finding in the next section.

Discussion

We started this paper by asking if, and to what extent, the impact of social media on routine and innovative job performance varies depending on how the technology is used. The answer, based on our findings, is that the use context of social media matters a great deal in work-based outcomes of job performance. The way social media is used to socialize, for entertainment, or for knowledge sharing – affects its impact on job performance. The specific mechanism through which these changes materialize is the employee's social capital. This finding represents a new empirical contribution linking social media, social capital, and job performance. It also provides an interesting addition to the ongoing discussion within management circles about the use of social media in the workplace. The paper's findings provide a contingent view – for some types of work, namely routine tasks, social media may have a negative effect, while for more creative and innovative tasks, its effect is positive. The paper also provides a theoretical foundation for the understanding of social media usage in work environments by combining insights from uses and gratification theory (Katz et al., 1973), affordances theory, and Nahapiet and Ghoshal's (1998) conceptualization of social capital.

Social capital matters

We found that social use of social media, to establish and maintain social relations, is positively linked to the formation of structural social capital. Expressive ties that are formed provide emotional support for innovation, and instrumental ties provide links to resources needed for both routine and innovative performance. Similarly, cognitive use of social media was positively linked to all three dimensions of social capital, supporting a strong link to job performance. Although we did not expect a significant link between cognitive use and the formation of expressive ties, we note that it is possible for friendships to materialize even in a computer mediated collaborative environment, as our results indicate. Hedonic use was found to have both a positive (on expressive ties) and a negative (on cognitive social capital) effect, and we elaborate on that later

in the discussion. Integrating our results with the research directions proposed by Kwon and Adler (2014) it would be interesting to study the effect of social media use on nuanced facets of social capital such as existing versus potential ties in social media, and differences in the impact of pure social ties versus those ties that exist both online and offline.

Innovative job performance and routine job performance as the outcome variables of this study showed r-squared values of 0.14 and 0.20, respectively. Despite the breadth and complexity of the performance measure, this study was able to significantly attribute a portion of the variability in job performance to social media usage and social capital, presenting an important contribution to the theoretical understanding of this emerging area of research.

Focusing on the how of social media use

Important calls were made in recent years to enrich the theoretical and empirical conceptualization of technology usage (e.g. Barki et al., 2007; Burton-Jones and Straub, 2006; Jaspersen et al., 2005). It is unlikely, these authors noted, that a single conceptualization or measure would be able to successfully capture a complex construct such as system usage. Indeed, in prior studies of technology adoption, as an example, when a single measure of system usage was employed, different findings emerged concerning antecedents of adoption in the utilitarian context (e.g., Davis et al., 1992; Kamis et al., 2008) versus the hedonic context (e.g. Hong and Tam, 2006; Van der Heijden, 2004).

In this study, we drew on affordances theory to further elucidate this notion, arguing that how affordances are perceived in social media usage depends on the goals of the individual user (Leonardi, 2011, 2013). In light of these insights, asking someone *whether* they use Facebook or YouTube or Blogs at work seems somewhat simplistic. A more appropriate question would be *how* they use Facebook, YouTube and Blogs.

The results of this paper provide an important support for the differentiated view of technology use. Rather than encapsulating technology use and linking it broadly to social capital, we provide a more granular view of the specific links from use contexts to social capital dimensions. While there may be numerous ways in which social media is used, we demonstrated that Uses and Gratifications theory could be used to examine three use contexts that provide three important gratifications – social, hedonic, and cognitive. As discussed above, our findings show that indeed the path from technology use to performance varies for the different contexts. Linking back to the concept of perceived affordances (Leonardi, 2011), a user with a goal to gratify social needs will perceive specific affordances that enable socialization, leading to specific feature use (like commenting or networking with others). Given the choice of features enacted, the effect of technology use on social capital and performance will vary. Hence, the impact of technology use for the person looking to gratify social needs will differ from, for example, that of a user looking to gratify cognitive needs. The latter will likely perceive different affordances, leading to different feature use (perhaps reading and posting information or sharing documents) and different performance impact.

To follow up on this contribution, future work can take a longitudinal approach to understand how social media use changes over time, and how this change affects performance. Another interesting extension of this work is at the organizational level. Many studies that look at the business value of IT also follow a dichotomous approach to measuring technology adoption, simply noting whether an organization implemented or did not implement a specific technology. It would be insightful to elaborate on *how* the organization uses the implemented IT in order to better understand the value it provides.

Is the hedonic use of social media in the workplace good or bad?

This study found that the use of social media for hedonic purposes had a negative direct effect on routine job performance; thus, the more an employee uses social media for entertainment, the less time he/she has to perform mandated duties and tasks. This negative effect is somewhat amplified by the negative relationship between hedonic use and cognitive social capital which, in turn, is also linked to routine job performance. Overall, we find that hedonic use of technology negatively affects routine performance through these routes.

However, it is equally important to note that hedonic use of social media may have a positive side. As our findings demonstrate, hedonic use is positively associated with the number of expressive ties an employee has at work, which – in turn – enhances his/her innovative job performance. This finding contributes to an important body of literature concerning gaming and playfulness as drivers of creativity and innovation in the workplace. Past findings demonstrated that playfulness has an important role in supporting employees' creativity and innovation (Lin et al., 2010) and that playful technologies are important drivers of creativity in organizations (Dodgson et al., 2008). Indeed the concept of gamification, which refers to games introduced by employers into the workplace (Mollick and Rothbard, 2014), has received increased attention in recent years. Beyond creativity and innovation, hedonic use of technology has also been shown to increase job satisfaction and commitment to the organization, resulting in improved job performance (Moqbel et al., 2013). The results of this study contribute to our understanding of how hedonic use of technology can support innovation by adding the role of expressive ties.

To follow up on this contribution, future work can further explore the link between hedonic interactions with technology and innovation. Bringing together the multiple streams of research into a single work that puts hedonic use of media in the forefront can help researchers and organizations understand the value of fun at work and how it can be leveraged by organizations wishing to promote innovation. Beyond this much needed review of hedonic use of technology, specific directions for future research can examine the negative impact of hedonic use on the cognitive dimension of social capital as well as identify what optimal amounts of hedonic media use may be (i.e. when does it cross the line between stimulating innovation and being disruptive).

Additional managerial implications

This study presents a notable contribution to managerial understanding of social media use in relation to job performance. By showing the contingent nature of social media usage and social capital, it demonstrates that social media should not be disregarded by organizations out of fear of employee productivity loss.

The study's finding is particularly critical at a time when up to 74% of companies ban certain forms of the social media in the office (Smith, 2012). In Microsoft Corporation's, 2013 survey of 9908 information workers in 32 countries, 34% reported that management underestimates the benefits of these tools, 37% said they could do their job better if management was more supportive of their use and 46% reported an increase in their productivity due to the use of social media (Microsoft, 2013). As managers and employees appear at odds over some forms of social media use within the workplace, this study adds a robust dimension to this increasingly public debate. Our study shows that the answer that managers seek to the question of whether they should allow social media at work is 'it depends'.

While these findings provide us with guidance to using an emerging and popular technology as a vehicle to improve employees' job performance, it will nonetheless remain a challenge for managers to build the social capital necessary to achieve this goal. Correspondingly, among this study's recommendations is that organizations develop social capital inter-nally. This goal can be achieved by providing opportunities for employees to make new connections, by allowing time and space for relationship building among employees, and by making explicit the norms, culture and language of organization, as well as those of the different communities and work groups therein (Lesser and Storck, 2001).

A key finding is that managers should have a strong notion of what type of job performance is important to them, and structure their social media use accordingly. If they are interested in promoting innovative and creative thinking, then building strong structural social capital is important. Hence, they can encourage social and cognitive use of the technology and may allow for very specific hedonic interactions to increase expressive ties. If managers' objective is to improve the efficiency of routine work tasks, then they should discourage any hedonic use and focus primarily on cognitive use, with some social networking aimed at enhancing instrumental ties.

Another recommendation is to legitimize the use of social media during working hours, to organize work related events that are built around these tools, and to allow the boundaries between work and social activities to become blurred. These activities would likely help develop the levels of social capital required to translate social media use into enhanced levels of job performance (Leidner et al., 2010). Another reason for legitimizing and managing social media in the office is that young employees are defiant about their social media activities, with nearly three out four millennial workers in a recent survey claiming disobedience toward corporate information technology policies on social media (Fister Gale, 2013). Managers can profit from training employees to use social media in ways that will positively develop their potential at work.

Limitations

One limitation of the study is its sampling frame. The company is one of a number of firms afforded the chance to experiment with a wide array of social tools that fully captures the three categories of social media. In this respect, it is a forward-looking locus of social media usage, and thus provides an attractive setting for analysis. Nevertheless, there may be some systematic factors that exist within this organizational context, including the possibility that the employees in this specialized setting may not be representational of the general population of employees outside its borders.

Another limitation of the survey is the potential risk of social desirability bias in questions about job performance and hedonic use of social media at work. However, the guarantee that all responses would remain anonymous and that individual responses could not be attributed to employees is expected to alleviate some of this risk (Singleton and Straits, 2005). Moreover, self-reported measures of performance are proven to be as reliable as supervisor evaluations in other studies (Teigland and Wasko, 2009). This study relied on a cross-sectional survey to assess the relationship between the different constructs making up the conceptual model. Cross-sectional surveys are limited in their ability to confirm causality in a relationship (Singleton and Straits, 2005). For this purpose, a follow-up longitudinal field survey or quasi-experiment could be conducted. Richer data could add additional inputs, such as detailed measures of social media experience, or a breakdown of experiences by specific social media tools and applications. Moreover, surveys have a limited ability for explanation or deep understanding of certain relationships (Singleton and Straits, 2005), therefore more qualitative methodologies may be needed to understand why this study did or did not find support for certain hypothesized relationships. A possible extension to this study is to focus on other potential measures, such as job satisfaction or team size (Lambert et al., 2001). Another interesting extension is an in-depth study of the relationship between social media uses and the structure of the employees' social network by performing a social network analysis (SNA) on sociometric data. Finally, it would be interesting to measure the extent of overlapping ties in the operationalization of structural social capital.

Conclusion

Social media represents a set of fluid technologies with many dynamic tools and a myriad of functionality. This technology's value inside the organization, particularly its impact on employee performance, is not well understood, which has led some companies to ban social media or restrict its use. As a result of these measures, companies may be missing out on

potential business benefits in the form of improved communication, collaboration, expertise location, problem solving, knowledge sharing, innovation, engagement, job satisfaction and employee retention.

The insights obtained by this study bolster the body of knowledge surrounding the organizational impact inherent in social media tools and applications. These perceptions are critical in illuminating the nuances of the debate surrounding the role of social media in the modern day workplace. If organizations are not alerted of the benefits inherent in social media, they risk disregarding these novel forms of social exchange wholesale, thus denying themselves of the rewards these tools may reap if properly understood and managed. Through studies such as this one, we can begin to assemble a richer picture of the positive impact social media use may have on business performance, while simultaneously staying abreast of the negative effects this same technology may yield. This updated understanding affords managers the ability to develop better policies toward social media use, which work to appease both managerial fears surrounding loss of employee productivity, and employee frustrations surrounding the loss of potential networks of emotional, social, and informational exchange within the workplace. Ultimately, this process of separating myth from reality, fiction from fact, contributes markedly to our overall understanding of a business world currently experiencing a unique combination of attraction and anxiety toward social media use.

Appendix A. Model constructs

	Construct	Description	Measurement Scale
Social media categories	Social use	Using social media to build new social relations (i.e. making new friends), identify individuals with shared interests, and stay in touch with existing friends and acquaintances	Developed from scratch with two items adapted from Chiu et al. (2006) social interaction ties
	Hedonic use	Using social media for fun, passing time, relaxing, escaping and entertainment	Based on Nevo and Nevo (2011) virtual worlds scale and Agarwal and Karahanna (2000) enjoyment scale
	Cognitive use	Using social media for creating and sharing content and accessing content produced by other individuals, for example, sharing opinions, stories, ratings, debates, personal photos and videos	Based on knowledge sharing scales (van den Hooff and Huysman, 2009 ; Bock et al., 2005)
Social capital dimensions	Structural social capital	Expressive network ties are social ties which primarily provide friendship and emotional and social support (Granovetter, 1973 ; Ibarra and Andrews, 1993). Instrumental ties are weaker social ties which can casually arise in a work environment for example and which tend to be better suited to access information and resources (Granovetter, 1973 ; Ibarra and Andrews, 1993)	Expressive ties' scale adapted from Law and Chang (2008) and Hansen et al. (2005) . Instrumental ties' scale developed based on Ibarra and Andrews (1993)
	Relational social capital	Most commonly operationalized through the construct of trust and trustworthiness, determined by (i) the trustee's ability, or the skills, competence and characteristics that enable a trustee to have influence in some domain, (ii) the trustee's benevolence, or the extent to which a trustee is believed to want to do good to the trustor, and (iii) the trustee's integrity, or the perception that the trustee adheres to principles acceptable to the trustor (Mayer et al., 1995)	Adapted from Law and Chang (2008) , Hansen et al. (2005) and Leana and Pil (2006)

Appendix A. Model constructs (continued)

	Construct	Description	Measurement Scale
	Cognitive social capital	Refers to resources providing shared representations, interpretations, and systems of meaning among parties and consists of shared codes, language and narratives (Nahapiet and Ghoshal, 1998)	Adapted from Hinds and Mortensen (2005)
Job	performance types	Represents performance on job-related tasks which are mandated, coordinated and rewarded by the organization and are set to meet organizational goals (Janssen and Van Yperen, 2004)	Routine Adapted from Janssen and Van Yperen (2004)
Innovative	Deals with problems,	opportunities and unusual situations (Janssen and Van Yperen, 2004). It is based on discretionary behavior beyond a formal job description and incorporates not only the generation of new ideas within a group or organization, but also of their promotion and realization or implementation (Kanter 1988; Sparrowe et al., 2001)	Adapted from Janssen and Van Yperen (2004)

Appendix B. Respondents demographics

		Percent
Gender	Male	75.5
	Female	24.5
Age	18–24	1.4
	25–36	32.6
	37–48	47.2
	49–64	18.8
Education	Did not complete high school	0.4
	High school degree	1.8
	Incomplete college or university	6.0
	Bachelor's degree	50.9
	Master's degree	39.1
Region	Doctorate degree	1.8
	North America	55.8
	Europe	29.3
	South America	1.6
	Asia	9.7
Professional involvement in social media ^a	Australia	3.6
	Development	28.6
	Technical support	28.2
	Sales consultancy	31.8
	Consultancy	39.2
Extent of social media use outside work	Other	23.3
	Heavy use	25.2
	Intermediate use	45.0
	Casual use	28.4
	No use	1.4

N = 307.

^a Respondent were allowed to select more than one category.

Appendix C. Exploratory factor analysis (EFA) loadings

Item/Factor	SocUse	CogUse	HedUse	InstrTie	ExprsvTie	ReltnCap	CgntvCap	InnovPerf	InrolPerf
SocUse1	.791	.204	.158	.124	.107	.037	-.048	.094	.092
SocUse2	.758	.188	.241	.188	.059	-.005	-.034	.110	.049
SocUse3	.637	.311	.161	.061	.191	.036	-.124	.152	.064
SocUse4 ^a	.548	.428	.055	.144	.122	.101	-.046	.181	.063
SocUse5	.811	.133	.190	.097	.133	.011	.002	.115	.045
SocUse6	.790	.141	.185	.072	.151	.091	.039	.138	.020
CogUse1	.206	.820	-.051	.154	.103	.136	.003	.101	.031
CogUse2	.251	.794	.003	.010	.128	.068	.039	.052	.083
CogUse3	.151	.835	.009	.118	.122	.112	.067	.018	.010
CogUse4	.108	.745	.000	.206	.037	.040	.089	.192	-.035
CogUse5	.223	.768	-.080	.174	.043	.208	.030	-.025	.022
HedUse1	.189	-.014	.865	.078	.165	.003	-.020	.010	-.077
HedUse2	.202	-.070	.876	.027	.113	-.012	-.060	.024	-.071
HedUse3	.179	.000	.819	.009	.206	.021	-.123	.052	-.080
HedUse4	.228	-.003	.874	.003	.079	-.045	-.068	.070	-.109
InstrTie1	.240	.152	-.069	.780	.198	.200	.059	.047	.050
InstrTie2	.285	.062	-.038	.743	.210	.164	.108	.027	.012
InstrTie3	.159	.223	.083	.646	.224	.343	.057	.108	.138
InstrTie4	.023	.277	.109	.683	.152	.175	-.064	.226	.133
InstrTie5	.013	.207	.122	.662	.189	.158	-.038	.257	.165
ExprsvTie1	.058	.075	.046	.233	.805	.198	.049	.107	.001
ExprsvTie2	.158	.123	.102	.284	.786	.053	.002	.163	.050
ExprsvTie3	.117	.113	.159	.193	.756	.184	.007	.141	-.043
ExprsvTie4	.170	.057	.163	.173	.740	.162	.033	.166	-.037
ExprsvTie5	.185	.143	.190	-.019	.736	-.079	-.104	-.001	.107
ReltnCap1	.036	.214	.010	.278	.106	.769	-.017	.045	.146
ReltnCap2	.096	.160	-.015	.205	.187	.799	.145	.004	.146
ReltnCap3	.082	.109	-.018	.218	.185	.821	.111	.102	.120
ReltnCap4	-.008	.074	-.060	.133	.180	.788	.089	.114	.098
ReltnCap5 ^a	.015	.045	.039	.004	-.104	.663	.164	.022	.088
CgntvCap1	-.010	-.024	-.078	.013	-.022	.141	.834	-.039	.063
CgntvCap2	-.121	.064	.047	-.047	.108	.030	.753	-.013	.237
CgntvCap3	-.032	.028	-.053	.054	-.071	.157	.817	-.026	.005
CgntvCap4	.019	.104	-.142	.044	-.032	.111	.730	-.047	.055
InnovPerf1	.151	.035	.004	.061	.123	.042	-.033	.848	-.046
InnovPerf2	.173	.079	.016	.059	.187	.061	.019	.798	-.016
InnovPerf3	.124	-.006	.031	.056	.031	.022	-.041	.772	.115
InnovPerf4	.013	.156	.086	.040	.039	-.012	-.009	.793	-.040
InnovPerf5	.012	.063	.019	.169	.049	.161	-.087	.774	.176
InnovPerf6	.128	.041	.004	.090	.076	.019	.013	.889	.001
RtnPerf1	.036	.071	-.078	-.033	.054	.158	.044	.020	.884
RtnPerf2	.044	.004	-.086	.078	.008	.156	-.002	.098	.859
RtnPerf3	.091	.028	-.092	.109	.029	.122	.075	.028	.874
RtnPerf4 ^a	.090	-.022	-.010	.114	.171	-.111	.309	.038	.529
RtnPerf5	.009	.039	-.078	.132	-.230	.307	.122	-.015	.604

N = 240.

^a The three highlighted items were dropped from the instrument.

Appendix D. Final survey items

Category	Item wording
Social use	<i>In my organization, I use social media to...</i> ...create new relationships at work ...get to know people I would otherwise not meet at work ...maintain close social relationships with people at work ...get acquainted with colleagues who share my interests ...discover colleagues with interests similar to mine
Cognitive use	...share content with colleagues ...create content in collaboration with colleagues ...create content for work ...disseminate content at work ...access content created by my colleagues
Hedonic use	...enjoy my break ...take a break from work ...entertain myself ...relax at work
Structural social capital – number of expressive ties	<i>Compared to others in my organization, I consider that...</i> ...I have many colleagues I consider friends ...I have many colleagues who are committed to continuing a personal relationship with me ...I have many colleagues who would support me in times of personal troubles ...I have many colleagues to whom I feel comfortable disclosing <i>personal</i> information ...I have many colleagues I see socially outside work
Structural social capital – number of instrumental ties	...I have many colleagues from whom I seek work-related information ...I have many colleagues from whom I seek advice in order to help me in my work ...I know many colleagues whom I can approach if I want advice on a work-related question ...I provide many of my colleagues with advice toward their work-related questions ...I provide many colleagues with input toward their work-related problems
Relational social capital	<i>In my organization...</i> I have several colleagues whose skills I trust Overall I can rely on the colleagues I work with Generally speaking, my colleagues and I have confidence in one another In general, my colleagues show a great deal of integrity
Cognitive Social Capital	<i>How often do you experience at work:</i> Incompatibility between your colleagues' work practices and yours Differences between your colleagues' priorities and yours Incompatibility between your colleagues' information and yours A difficult time understanding your colleagues when you interact with them
Innovative job performance	<i>How often do you perform the following work activities?</i> Create new ideas for improvements Mobilize support for innovative ideas Search out novel working methods Transform innovative ideas into useful applications

(continued on next page)

Appendix D. Final survey items (continued)

Category	Item wording
	Generate original solutions to problems
	Introduce innovative ideas
	<i>To what extent do you agree or disagree with the following?</i>
Routine job performance	I always complete the duties specified in my job description
	I always meet all the formal performance requirements of my job
	I always fulfill all responsibilities required by my job
	I often <i>fail</i> to perform essential duties

Appendix E. Common method bias analysis

Construct	Indicator	Substantive factor loading (R1)	R ¹²	Method factor loading (R2)	R ²²
Social use of social media	SOCUSE1	0.855***	0.730	-0.005	0.000
	SOCUSE2	0.857***	0.735	-0.028	0.001
	SOCUSE3	0.761***	0.579	0.121	0.015
	SOCUSE5	0.881***	0.775	-0.074	0.005
	SOCUSE6	0.862***	0.743	0.000	0.000
	Hedonic use of social media	HEDUSE1	0.905***	0.820	0.025
HEDUSE2		0.916***	0.839	-0.044	0.002
HEDUSE3		0.883***	0.780	0.040	0.002
HEDUSE4		0.915***	0.836	-0.021	0.000
Cognitive use of social media	COCUSE1	0.885***	0.783	0.046	0.002
	COCUSE2	0.838***	0.703	-0.024	0.001
	COCUSE3	0.876***	0.767	-0.043	0.002
	COCUSE4	0.788***	0.622	0.036	0.001
	COCUSE5	0.848***	0.720	-0.014	0.000
Structural social capital (number of instrumental ties)	INSTRTIE1	0.868***	0.754	-0.146*	0.021
	INSTRTIE2	0.811***	0.658	-0.156*	0.024
	INSTRTIE3	0.839***	0.704	0.096	0.009
	INSTRTIE4	0.794***	0.630	0.073	0.005
	INSTRTIE5	0.770***	0.593	0.147*	0.022
Structural social capital (number of expressive ties)	EXPRSVTIE1	0.862***	0.743	-0.014	0.000
	EXPRSVTIE2	0.887***	0.786	0.072	0.005
	EXPRSVTIE3	0.860***	0.740	0.027	0.001
	EXPRSVTIE4	0.834***	0.696	0.037	0.001
	EXPRSVTIE5	0.725***	0.526	-0.150*	0.022
Relational social capital	RELTNCAP1	0.868***	0.754	0.047	0.002
	RELTNCAP2	0.910***	0.829	0.000	0.000
	RELTNCAP3	0.923***	0.851	0.020	0.000
	RELTNCAP4	0.845***	0.714	-0.071	0.005
Cognitive social capital	CGNTVCAP1	0.854***	0.729	-0.027	0.001
	CGNTVCAP2	0.762***	0.580	0.014	0.000
	CGNTVCAP3	0.849***	0.721	-0.011	0.000
	CGNTVCAP4	0.767***	0.589	0.029	0.001
Routine job performance	RTNPERF1	0.904***	0.817	-0.019	0.000
	RTNPERF2	0.874***	0.763	0.022	0.000
	RTNPERF3	0.915***	0.837	0.032	0.001
	RTNPERF5	0.719***	0.517	-0.042	0.002

Appendix E. Common method bias analysis (continued)

Construct	Indicator	Substantive factor loading (R1)	R1 ²	Method factor loading (R2)	R2 ²
Innovative job performance	INNOVPERF1	0.872 ^{***}	0.761	−0.006	0.000
	INNOVPERF2	0.839 ^{***}	0.704	0.076	0.006
	INNOVPERF3	0.784 ^{***}	0.615	−0.045	0.002
	INNOVPERF4	0.795 ^{***}	0.633	−0.065	0.004
	INNOVPERF5	0.807 ^{***}	0.652	0.071	0.005
	INNOVPERF6	0.904 ^{***}	0.817	−0.034	0.001
Average		0.846	0.718	0.049 ^a	0.004

* $p < 0.05$.** $p < 0.01$.*** $p < 0.001$.^a Average of absolute values.**Appendix F. Mediation analysis**

Independent variable	Mediator	Dependent variable	Direct – no mediator	Direct with mediators	Sobel test	Mediation
Social use	Number of expressive ties	Innovative performance	0.30 ^{***}	0.17 ^{**}	2.42 ^{**}	Partial
Social use	Number of instrumental ties	Routine performance	0.14 ^{**}	0.03	1.98 [*]	Full
Social use	Number of instrumental ties	Innovative performance	0.30 ^{***}	0.17 ^{**}	3.28 ^{***}	Partial
Hedonic use	Number of expressive ties	Innovative performance	0.11 ^{**}	0.00	4.94 ^{***}	Full
Hedonic use	Cognitive dimension	Routine performance	−0.18 ^{**}	−0.14 ^{**}	−2.81 ^{**}	Partial
Cognitive use	Number of expressive ties	Innovative performance	0.23 ^{***}	0.06	3.21 ^{***}	Full
Cognitive use	Number of instrumental ties	Routine performance	0.13 ^{**}	0.04	2.73 ^{**}	Full
Cognitive use	Number of instrumental ties	Innovative performance	0.23 ^{***}	0.06	3.72 ^{***}	Full
Cognitive use	Relational dimension	Routine performance	0.13 ^{**}	0.04	4.12 ^{***}	Full
Cognitive use	Cognitive dimension	Routine performance	0.13 ^{**}	0.04	2.18 [*]	Full

N = 240.

*** $p < 0.001$.** $p < 0.01$.* $p < 0.05$.**References**

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