



# Knowledge-based HRM practices and innovation performance: Role of social capital and knowledge sharing

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## ABSTRACT

Drawing upon resource-based theory (RBT) and social capital theory (SCT), this study examines how do multinational enterprises (MNEs) in the emerging markets (EMs) utilize strategic resources to drive innovation performance. We used a survey questionnaire to collect data from 352 supervisor-subordinate dyadic samples in the MNEs in the EMs. The data collected was analyzed using structural equation modeling (SEM) to examine the study's hypotheses. We found that knowledge-based HRM practices directly and indirectly through social capital influence knowledge sharing behaviors in the MNEs. Furthermore, the study's findings suggest that knowledge sharing mediates the influence of social capital on innovation performance. Moreover, this study empirically suggests how knowledge-based HRM practices through the mediating role of social capital and knowledge sharing on innovation performance. This study's essential contribution is to extend and enrich the RBT, SCT, HRM, knowledge, and innovation literature in the field.

## 1. Introduction

Employee innovation performance is a critical construct in human resource management (HRM) and industrial psychology disciplines (Campbell and Wiernik, 2015) and can affect organizational performance (Anderson et al., 2014; Frederiksen and Knudsen, 2017; Rangus and Černe, 2019). Innovative job performance refers to the degree to which an employee intends to generate, promote, and realize novel ideas at the workplace (Janssen, 2001; Janssen and Van Yperen, 2004; Rangus and Černe, 2019). Organizations need employees who innovate while working on the assigned tasks (Daña et al., 2020; Birdi et al., 2016). Thus, innovation performance plays a critical role in talent retention and promotion decisions in the organization (Audenaert et al., 2019; Bettencourt et al., 2017). Furthermore, the extant literature suggests an upsurge in research interests on individual innovation performance (e.g., Dul and Ceylan, 2011; Forés and Camisón, 2016). Such an increased academic interest in employee innovation performance indicate organizations' aspirations to stay relevant and competitive through innovative products and services in the dynamic and competitive market of the 21st century (Birdi et al., 2016; Carayannis et al., 2017; Cegarra-Navarro et al., 2019).

The extant literature in the field has failed to identify specific individual and process-related variables most relevant to individual

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innovation performance (Anderson et al., 2014; Birdi et al., 2016; Maurer et al., 2011; Mumtaz and Parahoo, 2019). Previous studies suggest that knowledge, skills, and motivational attributes (Birdi et al., 2016), self-efficacy (Mumtaz and Parahoo, 2019), knowledge sharing (Guzman and Wilson, 2005; Wang and Hu, 2020), and domain relevant-commitment (Bettencourt et al., 2017) affect employees' innovation performance. On the other hand, team diversity (Sun et al., 2017), leadership influence tactics (Rangus and Černe, 2019), performance management (Audenaert et al., 2019), work environment (Dul and Ceylan, 2011), firm's knowledge sourcing strategy (Santoro et al., 2019), and absorptive capability (Forés and Camisón, 2016) are group and organizational level constructs to influence employee innovation performance. Furthermore, knowledge-based HRM (KHRM) practices promote knowledge creation, sharing, and utilization necessary for enhanced innovative performance (Caputo et al., 2019; Kianto et al., 2017; Minbaeva, 2013; Minbaeva et al., 2009). On the other hand, social capital at the workplace (Nahapiet and Ghoshal, 1998) facilitates knowledge sharing (Lefebvre et al., 2016) through access to relevant knowledge for enhanced innovation (Di Fatta et al., 2018; Wang et al., 2016) in the organization.

However, we know little about how KHRM practices act on theoretically acknowledged and malleable social capital and knowledge sharing of individual employees to engage in innovative job performance. In this study, we address this research gap by investigating the following questions: How does social capital operate on the influence of KHRM practices on knowledge sharing at the workplace? How does knowledge-sharing behavior play out on the influence of social capital on innovation performance? Our study posits that social capital may offer a relational opportunity for knowledge sharing in the departmental, interdepartmental, or organizational settings; however, the innovation performance depends on how KHRM practices orchestrate social capital and knowledge sharing behavior of the individual employee.

Premised on the resource-based theory (RBT: Barney, 1991; Barney et al., 2011) and the social capital theory (SCT: Nahapiet and Ghoshal, 1998), this study investigates the extent to which how employees use social capital (Adler and Kwon, 2002; Subramony et al., 2018) to engage in knowledge sharing behaviors (Campbell et al., 2012; Subramony et al., 2018) for enhanced innovation performance. Our study advances the literature on the relationship between KHRM, innovation performance (e.g., Kianto et al., 2017; Minbaeva, 2013; Minbaeva et al., 2009; Singh et al., 2019) and social capital (Mostafa and Bottomley, 2020; Subramony et al., 2018). It also offers insights into how KHRM practices play a critical role in promoting and strengthening social networking and knowledge sharing behaviors at the workplace. Furthermore, this study advances the literature on social capital (Nahapiet and Ghoshal, 1998), suggesting that is helpful for both accessing and contributing to knowledge (Wasko and Faraj, 2005; Wu and Chen, 2014) and innovation performance (Forés and Camisón, 2016). Last but not least, this study furthers the Journal of International Management (JIM) key goals to empirically understand and control knowledge management-related issues in the management of the global enterprises and advance theory and practice of international management.

## 2. Theoretical background and hypotheses

Resource-based theory (RBT) suggests that superior firm performance depends upon a unique bundle of strategic resources that the firm should possess and deploy effectively (Barney, 1991; Barney et al., 2011). These strategic resources include the financial, the physical, the human, and the organizational assets that a firm uses to conceptualize, produce, and deliver services or products to its customers (Barney, 1995). To attain the requirements as enunciated by the RBT, firms require top quality human capital (Takeuchi et al., 2007) at its disposal to satisfy customer needs to stay relevant in the markets. Employees are strategic means through which firms develop and build relationships and networks (McDonnell et al., 2016), particularly knowledge-based strategic assets considered peculiar to the organization in which they reside (Barney, 1991; Peteraf, 1993). Therefore, the leadership in an organization in conjunction with human resource (HR) professionals need to mobilize human capital for intra-organizational and cross-functional integration in a manner best suited to attain organizational goals (Cohen et al., 2010). Thus, knowledge as a resource is embedded in and carried through multiple entities, including KHRM practices (Kianto et al., 2017; Minbaeva, 2013), social capital (Nahapiet and Ghoshal, 1998), and knowledge sharing behaviors (Lefebvre et al., 2016) for innovation performance (Janssen and Van Yperen, 2004; Kotabe et al., 2007; Rangus and Černe, 2019).

We also base our study on the SCT (Nahapiet and Ghoshal, 1998) related to a network of invaluable relationships available to coworkers that they use network ties to share critical knowledge assets amongst themselves (Zhang et al., 2017). Social capital is a strategic resource that an individual employee acquires from his/her relational networks (Yu et al., 2013a, 2013b). We posit that knowledge sharing in an organization is the outcome of interactions and relationships amongst the coworkers. Social capital can be a critical asset to facilitate knowledge sharing (Chang and Chuang, 2011). Furthermore, knowledge creation and management are enhanced through learning that necessitates coworkers to exchange and share insights, knowledge, and mental models (i.e., social capital) (Cabello-Medina et al., 2011). Therefore, drawing upon SCT (Nahapiet and Ghoshal, 1998), we posit that knowledge sharing is essentially collaborative activities. Thus, social capital plays a vital role in enhancing coworkers' knowledge, skills, and abilities and creates conditions to influence knowledge sharing (Aklamanu et al., 2016) for innovation performance in the organization.

### 2.1. Knowledge-based HRM practices

Human resource management (HRM) practices explain the management processes that allow organizations to acquire valued and exceptional knowledge and influence innovative activity and higher performance (Lopez-Cabrales et al., 2009). HRM influences employees' job-related attitudes, abilities, and behaviors to accomplish the goals of an organization (Minbaeva, 2013; Singh et al., 2020) and plays a critical role in supporting an organizational environment favorable to knowledge management activities and innovation (Minbaeva, 2013; Singh et al., 2020). As knowledge and innovation have roots in human psychology, several past studies

call for customizing HRM practices in a manner best suited to develop and sustain the creation and sharing of knowledge for enhanced innovation performance in the organization (Kianto et al., 2017; Minbaeva, 2013; Minbaeva et al., 2009). The Knowledge-based HRM (KHRM) practices have expressed purpose to enhance knowledge processes within an organization (Kianto et al., 2017). The KHRM practices aim at improving the flow of knowledge - knowledge acquisition, assimilation, transformation, and exchange capabilities in the organization (Donate and de Pablo, 2015) through specific recruitment & selection, training & development, performance appraisal, and compensation practices (Lopez-Cabrales et al., 2009). KHRM practices augment the organization's human capital base while emphasizing less visible value-generating aspects: involvement, internal & external networks, knowledge embedded in scalar chains, etc. (Kianto et al., 2017; Malik et al., 2019; Minbaeva et al., 2009).

## 2.2. Social capital

Social capital denotes a kind of social networks, trust, and set of norms that ties together coworkers for facilitating coordination and cooperation for the mutual benefits of both coworkers necessary to attain larger goals of the organization (Coleman, 1988). Social capital is a strategic resource consisting of three dimensions, namely structure, relation, and cognition (Nahapiet and Ghoshal, 1998) that coworkers obtain through their relational networks (Yu et al., 2013a, 2013b) necessary to enhance organizational performance (Coleman, 1988; Ferraris et al., 2018). The structure element of social capital relates to the general nature of connection amongst the coworkers, whereas relational refers to network and cognition relates to common perspective, understanding including shared goals and languages (Chang and Chuang, 2011; Nahapiet and Ghoshal, 1998; Yu et al., 2013a, 2013b). Social capital facilitates knowledge sharing (Lefebvre et al., 2016; Zhang et al., 2017), organizational performance, and innovation (Yan and Guan, 2018). To sum it up, social capital is not situated in employees but in their relationships with coworkers of the organization (Coleman, 1988; Ferraris et al., 2018), and organization leverages social capital to affect effectiveness at the team and organizational level (Moran, 2005). Utilizing the SCT, we assume that the strength of the ties amongst coworkers creates an enabling context for knowledge sharing by developing conjoint confidence and willingness to engage in intensive interactions to share knowledge in the organization (Nahapiet and Ghoshal, 1998).

## 2.3. Knowledge sharing

KM process in an organization consists of the acquisition, storage, sharing, and application of knowledge (Nonaka and Takeuchi, 1995; Rowley, 2000) for achieving organizational goals. KM transference activities permit coworkers to share and disseminate relevant experience at the workplace (Liebowitz, 2004; Mulgan, 2005; Shamim et al., 2019). Knowledge sharing refers to making available task related information and to know how to help coworkers in a collaborative environment for problem-solving and the generation of new ideas (Cummings, 2004). It also refers to a process wherein coworkers mutually exchange both implicit and explicit knowledge to co-create unique experiences (Van Den Hooff and De Ridder, 2004). Coworkers who engage in knowledge-sharing activities display more agreeableness and extraversion orientation in their communications style (De Vries et al., 2006; Intezari et al., 2017; Liebowitz, 2004). Lately, the extant literature suggests for increased interest in the predictors of knowledge sharing in the organization, especially leadership and social relationships at the workplace promote and support knowledge sharing in the organizations (Del Giudice and Maggioni, 2014; Lefebvre et al., 2016; Singh et al., 2019; Zhang et al., 2017). Singh et al. (2019) suggest that top management support in valuing knowledge encourages coworkers to engage in knowledge sharing amongst themselves for problem-solving and in co-creation of new knowledge. Similarly, social capital influences coworkers' intrinsic and extrinsic motivations to engage in knowledge-sharing behaviors (Zhang et al., 2017). Knowledge sharing behaviors result in positive organizational outcomes, namely innovation performance (Giampaoli et al., 2017; Donate and de Pablo, 2015), open innovation (Singh et al., 2019), and job performance (Cillo et al., 2019; Kwahk and Park, 2016).

## 2.4. Innovation performance

Innovation performance (INNPERF) refers to the development and application of something new for which employees are yet to learn required strategies and knowledge (Janssen and Van Yperen, 2004), and such employees' innovative job behaviors contribute to sustaining organizational effectiveness (Janssen, 2003). INNPERF denotes the degree to which an employee creates and implements creative and valuable ideas in the organization (Janssen, 2001). Innovation performance is indispensable for helping organizations design and develop a sustainable competitive advantage (Anderson et al., 2014; Frederiksen and Knudsen, 2017; Santoro et al., 2020). However, it is also a known fact that while INNPERF results in intrinsic enjoyment and both costs and benefits to the coworkers (Janssen, 2003; Janssen et al., 2004). It has also emerged that the intermediate psychological processes to explain how and why varied factors affecting employees' innovative job behavior remain unsettled and immature (Anderson et al., 2014; Zhang et al., 2020). INNPERF is achieved if employees' new ideas are novel, useful, and have the market potential for helping organizations beat market competitions (Frederiksen and Knudsen, 2017), suggesting why creativity and innovation in any enterprise are essential for enhanced performance (Anderson et al., 2014). Therefore, all these past studies indicate that INNPERF plays a critical role in promoting organizational innovation (Singh et al., 2019), and indeed, there is strong evidence for the innovation-organizational performance linkage (Campanella et al., 2020; Wang and Dass, 2017).

## 2.5. The linkages amongst KHRM practices, social capital, knowledge sharing, and innovation performance

HRM practices provide individual employees in an organization to network with coworkers for developing interpersonal relationships (Chuang et al., 2013). Chuang et al. (2013) suggest that HRM practices positively affect organizational social capital by encouraging individual employees to construct decent relationships with their coworkers in the organization. In a study that investigates the linkages between HRM practices and innovation capability of technological firms in Spain, Lopez-Cabrales et al. (2009) found that human capital depends on high-profile personal HRM practices. In contrast, the firm's social capital depends on how efficiently and effectively collaborative HRM practices are implemented and that it influences firm's social capital. We posit that it is pertinent for organizations to consciously design and implement an explicit set of KHRM practices from the SCT perspective (Nahapiet and Ghoshal, 1998) to develop and strengthen innovation performance (Donate et al., 2016). Therefore, a firm's HRM practices should select employees based on their potential than current knowledge, skills, and experience (Lepak and Snell, 2002) for them to participate in learning unique knowledge necessary for the social capital of the organization (Subramaniam and Youndt, 2005; Weerakoon et al., 2019).

HRM practices grounded in the opportunity-motivation-ability philosophy facilitate employees' innovative behavior and overall innovativeness in the social enterprise (Weerakoon et al., 2019). This literature suggests to redefine and reposition traditional HRM into KHRM for enabling coworkers to engage in knowledge creation and sharing activities to support innovative behavior (Minbaeva, 2013) as KHRM enhances knowledge flows in the organization (Donate and de Pablo, 2015). We posit that a KHRM practice is a bundle of prudently selected HR practices (Minbaeva, 2013), aimed at enhancing organizational knowledge, influencing human capital (Noopur and Dhar, 2019) social capital to relate and co-create relevant experience for enhanced innovative performance in the organization. Drawing upon the RBT (Barney, 1991; Barney et al., 2011) and the SCT (Nahapiet and Ghoshal, 1998), we argue that KHRM practices (Minbaeva, 2013; Minbaeva et al., 2009) facilitate the development and strengthening of coworkers' social capital in the organization. Therefore, we propose that:

**H1.** KHRM practices positively influence social capital.

The principal scheme in social capital literature suggests that an employee's network of relationships at the workplace is a strategic resource for attaining collective goals in the organization (Dakhli and De Clercq, 2004; Nahapiet and Ghoshal, 1998; Zheng, 2010). We argue that social capital in an organization is well entrenched in the network of relationships amongst the coworkers (Zheng, 2010) and considered as the bedrock of knowledge creation, sharing, and innovation in the organization (Parker et al., 2016) necessary for knowledge management activities in the organization. It is believed that the more the supervisor gives positive performance feedback to the subordinate, the more enhanced subordinate's self-efficacy, which to create a path for creation and utilization of social capital for the benefits of the individual employees, the group, and the organizational unit (Parker et al., 2016). The social capital at the individual and team level has a distinctive influence on the individual employee's explicit and tacit knowledge sharing in the organization (Yu et al., 2013a, 2013b). Social relationships constitute the central core of networks and knowledge sharing (Wei et al., 2011). Social capital plays a strategic role in explaining knowledge sharing performance in the community of learning networks (Lefebvre et al., 2016). Drawing upon the RBT (Barney et al., 2011), we posit that intangible human capital (Campbell, Coff, & Krzycki, 2012; Subramony et al., 2018) and social capital (Adler and Kwon, 2002; Nahapiet and Ghoshal, 1998; Subramony et al., 2018) support knowledge sharing for improved individual innovation performance in the organization. Similarly, the SCT contends that relationship resources existing amongst coworkers, groups, and organizational units are strategic sources of knowledge management activities and innovation in the organization (Dakhli and De Clercq, 2004; Nahapiet and Ghoshal, 1998; Parker et al., 2016). Therefore, we hypothesize that:

**H2.** Social capital positively influences knowledge sharing.

Knowledge and its sharing are antecedents of innovation through organizational learning (Del Giudice and Della Peruta, 2016; Del Giudice et al., 2015; Nonaka and Takeuchi, 1995). Knowledge sharing and collaboration are facilitated through internal commitment (Palacios-Marqués et al., 2015; Soto-Acosta et al., 2014). This internal commitment relates to balancing the commitment of employees with that of organizations necessary for employee motivation and improvement in the organization's flow of knowledge (Popa et al., 2017). Employees' tendency to share substantial volumes of germane knowledge in an organization increases organizational embeddedness and influence of that particular individual employee (Henttonen et al., 2016) and s/he becomes distinctly visible and wanted source of knowledge (Cross and Gray, 2013). An employee in an organization interacts and shares explicit and tacit knowledge with coworkers, and augments the capability to delineate work-related problems and simultaneously utilizing new knowledge to act in a manner to find relevant solutions to his/her issues at the workplace (Nonaka et al., 2006).

On the other hand, the construct of innovation closely linked with knowledge creation in the organization (Scuotto et al., 2017; Nonaka and Takeuchi, 1995), and the processes of innovation entail series of the ongoing pursuit of harnessing novel and inimitable knowledge (Subramaniam and Youndt, 2005). Previous studies suggest linkages between knowledge sharing and innovation to inter-departmental coordination and network usage in the organization (Darroch, 2005; Singh et al., 2019; Papa et al., 2018). Therefore, as innovation performance is essentially contingent upon tacit knowledge, knowledge sharing is a foremost indispensable factor for innovation performance (Del Giudice and Della Peruta, 2016; Nonaka, 1994). Utilizing the RBT, we posit that knowledge sharing is a key element of knowledge management and also critical to enhance individual employees' innovation capability and performance (Ologbo et al., 2015; Soto-Acosta et al., 2014; Shujahat et al., 2019). Thus,

**H3.** Knowledge sharing positively influences innovation job performance.



## 2.6. KHRM Practice and knowledge sharing: the mediating role of social capital

The fundamental tenet of SCT argues for networks of relationships as strategic resources (Nahapiet and Ghoshal, 1998) as social capital embodies the resources a coworker or social entity attains through its network of relationships (Payne et al., 2011). We posit that this network of relationships (i.e., social capital) facilitates knowledge sharing amongst actors – the employees, the groups, and the organization – for innovative behaviors in the organization (Chow and Chan, 2008). The literature also suggests that social capital to obstruct value creation and innovation (Edelman et al., 2004) as some coworkers are enabled by their network positions, and others in the networks are constrained to share knowledge (Willem and Scarbrough, 2006). Thus, social capital, which encompasses shared values and trust, plays an ambivalent role vis-a-vis knowledge sharing (Bornay-Barrachina et al., 2017; Willem and Scarbrough, 2006) and that due to the fact that knowledge sharing is directed towards individual than organizational objectives (Adler and Kwon, 2002).

While reviewing past studies on why people share knowledge in the organization, Wang and Noe (2010) report interpersonal and embedded organizational relationships to push employees to engage in knowledge sharing behavior. Knowledge sharing is embedded in the organization's communities of practice (Wang & Noe, 2010). The resultant ties amongst coworkers within a social network(s) facilitate knowledge transfer and improve the value of information and knowledge as shared amongst them (Cross and Cummings, 2004; Reagans and McEvily, 2003). We posit that knowledge sharing in an organization starts at the individual employee level vis-à-vis his/her personal and professional relationships. Still, we know little about how relationships at work influence employee knowledge sharing behavior (e.g., Han et al., 2020). An organization is a social community wherein its members continuously engage in creating, sharing, and transferring of explicit and tacit knowledge (Chow and Chan, 2008). Knowledge management's fundamental aim is to convert individual experience into organizational knowledge (Li et al., 2006; Nonaka and Takeuchi, 1995).

Social capital is enhanced when coworkers get an opportunity to develop a communication network to recognize, assimilate, and utilize information and knowledge to create value at the workplace (Nahapiet and Ghoshal, 1998). That can be positively facilitated through well-crafted knowledge-based HRM practices as they positively relate to social capital, as they have implications for the density of work-related communication patterns (Jia et al., 2014). Several past studies suggest that KHRM practices influence coworkers' knowledge, skills, abilities, and attitudes to make them engage in knowledge sharing activities through the utilization of social capital, namely its relational, cognitive, and structural attributes (e.g., Aklamanu et al., 2016; Chuang et al., 2013; Donate et al., 2016). The knowledge available through social networks (Adler and Kwon, 2002; Subramony et al., 2018) helps develop social capital that allows promoting knowledge sharing behaviors in the systems (Lefebvre et al., 2016) and the knowledge-intensive work teams (Yu et al., 2013a, 2013b). While drawing upon the RBT and the SCT, we suggest that KHRM will relate to knowledge sharing activities through encouraging the network of relationships and strengthening coordination amongst the coworkers within and outside the organization (e.g., Jia et al., 2014; Kianto et al., 2017; Minbaeva, 2013; Minbaeva et al., 2009) – that is, by increasing social capital. Therefore, we hypothesize that:

**H4.** Social capital mediates the relationship between KHRM and knowledge sharing.

## 2.7. Social capital and innovation performance: the mediating role of knowledge sharing

SCT advocates for intangible benefits to both individual employees and organizations through networks of relationships embedded within the organizational cosmos (Adler and Kwon, 2002; Nahapiet and Ghoshal, 1998). The more the coworkers interact with others at the workplace, the more the opportunities for sharing of strategic resources, information, and knowledge for the benefits of all the stakeholders in the organization (Hezlett and Gibson, 2007), especially when managerial practices facilitate trusting relationships amongst the coworkers (Adler and Kwon, 2002). The network of social relationships possesses the power to facilitate access to critical strategic resources to employees (Nahapiet and Ghoshal, 1998), which ensures that individual employees have relevant information and knowledge to identify organizational problems and develop innovative solutions (Xerri and Brunetto, 2011). Drawing upon SCT's central idea, the networks of relationships generate valuable resource exchanges, information flow, and knowledge transfers amongst the network coworkers in the organization (Kim et al., 2016).

Furthermore, social capital reveals strong interpersonal connect and far-reaching investment in interactive relationships at work, and this affect-based trust enhances coworkers' willingness to share tacit knowledge amongst themselves (Yang and Farn, 2009). Hau et al. (2013) found social capital to positively and significantly predict implicit and explicit knowledge sharing intentions. However, they also noted the impact of social capital on tacit knowledge sharing is considerably higher than its impact on explicit knowledge sharing in the organization. The relational capital, sometimes referred to as (external) social capital (Nahapiet and Ghoshal, 1998), contributes to innovation performance as all relevant information and knowledge required for innovation at the workplace does not always reside within organizational boundaries (Kianto et al., 2017). The network of relationships may perhaps better elucidate innovation performance (Moran, 2005). The reason is that the innovation per se typically is contingent on distinctive established relationships amongst the coworkers involved in finding innovative solutions to the problems, rather than on the density, connectivity, and hierarchy of those relationships amongst employees at the workplace (Pérez-Luño et al., 2011).

We note that knowledge is subjective and difficult to express (Nonaka, 1994), and knowledge acquisition depends on commitment and trust within a relationship. Thus, social capital becomes a prerequisite condition to successfully transfer tacit knowledge and generate radical innovations (Levin and Cross, 2004). Pérez-Luño et al. (2011) investigated the moderating influence of social capital on the knowledge tacitness-radical innovations and found that for a high level of social capital, radical innovation increases as knowledge tacitness increases. Thus, innovations become radical when knowledge to be transferred is tacit and social capital is present (Hansen, 1999) as sharing of tacit knowledge requires strong relationships at work (Pérez-Luño et al., 2011). Based on the above

literature indicating a high degree of interconnection amongst social capital, knowledge sharing, and innovation, we hypothesize that:

**H5.** Knowledge sharing mediates the relationship between social capital and innovation performance.

Based on the extant literature and the resultant hypotheses, we propose the theoretical framework in Fig. 1 to be examined in this study.

### 3. Methods

#### 3.1. Participants and procedure

Following the procedures adopted in the previous studies (Butts et al., 2015; Ng et al., 2019; Panaccio and Vandenberghe, 2012), we collected data from 352 superior-subordinate dyadic self-initiated expatriates (SIEs) from personal and professional networks in service sector firms in the United Arab Emirates (UAE). We designed this study wherein a supervisor will rate only one subordinate. Therefore, one of the coauthors used his personal & professional networks to liaise with the human resource department in each participating organization, who assisted in coding the survey questionnaires for the matched supervisor and subordinate in the organization (Bakar and McCann, 2014). We described the study's general nature to our dyadic sample but did not divulge any particular hypotheses and guaranteed them of confidentiality of their responses. We used a convenient sampling technique to approach 378 supervisor-subordinate dyadic SIEs managerial professionals from select-service sector multinational enterprises (MNEs) in the UAE. It is to mention that it was a convenient sample. However, we found 352 supervisor-subordinate matched datasets valid for this study as 26 dyadic respondents had left a few items unanswered in the survey questionnaire. First, we asked the subordinate to complete KHRM practice and knowledge sharing measuring instruments. After that, we approached the subordinates' (those who participated in this study) supervisor to fill in survey questionnaires of the social capital and the innovation performance behavior of his/her subordinate. Both supervisor and subordinate completed the survey questionnaires at separate time and location, but they knew about each other's identity. The study sample was assured that their responses will not be shared with anybody and kept strictly confidential (e.g., Tepper et al., 2011).

To minimize the common method bias, we decided to go for a supervisor-subordinate dyadic response during the data collection stage as in the previous studies (Ma et al., 2017). Furthermore, to minimize risk related to common-method bias, if any, the dependent variables were placed after the independent variables in the survey questionnaire meant for both supervisor and subordinate sample to weaken, if not avoid, the effects of consistency artifacts (Foss et al., 2009; Salancik and Pfeffer, 1977). After the data collection, we further looked for evidence on a lack of common method bias in our study. We observed that the highest inter-construct correlation is 0.554 in the correlation matrix (Table 5). In contrast, common method bias is typically supported by extremely high correlations ( $\geq 0.90$ ) amongst the constructs in the study (Bagozzi et al., 1991). Therefore, the common-method bias was not a concern in our research.

Table 1 depicts that subordinate SIEs consisted of approximately 45% female, 54% were married, 51% had master-level education in humanities, science, technology, & business, and 30% were Middle Eastern expatriates. On the other hand, the supervisor sample consisted of approximately 36% female, 75% were married, 76% had a master level of education in humanities, science, technology, & business, and 59% were Middle Eastern expatriates working and living in the UAE.

#### 3.2. Measuring instruments

The respondent rated each of four the measuring instruments on a five-point Likert scale (1 = strongly disagree and 5 = strongly agree) unless otherwise indicated.

##### 3.2.1. Knowledge-based HRM (KHRM) practices

We adopted twelve items scale of commitment-focused HRM of Lepak and Snell (2002) to assess KHRM practices which was also used by Lopez-Cabrales et al. (2009) in their study. The sample items of this scale included in the KHRM practice scale asked subordinate employees to indicate how s/he performs jobs with a high degree of job security, training to develop organization-specific knowledge/skills, and receiving incentives for new ideas, etc. We found the Cronbach alpha coefficient of the KHRM practice scale

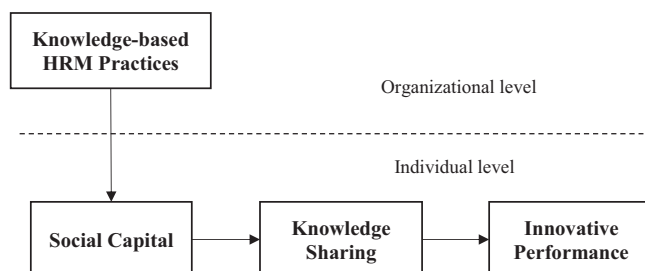


Fig. 1. The theoretical research framework.

**Table 1**  
Sample details.

		Subordinate (n = 352)	Supervisor (n = 352)
Gender	Male	194 (55.11%)	224 (63.64%)
	Female	158 (44.89%)	128 (36.36%)
Marital Status	Single	145 (41.19%)	67 (19.03%)
	Married	191 (54.26%)	265 (75.28%)
	Divorced	16 (4.55%)	20 (5.68%)
Age	≤30 (in Years)	107 (30.40%)	47 (13.35%)
	31–40 (in Years)	155 (44.03%)	242 (68.75%)
	≥41 (in Years)	90 (25.57%)	63 (17.90%)
Nationality	Middle Eastern Expatriate	102 (28.98%)	208 (59.09%)
	Non-Middle Eastern Expatriate	250 (71.02%)	144 (40.91%)
Educational Qualification	Bachelor Degree	116 (32.95%)	68 (19.32%)
	Master Degree	180 (51.14%)	269 (76.42%)
	Doctoral Degree	56 (15.91%)	15 (4.26%)
Years of Work Experience in the UAE	≤5 Years	116 (32.95%)	16 (4.55%)
	6–10 Years	100 (28.41%)	89 (25.28%)
	11–15 Years	84 (23.86%)	208 (59.09%)
	≥16 Years	52 (14.77%)	39 (11.08%)

to be 0.952 (Table 2).

### 3.2.2. Social capital (SCAP)

We adopted five items scale of Subramaniam and Youndt (2005). The sample items of SCAP scale asked immediate supervisor to indicate the extent to which her/his subordinate share and learn knowledge from each other, partners with customers, suppliers, etc. to find relevant solutions to the problems, skilled at collaboration with each other to diagnose and solve problems in their jobs, etc. Table 2 depicts the Cronbach alpha coefficient of the SCAP scale to be 0.922.

### 3.2.3. Knowledge sharing (KS)

We adopted five items scale of Connelly et al. (2012). Bavik et al. (2018) and Connelly et al. (2014) also adopted Connelly et al.'s (2012) scale to measure knowledge sharing in their studies. The sample items included in this scale asked the subordinate employees to indicate the extent to which s/he found their colleagues in their department looks into her/his requests to make sure s/he receives accurate answers, go out of their way to ensure that their colleagues tell her/him precisely what s/he needs to know, etc. We found the Cronbach alpha coefficient for the KS scale to be 0.928 (Table 3).

### 3.2.4. Innovation performance (INNPERF)

The INNPERF scale consisted of nine items scale that was adopted from Janssen (2001, 2003). We asked the supervisor to indicate the extent to which her/his subordinate engages in creating new ideas for improvements, thoroughly evaluates the application of new ideas, generate novel solutions to the problems, etc. The Cronbach alpha coefficient for INNPERF scale was calculated to be 0.937 (Table 3).

**Table 2**  
Test for convergent validity of knowledge-based HRM practices and social capital scales.

	Indicators	Std. loading	Variance	Error	Cronbach Alfa	SCR	AVE
Knowledge-based HRM (KHRM) Practices	KHRM1	0.777	0.604	0.396	0.952	0.952	0.622
	KHRM2	0.765	0.585	0.415			
	KHRM3	0.763	0.521	0.418			
	KHRM4	0.830	0.689	0.311			
	KHRM5	0.825	0.681	0.319			
	KHRM6	0.821	0.674	0.326			
	KHRM7	0.817	0.667	0.333			
	KHRM8	0.823	0.677	0.323			
	KHRM9	0.799	0.638	0.362			
	KHRM10	0.812	0.659	0.341			
	KHRM11	0.704	0.496	0.504			
	KHRM12	0.718	0.516	0.484			
Social Capital (SCAP)	SCAP1	0.790	0.624	0.376	0.922	0.923	0.706
	SCAP2	0.832	0.692	0.308			
	SCAP3	0.869	0.755	0.245			
	SCAP4	0.871	0.759	0.241			
	SCAP5	0.837	0.701	0.299			

**Table 3**  
Test for convergent validity of knowledge sharing and innovation performance scales.

	Indicators	Std. loading	Variance	Error	Cronbach Alfa	SCR	AVE
Knowledge Sharing (KS)	KS1	0.866	0.750	0.250	0.928	0.929	0.724
	KS2	0.909	0.826	0.174			
	KS3	0.737	0.543	0.457			
	KS4	0.849	0.721	0.279			
	KS5	0.882	0.778	0.222			
Innovation Performance (INNPERF)	INNPERF1	0.779	0.607	0.393	0.937	0.938	0.623
	INNPERF2	0.803	0.645	0.355			
	INNPERF3	0.807	0.651	0.349			
	INNPERF4	0.758	0.575	0.425			
	INNPERF5	0.744	0.554	0.446			
	INNPERF6	0.825	0.681	0.319			
	INNPERF7	0.787	0.619	0.380			
	INNPERF8	0.805	0.648	0.352			
	INNPERF9	0.790	0.624	0.376			

#### 4. Results

We applied confirmatory factor analysis (CFA) and structural equation modeling (SEM), using AMOS V26, to examine the research framework and hypotheses in this study. The CFA helps calculate the measuring instruments' validity and reliability and the model fit of the measurement model. Finally, we used SEM to examine the direct and mediating hypotheses of this study.

##### 4.1. The measurement model

We used confirmatory factor analysis (CFA) to verify the reliability and validity of the measurement model in this study (Anderson and Gerbing, 1988; Bentler, 1989). The obtained results through CFA suggest that the measurement model of this study demonstrates acceptable level of the model fit ( $\chi^2/df = 1.835$ ,  $p < 0.000$ ; TLI = 0.955; CFI = 0.958; IFI = 0.959; RMSEA = 0.049). We found the obtained standardized factor loading of each of the items of all four measuring instruments of KHRM practices, SCAP, KS, and INNPERF scales  $> 0.70$  as threshold point (Fornell and Larcker, 1981a), confirming the convergent validity of all the constructs. Furthermore, we tested for the measurement model's unidimensionality using four criteria: the factor loading of individual items on the intended construct, the Cronbach alpha coefficient, the average variance extracted (AVE), and composite reliability the scale in this study. Tables 2 and 3 suggest that standard loading of individual item on its intended construct ranges in between 0.704 and 0.882 (Chin, 2010), the Cronbach alpha coefficient of the scales ranges from 0.922 to 0.952 (Nunnally and Bernstein, 1994), the AVEs of the constructs in the study lies in between 0.622 and 0.724 (Fornell and Larcker, 1981b), and the scale composite reliability exceeds the cut-off mark of 0.80 (Hair et al., 2006), suggesting that the convergent validity of the measuring instruments are in the acceptable zone.

Furthermore, we examined the discriminant validity through square roots of AVEs obtained for each of the measuring instruments and depicted them, bold & italic, in the diagonal in the correlation matrix (Table 4). Table 4 shows that AVE's square roots for each of the construct is higher than its correlational with other constructs and that reflect upon the evidence of discriminant validity of the constructs in our study. Therefore, it suggests that the latent constructs in the study had different sets of items to them. They are conceptual dissimilar to each other, indicating the measurement model's discriminant validity (Chin, 2010).

##### 4.2. The structural model

We used SEM to examine three direct and two mediating hypotheses of the study following previous studies (Gunasekaran et al., 2017; Wamba et al., 2017), as in the conceptual research framework (Fig. 1). The obtained structural model of this study suggests for the model fit ( $\chi^2/df = 2.183$ ,  $p = 0.113$ ; TLI = 0.980; CFI = 0.993; IFI = 0.994; RMSEA = 0.058,  $p = 0.328$ ) as all the relevant indices for goodness-of-fit are in the acceptable range.

**Table 4**  
Test for discriminant validity.

		Mean	SD	1	2	3	4
1	Knowledge-based HRM Practices (KHRMP)	3.80	0.81	<b>0.789</b>			
2	Social Capital (SCAP)	3.99	0.84	0.554**	<b>0.840</b>		
3	Knowledge Sharing (KS)	3.92	0.85	0.451**	0.497**	<b>0.851</b>	
4	Innovation Performance (INNPERF)	3.81	0.82	0.275**	0.346**	0.531**	<b>0.789</b>

Wherein, \*\* $p < 0.001$ ; SD = Standard Deviation.

# The diagonal bold italic values in the table represent square root of average variance extracted (SQRT-AVE).



#### 4.2.1. Testing for the direct hypotheses

The first hypothesis of the study suggested that knowledge-based HRM (KHRM) practices positively influence social capital (H1) was supported ( $\beta = 0.554, p < 0.000$ ). The second hypothesis that social capital positively affects knowledge sharing (H2) was found supported ( $\beta = 0.357, p < 0.000$ ). Finally, the third hypothesis (H3) of the study indicating knowledge sharing to be positively associated with innovation performance ( $\beta = 0.531, p < 0.000$ ) was also supported (Table 5).

#### 4.2.2. Testing for the indirect hypotheses

The fourth hypothesis suggesting social capital to positively mediate the relationship between knowledge-based HRM practices and knowledge sharing (H4) was supported ( $\beta = 0.198, p < 0.001$ ). Our fifth hypothesis, which suggested that, knowledge sharing mediates between social capital and innovation performance (H5), was also supported ( $\beta = 0.189, p < 0.001$ ). We also performed the Sobel test of significance (Sobel, 1982), confirming the mediation effects (Table 6).

### 5. Discussion and conclusion

Drawing upon the RBT and SCT, we developed a theoretical model to uncover the link between KHRM practices and innovation performance by mediating social capital and knowledge sharing in the organization. Our results show that KHRM practices facilitate a network of social relationships amongst coworkers; the network of relationships at work (i.e., social capital) supports knowledge sharing amongst the coworkers; and coworkers' knowledge sharing behaviors seem to facilitate their innovation performance. We also found KHRM practices indirectly through social capital (i.e., employees' network of relationships) positively and significantly support knowledge sharing behaviors within the organization. Last but not least, the study results suggest that social capital through knowledge sharing also indirectly but positively and significantly influences employees' innovation performance. Therefore, our study's findings have both theoretical and practical implications and are discussed in detail.

#### 5.1. Theoretical implications

First, the findings of the study advance the application of RBT (Barney et al., 2011) and SCT (Nahapiet and Ghoshal, 1998) to understand how a firm utilizes its knowledge-based HRM practices to orchestrate a network of relationships embedded in the social networks to support and facilitate coworkers' innovation performance in the organization. Findings of this study are in harmony with the extant literature endorsing that with the apt management of strategic resources (i.e., sharing of unique knowledge through social networks, trust, and set of norms), organizations facilitate coworkers' innovation performance (Barney et al., 2011; Lopez-Cabrales et al., 2009; Minbaeva, 2013; Singh et al., 2019).

Second, the findings of our study extend the strategic HRM literature on knowledge-based competitive advantage (e.g., Cegarra-Navarro et al., 2016; Kaufman, 2015a, 2015b; Lepak and Snell, 2002; Minbaeva, 2013) through knowledge sharing, which is a critical factor in both individual and organizational learning and performance. This study supports a growing body of literature in the field focused on how firms can effectively increase knowledge transfer through HRM practices (Krausert, 2014; Minbaeva et al., 2012). Furthermore, our study advances the literature on high-commitment HRM practices (e.g., Boon and Kalshoven, 2014; Yousaf et al., 2018) and suggests the need to make employees feel that they are appreciated and valued in their organization. Such an appreciation of employees will have a cascading effect on knowledge-sharing behaviors amongst them for the benefit of both individual employees and the organization.

Third, our study extends the literature on social capital (Adler and Kwon, 2002; Nahapiet and Ghoshal, 1998) and its usage to capture and share knowledge (e.g., Bai et al., 2020; Paul et al., 2017) for enhanced employees' innovation performance (Janssen, 2003; Janssen and Van Yperen, 2004) in the organization. Social capital is the bedrock of knowledge creation, sharing, and innovation (Parker et al., 2016), and plays a strategic role in explaining knowledge-sharing behaviors in the community of learning networks (Lefebvre et al., 2016). Our study supports and extends such knowledge on the continuum of social capital-knowledge-innovation performance.

#### 5.2. Practical implications

The results obtained in this study have practical implications. First, as knowledge is the critical competitive advantage, the organization interested in developing and sustaining innovation performance should identify and acquire unique and organization-specific knowledge, making it very difficult to copy and thus decide its competitive advantage. Employees who possess strategically unique knowledge, rare and difficult for the competitor(s) to imitate, must have achieved longer-term performance and sustained competitive advantage.

Second, our study suggests that KHRM practices are necessary preconditions for nurturing coworkers' social capital at the workplace. Human resources are generally embedded in a social network of relationships that tie them together for mutual benefits and may cause these coworkers to take on organization-specific features that make them more valuable for a specific organization than for other organizations in the markets. Therefore, managers and organizations must use KHRM practices wherein employees on their own immersed themselves in their network of relationships and utilize their resultant social capital to further the organization's interest to share knowledge for competitive advantage.

Third, we suggest that organizations need to develop a kind of environment wherein knowledge exploration and exploitation are embedded in their culture. It is important to recall that we found a positive relationship between knowledge sharing and innovation

**Table 5**  
Testing for the direct effect.

Direct effect	Standardized direct effect	Standard error	t value	Sig. level	Hypothesis testing
SCAP<—KHRM Practices	0.554	0.019	12.458	$p < 0.000$	H1 Accepted
KS<—SCAP	0.357	0.055	6.613	$p < 0.000$	H2 Accepted
INNPREF<—KS	0.531	0.078	11.728	$p < 0.000$	H3 Accepted

Wherein, KHRM Practices = Knowledge-based HRM practices, SCAP = Social capital, KS = Knowledge sharing, INNPREF = Innovation performance.

**Table 6**  
Testing for the indirect effect.

Indirect effect	Standardized indirect effect	Sobel test statistics	Sig. level	Hypothesis testing
KS<—SCAP<—KHRM Practices	0.198	6.336	$p < 0.001$	H4 Accepted
INNPREF<—KS<—SCAP	0.189	4.698	$p < 0.001$	H5 Accepted

Wherein, KHRM Practices = Knowledge-based HRM practices, SCAP = Social capital, KS = Knowledge sharing, INNPREF = Innovation performance.

performance. While this finding is valuable for academic analysis about the role of strategic organizational capabilities (i.e., knowledge) on innovation performance, its practical implications are far-reaching. Our study suggests that investing in knowledge sharing activities is a profitable business for managers in numerous ways. As such, investment enhances employee's innovation performance that firms can use to satisfy customer needs and beat competition in the markets.

Finally, we note that our study's findings will make a difference in the post-COVID-19 knowledge economy wherein knowledge-based HRM could be a great differentiator to redefine talent management's shifting boundaries.

### 5.3. Limitations and future research directions

We ask researchers and practitioners to interpret this study's findings with caution as it has some limitations. First, even if the firm's intellectual capital consists of human, social, and organizational capital, we studied only the social capital dimension. The reason for studying social capital is that it improves the individual employee's work output. It is characterized by the richness of information & knowledge exchange amongst the coworkers in the organization. Future research should consider the human and organizational aspects of a firm's intellectual capital and view the interactive effect of three of them (the human, the social, and the organizational) on the intellectual capital. Second, our study's research context is based on a country-specific context (i.e., the UAE). Future research should examine our theoretical framework in a cross-country context to understand how social capital operates across different cultural and institutional contexts. Lastly, our study used a self-administered survey questionnaire grounded in the quantitative tradition, which has its limitations. Therefore, future research should use mixed-methods to take care of quantitative study limitations and provide additional academic and practical insights.

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