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Internal or external social media? The effects of work-related and social-related use of social media on improving employee performance

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Abstract

Purpose – This study investigates how employees' work- and social-related use of social media can individually and interactively render different impacts on employees' performance in the context of internal or external social media.

Design/methodology/approach – To test the research model in these two different contexts, the authors collected data from 392 internal social media users and 302 external social media users in the workplace.

Findings – The data suggest that the respondents' job performance can be enhanced when using internal social media for work-related purposes and using external social media for social-related purposes. Meanwhile, the interaction of work- and social-related use is positive for external social media but negative for internal social media on job performance. These findings highlight the significant distinction of social media use in the workplace.

Originality/value – First, this study contributes to the literature on the business value of IT by providing theoretical arguments on how companies can capitalize efforts to consider work-related use in combination with social-related use to create business value. Second, this research theorizes two distinct yet interacting views of social media use. The authors offer a more granular insight of the paths from work- and social-related use to employee performance instead of encapsulating social media use in a unitary concept and linking it simply and broadly to employee performance. Third, this research considers the interdependent effects of work- and social-related use on employee performance, and thus goes beyond the independent roles of these two types of social media use. Fourth, the authors find that the links from employees' work- and social-related use of social media to job performance vary in different contexts.

Keywords Internal social media, External social media, Work-related use, Social-related use, Job performance

Paper type Research paper

1. Introduction

Social media, such as social networking sites, weblogs and wikis, enable the creation and exchange of user-generated content (Karahanna *et al.*, 2018; Huang *et al.*, 2015; Chen and Wei, 2020). Despite the prevalence of social media, the exact impact of social media use on organizations remains debatable. One of the reasons is that social media are relatively



versatile in the way they are used (Schlagwein and Hu, 2017): employees can use the same social media for very different purposes. At the same time, a large number of companies including Microsoft, Google and IBM are investing considerable resources in implementing social media to enhance employees' collaboration and communication with the expectation of improving their job performance (Lu *et al.*, 2015). This suggests that social media are supposed to provide substantial benefits for companies. However, the extant literature has highlighted the controversy about whether social media are accepted as tools to aid or hinder job performance (Davison *et al.*, 2014; Koch *et al.*, 2012). Some scholars consider that social media can help enhance problem-solving and coordination, thus leading to better employee productivity (Leonardi, 2014, 2015; Beck *et al.*, 2014). Others are concerned that using social media at work may be associated with procrastination, an excess of personal chat and more general misuse, resulting in a loss of productivity (Chui *et al.*, 2009; Turban *et al.*, 2011; Lu *et al.*, 2015). Given the above debates, investigating whether and how social media use can help enhance employees' job performance is of great significance and interest.

Increasing attention has focused on the impacts of social media on organizations (Chen and Wei, 2020; Zhang *et al.*, 2019; Luo *et al.*, 2018). However, the current literature still has the following limitations: first, most research treats social media use as a unitary concept and has investigated it in terms of intensity, frequency and duration (Rishika *et al.*, 2013; Hu *et al.*, 2014), though these assessment approaches overlook the pluralistic nature of social media use and do not distinguish different behaviors in utilizing social media. Some recent studies have highlighted the importance of considering different behaviors in using social media (Sun and Shang, 2014; Zhang *et al.*, 2019). Second, although some existing research focused on the direct effect of social media use on job performance (Charoensukmongkol, 2014; Moqbel *et al.*, 2013), they did not explore how different purposes of social media use may exert different impacts. In fact, employees often use social media in the workplace to engage in both work- and social-related activities (Koch *et al.*, 2012; Chen *et al.*, 2019; Chen and Wei, 2019). Work-related activities include the exchange of opinions and advice or reading of work-related posts, whereas social-related activities include building and maintaining relationships with their coworkers. The reasons for recognizing the presence of work- and social-related social media uses are as follows. First, work aspects of social media use can differ from the social aspects of social media use (Koch *et al.*, 2012) and lead to different consequential effects (Ali-Hassan *et al.*, 2015; Chen and Wei, 2019). Failure to distinguish these two types of social media use may result in contradictory empirical findings (Moqbel *et al.*, 2013; Odoom *et al.*, 2017). More importantly, employees may use social media for work-related activities, yet this may reduce the impacts of the social aspects of use, and vice versa. Thus, the first objective of this study is to investigate the direct effects of work- and social-related use of social media on employees' job performance.

We also argue that the effect of social media use on employee performance is dependent on its context. Employees are often encouraged to use both internal and external social media in their organizations (Beck *et al.*, 2014; Forsgren and Byström, 2018; Davison *et al.*, 2018). *Internal social media* applications, such as Yammer, IBM Connections, Chatter and Jive, are owned by organizations, implemented on corporate platforms and restricted to internal use by employees (Turban *et al.*, 2011; Rode, 2016; Chen and Wei, 2019). *External social media* refer to public social networking services like WeChat, Twitter and Facebook, which are owned and operated by commercial providers (Pan *et al.*, 2017). Internal and external social media symbolically represent different values for employees (Forsgren and Byström, 2018). Employees may use these two different social media applications in different ways at work, with varied consequences (Forsgren and Byström, 2018). For example, employees may use internal social media more for work-related activities (Leftheriotis and Giannakos, 2014). In contrast, employees may use external social media more to engage in social-related activities (Davison *et al.*, 2014). For these two different contexts of social media, the effects of work- and

social-related use may generate different impacts on employee performance. Thus, our second objective is to conceptualize and examine the relationships among different contexts where social media are used, viz.: work- and social-related use and the associated job performance.

While researchers have previously suggested that work- or social-related use of social media directly affects employees' perceived work values, work- and social-related social media uses may be closely intertwined in the workplace (Mäntymäki and Riemer, 2016). For example, some scholars have explored the relationships between work- and social-related social media uses and indicated that social-related use is positively associated with work-related use (Sun and Shang, 2014). Consequently, considering the two use types independently and disregarding their interaction may be inappropriate (Rooksby *et al.*, 2009), even though the extant literature has largely ignored this interaction (Sun and Shang, 2014). Our third objective is to investigate the interaction of work- and social-related use on job performance for internal and external social media.

To meet these three objectives, we develop a research model that (1) outlines the relationships between work- and social-related social media uses on employee job performance, (2) theorizes the differential effects of work- and social-related use on job performance for internal and external social media and (3) considers the interaction of work- and social-related use on job performance under internal and external social media contexts. The following literature review section provides further explanations.

2. Literature review

2.1 *Internal social media vs external social media*

Based on the network content perspective, a widely adopted classification method of social media includes the instrumental or expressive value (Ibarra, 1995; Luo *et al.*, 2018). In view of this, the current study distinguishes between internal and external social media. Internal social media, also known as enterprise social media, intra-organizational social media or organizational social media, allow workers to "(1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing" (Leonardi *et al.*, 2013, p. 2). An increasing number of companies have implemented internal social media, like Kaiser-Permanente's Ideabook, IBM's Beehive, HP's Watercooler, SAP's Harmony, Kingdee's Yunzhijia, Wanqimingdao's Mingdao, Beisen's Tita, Tencent's Enterprise WeChat and Alibaba's DingTalk. These internal social media often comprise digital platforms integrating a variety of media tools, such as wikis, microblogs and social networking services (Kügler *et al.*, 2015; Huang *et al.*, 2015). Internal social media can only be used by the employees of an organization (Turban *et al.*, 2011) and therefore excludes external partners and clients. Internal social media facilitate the exchange of work-related information, such as tracking of work and events, task management, formal communication among employees and the creation of resources (Song *et al.*, 2019). The content conveyed through internal social media comprises work-related documents and task advice. On the other hand, external social media enable the exchange of personal and social information (Song *et al.*, 2019). Examples of external social media are Facebook, Twitter and WeChat. External social media applications can be used both for external communication, with parties like families and friends, and for internal communication with coworkers (Davison *et al.*, 2014; Wong *et al.*, 2016).

Internal and external social media are different in terms of their technical features, affordances and supported ties. First, regarding technical features, different social media

might be different in computer code, interfaces, platform-supported applications, algorithms, data and protocols (Song *et al.*, 2019). Different technical features of social media lead to individual employees interacting in qualitatively different ways (Song *et al.*, 2019). Second, internal and external social media are also different with respect to their affordance flexibility. Sociomateriality theory indicates that technological affordances should emerge through social practice (Orlikowski and Scott, 2008). Technological affordances are subject to contextual influences and human interpretation (Chen *et al.*, 2020). The flexibility of affordances of specific social media varies among different contexts and users. Internal social media often have rigid policies or rules about functionality and use (Leonardi *et al.*, 2013). The affordances of internal social media should be consistent with organizational structures, norms or policies (Jarrahi and Sawyer, 2015) and thus are relatively fixed. External social media enable flexible affordances when users use these technologies to engage in diverse work or personal life activities (Moqbel *et al.*, 2013). Third, internal and external social media facilitate ties in different ways. Internal social media are often used for establishing role-based connections at work (e.g. supervisor and subordinates, colleagues and business partners), whereas external social media are used for building and maintaining informal and affective ties with others.

Initially, there were more studies on social media used in organizations, with a focus on external social media. These studies mainly emphasized the means for organizational communication with external audiences, such as vendors, customers and the public at large (Culnan *et al.*, 2010; Hanna *et al.*, 2011). More recently, scholars have turned to the examination of internal social media use. Existing research emphasizes how internal social media are adopted for information sharing among employees and for building new relationships across organizational boundaries (Forsgren and Byström, 2018; Leonardi *et al.*, 2013).

2.2 Work- and social-related use of social media

Social media use can be divided into work- and social-related aspects (Chen and Wei, 2019). Classifying social media use into work-related use and social-related use is necessary for the following reasons. First, Zhang *et al.* (2019) argued that the work aspects of social media use are different from the social aspects of social media use. Second, prior research suggested that these two different purposes of social media use have distinct antecedents and outcomes (Chen and Wei, 2019; Chen *et al.*, 2019). Third, failure to differentiate these two types of social media use may lead to contradictory research findings (Moqbel *et al.*, 2013; Odoom *et al.*, 2017). Thus, it is necessary to consider social media uses for both work and social purposes and investigate the results derived from these two different purposes of social media use in the workplace.

Work-related social media use refers to using social media to access content created by others and to share work-related content (Chen and Wei, 2019; Chen *et al.*, 2019). Social media has been widely used for work-related purposes, such as reading work-related posts, sharing information about organizational policies, objectives and procedures, and setting up a meeting with other coworkers about work projects (Lu *et al.*, 2015). *Social-related social media use* refers to using social media to build and maintain relationships with others (Chen and Wei, 2019; Chen *et al.*, 2019). Social media can be used for a variety of social-related purposes, such as finding coworkers with similar interests and values and making friends within the organization.

Internal and external social media can each serve as a medium for which different purposes of use are allowed (Song *et al.*, 2019). For example, as one type of internal social media, DingTalk includes different kinds of functional modules such as calendars, attendance systems, group charts and task management. However, employees can also use DingTalk to communicate with each other by creating a private or group chat dialog box.

Similarly, employees can use WeChat (one type of external social media) for work purposes, such as discussing work project updates and sharing files. Employees can use the group chat function of WeChat for internal communication and collaboration. However, compared with the socialization-oriented WeChat that has strong features supporting social-related activities and delivering expressive value, DingTalk supports work-rated functions and provides instrumental value. Because internal and external social media have very different technical features, affordances and supported ties, people typically use internal social media for work purposes and use external social media for social purposes.

Existing research on social media use in organizational contexts can be organized into three streams (see [Table 1](#)). The first stream emphasizes social behavior on social media and particularly focuses on explaining the rationales of individuals who engage in knowledge-seeking and sharing behavior. For example, [Ou et al. \(2016\)](#) investigated how individual preferences for communication context influence knowledge sharing via social media. [Rode \(2016\)](#) investigated how intrinsic and extrinsic motivations influence knowledge sharing in enterprise social media platforms. [Kane \(2017\)](#) emphasized that social media is a diverse and evolving technological infrastructure that can support organizational knowledge management. [Zhao et al. \(2020\)](#) considered how the features of social media affect knowledge sharing via ambient awareness.

The second stream focuses on how social media affordance supports communication among employees. For example, the affordances of visibility, persistence, editability and association enabled by enterprise social media may alter information sharing, social network ties and power processes in the organization ([Treem and Leonardi, 2012](#); [Chen et al., 2020](#)). In particular, communication visibility afforded by enterprise social media increases the accuracy of meta-knowledge among people at work ([Leonardi, 2014, 2015](#)). [Van Osch and Steinfield \(2018\)](#) considered the role of internal social media visibility affordances in evoking diverse network structures.

The third stream examines the relationship between social media use and job performance. However, the effect of social media use on performance is not straightforward. Social media use has mixed effects on job performance. Social media use is viewed as a way for reaching a work-life balance that can reduce job stress and absenteeism, thereby resulting in enhanced job performance ([Moqbel et al., 2013](#)). [Chen and Wei \(2020\)](#) noted that social media use for vertical communication positively affects leader-member exchange and social media use for horizontal communication positively affects team-member exchange, which in turn improves employee performance. [Cui et al. \(2019\)](#) found that team social media use can improve in-role and extra-role knowledge sharing among team members and thus enhances their job performance. But on the other hand, some researchers also indicated that social media use may be negatively associated with job performance. For example, [Ali-Hassan et al. \(2015\)](#) argued that hedonic use of social media can lead to reduced employee routine job performance because of distractions. [Luqman et al. \(2021\)](#) indicated the socio-instrumental use of enterprise social media during working hours can induce psychological transition and interruption overload, which in turn reduce employees' performance. [Xie et al. \(2021\)](#) found that compared with nonsocial media users, social media users have difficulties suppressing interference information which leads to poor performance. In the context of this study, social media use may be positively associated with job performance. Social media use at work can be critical for improving work performance because it can serve as a communication channel where implicit and explicit knowledge are effectively transferred among employees ([Cao et al., 2016](#)). From the social capital perspective, using social media at work increases employees' job performance because social media enables employees to obtain advice from their colleagues more conveniently and easily and hence build social bonding ([Charoensukmongkol, 2014](#)). We formalize these literature discussions in our research framework as proposed below.

Study	Work-related usage	Social-related usage	Referring to internal social media	Referring to external social media	Theory	Methodology
Ali-Hassan <i>et al.</i> (2015)	Creating and sharing opinions, ratings, stories and debates, and accessing content created by others	Building new social relations, identifying individuals with common interests and staying in touch with existing friends	No	Yes	Social capital theory	Survey
Arazy and Gellatly (2012)	Nil	Nil	Yes	No	Regulatory focus theory	Survey
Beck <i>et al.</i> (2014)	Nil	Nil	Yes	No	–	Case study
Bulgurcu <i>et al.</i> (2018)	Nil	Nil	Yes	No	–	Cluster analysis
Chen <i>et al.</i> (2020)	Nil	Nil	Yes	No	Affordance theory	Survey
Chen and Wei (2019)	Creating, sharing content for work and accessing content about work generated by other coworkers	Creating new relationships, maintaining close social relationships and finding coworkers with similar interests	Yes	No	Communication visibility theory	Survey
Davison <i>et al.</i> (2014)	Sharing resources, asking questions and obtaining primary news and secondary opinions	Maintaining social relationship	No	Yes	Communication ecology framework	Case study
Ellison <i>et al.</i> (2015)	Nil	Nil	Yes	No	Affordance theory	Theoretical development
Kane (2017)	Nil	Nil	No	Yes	–	Theoretical development
Karahanna <i>et al.</i> (2018)	Nil	Nil	No	Yes	Needs-affordances–features (NAF) perspective	Theoretical development
Leonardi (2015)	Nil	Nil	Yes	No	Communication visibility theory	Theoretical development
Leonardi and Meyer (2014)	Nil	Nil	Yes	No	–	Experiment

(continued)

Table 1.
An overview of prior research on social media use at work

Study	Work-related usage	Social-related usage	Referring to internal social media	Referring to external social media	Theory	Methodology
Lu <i>et al.</i> (2015)	Reading work-related posts and exchanging advice and opinions	Maintaining relationships and cultivating social and emotional support	Yes	No	Social capital theory	Archival data
Luo <i>et al.</i> (2018)	Nil	Exchanging emotional feelings, sharing leisure or life feelings and constructing online relationships	Yes	No	Social network theory and social penetration theory	Survey and archival data
Moaqbel <i>et al.</i> (2020)	Nil	Nil	Yes	No	Social capital and emotional dissonance theory	Survey
Rode (2016)	Nil	Nil	Yes	No	Social exchange theory	Survey
Schlagwein and Htu (2017)	Broadcasting information, getting feedback and engaging in open-ended communication, storing, maintaining and retrieving knowledge	Generating fellowship and social relations	No	Yes	Absorptive capacity theory	Case study
Van Osch and Steinfield (2018)	Nil	Nil	Yes	No	–	Log and content data
Zhang <i>et al.</i> (2019)	Setting up meetings with coworkers about work projects and sharing information about organizational policies, objectives and procedures	Finding people with common interests, arranging social events with coworkers after work and making friends within the organization	No	Yes	Organizational commitment theory	Survey

The extant literature on social media has provided us with rich insights on how social media can be used differently at work. However, our review of the extant literature on social media use also indicates the following limitations. First, most existing studies have not considered the segment of social media use, instead purely focusing on use intensity or frequency (Moqbel *et al.*, 2013; Kuegler *et al.*, 2015). Second, although a few studies have highlighted the importance of considering different purposes of social media use (Sun and Shang, 2014; Lu *et al.*, 2015), the direct effect and interaction of different purposes of social media use on job performance are overlooked, resulting in unknown overall impacts of social media at work. Third, different contexts of social media use are important for us to apply the findings regarding social media. However, the extant literature appears to pay more attention to either internal or external social media, but the coexistence of these two types of social media and the contexts of usage are neglected.

3. Research framework and hypothesis development

Extending the literature discussion above, we outline the research model in Figure 1. Specifically, we argue that internal and external social media may convey different values to employees and influence the effects of affordance uses (i.e. work- and social-related use) on employees' job performance. Thus, we first propose that work- and social-related use influence job performance differently for internal and external social media. Then, we theorize the interaction of work- and social-related use on job performance in the contexts of internal and external social media.

3.1 The effects of work- and social-related use of social media on job performance

Social media can be used to create and share work-related content. Thus, it serves as an information repository to help employees find experts in the organization (Leonardi, 2015; Koch *et al.*, 2013). Knowing where to obtain expertise can help employees solve difficult problems at hand and produce high-quality work (Wu, 2013). Work-related use of social media at work may enable employees to gain easier access to relevant knowledge portals (Leonardi, 2014; Arazy and Gellatly, 2012). By learning from various knowledge experts in the network, employees can enhance their skill development (Saks and Ashforth, 1997). Work-related use of social media at work has the potential to increase employees' own ability to solve problems, which is crucial to higher job performance. Hence, we propose:

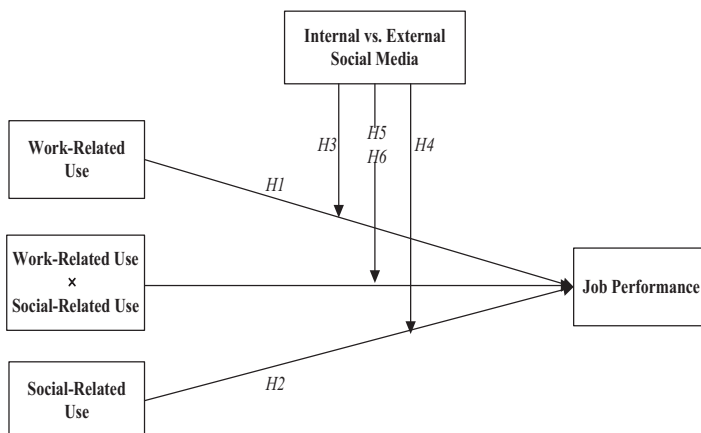


Figure 1. Research model

H1. Work-related use of social media has a positive effect on job performance.

Employees' use of social media for social-related purposes at work is also considered positively related to their job performance. Social-related use of social media at work provides a way for employees to tap into different social networks in the organization that offer social resources (Moqbel *et al.*, 2013). These social resources help build and strengthen the ties among employees (Lin *et al.*, 1981), and can in turn influence job performance by providing social support to each other in the social network. Luo *et al.* (2018) proposed that employees can exchange emotional feelings and cultivate trust through social-related social media use, thereby enhancing their attachment to the organization. In addition, social-related use of social media can help employees to obtain information about coworkers' interests outside of work (Leonardi and Meyer, 2014), thereby facilitating relationship building, and cooperation among employees, which may subsequently improve their job performance. Prior research has suggested that using social media for social-related purposes at work can enhance information accessibility and communication efficiency, which results in employees' higher job engagement (van Zoonen *et al.*, 2017; Zhang *et al.*, 2019). Thus, we propose:

H2. Social-related use of social media has a positive effect on job performance.

3.2 Comparative effects of work- and social-related use on job performance

If people know the value of a technical object, they can develop a general understanding of what kinds of consequences can be obtained by using the object (Grgecic *et al.*, 2015). Employees may perceive values such as efficiency and control for internal social media (Troom and Leonardi, 2012; Leonardi *et al.*, 2013). Internal social media are mostly designed to support organizational tasks (Sun and Shang, 2014; Ellison *et al.*, 2015). Internal social media afford communication opportunities for building and maintaining work-focused relationships (Song *et al.*, 2019). Thus, employees tend to make better use of internal social media for work-related purposes. Employees may treat the use of internal social media for work-related purposes as a channel to obtain professional information and share knowledge (Leonardi, 2014; Leftheriotis and Giannakos, 2014). Using internal social media for work-related purposes can enable employees to get answers to task-related problems and to create task-related connections (Mäntymäki and Riemer, 2016), which facilitate employees' job performance.

Hence, we argue that, relative to external social media, work-related use of internal social media has a stronger effect on job performance. External social media may not be so compatible with tasks as compared with internal social media. In addition, external social media, such as WeChat, are social spaces, where personal and professional interactions coexist (van Zoonen *et al.*, 2017; Ollier-Malaterre *et al.*, 2013). The blurring of temporal and social boundaries may sometimes create role conflicts through intruding into other life domains (Ollier-Malaterre *et al.*, 2013). Thus, compared with internal social media, the use of external social media for work-related purposes does not appear to be the ideal situation. Therefore, we propose:

H3. Work-related use of social media has a stronger positive effect on job performance for internal social media than for external social media.

We also theorize that relative to internal social media, social-related use of external social media has a stronger effect on enhancing job performance. According to Grgecic *et al.* (2015), people are more willing to use external social media for social-related purposes because external social media communicates values such as autonomy and relatedness for people (Jiao *et al.*, 2017). For example, WeChat was originally designed for social and personal use, and thus users tend to interpret and use it as a tool to support social interaction (Song *et al.*, 2019).

Using external social media for social-related purposes can contribute to efficient communication among employees (Huang *et al.*, 2013; Leonardi *et al.*, 2013). Efficient communication through external social media helps achieve work goals and address job demands (van Zoonen *et al.*, 2017). Meanwhile, allowing the social-related use of external social media at work conveys a sense of assurance for employees that the organization cares about their social-related needs and well-being. If employees feel supported by their organization, they will be more likely to exert additional effort at work (Lambert, 2000), thereby resulting in higher levels of job performance.

Even though both internal and external social media use can be used for social-related purposes, employees' work performance may be sub-optimal by using internal social media due to the formal nature may cause employees to fear being monitored by the organizations. Although employees still use internal social media to interact with their coworkers, they are not fully engaged in it socially. Therefore, we propose:

- H4.* Social-related use of social media has a stronger positive effect on job performance for external social media than for internal social media.

3.3 Interaction of work- and social-related use

Some researchers have suggested that social-related use can lubricate work-related use (Mäntymäki and Riemer, 2016). However, the literature also indicates a contrary viewpoint that using social media for social-related purposes may interfere with work-related purposes (Sun and Shang, 2014). The interaction of different uses on individuals' behavior may also depend on the specific context. We argue that the interaction of work- and social-related use on employees' job performance is conditionally varied depending on the social media contexts.

Compared with external social media, the interaction of work- and social-related use on job performance may be negative for internal social media. Functioning primarily as a working tool, internal social media are widely adopted by the organization for work purposes (Leonardi *et al.*, 2013; Song *et al.*, 2019). If employees focus on the work use of internal social media at the very beginning, then their perception and cognition of the internal social media can be shaped and generate more impacts by this behavioral propensity (Song *et al.*, 2019). Employees who engage in internal social media for socialization with other coworkers may greatly reduce their concentration on the work at hand. Thus, social-related use of internal social media at work can lead to work interruption, while eleven minutes are needed for a worker to return to a concentration state on an interrupted task (Slocum and Sims, 1980). Such an interruption can seriously influence employees' work focus and consequently their productivity and performance.

Compared with internal social media, the interaction of work- and social-related use on job performance may be positive for external social media. External social media function as social networking tools and are widely used for "being connected" purposes in work environments (Li *et al.*, 2005; Cho *et al.*, 2005; Ou and Davison, 2011). Social-related use of external social media provides a two-way private channel for employees where emerging questions can be readily discussed and mutual understanding among employees can be developed (Ou and Davison, 2011). The more mutual understanding that is achieved, the higher the levels of work-related engagement on job performance that can result. Song *et al.* (2019) also argue that social-related use of external social media can smooth other social interactions and enhance perceptions of social capital among employees, ultimately reinforcing work-related use. Therefore, we propose:

- H5.* For internal social media, the interaction of work- and social-related use of social media negatively influences job performance such that the more positive the

influence of work-related use, the lower the impact of social-related use on job performance.

- H6.* For external social media, the interaction of work- and social-related use of social media positively influences job performance such that the more positive the influence of social-related use, the greater the positive impact of work-related use on job performance.

4. Research methodology

To test the proposed theoretical hypotheses, we used two survey studies to collect the empirical data. Study 1 is related to the context of internal social media, whereas study 2 is designed for the context of external social media.

4.1 Measures

As the proposed constructs in this paper have been well established in prior research, we adapted existing validated measures from the literature to our contexts (see [Appendix](#)).

We conducted a survey in China and followed the translation committee approach to convert the original English instrument items into Chinese ([Van de Vijver, 1997](#)). Three researchers from different backgrounds (information systems, computer science and management) were invited to join the committee. Before starting the translation, we offered a brief introduction of the research purpose and the construct definitions. These three invited researchers independently translated the English questionnaire into Chinese. Next, together with the researchers, the committee discussed the translated questionnaire item-by-item until they reached a consensus. Then, we asked a professional translator, who was unfamiliar with this study, to translate the Chinese questionnaire back into English. We found no significant semantic discrepancies after comparing the original English questionnaire and the retranslated English version. Finally, we invited two working professionals who have experience of both internal and external social media use to review the questionnaire. Based on their feedback, we made some minor modifications to the text and finalized the questionnaire. [Appendix](#) lists the final measurement items used in the two surveys.

Prior research suggests that gender, age, education and position may influence job performance ([Lu et al., 2015](#)). We thus include these control variables in the survey and the subsequent statistics.

4.2 Research design and data collection

We collected the data for study 1 from a large business management software developer with approximately 7,000 employees headquartered in southern China. The company implemented an internal social media, called circle [1] in 2011. The functions of this internal social media are nearly identical to Twitter and Weibo, but circle can only be used by employees. Nevertheless, circle can be accessed via an app on mobile devices. Circle is well used throughout the company for daily work and social purposes. We conducted the survey by sending the online survey hyperlink to 1,000 randomly selected employees on the company's employee list. To encourage responses, we offered RMB15-20 (approximately US\$2.20–US\$2.93) as an incentive for each respondent. In total, 392 useable responses were received from 1,000 invitations over a period of two months, giving a response rate of 39.2%. The demographic information of the respondents is summarized in [Table 2](#).

To identify appropriate respondents for study 2, we employed the services of a marketing research firm in China. Based on the customer panel database offered by this firm, our online

	Percentage	Work- and social-related use of social media	
<i>Gender</i>			
Male	51.3	691	
Female	48.7		
<i>Age</i>			
18–25	40.1		
26–30	36.2		
31–35	18.6		
36–40	2.8		
41 and above	2.3		
<i>Education</i>			
High school or below	12.0		
College	26.5		
Bachelor's degree	54.3		
Master's degree or above	7.1		
<i>Position</i>			
Nonmanagement employee	66.6	Table 2. Demographics of respondents (the number of subjects = 392)	
Manager	21.9		
Senior or executive manager	3.1		
Others	8.4		

survey hyperlink was sent to 1,000 randomly selected panel members who were registered as employees and who used external social media at work. In addition, for each participant, we provided RMB15–20 (approximately US\$2.20–US\$2.93) as a token of appreciation. Over two months, we successfully received 302 valid responses, yielding a 30.2% response rate. The demographic characteristics of these 302 respondents are summarized in [Table 3](#).

We assessed the nonresponse bias for these two samples following the suggestions from [Armstrong and Overton \(1977\)](#). We first used the two-tailed *t*-statistic to compare the first 25% and last 25% of responses for all constructs. No significant differences were found for any construct means, indicating that nonresponse bias was not a serious issue for these two studies.

To compare the differences between these two samples, we also conducted *t*-tests to compare the demographics in these two samples. The results indicated that no significant differences existed with respect to gender ($t = -0.074, p = 0.941$), age ($t = -1.579, p = 0.115$), education ($t = -1.558, p = 0.120$) or position ($t = 1.614, p = 0.692$) between these two samples. Thus, the respondent difference was not a serious issue for these two samples.

Finally, we should point out that while we collected data from two platforms or contexts, we kept the unit of analysis at the individual level to eventually compare the impacts of platform/context on job performance in the respective study.

4.3 Common method bias

We used three methods to test the common method bias. First, we employed Harman's single-factor test to examine the three conceptual variables in our model ([Podsakoff and Organ, 1986](#)). For study 1, the test indicated that the three constructs had eigenvalues above 1.0, accounting for 78.49% of the total variance. The first construct explained 26.60% of the variance. In addition, for study 2, the results indicated that three constructs had eigenvalues higher than 1.0, explaining 85.21% of the total variance. The first construct accounted for 29.68% of the variance. Thus, the threat of the common method bias was minimal.

INTR 32,3		Percentage
	<i>Gender</i>	
	Male	51.0
	Female	49.0
	<i>Age</i>	
	18–25	25.5
	26–30	54.0
	31–35	15.2
	36–40	3.6
	41 and above	1.7
	<i>Education</i>	
	High school or below	15.6
	College	19.2
	Bachelor's degree	48.0
	Master's degree or above	17.2
	<i>Position</i>	
	Nonmanagement employee	72.2
	Manager	17.2
	Senior or executive manager	6.3
	Others	4.3

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Table 3.
Demographics of
respondents (the
number of
subjects = 302)

Second, we followed [Liang et al.'s \(2007\)](#) method to include a common method factor that is associated with all the principal constructs' indicators in the partial least squares (PLS) model. We calculated how variances of each indicator were substantively explained by the method factor and the principal constructs. For study 1, the results reveal that the substantive constructs accounted for, on average, 78.6% of the variance, whereas the average indicators' method-based variance was 0.5%. All method factor loadings were insignificant. For study 2, the results show that the substantive constructs explained, on average, 85.2% of the variance, whereas the average indicators' method-based variance was 0.3%. Most of the method factor loadings were not significant. Therefore, common method bias was not a serious concern in these two studies.

Third, we further compared the fit between the one-factor and measurement models. For study 1, the results indicated that the one-factor model yielded $\chi^2/df = 2,970.89/90 = 33.01$, CFI = 0.86, IFI = 0.86, NFI = 0.86, NNFI = 0.84, SRMR = 0.117 and RMSEA = 0.286, whereas the measurement model yielded $\chi^2/df = 244.06/87 = 2.81$, CFI = 0.99, IFI = 0.99, NFI = 0.98, NNFI = 0.99, SRMR = 0.030 and RMSEA = 0.068. The fit of the one-factor model is significantly worse ($p < 0.01$) than the fit of the measurement model, suggesting that common method bias was not a serious concern in study 1. For study 2, the results revealed that the one-factor model yielded $\chi^2/df = 4670.36/90 = 51.89$, CFI = 0.76, IFI = 0.76, NFI = 0.76, NNFI = 0.72, SRMR = 0.204 and RMSEA = 0.411, and the measurement model yielded $\chi^2/df = 325.41/87 = 3.74$, CFI = 0.98, IFI = 0.98, NFI = 0.97, NNFI = 0.98, SRMR = 0.036 and RMSEA = 0.095. The fit of the one-factor model is also significantly worse ($p < 0.01$) than the fit of the measurement model, indicating that common method bias was not a serious concern in study 2.

5. Data analysis and results

5.1 Measurement model

To evaluate the measurement model, we tested the reliability and validity of the constructs ([Carmines and Zeller, 1979](#); [Barclay et al., 1995](#)). [Tables 4 and 5](#) show that the

values of Cronbach’s alpha and composite reliability exceed the value of 0.7, demonstrating good reliability (Fornell and Larcker, 1981). We used the average variance extracted (AVE) and indicator loadings to test convergent validity. Tables 4 and 5 indicate that all AVE values were greater than 0.5 (Fornell and Larcker, 1981). In addition, as shown in Appendix, the loadings of all items were higher than the desired threshold of 0.7 (Carmines and Zeller, 1979). Thus, the test results suggest good convergent validity for both studies.

To evaluate the discriminant validity, we applied multiple methods. First, the chi-square difference test shows that correlations between each pair of constructs were different from unity (i.e. 1.0) (Anderson and Gerbing, 1988; Jöreskog, 1993). Second, Tables 4 and 5 show that the largest correlations between constructs were 0.589 and 0.591, lower than the recommended level of 0.71 (MacKenzie et al., 2011). The square roots of the AVEs for all constructs on the diagonal row were well above the inter-construct correlations (Fornell and Larcker, 1981). Finally, all of the items loaded sufficiently on the respective construct but poorly on other constructs (Appendix). Hence, our measurement model demonstrates good discriminant validity for studies 1 and 2.

5.2 Structural model

To test the structural model for studies 1 and 2, we used hierarchical regression analysis in SPSS. We chose hierarchical regression as the preferred mode of analysis. When employing interaction analysis, regression analysis with the product of the sum of indicators is more suitable than PLS (partial least squares) with the product of indicators (the significance of relationships is underestimated and their strength is overestimated in PLS) (Goodhue et al., 2007).

The independent and moderator variables were first mean-centered to minimize any possible multicollinearity (Aiken and West, 1991). Then in step 1 of the regression, we included control variables only. In step 2, we added the independent and moderator variables. In step 3, we further included the interaction in the regression. The results of these models are shown in Tables 6 and 7. The final regression with all variables indicated that the model

Variable	Mean	SD	Composite reliability	Cronbach’s alpha	AVE	WRU	SRU	JP
WRU	5.837	1.204	0.912	0.935	0.674	0.821		
SRU	5.904	1.055	0.902	0.923	0.649	0.583	0.806	
JP	5.992	0.945	0.908	0.931	0.664	0.589	0.583	0.815

- Note(s): 1. Study 1
- 2. WRU: work-related use; SRU: social-related use; JP: job performance
- 3. The numbers in the diagonal row are square roots of the average variance extracted
- 4. NA: not applicable

Table 4. Internal consistency and discriminant validity of constructs

Variable	Mean	SD	Composite reliability	Cronbach’s alpha	AVE	WRU	SRU	JP
WRU	5.334	1.539	0.948	0.966	0.784	0.885		
SRU	5.674	1.240	0.910	0.946	0.671	0.591	0.819	
JP	5.549	1.058	0.939	0.954	0.755	0.423	0.591	0.869

- Note(s): 1. Study 2
- 2. WRU: work-related use; SRU: social-related use; JP: job performance
- 3. The numbers in the diagonal row are square roots of the average variance extracted
- 4. NA: not applicable

Table 5. Internal consistency and discriminant validity of constructs

INTR
32,3

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Variables	Model 1	DV:job performance Model 2	Model 3
<i>Control variables</i>			
Gender	0.092	0.050	0.041
Age	-0.050	-0.042	-0.038
Education	0.045	0.031	0.028
Position	0.026	0.002	0.007
<i>Main effects</i>			
WRU		0.369***	0.356***
SRU		0.366***	0.315***
<i>Interaction effect</i>			
WRU × SRU			-0.134**
R ²	1.4%	43.0%	45.3%
ΔR ²		41.6%	2.3%
F(p-value)	1.361	50.251***	45.501***

Table 6. Hierarchical regression results for study 1 on internal social media

Note(s): 1. The number of respondents (internal social media) = 392
 2. Reported values are standardized regression coefficients
 3. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Variables	Model 1	DV:job performance Model 2	Model 3
<i>Control variables</i>			
Gender	-0.029	-0.018	-0.013
Age	0.150*	0.065	0.074
Education	0.076	-0.058	-0.046
Position	-0.132*	0.032	0.013
<i>Main effects</i>			
WRU		0.139*	0.140*
SRU		0.523***	0.584***
<i>Interaction effect</i>			
WRU × SRU			0.127*
R ²	3.0%	35.4%	36.3%
ΔR ²		32.4%	0.9%
F(p-value)	3.291	28.487**	25.479***

Table 7. Hierarchical regression results for study 2 on external social media

Note(s): 1. The number of respondents (external social media) = 302
 2. Reported values are standardized regression coefficients
 3. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

explained 45.3% of the variance in job performance for study 1 and 36.3% of the variance in job performance for study 2.

Specifically, for study 1, the path from work-related use to job performance was positive and significant ($\beta = 0.369, p < 0.001$) as was the path from social-related use to job performance ($\beta = 0.366, p < 0.001$). For study 2, we also found that the path from work-related use to job performance was positive and significant ($\beta = 0.139, p < 0.05$) as was the path from social-related use to job performance ($\beta = 0.523, p < 0.001$). Thus, H1 and H2 were supported.

Moreover, following [Pavlou and Dimoka \(2006\)](#), we further investigated the differential effects of work- and social-related use on job performance for internal and external social media by comparing the regression models from the above two studies. As shown in [Table 8](#), work-related use exerts a significantly stronger impact on job performance for internal social media than for external social media, supporting [H3](#); while social-related use exerts a significantly stronger impact on job performance for external social media than for internal social media, supporting [H4](#).

The interaction effect between work-related use and social-related use was found negative and significant for study 1 ($\beta = -0.134, p < 0.01$), thus supporting [H5](#). We plotted this interaction effect in [Figure 2](#). As predicted, at a low level of social-related use (i.e. mean – standard deviation), job performance increased rapidly when work-related use increased. Nevertheless, at a high level of social-related use (i.e. mean + standard deviation), job performance increased marginally when work-related use increased. In addition, the interaction effect between work-related use and social-related use on job performance was found to be positive and significant for study 2 ($\beta = 0.127, p < 0.05$), supporting [H6](#). This interaction effect is plotted in [Figure 3](#). At a high level of social-related use, job performance increased rapidly as work-related use increased. However, at a low level of social-related use, job performance decreased as work-related use increased.

To evaluate whether the significant interaction effect was substantive, we tested the R^2 changes resulting from the interaction ([Carte and Russell, 2003](#)). [Table 6](#) shows that work- and social-related use significantly increased the variance of job performance by 41.6% ($F = 50.251, p < 0.001$), indicating a large effect size ($f^2 = 0.730$) [[2](#)]. The interaction of work-related use with social-related use significantly increased the R^2 of job performance by 2.3%

IVs	Path	t-statistic	Indication
WRU	$\beta_{WRU \rightarrow JP}$ (0.369) for internal social media > $\beta_{WRU \rightarrow JP}$ (0.139) for external social media	54.10***	The use of internal social media for work-related purposes exerts a significantly larger effect than external social media in improving job performance
SRU	$\beta_{SRU \rightarrow JP}$ (0.523) for external social media > $\beta_{SRU \rightarrow JP}$ (0.366) for internal social media	38.06***	The use of external social media for social-related purposes exerts a significantly larger effect than internal social media in improving job performance

Note(s): * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8.
Path comparison results

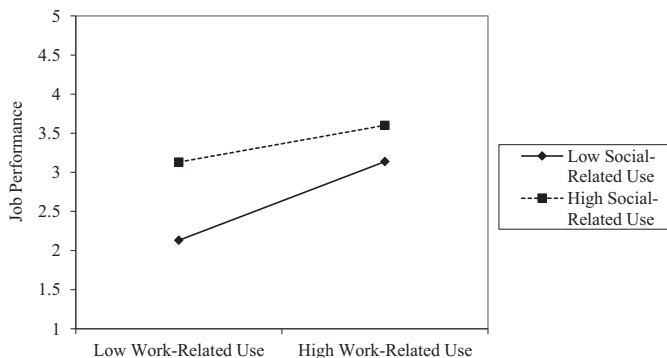


Figure 2.
Study 1 – the interaction of work- and social-related use on job performance

($F = 45.501, p < 0.001$), though indicating a small effect size ($f^2 = 0.042$). Thus, the F -test results indicate that the interaction for study 1 was significant.

Furthermore, [Table 7](#) indicates that work- and social-related use significantly increased the variance of job performance by 32.4% ($F = 28.487, p < 0.01$), suggesting a large effect size ($f^2 = 0.529$). The interaction of work-related use with social-related use significantly increased the R^2 of job performance by 0.9% ($F = 25.479, p < 0.001$) but with a small effect size ($f^2 = 0.014$). Consequently, the F -test results confirm that the interaction effect for study 2 was also significant.

5.3 Endogeneity check

To rule out the endogeneity issues on the results between the effects of work- and social-related social media uses on job performance, we further conducted an endogeneity test by performing a two-step econometric procedure for studies 1 and 2, following [Heckman \(1979\)](#). First, we calculated the mean of the two types of social media use. Then, we divided the respondents in study 1 into two groups. Respondents with scores of social media use below the mean were coded as zero and respondents with scores above the mean were coded as one. Next, we computed the LAMBDA (i.e. the inverse Mills ratio) with a SPSS Probit model by regressing different groups on all control variables. Second, we retested the hypotheses with two LAMBDA variables as the additional control variables for predicting job performance. The results confirmed that the two LAMBDA variables for study 1 were not statistically significant in predicting job performance ($\beta = -0.053, p > 0.05; \beta = 0.082, p > 0.05$). For study 2, we similarly also found that the two LAMBDA variables were not significant in predicting job performance ($\beta = -0.018, p > 0.05; \beta = -0.163, p > 0.05$). These results suggested that endogeneity is not a serious concern for these two studies (cf. [\(Heckman, 1979\)](#)).

6. Discussion, implications and future research

6.1 Theoretical implications

This study makes four important contributions to the literature. First, although organizations invest millions of dollars in IT resources, not all of them obtain the expected benefits. Previous studies on the business value of IT have proposed that investigating how companies use IT initiatives and resources is more important than focusing on how much they invest in IT initiatives and resources ([Chen et al., 2015, 2017](#)). This study contributes to the extant literature on the business value of IT by providing theoretical arguments on how companies can capitalize efforts to consider work-related use in combination with social-related use to create business value.

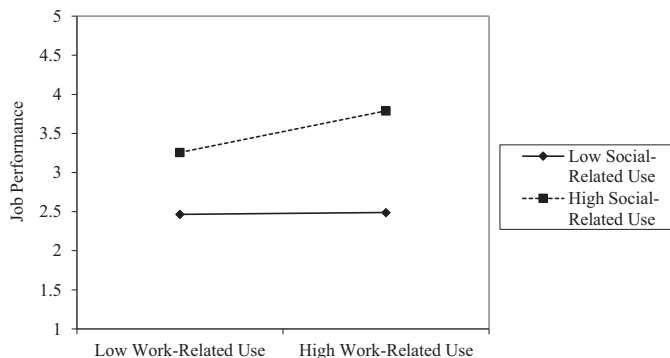


Figure 3.
Study 2 – the
interaction of work-
and social-related use
on job performance

Second, our findings suggest that employees engage in two types of social media use behaviors, viz., work and social related. Indeed, a single measure of social media use may result in mixed and conflicting outcomes in terms of employee performance (Moqbel *et al.*, 2013; Odoom *et al.*, 2017) due to the inaccurate conceptualization of usage and the missing contexts. Therefore, capturing the complex nature of social media use with a unitary conceptualization or measure would be ineffective. Different purposes of social media use can result in a different impact on performance (Zhang *et al.*, 2019). This research theorizes two distinct yet interacting views of social media use. We offer a more granular insight of the paths from work- and social-related use to employee performance instead of encapsulating social media use in a unitary concept and linking it simply and broadly to employee performance. Different from traditional work-oriented enterprise systems, social media technologies can satisfy employees' different needs and thus are malleable (Mäntymäki and Riemer, 2016). This is good for improving the value of social media as an information tool.

Third, although very few studies focus on different purposes of social media usage, they always emphasize the individual effects of different types of usage (Ali-Hassan *et al.*, 2015; Kuegler *et al.*, 2015). However, in reality, it is hard to separate work- and social-oriented interactions (Rooksby *et al.*, 2009). This research offers insights into the framework of social media usage in originations and finds the interdependent effects of work- and social-related use on employee performance. Thus, this research goes beyond the independent roles of these two types of social media use. Our findings also provide both conceptual and empirical extensions to Rooksby's (2009) proposition to consider the interaction of work- and social-related social media uses in future research.

Fourth, we find that the links from employees' work- and social-related use of social media to job performance vary for different contexts. Specifically, the interaction of work-related use and social-related use on job performance is positive for external social media. In contrast, the interaction of work-related use and social-related use is negative on job performance for internal social media. Prior research has long treated social-related use of social media in the workplace as a form of IT misuse and argued that it could have negative effects on productivity (Davison *et al.*, 2014); nevertheless, some researchers indicated that social-related use of social media at work promotes job and organizational engagement (Zhang *et al.*, 2019). Furthermore, the findings on the impacts of work-related use of social media are also inconsistent (van Zoonen *et al.*, 2017; Zhang *et al.*, 2019). However, to the best of our knowledge, the existing literature has largely overlooked the contextual conditions in which work- and social-related use of social media exert distinct effects on employee performance. The oversimplification or omission of the context about the use of social media might have led to conflicting research results. This study conceptualizes and empirically demonstrates that the relative importance of work- and social-related use of social media in determining employees' job performance is context-specific. In particular, our research suggests that the distinction between internal and external social media is critical when investigating the organizational consequences of social media use. Importantly, our findings demonstrate that the effect of social media use on its outcomes for employees is more complex than prior studies have asserted in terms of both positive and negative impacts.

Finally, our study contributes to the social media literature by differentiating social media into internal and external aspects. Prior research has paid limited attention to the heterogeneous types of social media and their effects on employee performance. Forsgren and Byström's (2018) study is one exception recognizing the use of multiple social media in the workplace, despite no theoretical implications to the differences and interrelationships among different types of social media. Based on a case study in a Scandinavian software development company, Forsgren and Byström (2018) found that employees use both Microsoft Yammer (one type of internal social media in our study) and Facebook (one type of external social media in our study) informally. However, the employees of Chinese companies

often perceived the usage of DingTalk (one type of internal social media in our study) as formal, while feeling the emotional, personal and informal characteristics when they used WeChat (one type of external social media in our study) (Song *et al.*, 2019). This is because DingTalk and WeChat have heterogenous features and affordances (Song *et al.*, 2019). Specifically, the social interactions on DingTalk are often efficient and formal, while the social interactions on WeChat are informal. The flows on DingTalk are work-oriented materials, while the flows on WeChat are more diverse, including not only work information but also emotion and jokes. DingTalk is conducive to building and developing role-based relations at work, while WeChat contributes to affective relations. Different cultural contexts (e.g. Sweden vs China) may also lead to such interesting differences (informal vs formal usage). Exploring how the effect of social media on companies differs by cultural context should be interesting. The categorization of internal and external social media offers insights into the complexity of social media use and impacts.

6.2 Practical implications

In addition to the above theoretical contributions, this study also provides rich insights into a managerial understanding of improving employee performance by leveraging social media. In O'Connor *et al.*'s (2016) survey of 166 workers, 77% reported that they used social media at work; nevertheless, only 36% said they were allowed to do so by their companies. Employees and managers appear at odds over the use of social media in the workplace, thus this research engages with this debate to some extent. Our findings suggest that a well-designed and sensible policy on the use of social media is arguably better than just a ban. Given that younger employees are more likely to disobey their companies' policies on social media (Ali-Hassan *et al.*, 2015), managing how social media use can positively influence employees' work performance and ultimately benefit the organization is a task worth undertaking.

A key practical implication of this research is that companies should legitimize the use of social media during working hours. The ways in which social media are used may vary from person to person; companies should consider the differential effects of work- and social-related use on employees' job performance. Although both work- and social-related uses of internal and external social media are positively associated with employee performance, the use of internal social media for work-related purposes exerts a significantly larger effect than external social media, while the use of external social media for social-related purposes exerts a significantly larger effect than internal social media in improving job performance. Therefore, companies should encourage employees to use internal social media for work-related purposes and to use external social media for social-related purposes. It is not sensible to impose a complete ban on social media use in the workplace. Social media change the ways in which people communicate with each other, share information and build relationships. Companies are suggested to promulgate social media use policies in order to define the acceptable work and social behavior related to social media use in the workplace.

Another recommendation is that companies should recognize the work- and social-related use influence each other's effects on employees' job performance and the influences differ for internal and external social media. Given that social media have different technical features, affordances and supported ties, it is important to highlight the heterogenous types of social media. The implementation of internal social media depends largely on companies' workplace design, human resources and strategy related to IT. On the other hand, external social media are personal and their usage largely relies on the self-initiative of employees. Thus, companies should consider internal and external social media when balancing employee' work- and social-related use. For example, companies should encourage employees' work-related use while reducing their social-related use for internal social media. In addition, some companies may view social-related use of social media as an obstacle to employee

productivity and thus forbid it at work. In particular, some companies may ban the usage of external social media. Our findings suggest that companies should not hesitate to allow employees to engage simultaneously with work- and social-related use of external social media because they might indeed improve employee productivity.

6.3 Limitations and future research

This research has limitations that open up opportunities for future research. First, our research model included internal and external social media as the contextual variables. Future research can explore other conditions that moderate the relationship between social media use and employee performance. For example, different task characteristics (Kuegler *et al.*, 2015) or levels of organizational support (Davison *et al.*, 2014) may influence the effect of social media use on job performance. Furthermore, the previous literature has highlighted the significance of organizational factors (e.g. organizational culture, organizational support and corporate governance) and individual factors (e.g. level of personal social media use, attention allocation and personal values) that could shape the impact of social media use (Schiuma *et al.*, 2012; Treem *et al.*, 2015; Leftheriotis and Giannakos, 2014). In addition, personality, specifically, the honesty-humility trait has been meta-analytically shown to predict the three major dimensions of job performance (counterproductive work behavior, organizational citizenship behavior and task performance) (Lee *et al.*, 2019). Future researchers may consider including these factors when generalizing our findings to other contexts.

Second, we collected the data via two self-reported surveys. However, statistical analyses suggest that common method bias is not a serious concern for these two studies. In addition, the guarantee of anonymity of response can reduce the evaluation apprehension (Podsakoff *et al.*, 2012). Moreover, self-reported measures of job performance are demonstrated to be as reliable as supervisor evaluations of the performance of their subordinates (Ali-Hassan *et al.*, 2015; Teigland and Wasko, 2009; Moqbel *et al.*, 2013). Future research can validate our findings by collecting data that use (1) objective measures (e.g. actual social media use measures and supervisor rating of employees' performance and (2) multiple sources to gain social media use and job performance variables.

Third, we focus on work-related use and social-related use, but there might be other types of social media use behaviors. For example, Karahanna *et al.* (2018) propose that Facebook affordances include self-presentation, content sharing, relationship formation, browsing others' content, meta-voicing and communication. However, it is more useful to abstract a more general set of affordances that social media allow. Classifying social media affordances into work and social aspects can permit generalization across social media applications, while focusing on specific social media features is application-specific. Furthermore, we used an agree-disagree scale to measure the intensity of social media usage, although it adequately reflects employees' actual behaviors (Chen and Wei, 2019; Chen *et al.*, 2019). Future research may include other measures of the intensity and frequency of social media usage in order to achieve better validity.

Finally, we conducted two separate studies and sampled from two different populations, where we asked questions about external social media in the first study, and questions about internal social media in the second survey. Although we compared the two samples in terms of their demographics and demonstrated that these two samples can be compared directly, future research may further compare internal and external social media by the same populations.

7. Conclusion

The business benefits of social media inside the company, particularly its effects on employee performance, are not yet well-understood. As a result, some companies may ban or restrict

social media use, leading to the elimination of the potential value in the form of improved collaboration, coordination, problem-solving and knowledge sharing that can occur with social media use in the workplace. This study reveals that when considering the positive effect of social media use on employee performance, the different use contexts of social media (i.e. internal and external) should be considered. Our findings can help companies develop better policies associated with social media use. To conclude, the findings of this study provide interesting insights into current debates in the business world about the attraction and anxiety of social media use at work.

Notes

1. We use a pseudonym of the internal social media tool for confidentiality purposes.
2. Effect size $f^2 = (R^2 \text{ of interaction effect model} - R^2 \text{ of main effect model}) / (1 - R^2 \text{ of main effect model})$. Following Cohen (1988), f^2 of 0.02–0.14, 0.15–0.34, and above 0.35 are termed small-, medium-, and large-effect sizes, respectively.

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Appendix

Constructs	Items	Item loadings and cross loadings		
		WRU	SRU	JP
<i>A. Study 1: Internal social media use</i>				
<i>Work-related use (WRU)</i> Adapted from Ali-Hassan et al. (2015)	(1) In my organization, I use circle to share content about work projects with coworkers	0.823	0.178	0.306
	(2) In my organization, I use circle to create content about work projects in collaboration with coworkers	0.813	0.258	0.270
	(3) In my organization, I use circle to create content for work	0.820	0.248	0.255
	(4) In my organization, I use circle to disseminate content at work	0.837	0.276	0.183
	(5) In my organization, I use circle to access content about work created by my coworkers	0.810	0.258	0.233
<i>Social-related use (SRU)</i> Adapted from Ali-Hassan et al. (2015)	(1) In my organization, I use circle to create new relationships at work	0.318	0.776	0.253
	(2) In my organization, I use circle to get to know coworkers I would otherwise not meet at work	0.254	0.751	0.300
	(3) In my organization, I use circle to maintain close social relationships with coworkers at work	0.254	0.824	0.243
	(4) In my organization, I use circle to get acquainted with coworkers who share my interests	0.193	0.828	0.218
	(5) In my organization, I use circle to discover coworkers with interests similar to mine	0.202	0.844	0.197
<i>Job performance (JP)</i> Adapted from Williams and Anderson (1991)	(1) I always complete the duties specified in my job description	0.301	0.273	0.798
	(2) I always meet all the formal performance requirements of my job	0.265	0.199	0.828
	(3) I always fulfill all responsibilities required by my job	0.222	0.213	0.812
	(4) I never neglect aspects of the job that I am obligated to perform	0.263	0.258	0.824
	(5) I always perform essential duties	0.191	0.271	0.813

(continued)

Table A1.
Measurement Items

Constructs	Items	Item loadings and cross loadings		
		WRU	SRU	JP
<i>B. Study 2: External social media use</i>				
<i>Work-related use (WRU)</i>				
Adapted from Ali-Hassan et al. (2015)				
	(1) In my organization, I use external social media (e.g. WeChat) to share content about work projects with coworkers	0.830	0.339	0.183
	(2) In my organization, I use external social media (e.g. WeChat) to create content about work projects in collaboration with coworkers	0.901	0.268	0.175
	(3) In my organization, I use external social media (e.g. WeChat) to create content for work	0.900	0.243	0.177
	(4) In my organization, I use external social media (e.g. WeChat) to disseminate content at work	0.905	0.217	0.163
	(5) In my organization, I use external social media (e.g. WeChat) to access content about work created by my coworkers	0.888	0.227	0.171
<i>Social-related use (SRU)</i>				
Adapted from Ali-Hassan et al. (2015)				
	(1) In my organization, I use external social media (e.g. WeChat) to create new relationships at work	0.316	0.791	0.298
	(2) In my organization, I use external social media (e.g. WeChat) to get to know coworkers I would otherwise not meet at work	0.275	0.781	0.296
	(3) In my organization, I use external social media (e.g. WeChat) to maintain close social relationships with coworkers at work	0.305	0.790	0.291
	(4) In my organization, I use external social media (e.g. WeChat) to get acquainted with coworkers who share my interests	0.250	0.869	0.275
	(5) In my organization, I use external social media (e.g. WeChat) to discover coworkers with interests similar to mine	0.239	0.859	0.232
<i>Job performance (JP)</i> Adapted from Williams and Anderson (1991)				
	(1) I always complete the duties specified in my job description	0.182	0.266	0.874
	(2) I always meet all the formal performance requirements of my job	0.176	0.227	0.867
	(3) I always fulfill all responsibilities required by my job	0.165	0.245	0.890
	(4) I never neglect aspects of the job that I am obligated to perform	0.159	0.238	0.871
	(5) I always perform essential duties	0.167	0.277	0.842

Table A1.

Note(s): All items are measured with seven-point Likert scales from 1 (strongly disagree) to 7 (strongly agree)

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