

**Reverse relationship between reward, knowledge sharing and performance**

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**Published**

2020

**Journal Title**

Knowledge Management Research & Practice

**Version**

Accepted Manuscript (AM)

**DOI**

[10.1080/14778238.2020.1821588](https://doi.org/10.1080/14778238.2020.1821588)

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# **Reverse relationship between reward and performance – the mediating role of knowledge sharing**

## **Abstract**

The study draws upon expectancy theory and proposes a reverse relationship between rewards, knowledge sharing, and job performance. Knowledge sharing behaviours including knowledge donation, collection, and lurking are modelled to intervene between this relationship. The study was conducted with employees who had used online knowledge platforms in organisations from three industries in Vietnam, namely, tele-communications, banking, and insurance. A pilot study was undertaken prior to the formal survey to ensure clarity and validity of the questionnaires. The results show that job performance was significantly related to knowledge donating and collecting but not related to lurking. Knowledge donating, collecting, and lurking also have a significant impact on intrinsic rewards respectively and that top management support moderates the effect of knowledge donating, knowledge collecting, and lurking on intrinsic rewards. The study extends expectancy theory into online knowledge sharing literature and suggest for optimising organisational resources and maximising knowledge sharing values.

**Keywords: online knowledge sharing, employee response; job performance; organisational support; online platforms; reward**

## **1. Introduction**

Knowledge sharing encourages the exchange of knowledge, experience and skills throughout the whole organisation (Cavaliere et al., 2015). Such sharing preserves pre-existing knowledge (Nesheim & Gressgård, 2014), enables every department to access necessary information and connects employees within the organisation (Wang et al., 2019). Consequently, knowledge sharing is critical to gain organisational competitive advantages through enhanced social interaction in the workplace, diminishing production costs, generating solutions and increasing productivity (Nguyen et al., 2019a, Nham et al., 2020).

The emergence of online platforms such as weblogs, Zoom, Microsoft Teams, or Skype has facilitated online knowledge sharing for more collaborative work among employees. Online platforms function as a bridge for knowledge sharing by extending employees' reach beyond face-to-face communication (Navimipour & Charband, 2016; Park & Gabbard, 2018). Online platforms have interactive potential, which enables interlocutors to communicate asynchronously or synchronously in near real-time to work across space and time by integrating assorted information sources and overcome difficulties by blending knowledge (Nguyen, 2020). For example, due to their broad readership, weblogs and discussion forums are effective in conversationally contextualising knowledge where employees can express their personal viewpoints and reflect on the knowledge gained in an organisation (Pi et al., 2013; Safa & Von Solms, 2016).

Online knowledge sharing behaviour refers to the provision or receipt process of digital information, skills, and experience (Cummings, 2004). Effective online knowledge sharing can result in positive organisational outcomes such as enhanced performance, productivity, or innovation capabilities, which are key to providing organisations with a sustainable competitive advantage (Cummings, 2004; Li et al., 2019; Mesmer-Magnus & DeChurch, 2009). Employees are often encouraged to participate in online knowledge sharing to facilitate

the information flow and the wider distribution of knowledge, as well as creating a healthy learning climate based on collaboration (Yang, 2007). Online knowledge sharing is especially useful in multinational corporations or large companies with a large cohort of employees who may frequently utilise digital communications and exchanges (Iglesias-Pradas et al., 2017).

Although online knowledge sharing is crucial to the success of the organisation, many employees are reluctant to share knowledge online (Trusson et al., 2017; Nguyen et al. 2019b). About 90 percent of online participants do not donate or collect knowledge online (Marett & Joshi, 2009; Rafaeli et al., 2004; Walker et al., 2013). These are referred to as lurkers (Amichai-Hamburger et al., 2016; Sun et al., 2014). The annual losses associated with knowledge hiding by lurkers is significant (Panopto, 2018). Rewards are considered essential to encourage employees to participate in knowledge sharing (Bartol & Srivastava, 2002; Hau et al., 2013).

However, rewards are not always effective (e.g. Olatokun and Nwafor, 2012), or may negatively affect knowledge sharing (e.g. Bock and Kim, 2002). The discrepancy may have resulted from the contexts of the study, the reward system design, the type of rewards offered, or the knowledge sharing capacity of the employee participants for example, as a knowledge donator, knowledge collector, or a lurker? According to Varoom's (1964) expectancy theory, an individual may engage in certain behaviours to achieve a desired outcome or consequence (Matzler et al., 2011). The outcome could be an expected reward, and the behaviour becomes an antecedent of this reward. Drawing on this view, this study proposes job performance and knowledge sharing as such behaviours for an anticipated outcome – intrinsic reward. The proposition is consistent with that in Prentice and Thaichon (2019) and based on the assumption that well-performing employees tend to engage in certain behaviours such as sharing their knowledge with peers or participating in the sharing process to “feel good” about themselves (intrinsically rewarded), as opposed to the assumption that employees are extrinsically rewarded to perform well or to engage in knowledge sharing.

Consistent with the foregoing discussion, this study proposes a reverse relationship between rewards and job performance. Knowledge sharing is modelled to mediate between this relationship. In addition to this individual perspective, organisational support is included to understand external influence on these relationships. Consequently, the study contributes to the knowledge sharing literature by utilising expectancy theory to reinterpret the reward-performance relationship. As prior studies were primarily focused on examining the effect of rewards on online knowledge sharing and the impact on employee job performance, the establishment of this relationship directs both researchers and practitioners to reconsider the determinants of online knowledge sharing behaviours to assist in the design of reward systems for participants. The following section presents the relevant literature and offers hypotheses for testing. The methodology applied to examine these hypotheses is then outlined. Discussion and implications of the research findings conclude this paper.

## **2. Literature review and hypotheses development**

### ***Job performance and knowledge sharing***

Job performance refers to an individual's ability to accomplish job responsibilities or perform activities that are formally recognised as part of their job. Job performance not only involves task performance but also the less formal "emergent" behaviours that include helpfulness, sportsmanship, conscientiousness, and civic virtue (Organ, 1988). These behaviours do not contribute directly to an organisation's technical core, but rather fosters a social and psychological environment conducive to the accomplishment of work that relates to the technical core (Motowildo et al., 1997).

Knowledge sharing refers to the provision or receipt process of information, skills, and experience either online or offline (Cummings, 2004). The current study focuses on online sharing. In the knowledge sharing literature, two main dominant approaches have been applied

to capture online sharing behaviour. First, such behaviour is viewed as a holistic activity (e.g. Choi et al., 2008; Kwahk & Park, 2016; Matzler & Mueller, 2011). However, with this approach, online knowledge sharing behaviour is oversimplified and not adequately measured. Second, online knowledge sharing behaviour more recently has been viewed as bidirectional (Akhavan & Mahdi Hosseini, 2016). This perspective, first introduced by Van der Rijt (2002) and Ardichvili et al. (2003), involves both donating and collecting knowledge, and refers to both the supply of, and demand for, the knowledge needs to be included in the knowledge sharing process. Unlike the first approach which applies a unidirectional perspective, where sharing knowledge as a one direction process from the provider to the recipient, the bidirectional perspective has brought more insights when capturing online sharing behaviour (Yi, 2009).

However, knowledge donating and knowledge collecting per se are insufficient to capture all dimensions of online knowledge sharing behaviours because they can only present the active processes of learning, where individuals actively communicate with each other. Another dimension, lurking, which suggests passive learning with no or little interaction among members, has not be captured. Lurking is recognised as a common behaviour in the online knowledge sharing process (Amichai-Hamburger et al., 2016; Sun et al., 2014).

In order to address the limits of the two approaches, this study examines online knowledge sharing behaviour with three dimensions: knowledge donating, knowledge collecting, and lurking. Knowledge donating refers to the process in which employees donate their knowledge. Knowledge collecting involves the process in which employees consult colleagues to encourage or ask them to share their intellectual capital (Van den Hooff & de Ridder, 2004). Lurking refers to the process in which employees read posts and accumulate knowledge shared in the online platform (Sun et al., 2014). Understanding the dimension of lurking provides more insights to the online knowledge sharing process.

Employees who are pleased with their jobs are likely to engage in organisational activities and contribute to the organisation. High performing employees are likely to have more positive energy and outlook towards life and career, hence they become more committed to the organisation (Matzler & Mueller, 2011; Matzler et al., 2011). These employees are often more positive about challenging situations and even relish in the chance to show their ability as well as being more open to develop new skills and learn new subjects (Matzler et al., 2008). They tend to proactively engage in sharing knowledge with others to conduct their work smoothly and maintain the good relationship with colleagues as well as contributing to the development of the organisation (Liao & Chuang, 2004). The proactive approach is more conducive to optimising organisational resources as intrinsic reward is non-financially driven.

High performers tend to donate knowledge to keep their work going smoothly and avoid errors or problems since they are dutiful and work well in their roles. Kumar et al. (2009) suggest that high performing employees with higher levels of expertise often display considerably more flexible behaviours, such as giving useful advice that benefits the organisation. They tend to view knowledge donating as an important component of their work and believe that donating knowledge is important to effective daily work and entails getting along with others (Borges, 2013; Wang & Yang, 2007). Consequently, high performing employees are more likely to participate in knowledge sharing, particularly knowledge donating, which is indicative of workplace helpfulness, cooperation, and collaboration

Furthermore, employees with high performance often display intellectual curiosity, creativity, and flexible thinking (Digman, 1990) and thus are keener to learn and experience (Rothmann & Coetzer, 2003). Knowledge collecting and lurking are reflective of a person's curiosity and originality (Cabrera et al., 2006). High performers are more likely to discover novel ideas through knowledge collecting and learning from others via lurking. Knowledge collecting and lurking provide a good learning opportunity from others and can inspire creative

ideas. Wasko and Faraj (2000) and Wasko and Faraj (2005) show that high performing employees have a high level of openness and are more engaged with collecting knowledge as well as lurking. These employees tend to collect knowledge by asking or discussing their issues with their colleagues or read and accumulate knowledge about them through lurking, consequently improving the level of confidence in work performance such as reducing time or errors for a set of work processes (Gueutal et al., 1984). This discussion leads to the following hypotheses:

H1a: Job performance is positively and significantly related to online knowledge donating.

H1b: Job performance is positively and significantly related to online knowledge collecting.

H1c: Job performance is positively and significantly related to online knowledge lurking.

### ***Online knowledge sharing and intrinsic reward***

Rewards are generally categorised into extrinsic and intrinsic (Choi et al., 2008). The former refers to monetary incentives such as bonuses, paid vacation, and promotions (Kankanhalli et al., 2005); the latter refers to intrinsic incentives such as praise and public recognition (Choi et al., 2008). Rewards have been proven to be motivational outcomes (Kim & Lee, 2006; Pee et al., 2010) that occur through the mechanisms of expectancy (Vroom, 1964).

Vroom's (1964) expectancy theory indicates that motivation to perform and engage in chosen behaviours relates directly to an anticipated reward, which produces fulfilment (Kiatkawsin & Han, 2017; Purvis et al., 2015). Three elements leading to employees' motivation to perform a behaviour are: (i) valence, as the value assigned by employees to a specific reward, (ii) expectancy, as the employees' expectations for receiving a reward, and



(iii) instrumentality, as the employees' perception of actually receiving the reward (Vroom, 1964). The interaction of these three elements creates a motivational force that drives employees' behaviour (Vroom, 1964). Such reward is more intrinsically driven.

The expectancy theory relies on the reinforcement perspective. This perspective endorses the utilitarian view of human nature and assumes that reinforcements from intrinsic rewards can enhance any behavioural dimension, such as force, duration, novelty, and variability (Skinner, 1963). From this perspective, intrinsic rewards result from employee efforts in the desired direction and elicit behavioural changes if a given reward is designed to meet the demand of employees (Eisenberger & Cameron, 1998). In other words, employees will be motivated to exert a high level of effort when they believe that effort will lead to desired rewards (Malik et al., 2015).

Previous research on expectancy theory shows that employees exhibit greater motivation when they participate in reward system design (Kauhanen & Piekkola, 2006; Lawler, 2000). The degree of employee participation in reward system design positively affects reward acceptance and work commitment because employees know what rewards they might gain if they actively participate in online knowledge sharing (Lawler, 2000). Accordingly, a reward system that is designed to meet the demand of employees encourages online knowledge sharing behaviours (Huang et al., 2008). In the work setting, in some circumstances where knowledge is valuable and gaining specific knowledge is difficult, employees may strategically choose to withhold knowledge because of the fear of losing competitive advantage (Wittenbaum et al., 2004). Employees will be motivated to engage in online knowledge sharing and become more active in knowledge donating and collecting as well as lurking when it is intrinsically driven (Hau et al., 2013). Consistent with foregoing discussion, the following hypotheses are offered:

H2a: Knowledge donating is significantly related to intrinsic reward.

H2b: Knowledge collecting is significantly related to intrinsic reward.

H2c: Knowledge lurking is significantly related to intrinsic reward.

### ***The moderating role of top management support***

Top management support refers to the support of top management for employee behaviour engagement such as online knowledge sharing (Kang et al., 2008). Top management support creates an organisational environment in which online knowledge sharing among employees is encouraged (Koch, 2003). As a result of the provision of structure, facilitation, and support, a knowledge sharing culture can be cultivated and maintained. Srivastava et al. (2006) state that online knowledge sharing does not happen automatically in an organisation, and top management support plays a pivotal role in this process.

Top management support has previously been identified as a useful resource for employees' effective functioning in organisational life (Ng & Sorensen, 2008). In examining the implications of top management support, Bandura and Walters (1977) drew upon social learning theory and argued that behaviour patterns adopted by top management have been shown to influence employees' behaviour. When experiencing support from top management, employees expose their real selves, are able to take risks, and do not fear the consequences if they fail (Kahn, 1990). Supportive organisational environments can foster feelings of psychological safety that enhance willingness to engage fully in work roles. In such environments, employees feel safe, trustworthy, secure, and clear regarding behavioural consequences.

The nature of the environment also plays an important role in online knowledge sharing. Employees who feel the support from top management tend to exert more effort towards the success of the organisation (Bonner et al., 2002; de Bakker et al., 2010). Under this perception, employees who perceive higher support from top management often have a stronger belief that

if they actively donate and collect knowledge as well as lurking, the organisation will offer the desired rewards. With high support from top management, employees often have positive and secure expectations related to the organisation's likely reaction to their knowledge sharing behaviour. Thus, they tend to fear less of incurring damaging consequences for their careers and reputation as a result of investing themselves fully in online knowledge sharing (Edmondson, 1999). In highly supportive environments employees are likely to value online knowledge sharing behaviours including knowledge donating, collecting, and lurking because such support can be interpreted as the availability of potential recognition from others, and/or an opportunity to develop within the work environment (Wikhamn & Hall, 2014).

The opposite occurs in environments where top management support is low. Employees in such environments often believe active online knowledge sharing behaviour will not be recognised. They are unsure of what to expect and fear that they may suffer for their personal engagement in knowledge sharing. Consequently, they tend to guard themselves by avoiding knowledge donating, knowledge collecting, or lurking (Kahn, 1990). In such environments, constructive communication is not possible (Wikhamn & Hall, 2014). When things go wrong, instead of identifying weaknesses and finding solutions to overcome the problems in the future, the discussion tends to be dominated by accusations and scapegoating. On the other hand, when things turn out well, acknowledgment is non-existent. As such, online knowledge sharing is not appreciated and can be experienced as a "stressor" (Hall et al., 2006). Hence, employees' intrinsic reward is compromised, as there is no intrinsic reward for the behaviour or action that leads to a positive result. Consequently, the following hypotheses are offered:

H3a: Top management support has a significant moderating effect on the relationship between knowledge donating and intrinsic reward.

H3b: Top management support has a significant moderating effect on the relationship between knowledge collecting and intrinsic reward.

H3c: Top management support has a significant moderating effect on the relationship between lurking and intrinsic reward.

The proposed relationships are shown in Figure 1.

### **Insert Figure 1**

## **3. Methods**

### **3.1. Sample**

The study was conducted with employees who had used online knowledge platforms in organisations from three industries in Vietnam, namely, tele-communications, banking, and insurance. These industries were selected based on the suggestion of Kim and Lee (2006) and Tohidinia and Mosakhani (2010) since knowledge management practices are important in these industries and these industries have the appropriate information technology infrastructure for online knowledge sharing. Of 792 eligible responses from 895 surveys, 49% were males and 51% were females. The majority of respondents were in the age group 31-40 (45.5%), followed by the 18-30 group (44.2%), and the 41-60 group (10.4%). More than 74% of respondents had a bachelor's degree.

### **3.2. Measures**

Measures for the study variables were adapted from existing studies which reported high reliability and validity. This study adopted a 7-point Likert scale ranging from 1-strongly disagree to 7-strongly agree for all measurement items to enable flexibility. The scale of intrinsic rewards was adapted from Choi et al. (2008) as was the measurement of intrinsic rewards (Choi et al., 2008). To measure job performance, five items were derived from Kang et al. (2008) and Kwahk and Park (2016). Top management support was also measured through adaptation of Kang et al.'s (2008) work. The scales of knowledge donating and collecting were both adapted from Akhavan and Mahdi Hosseini (2016). The scale for lurking was from Bishop (2007) and Dennen (2014).

### ***3.3. Procedures***

The questionnaire was originally developed in English and translated to Vietnamese, then back-translated to ensure consistency by two bilingual experts to ensure the meanings being consistent. SurveyMonkey was used to design the online questionnaire. Prior to the survey, a pilot study was conducted with 30 Vietnamese employees. The results showed the high reliability of all measures. The formal questionnaire included a cover letter introducing the research and explaining the significance and objectives. Two funnelling questions were placed at the beginning of the online survey to ensure that the employees worked in Vietnamese tele-communications, banking and insurance industries and had experienced online knowledge sharing in their organisation. Three research assistants, with permission from company management, directly distributed the link of the questionnaire to employees in the Vietnamese tele-communications, banking, and insurance companies. Finally, 895 responses were received but only 792 were eligible, leading to a response rate of 88.5%.

### ***3.4. Common method variance***

Both ex-ante and ex-post procedures were undertaken to minimise response bias and errors. For the ex-ante procedure, validated scales from previous studies to measure the variables were used. A pilot study was conducted to ensure the high reliability. In the main survey, respondents were assured of anonymity in their responses and similar questions were dispersed throughout different sections of the questionnaire to refresh respondents' memories. For the ex-post procedure, Harman's single factor test, partial correlation procedure, and controlling for the effects of an unmeasured latent method factor were assessed (Podsakoff et al., 2003). In the Harman's single factor test, when measurement items of the study were loaded on one factor, resulted in only 44.36% of variance. Partial correlation procedure was undertaken with the inclusion of a marker variable (organisational innovation). This process did not alter the postulated relationships and significance of these relationships. The last

procedure was to control for the effect of an unmeasured latent factor and to compare the item loadings with and without adding an unmeasured latent methods factor. The results showed no great difference between two sets of loadings (all less than .01). Multicollinearity was diagnosed by using the variance inflation factor (VIF). The results present no issue of multicollinearity as all VIFs are below 3.0 (Rogerson, 2001).

### ***3.5. Predictive validity testing***

As the study was undertaken cross-sectionally, the proposed causal relationships cannot be established unless predictive validity is addressed. Following Prentice and Woodside's (2013) approach, we tested the predictive validity by randomly splitting the data into two subsamples to assess a predictive relationship between job performance and intrinsic rewards. Two models, Model 1 and 2, were assessed with job performance, knowledge donating, knowledge collecting, and lurking as predictors from the one subsample, and intrinsic rewards as the outcome variable from the other. The results below reveal that the selected predicting variables from one subsample are significantly related to the outcome variable from the other, and thus supporting a causal relationship from job performance to intrinsic rewards.

*Model 1:* Intrinsic rewards = .28 + .17\*\*Knowledge donating + .16\*\*Knowledge collecting + .08\*\*Lurking + .54\*\*\*Job performance. Adj.R2 = .60, df = 4/391, p<.001

*Model 2:* Intrinsic rewards = .24 + .19\*\*\*Knowledge donating + .17\*\*\*Knowledge collecting + .08\*\*Lurking + .52\*\*\*Job performance. Adj.R2 = .62, df = 4/391, p<.001, Note: \*\*p<.01, \*\*\*p<.001

## **4. Analysis and results**

The skewness and kurtosis values were between -2.00 to +2.00, indicating normal distribution of the data (Hair et al., 2014). Confirmatory factor analysis (CFA) and maximum likelihood estimation were used to determine the model fit (Hu & Bentler, 1999). The model fit indices were acceptable: ( $\chi^2 = 993.874$ , d.f. = 245;  $\chi^2 /d.f = 4.06$ ; CFI = .96; NFI=.95; TLI

= .95, RMSEA=.06). The results of standardised residual co-variances and modification index values indicate no conspicuously significant changes to the model. The average variance extracted for each factor was higher than the cut-off value of .5, indicative of adequate convergence (Fornell & Larcker, 1981). The composite reliability was acceptable with all Cronbach's alpha values over .7 (Nunnally, 1994). All items have a significant loading on their corresponding constructs, demonstrating adequate convergent validity (see Table 1). The square root of average variance extracted of each construct exceeds the correlation between constructs, indicating discriminant validity (see Table 2).

### **Insert Tables 1 and 2**

Structural equation modelling was conducted to test the hypotheses (see Table 3). The results demonstrated an acceptable fit of the model ( $\chi^2 = 866.013$ , d.f. = 184;  $\chi^2 /d.f = 4.71$ ; CFI = .96; NFI= .95; TLI = .96, RMSEA=.07). H1a, H1b and H1c proposed job performance significantly affect knowledge donating, knowledge collecting, and lurking. The results show that job performance was significantly related to knowledge donating ( $\beta=.83$ ,  $p<.001$ ) and knowledge collecting ( $\beta=.88$ ,  $p<.001$ ), but not related to lurking ( $\beta=.06$ ,  $p>.05$ ), supporting H1a and H1b but not supporting H1c. H2a, H2b, and H2c proposed that knowledge donating, knowledge collecting, and lurking have a significant impact on intrinsic rewards respectively. The results indicate that intrinsic rewards were significantly affected by knowledge donating ( $\beta=.48$ ,  $p<.001$ ), knowledge collecting ( $\beta=.26$ ,  $p<.001$ ), and lurking ( $\beta=.15$ ,  $p<.001$ ); thus, H2a, H2b and H2c were supported.

### **Insert Table 3**

H3a, H3b, and H3c proposed that top management support moderates the effect of knowledge donating, knowledge collecting, and lurking on intrinsic rewards. In Table 4, the results show that the negative moderating effect of top management support was found in the relationship between knowledge donating and intrinsic rewards ( $\beta= -.27$ ,  $p<.05$ ). Top

management support, however, had a positive moderating effect on the relationship between knowledge collecting and intrinsic rewards ( $\beta=.39$ ,  $p<.001$ ) and between lurking and intrinsic rewards ( $\beta= .15$ ,  $p<.001$ ). Thus, these hypotheses were confirmed.

#### **Insert Table 4**

### **6. Discussion**

Rewards have been widely acknowledged as a determinant of knowledge sharing behaviour in the relevant literature. However, research findings on the impact of rewards on knowledge sharing behaviour are inconsistent. This study draws on expectancy theory to propose a reverse relationship between knowledge sharing behaviour and rewards, and model job performance as an antecedent of knowledge sharing, and top management support as a moderator. The results support hypotheses. The following section presents the discussion about these findings.



### ***6.1. Job performance and online knowledge sharing***

The significant positive relationships between job performance and knowledge donating and knowledge collecting indicate that high performing employees are likely to donate and collect knowledge. The findings support the proposed model and conform to our contention that if knowledge donators and collectors have high job performance, they tend to actively contribute to the organisation through donating and collecting knowledge. Job performance in this case is the source of motivation to drive knowledge donators and collectors in online knowledge sharing. Employees with high job performance often strive for cooperation rather than competition. They are more willing to engage to disseminate their knowledge to others and transfer their individual knowledge into organisational capital. They are also eager to learn new things and open to acquire knowledge. Equally those who fail to perform well are less likely to donate or collect knowledge. Instead, they are likely to keep knowledge for themselves due to the fear of losing a competitive advantage. *These findings are in line with those in Matzler et al. (2011) and Matzler et al. (2008) that knowledge sharing is a form of workplace helpfulness, cooperation, and collaboration and entails 'getting along with others'. Therefore, employees, who are sympathetic, enthusiastic to help others, intellectual curiosity and responsible, tend to participate in the knowledge sharing process.* In contrast, lurkers are not affected by job performance. This finding is consistent with those in Sun et al. (2014) and Amichai-Hamburger et al. (2016) where it was found that lurkers have their own reasons for lurking such as time constraints rather than job performance.

### ***6.2. Online knowledge sharing and intrinsic rewards***

The results of this study show that knowledge donating, knowledge collecting, and lurking positively influence intrinsic rewards. These results imply that intrinsic rewards work well with knowledge donators, knowledge collectors, and lurkers. Each of them is committed

to online knowledge sharing due to their expectation that their behaviour would be honoured, recognised, and acknowledged. If the reward system is intrinsically driven, knowledge donators, collectors, and lurkers will be actively sharing their knowledge online. The results of this study show that intrinsic rewards should be designed to meet the expectations of different types of knowledge sharing participants. This finding is in line with Vroom's (1964) expectancy theory confirming that the motivation to perform a behaviour affects anticipated rewards. However, contrasting with the traditional view that intrinsic rewards are a natural inclination or inherent disposition and hard to change, the findings of this study are in line with those in Pee & Lee (2015) which prove that intrinsic rewards could be affected by the condition in which individuals develop and function. In this study, intrinsic rewards are affected by online knowledge sharing behaviours including knowledge donating, which can be regarded as an extra-role behaviour rather than an obligatory job responsibility. Therefore, the higher the intrinsic rewards that are offered, the more employees would be likely to share their knowledge.

The findings of this study partly help to explain the variation in the literature regarding the drivers of rewards. Different types of knowledge sharing participants have different levels of expectations in relation to intrinsic rewards: knowledge donators have a relatively strong expectation ( $\beta=.48$ ,  $p<.001$ ), while knowledge collectors ( $\beta=.26$ ,  $p<.001$ ) and lurkers ( $\beta=.15$ ,  $p<.001$ ) have a medium and small expectation respectively. Prior research has investigated rewards but tended to neglect the different types of participants, whose reactions to the expected rewards will be different. Therefore, when examining the relationship between rewards and knowledge sharing behaviours, the exclusion of also examining the different types of participants, may account for the mixed results within previous studies.

### ***6.3. The moderation of top management support***

Top management support was found to negatively moderate the effect of knowledge donating on intrinsic rewards but positively moderates the influence of knowledge collecting

and lurking on intrinsic rewards. These results imply that with high support from top management, knowledge donators perceive that their knowledge donating is less acknowledged and feel that their involvement and competence are less appreciated. These results are in line with findings of Zhao et al. (2016) showing that knowledge donators, as active members under the support of management, tend to feel deprived of the chance of displaying their own interest in donating knowledge. When top management supports knowledge sharing, others may wonder that knowledge donating behaviours stem from their own interests or from the top management.

In contrast, knowledge collectors and lurkers are motivated to collect knowledge and lurk with more support from top management. One possible explanation is that knowledge collectors may think that raising questions or asking for knowledge makes them lose face or reduce their reputation. Lurkers may feel shameful when they lurk without contribution. However, when top management highly supports online knowledge sharing, knowledge collectors and lurkers are encouraged to participate in online knowledge sharing as their behaviour is also recognised as a contribution to foster a culture of online knowledge sharing. These results support the findings of Zhao et al (2016) indicating that some individuals do not enjoy knowledge collecting or lurking due to shame or shyness. However, with support from top management, they may be encouraged to participate through collecting and lurking.

## **7. Implications**

This study suggests several implications for both the relevant literature and practitioners. First, from a theoretical standpoint, this study is the first to capture three dimensions of online knowledge sharing behaviours which consist of knowledge donating, collecting and lurking. Going beyond the limit of measuring online knowledge sharing as active learning behaviour with knowledge donating and collecting, this study investigates online knowledge sharing from a comprehensive perspective including lurking as a passive learning

behaviour. Considering that there has been a lack of studies examining all aspects of online knowledge sharing behaviour, this study provides a useful theoretical basis for future scholars who intend to examine online knowledge sharing behaviours. The inclusion of all three dimensions will help future researchers achieve greater insights into the different types of knowledge sharing participants.

Second, the findings of this study extend expectancy theory into the online knowledge sharing literature. The proposed model investigates intrinsic rewards as the output of online knowledge sharing behaviour instead of a determinant as shown in previous research. By doing this, the study partly helps to explain the inconsistent findings in the literature in terms of the influence of rewards in knowledge sharing. Moreover, this study indicates that organisations need to understand the demands of different types of participants and their knowledge sharing behaviours to target the desired intrinsic rewards. This study develops expectancy theory out of the traditional boundary in which intrinsic rewards are considered to be hard to capture. Thus, this study is one of the first showing that intrinsic rewards could be designed to meet the expectations of different types of participants.

Third, job performance has often been examined as the outcome of knowledge sharing behaviours. In this study, job performance is modelled as the motivation for online knowledge sharing behaviours. Job performance can drive employees to be more committed to knowledge sharing. Such commitment is manifested in their knowledge donating and collecting. [This view is consistent with that of Matzler et al. \(2011\) and Matzler and Mueller \(2011\) indicating employees who demonstrate a high level of openness, conscientiousness, and agreeableness tend to perform well at work and are more prone to share knowledge.](#) This finding conforms to Wiggins (1996) in that job performance is regarded as a chosen behaviour, which is expected to lead to preferred outcome, knowledge sharing behaviours including knowledge donating and collecting.

Fourth, this study presents a new perspective of top management support to knowledge sharing. The previous studies in the existing literature have examined top management support as a predictor of online knowledge sharing behaviours. The results consolidate the expectation and indicate that top management support moderates the impact of online knowledge sharing behaviour on intrinsic rewards. Examining top management support as a moderator is crucial and brings more insights into the psychological differences of the various types of knowledge sharing participants and their expectations of intrinsic rewards under different levels of top management support.

From a practical standpoint, first, this study has shown that job performance positively influences the knowledge donating and collecting behaviour of employees in the organisational context. Management and HR practitioners should take this into consideration during the recruitment process. Job candidates could be asked to self-rate their competency or ability to complete a task in job descriptions. A candidate should be aware of his or her own personality traits such as their openness, conscientiousness, and agreeableness, which can help to enhance knowledge donating and collecting if the candidate has high job performance.

Second, to motivate the online knowledge sharing participation, intrinsic rewards should be prioritised and customised according to participant typologies to effectively encourage employees to participate online knowledge sharing. Knowledge donators have a strong expectation of intrinsic rewards which are regarded as recognition of the value of knowledge shared and knowledge donators' worth, improving self-esteem, and symbolising status and achievement. Thus, for those who actively share knowledge, managers should acknowledge the value of knowledge and expertise they share and make them feel recognised with incentives such as a certificate or transferring authority in their area of expertise. Knowledge collectors place moderate weighting on intrinsic rewards and need encouragement that helps them to solve their work issues and raise new ideas. Managers should encourage

knowledge collectors to seek knowledge to improve their work performance. Although lurkers do not contribute knowledge, they are still intrinsically driven. Managers may consider encouraging employees to read shared information and follow discussions as one means of learning.

Third, top management should show strong support to encourage knowledge collectors and lurkers to step out of their silent zone. For example, a supportive organisational environment may foster feelings of psychological safety. Negative comments or criticism should be prevented or minimised. A small survey or quick interview about employees' desire would be useful. For knowledge donators, strong support from top management has adverse impact. Instead, top management should value their knowledge donating behaviour and acknowledge their willingness to share.

## **8. Limitations and future research**

Although great effort was made to ensure the vigorousness of this study, some limitations must be acknowledged. First, this study adopted a cross-sectional study and measured the variables in the proposed framework employing a self-report method. Individual belief, such as job performance, can change over time. In this regard, future researchers should implement a longitudinal study to estimate changes that affect online knowledge sharing behaviours and job performance over an appropriate time period. Second, the sample was collected from employees in Vietnamese tele-communications, banking, and insurance industries. Future researchers should investigate the model in different industries and different countries to validate the findings. *Third, other moderators such as leadership styles may provide more insights to the intended outcomes. Final, knowledge self-efficacy, which refers to the confidence in bringing valuable knowledge to others, can be incorporated into the*

proposed model to have a better understanding of the impact of knowledge donating, knowledge collecting and lurking behaviours.

## References

- Akhavan, P., & Mahdi Hosseini, S. (2016). Social capital, knowledge sharing, and innovation capability: an empirical study of R&D teams in Iran. *Technology Analysis & Strategic Management, 28*(1), 96-113.
- Amichai-Hamburger, Y., Gazit, T., Bar-Ilan, J., Perez, O., Aharony, N., Bronstein, J., & Dyne, T. S. (2016). Psychological factors behind the lack of participation in online discussions. *Computers in Human Behavior, 55*, 268-277.
- Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of Knowledge Management, 7*(1), 64-77.
- Bandura, A., & Walters, R. H. (1977). Social learning theory. *General Learning Press*, 1-46.
- Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of Leadership & Organizational Studies, 9*(1), 64-76.
- Bishop, J. (2007). Increasing participation in online communities: A framework for human-computer interaction. *Computers in Human Behavior, 23*(4), 1881-1893.
- Bock, G. W., & Kim, Y. G. (2002). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal, 15*(2), 14-21.
- Bonner, J. M., Ruekert, R. W., & Walker, O. C. (2002). Upper management control of new product development projects and project performance. *The Journal of Product Innovation Management, 19*(3), 233-245.
- Borges, R. (2013). Tacit knowledge sharing between IT workers: The role of organizational culture, personality, and social environment. *Management Research Review, 36*(1), 89-108.



- Cabrera, A., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, *17*(2), 245-264.
- Cavaliere, V., Lombardi, S., & Giustiniano, L. (2015). Knowledge sharing in knowledge-intensive manufacturing firms. An empirical study of its enablers. *Journal of Knowledge Management*, *19*(6), 1124-1145.
- Choi, S. Y., Kang, Y. S., & Lee, H. (2008). The effects of socio-technical enablers on knowledge sharing:: an exploratory examination. *Journal of Information Science*.
- Cummings, J. N. (2004). Work Groups, Structural Diversity, and Knowledge Sharing in a Global Organization. *Management Science*, *50*(3), 352-364.  
doi:10.1287/mnsc.1030.0134
- de Bakker, K., Boonstra, A., & Wortmann, H. (2010). Does risk management contribute to IT project success? A meta-analysis of empirical evidence. *International Journal of Project Management*, *28*(5), 493-503.
- Dennen, V. P. (2014). Becoming a blogger: Trajectories, norms, and activities in a community of practice. *Computers in Human Behavior*, *36*, 350-358.
- Digman, J. M. (1990). Personality structure: emergence of the five-factor model. *Annual Review of Psychology*, *41*(1), 417-440.
- Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, *44*(2), 350-383. doi:10.2307/2666999
- Gueutal, H. G., Surprenant, N., & Bubeck, K. (1984). *Effectively Utilizing Computer-Aided Design Technology: The Role of Individual Difference Variables*. Paper presented at the Proceedings for the Fifth International Conference on Information Systems, Tucson, Arizona.

- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis*. Harlow, Essex: Pearson Education Limited.
- Hall, A. T., Royle, M. T., Brymer, R. A., Perrewé, P. L., Ferris, G. R., & Hochwarter, W. A. (2006). Relationships Between Felt Accountability as a Stressor and Strain Reactions: The Neutralizing Role of Autonomy Across Two Studies. *Journal of Occupational Health Psychology, 11*(1), 87-99.
- Hau, Y. S., Kim, B., Lee, H., & Kim, Y. G. (2013). The effects of individual motivations and social capital on employee's tacit and explicit knowledge sharing intentions. *International Journal of Information Management, 33*, 356-366.
- Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.
- Huang, Q., Davison, R. M., & Gu, J. (2008). Impact of personal and cultural factors on knowledge sharing in China. *Asia Pacific Journal of Management, 25*(3), 451-471.
- Kahn, W. A. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management Journal, 33*(4), 692-724
- Kang, Y. J., Kim, S. E., & Chang, G. W. (2008). The Impact of Knowledge Sharing on Work Performance: An Empirical Analysis of the Public Employees' Perceptions in South Korea. *International Journal of Public Administration, 31*(14), 1548-1568.
- Kankanhalli, A., Bernard, C. Y. T., & Wei, K.-K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly, 29*(1), 113-143.
- Kauhanen, A., & Piekkola, H. (2006). What Makes Performance-Related Pay Schemes Work? Finnish Evidence. *Journal of Management & Governance, 10*(2), 149-177.

- Kiatkawsin, K., & Han, H. (2017). Young travelers' intention to behave pro-environmentally: Merging the value-belief-norm theory and the expectancy theory. *Tourism management, 59*, 76-88.
- Kim, S., & Lee, H. (2006). The impact of organizational context and information technology on employee knowledge-sharing capabilities. *Public Administration Review, 66*(3), 370-385.
- Kumar, K., Bakhshi, A., & Rani, E. (2009). Linking the Big Five personality domains to Organizational citizenship behavior. *International Journal of Psychological Studies, 1*(2), 73.
- Kwahk, K. Y., & Park, D. H. (2016). The effects of network sharing on knowledge-sharing activities and job performance in enterprise social media environments. *Computers in Human Behavior, 55*, 826-839.
- Lawler, E. E., III. (2000). Pay can be a change agent. *Compensation & Benefits Management, 16*(3), 23.
- Li, Z., Liu, X., Wang, W., Vatankhah Barenji, A., & Huang, G. Q. (2019). CKshare: secured cloud-based knowledge-sharing blockchain for injection mold redesign. *Enterprise Information Systems, 13*(1), 1-33.
- Liao, H., & Chuang, A. (2004). A Multilevel Investigation of Factors Influencing Employee Service Performance and Customer Outcomes. *The Academy of Management Journal, 47*(1), 41-58.
- Malik, M. A. R., Butt, A. N., & Choi, J. N. (2015). Rewards and employee creative performance: Moderating effects of creative self-efficacy, reward importance, and locus of control. *Journal of organizational behavior, 36*(1), 59-74.

- Marett, K., & Joshi, K. (2009). The decision to share information and rumors: Examining the role of motivation in an online discussion forum. *Communications of the Association for information systems*, 24(1), 47-68.
- Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing – Examining the influence of learning and performance orientation. *Journal of Economic Psychology*, 32(3), 317-329.
- Matzler, K., Renzl, B., Mooradian, T., von Krogh, G., & Mueller, J. (2011). Personality traits, affective commitment, documentation of knowledge, and knowledge sharing. *The International Journal of Human Resource Management*, 22(02), 296-310.
- Matzler, K., Renzl, B., Müller, J., Herting, S., & Mooradian, T. A. (2008). Personality traits and knowledge sharing. *Journal of Economic Psychology*, 29(3), 301-313.
- Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology*, 94(2), 535-546.
- Motowildo, S. J., Borman, W. C., & Schmit, M. J. (1997). A Theory of Individual Differences in Task and Contextual Performance. *Human Performance*, 10(2), 71-83.
- Navimipour, N. J., & Charband, Y. (2016). Knowledge sharing mechanisms and techniques in project teams: literature review, classification, and current trends. *Computers in Human Behavior*, 62, 730-742.
- Nesheim, T., & Gressgård, L. J. (2014). Knowledge sharing in a complex organization: Antecedents and safety effects. *Safety science*, 62, 28-36.
- Ng, T. W. H., & Sorensen, K. L. (2008). Toward a Further Understanding of the Relationships Between Perceptions of Support and Work Attitudes: A Meta-Analysis. *Group & Organization Management*, 33(3), 243-268.

- Nguyen, T.-M., Nham, T. P., Froese, F. J., & Malik, A. (2019a). Motivation and knowledge sharing: a meta-analysis of main and moderating effects. *Journal of Knowledge Management, 23*(5), 998-1016.
- Nguyen, T.-M., Nham, P. T., & Hoang, V.-N. (2019b). The theory of planned behavior and knowledge sharing: A systematic review and meta-analytic structural equation modelling. *VINE Journal of Information and Knowledge Management Systems, 49*(1), 76-94.
- Nguyen, T.-M. (2020). Do extrinsic motivation and organisational culture additively strengthen intrinsic motivation in online knowledge sharing?: An empirical study. *VINE Journal of Information and Knowledge Management Systems, 50*(1), 75-93.
- Nham, P. T., Nguyen, T.-M., Tran, H. N., & Nguyen, A. H. (2020). Knowledge sharing and innovation capability at both individual and organizational levels: An empirical study from Vietnam's telecommunication companies. *Management & Marketing: Challenges for the Knowledge Society, 15*(2), 275-301.
- Nunnally, J. C. (1994). *Psychometric theory (3rd ed.)* (3rd ed.). New York: McGraw-Hill.
- Olatokun, W., & Nwafor, C. I. (2012). The effect of extrinsic and intrinsic motivation on knowledge sharing intentions of civil servants in Ebonyi State, Nigeria. *Information Development, 28*(3), 216-234.
- Organ, D. W. (1988). *Organizational citizenship behavior: the good soldier syndrome*. Lexington, Mass: Lexington Books.
- Panopto. (2018). *Panopto workplace knowledge and productivity report*. Retrieved from <https://www.panopto.com/resource/valuing-workplace-knowledge/>
- Park, J., & Gabbard, J. L. (2018). Factors that affect scientists' knowledge sharing behavior in health and life sciences research communities: Differences between explicit and implicit knowledge. *Computers in Human Behavior, 78*, 326-335.

- Pee, L. G., Kankanhalli, A., & Kim, H. W. (2010). Knowledge sharing in information systems development: a social interdependence perspective. *Journal of the Association for Information Systems, 11*(10), 550-575.
- Pee, L., & Lee, J. (2015). Intrinsically motivating employees' online knowledge sharing: Understanding the effects of job design. *International Journal of Information Management, 35*(6), 679-690.
- Pi, S.-M., Chou, C.-H., & Liao, H.-L. (2013). A study of Facebook groups members' knowledge sharing. *Computers in Human Behavior, 29*(5), 1971-1979.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology, 88*(5), 879-903.
- Prentice, C., & Thaichon, P. (2019). Revisiting the job performance–burnout relationship. *Journal of Hospitality Marketing and Management, 1*-26.
- Prentice, C., & Woodside, A. G. (2013). Problem Gamblers' Harsh Gaze on Casino Services: Problem gamblers' harsh gaze. *Psychology & Marketing, 30*(12), 1108-1123.
- Purvis, R. L., Zagenczyk, T. J., & McCray, G. E. (2015). What's in it for me? Using expectancy theory and climate to explain stakeholder participation, its direction and intensity. *International Journal of Project Management, 33*(1), 3-14.
- Rafaeli, S., Ravid, G., & Soroka, V. (2004). *De-lurking in virtual communities: a social communication network approach to measuring the effects of social and cultural capital*. Paper presented at the System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference.
- Rogerson, P. (2001). *Statistical methods for geography*. London: SAGE.
- Rothmann, S., & Coetzer, E. P. (2003). The big five personality dimensions and job performance. *SA Journal of Industrial Psychology, 29*(1).

- Safa, N. S., & Von Solms, R. (2016). An information security knowledge sharing model in organizations. *Computers in Human Behavior*, *57*, 442-451.
- Skinner, B. F. (1963). *The behavior of organisms: and experimental analysis*. New York: Appleton-Century-Crofts.
- Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering Leadership in Management Teams: Effects on Knowledge Sharing, Efficacy, And Performance. *Academy of Management Journal*, *49*(6), 1239-1251.
- Sun, N., Rau, P. P. L., & Ma, L. (2014). Understanding lurkers in online communities: A literature review. *Computers in Human Behavior*, *38*, 110-117.
- Tohidinia, Z., & Mosakhani, M. (2010). Knowledge sharing behavior and its predictors. *Industrial Management & Data Systems*, *110*(4), 611-631.
- Trusson, C., Hislop, D., & Doherty, N. F. (2017). The rhetoric of “knowledge hoarding”: a research-based critique. *Journal of Knowledge Management*, *21*(6), 1540-1558.
- Van den Hooff, B., & de Ridder, J. A. (2004). Knowledge sharing in context: The influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*, *8*, 117-130.
- Van der Rijt, P. (2002). *Precious Knowledge*. Amsterdam: The Amsterdam School of Communications Research.
- Vroom, V. (1964). *Work and motivation*. New York: John Willey & Sons: Inc.
- Walker, B., Redmond, J., & Lengyel, A. (2013). Are They All The Same? Lurkers and Posters on The Net. *eCULTURE*, *3*(1), 155-165.
- Wang, C.-C., & Yang, Y.-J. (2007). Personality and intention to share knowledge: An empirical study of scientists in and RD laboratory. *Social Behavior and Personality*, *35*(10), 1427-1436.

- Wang, Y., Han, M. S., Xiang, D., & Hampson, D. P. (2019). The double-edged effects of perceived knowledge hiding: empirical evidence from the sales context. *Journal of Knowledge Management*, 23(2), 279-296.
- Wasko, M. M., & Faraj, S. (2000). "It is what one does": Why people participate and help others in electronic communities of practice. *Journal of Strategic Information Systems*, 9(2-3), 155-173.
- Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 29(1), 35-57.
- Wiggins, J. S. (1996). *The five-factor model of personality: theoretical perspectives*. New York: Guilford Press.
- Wikhamn, W., & Hall, A. T. (2014). Accountability and satisfaction: Organizational support as a moderator. *Journal of Managerial Psychology*, 29(5), 458-471.
- Wittenbaum, G. M., Hollingshead, A. B., & Botero, I. C. (2004). From cooperative to motivated information sharing in groups: moving beyond the hidden profile paradigm. *Communication Monographs*, 71(3), 286-310.
- Yang, J. T. (2007). Knowledge sharing: Investigating appropriate leadership roles and collaborative culture. *Tourism management*, 28(2), 530-543.
- Yi, J. (2009). A measure of knowledge sharing behavior: scale development and validation. *Knowledge Management Research & Practice*, 7(1), 65-81.
- Zhao, L., Detlor, B., & Connelly, C. E. (2016). Sharing knowledge in social Q&A sites: The unintended consequences of extrinsic motivation. *Journal of Management Information Systems*, 33(1), 70-100.



Table 1. Measurement items

Factor	Item	Mean	SD	Factor loading	Alpha
Intrinsic rewards	People honour my job when I teach or share my own skills online	5.05	1.35	.92	.95
	The more I share my own knowledge online, the more my reputation would be enhanced	5.00	1.42	.88	
	When I share my knowledge online, I can get more chance to show my skills to the other colleagues	5.05	1.44	.90	
	When I share my knowledge online, people approve me as expert in our company	5.14	1.40	.94	
Knowledge donating	<i>In the organiational online platforms:</i>	5.15	1.35	.91	.74
	I often share my information, skills and experiences with my colleagues				
	When I have learned something new, I tell my colleagues about it	5.08	1.40	.92	
	I regularly tell my colleagues what I am doing	4.79	1.47	.84	
	Sharing knowledge among colleagues in my company is considered normal	5.33	2.92	.59	
Knowledge collecting	<i>In the organiational online platforms:</i>				.82
	I like to be informed of what my colleagues know	5.16	1.38	.85	
	When I need certain knowledge, I will ask my colleagues	5.00	1.53	.67	
	When one of my colleagues is good at something, I ask him/her to teach me how to do that thing	4.98	1.56	.67	
Lurking	I regularly read information and skills and experiences shared online	3.68	1.93	.94	.93
	I often accumulate information and skills and experiences shared online	3.70	1.92	.90	
	I often read the discussion or knowledge exchange online	3.68	1.74	.78	
	I often follow the discussion or knowledge exchange online	3.57	1.83	.83	
Job performance	Online knowledge sharing helps me reduce errors at work	5.31	1.36	.86	.97
	Online knowledge sharing helps me enrich my work	5.30	1.36	.92	
	Online knowledge sharing helps me improve my work output	5.39	1.36	.95	
	Online knowledge sharing helps me improve quality of work	5.39	1.35	.95	
	Online knowledge sharing helps me solve problems at work	5.39	1.34	.93	
Top management support	The top management in my company emphasises the importance of online knowledge sharing between work units	5.30	1.42	.90	.95
	The top management in my company highly encourages employees to share knowledge online	5.30	1.47	.95	
	The top management in my company makes consistent efforts to foster a culture of online knowledge sharing	5.27	1.43	.92	

Figure 1. Conceptual framework

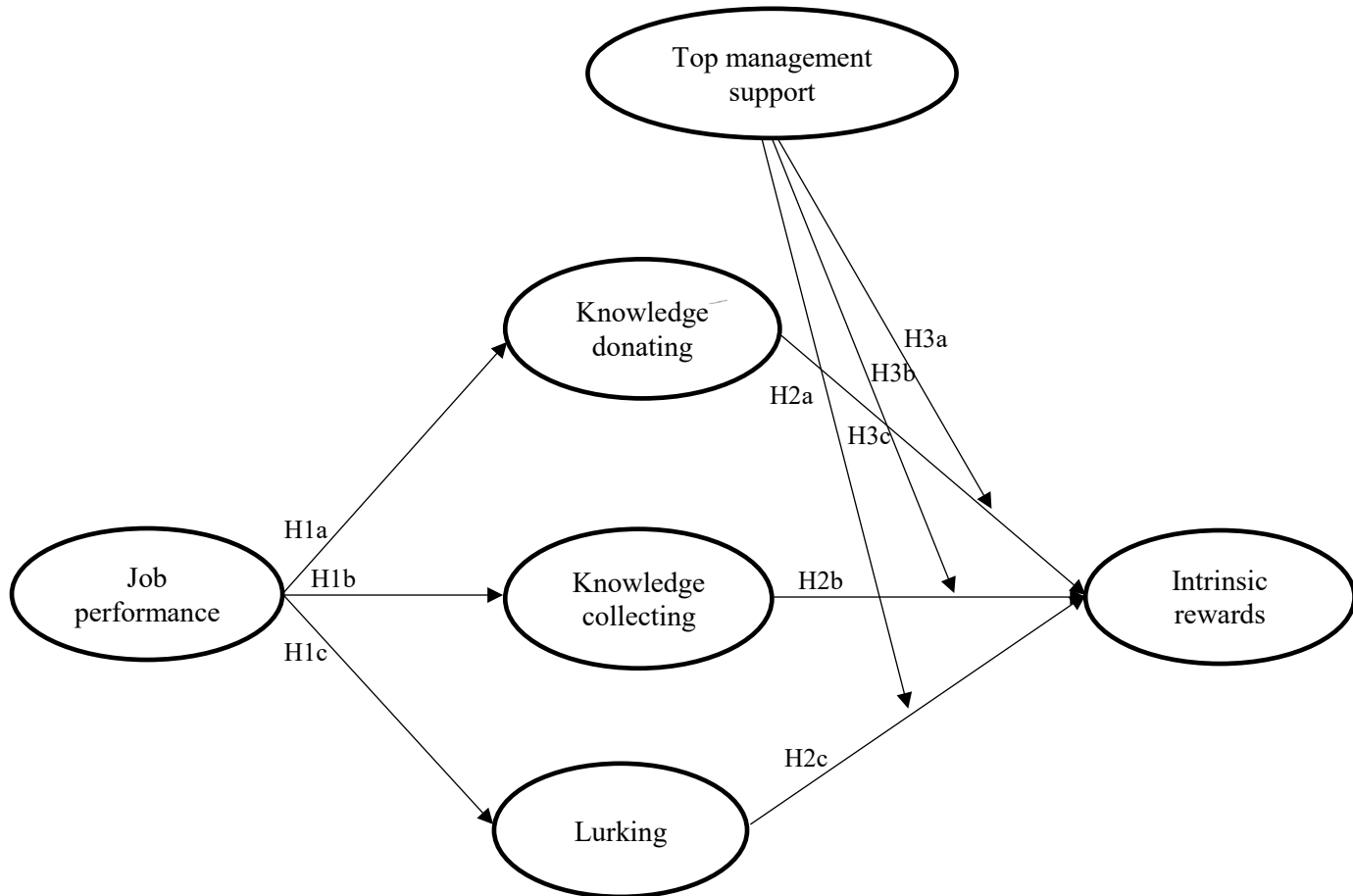


Table 2. Discriminant validity

		CR	AVE	1	2	3	4	5	6
1	Intrinsic rewards	.92	.75	<b>.87</b>					
2	Knowledge donating	.86	.61	.61**	<b>.78</b>				
3	Knowledge collecting	.78	.54	.57**	.65**	<b>.73</b>			
4	Lurking	.92	.75	.22**	.12**	.19**	<b>.86</b>		
5	Job performance	.94	.84	.69**	.67**	.67**	.07	<b>.92</b>	
6	Top management support	.95	.86	.59**	.62**	.56**	.03	.69**	<b>.93</b>

\*\*Correlation is significant at the 0.01 level (2-tailed)

The bold numbers in the diagonal row are the square roots of AVE

Table 3. Results of structural model

Path	Knowledge donating	Knowledge collecting	Lurking	Intrinsic rewards
Job performance	.83***	.88***	.06	
Knowledge donating				.48***
Knowledge collecting				.26***
Lurking				.15***
R <sup>2</sup>	.78	.68	.00	.58

\*p<.05, \*\*p<.01, \*\*\*p<.001

Table 4. Results of moderator of top management support

Path	Knowledge donating	Knowledge collecting	Lurking	Intrinsic rewards
Job performance	.83***	.88***	.06	
Knowledge donating				.58***
Knowledge collecting				-.03
Lurking				.03
Top management support				.07
Top management support x Knowledge donating				-.27*
Top management support x Knowledge collecting				.39***
Top management support x Lurking				.15***

\*p<.05, \*\*p<.01, \*\*\*p<.001