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# Online knowledge sharing capability of young employees: An empirical study

## Abstract

Along with the development of information technology and artificial intelligence, online knowledge sharing has become an essential organizational resource. Online knowledge sharing can contribute to the success of organizations through effective knowledge management which is often enhanced by using artificial intelligence techniques. Young employees often make up the largest segment in organizations, but they tend to start their early career with temporary contracts which impact their likelihood to hide or hoard organizational knowledge. This study examines knowledge self-efficacy, perceived ease of use, organizational rewards, and top management support affecting the online knowledge sharing capability of young employees. A survey was conducted in Vietnam, targeting young employees aged 18-30 in three key industries. Results indicate that knowledge self-efficacy, perceived ease of use, and top management support significantly influence young employees' online knowledge sharing. Interestingly, organizational rewards were found to only impact lurkers' online knowledge sharing and work effectively if employees have either high perceived ease of use or top management support.

Keywords: online knowledge sharing, organizations, young employees, artificial intelligence

## 1. Introduction

Online knowledge sharing plays a crucial role in creating a competitive advantage for organizations through the process of knowledge exchange among employees and knowledge capturing for reuse (Khan & Khan, 2019; Nguyet et al., 2019a; Schalow, 2015). Regarding knowledge exchange, online knowledge sharing is the act of employee collaboration, sharing, and creation (Nguyen, 2020b). Online knowledge sharing involves the transferrences of knowledge between employees, where employees make available their own knowledge to others in an organization, (Berends et al., 2006), which in turn, contributes to organizational performance and innovative thinking (Nguyen et al., 2019a). When it comes to the knowledge capturing process, the knowledge that is shared among employees can be repositied in knowledge repositories (Nguyen, 2020b). In the modern economy, as the amount

of knowledge which needed to be captured grew, the knowledge capturing process is often integrated with artificial intelligence (AI) tools such as corporate Wikis or document storages (Liebowitz, 2001). These knowledge repositories then could be explored using AI-related methods such as data mining or machine learning to promote creative thinking (Liebowitz, 2001). AI techniques are used as intelligent agents to codify the shared knowledge as well as help in the search and retrieval of knowledge in the knowledge management systems, leading to the effective use of vast and varied knowledge and resources to create a competitive advantage for organizations (Chi et al., 2020; Nguyen, 2020b; Prentice et al., 2019; Prentice et al., 2020). Thus, the more knowledge shared online, the more knowledge is exchanged and captured to create a competitive advantage for organizations.

Fostering online knowledge sharing behavior in an organization, however, is a challenging task (Welschen et al., 2012). Employees have been found to engage in numerous knowledge withholding behaviors including knowledge hiding or knowledge hoarding (Webster et al., 2008). This has negative consequences, including organizational inefficiency, fragmentation of services and/or service breakdown (Konstantinou & Fincham, 2010). In order to reduce knowledge withholding behavior and minimize its negative consequences, numerous studies were conducted to examine factors which help to motivate employees to share knowledge online (such as Lin, 2007a; Nguyen et al., 2019a; Nguyen et al., 2019b; Rosendaal & Bijlsma-Frankema, 2015). However, according to systematic literature reviews on knowledge sharing, the majority of the research was undertaken in western countries. There is a scarcity of research examining online knowledge sharing in developing countries such as Vietnam (Bibi and Ali (2017) Navimipour & Charband, 2016; Navimipour and Charband (2016); Zahedi et al. (2016).

Young employees play a crucial role because they are one of the largest segments in the workplace (World Bank Group, 2019). In Vietnam, young employees accounted for almost 60 percent of the workforce in 2017 (World Bank Group, 2019). Employing young employees can generate benefits for a company in both the short-term and the long-term (Hasluck, 2012). Young employees have been socialized from an early age with digital capability, which in turn influences their approach to work (Hasluck, 2012). Furthermore, they tend to be more independent, flexible and adaptable to change as well as often eager and willing to learn and bring new ideas assisting business with technology-related business expansion (Hasluck, 2012; Tapscott, 2009).

Young employees in the early stage of their career are typically employed on a fixed-term contract (de Lange et al., 2014; European Commission, 2012), which over time may result in individuals becoming trapped in a cycle of temporary contracts. This continual cycle of temporary employment influences young employees' perceptions of job security and loss of the skill-based competitive advantage (Trusson et al., 2017; Zhao & Xia, 2017). Despite the benefits of temporary employment (such as more working experience and connection with others in the field), the continuance of temporary contracts has been shown to influence young employees' likelihood of hiding or hoarding organizational knowledge (Bilginoglu, 2019). Young employees are unlikely to share knowledge online within organizations without motivation (de Lange et al., 2014; Gebel, 2010). Notably, Vietnamese young employees, due to the strong influence by the old Communist regime and Marxist-Leninist educational system, believe that knowledge is power and hoarding and hiding knowledge is a way to maintain power (Dong et al., 2010). With these beliefs, Vietnamese young employees are inclined to participate in online knowledge sharing as lurkers who read postings without making their own contribution. Consequently, on average, the percentage of lurkers in Vietnamese companies is higher than those in Western countries where lurkers account for up to 95 percent of employees in a Vietnamese company (VECITA, 2012). Yet, to the best of our knowledge, there is no empirical study that has investigated factors to motivate young employees, especially Vietnamese young employees, in online knowledge sharing.

This study aims to contribute to the literature on knowledge sharing by examining what factors influence Vietnamese young employees' online knowledge sharing behavior. The contributions of this paper are twofold. First, by examining factors which influence online knowledge sharing, this study harnesses insights as to the role of online knowledge sharing within organizations. Through investigating the impacts of factors on young employees' online knowledge sharing, researchers and practitioners are able to place more attention on the driving force of knowledge sharing behavior. Second, this study focuses on young employees. As young employees are a relatively large and vulnerable group in the workplace; workforce of the future (European Commission, 2012; Heisig & Solga, 2015), it is of critical importance to understand factors that motivate them to share knowledge in organizations.

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

Online knowledge sharing behavior refers to the dissemination of knowledge online among

employees in an organization (Lin, 2007b). Through active online knowledge sharing behavior, employees can exchange ideas and knowledge assets to contribute to organizational knowledge creation (Lee, 2016; Foss et al., 2010; Wang & Noe, 2010; Nonaka, 1994). According to the Social Exchange Theory, the crucial and prerequisite conditions to share knowledge are that employees need to have knowledge about the topics discussed, and know how to share such knowledge via online platforms. These conditions are related to two individual factors: knowledge self-efficacy and perceived ease of use. Knowledge self-efficacy refers to individuals' confidence in their ability to offer knowledge valuable to others (Bandura, 1977). In knowledge sharing, a desire to offer is not sufficient for employees to join the discussion. Employees need to have knowledge self-efficacy, which involves perceived capabilities to provide valuable knowledge (Hsu et al., 2007). A lack of knowledge self-efficacy may impede the participation of knowledge sharing (Nguyen, 2020c). In addition, when it comes to online knowledge sharing, perceived ease of use must be examined because employees are required to know how to use online platforms. Perceived ease of use refers to employee perceptions of the ease in terms of using online platforms (Hsu & Lin, 2008; Nguyet et al., 2013; Yu et al., 2010). Perceived ease of use influences behavioural intentions to use online platforms to participate in online knowledge sharing (Nguyen et al., 2015). If employees do not know how to use online platforms, their participation in online knowledge sharing becomes challenging (Nguyen, 2020b).

Due to working in an organizational environment, an employee is also influenced by organizational factors (Nguyet et al., 2019b). According to Al-Busaidi et al. (2010) and Black & Laflin (2009), organizational rewards and top management support are of the most important organizational factors in knowledge sharing. As knowledge sharing is voluntary, employees need to have encouragement from the organization via organizational rewards and support from the top management. Organizational rewards refer to extrinsic rewards, which assesses employees' beliefs about extrinsic organizational incentives, such as salary incentives, bonuses, promotion incentives, or job security, which can be obtained if they actively share knowledge online (Lin, 2007a). The existing literature on human resource management shows that an organisation's reward mechanism plays an important role in encouraging employees to share knowledge online. Organisational rewards have been indicated to be a viable method to motivate employees to complete their assigned tasks at their highest potential (Nguyen, 2020b). Top management support refers to the support of top management for online knowledge sharing in organizations (Kang et al., 2008). Employees will not feel motivated if they do not

perceive support from their top management (Nguyen, 2020b). Therefore, we propose a conceptual framework, as depicted in Figure 1, to examine the impact of these two individual factors and two organizational factors on online knowledge sharing behavior in an organization. The following sections develop the hypotheses regarding the relationships among these factors with online knowledge sharing behavior.

Insert Figure 1 here

### ***2.1 Individual factors and Online knowledge sharing behavior***

Knowledge self-efficacy is rooted in Social Cognitive Theory, which highlights that if individuals believe in their capability to execute a behavior successfully, the expectations of the positive outcome of such behavior will be fruitful (Bandura, 1997; Hsu & Lin, 2008; Pee & Lee, 2015). This belief leads employees to perform adequately and cope with unexpected situations (Bandura, 1977). According to Bandura (1977), knowledge self-efficacy drives young employees to act in accordance with their capability because knowledge self-efficacy influences their process of thinking, motivation, and emotion and enhances young employee accomplishment and personal well-being.

Nguyen (2020) argues that in the modern industry, knowledge shared online in an organization is crucial to create a competitive advantage. Such knowledge is mainly captured in knowledge management systems, which are often reinforced with AI tools to easily find and use relevant information, get instant answers to questions, improve real-time decision-making and accelerate problem-solving. Consequently, organizations could enhance collaboration among employees and the process of idea generation (Kankanhalli et al., 2005; Lin, 2007b). Therefore, young employees who could contribute valuable knowledge to the organization are more likely to be confident in their capacity of exercising control over their work as well as supporting and assisting colleagues, leading to knowledge sharing behavior (Kankanhalli et al., 2005; Lin, 2007b). Carter et al. (2018) and De Clercq et al. (2018) also argue that if young employees think that their knowledge is valuable to other colleagues and could be used to contribute to the development of the organization, they tend to be more willing to share their knowledge online.

**H1:** Young employees' high knowledge self-efficacy relates positively to their online knowledge sharing behavior.

Perceived ease of use is rooted in the technology acceptance model, which shows the prospective user's assessment of the mental efforts needed to make decisions when adopting information technology (Davis, 1989). According to the technology acceptance model, all things being equal, improvements in ease of use will lead to employees' online knowledge sharing behaviour (Davis, 1989). Cheng et al. (2012) studied online knowledge sharing; revealing that online platforms in the workplace are getting more sophisticated due to advances of information technology and the application of AI in knowledge management and sharing. An online platform could be used for multi-purposes such as self-training and sharing knowledge as well as storing, extracting and mining information (Cheng et al., 2012). Therefore, perception of the ease in using online platforms in the workplace is crucial to impacting employees' intentions to use such online platforms (Cheng et al., 2012).

Bravo et al. (2015) supports this argument in their examination of perceived ease of use in using an online platform to share knowledge online among young professionals in private sectors in Peru. They concluded that ease of technology to share knowledge online determines knowledge sharing behavior because online platforms in the workplace are continuously improved to facilitate online knowledge sharing and knowledge management. The importance of perceived ease of use has also been well documented among young employees in the banking industry. Ramayah & Suki (2006) explain online platforms tend to be developed with many functions to facilitate knowledge sharing as well as information extraction and search when applying AI in knowledge management. Organizations tend to integrate AI-powered knowledge systems into online knowledge sharing platforms to make them gain intelligence and usefulness such as providing e-learning programs for self-training. Thus, perceived ease of use plays a vital role in online platform adoptions and usages for online knowledge sharing. Nguyen et al. (2013) emphasise that although young people tend to become familiar with new information technology and AI applications fast, the constant development of online platforms remains difficult for them to use. Therefore, perceived ease of use influences their behavioral intention to use online platforms.

**H2:** Young employees' high perceived ease of use relates positively to their online knowledge sharing.

## ***2.2 Organizational factors and Online knowledge sharing behavior***

Organizational rewards have been proven to be effective in encouraging employees to share knowledge to gain extrinsic benefits (Cabrera et al., 2006; Hung et al., 2011). Nguyen et al. (2019b) argue that good managers should acknowledge their employees' accomplishments by giving them something tangible. Fair chances of promotion determined by employee's ability and skills could improve employees' loyalty (Nguyen et al., 2019b). Changes in reward and performance appraisal systems can lead to changes in knowledge sharing behavior among young employees (Nguyen et al., 2019b).

Organizational rewards are the key strategy of numerous organizations as they bind the success factor with employee performance. Nguyen (2020) argues that young employees in their early working career are more likely to hide or hoard knowledge due to a fear of losing competitive advantage. However, they will have a greater willingness to share knowledge online if organizational rewards are offered. Lin (2007c) believes that organizational rewards are effective in encouraging young employees to participate in online knowledge sharing because young employees need incentives to perform knowledge sharing behavior. Young employees in the early stage of their career tend to feel less secure with their job; thereby, they do not want to share skills or experiences that require much of their effort and time. To motivate young employees to share knowledge online, organizations need to provide organizational rewards such as bonuses or promotions as compensation for time and effort. Robbins et al. (2017) posit a view that young employees minutely measure the cost; the hard work invested in acquiring knowledge, compared to organizational rewards; the estimation of expected compensation. If organizational rewards are equal or greater than the cost, knowledge sharing behaviour will be performed (Barton, 2002).

**H3:** Organizational rewards relate positively to young employees' online knowledge sharing behavior.

Top management support includes the emphasis on the importance of online knowledge sharing, the encouragement of employee knowledge sharing behavior, and the foster of a knowledge sharing culture (Nguyen, 2020a). Top management support plays a vital role in online knowledge sharing because, with the facilitation and support of top management, the knowledge sharing culture among employees in an organization can be enhanced, cultivated and maintained (Liebowitz, 2001).



Young employees in their early career tend to need more support for their job than their older counterparts (Nguyen, 2020a). They often follow the guidelines of seniors, supervisors and top management to fulfil their tasks. In an organization, top management has the highest authority and ability to decide the direction of the organization (Civi, 2000). If top management supports online knowledge sharing, employees are inclined to participate in online knowledge sharing because they know that their knowledge sharing behavior is aligned with the organization's directions (Nguyen, 2020a; Pee & Min, 2017). Therefore, if top managers encourage young employees to collaborate and share knowledge online, they will actively participate in online knowledge sharing (Tan & Zhao, 2003).

**H4:** Top management support relates positively to young employees' online knowledge sharing behaviour.

### **3. Method**

#### ***3.1 Measures***

All measurement items were adapted from existing scales in previous studies to ensure content validity and were anchored on a 7-point Likert scale from 1 for 'strongly disagree' to 7 for 'strongly agree'. The items of knowledge self-efficacy were adapted from Bock et al. (2005) and Kankanhalli et al. (2005). The items of perceived ease of use were adapted from Hsu & Lin (2008). The items for organizational rewards was adapted from Lin (2007a). Top management support was measured by adapting the top management support scale in Kang et al. (2008). Online knowledge sharing behavior was measured using five items adapted from Akhavan & Mahdi Hosseini (2016). The Cronbach's alpha coefficient for all these adapted scales are above 0.7 (see Table 1).

#### ***3.2 Data collection***

The target respondents were young employees who have experience with online knowledge sharing in organizations in Vietnamese tele-communication, banking and insurance industries. These industries were chosen because based on recent studies in online knowledge sharing in Vietnam (Nguyen, 2020a, Nguyet et al., 2019c), knowledge management practices are important in these industries in Vietnam, and they have appropriate information

technology infrastructures for online knowledge sharing. Regarding participants' age, following the definition of Buers et al. (2018), young employees in this study are those aged from 18 to 30. The questionnaire was originally developed in English, then translated back into Vietnamese to compare. The survey was pilot tested with 30 Vietnamese employees who were familiar with knowledge sharing in organizational online platforms. The results of the pilot test showed the high reliability of all constructs.

The online survey was made available via SurveyMonkey. Three screening questions were used to ensure that the respondents were aged between 18 and 30, and had experience with online knowledge sharing in organizations. In total, 350 completed surveys were eligible for data analysis. The sample, which was comprised slightly more of females (57%, n=199) than males (43%, n=151); was highly educated with the majority of respondents holding a bachelor's degree (82%, n=287), and the remaining holding either a technical college degree (11%, n=39) or a master's degree or higher (7%, n=24). Respondents resided in major Vietnamese cities of Hanoi, Da Nang, and Ho Chi Minh. All respondents were working in a full-time capacity.

### *3.3 Common method bias*

PLS algorithm analysis in Smart PLS 3 was used to assess common method bias following the recommendation of Kock (2015). In the PLS algorithm analysis, one of five constructs (knowledge self-efficacy, perceived ease of use, organisational rewards, top management support and knowledge sharing behavior) was considered a dependent variable; the others were considered predictors. In particular, five PLS algorithm analyses were conducted: (1) knowledge self-efficacy, perceived ease of use, organisational rewards, and top management support as predictors of knowledge sharing behavior; (2) perceived ease of use, organisational rewards, top management support and knowledge sharing behavior as predictors of knowledge self-efficacy; (3) organisational rewards, top management support, knowledge sharing behavior, and knowledge self-efficacy as predictors of perceived ease of use; (4) top management support, knowledge sharing behavior, knowledge self-efficacy, and perceived ease of use as predictors of organisational rewards; (5) knowledge sharing behavior, knowledge self-efficacy, and perceived ease of use, and organisational rewards as predictors of top management support. All factor level-variance inflation factor values were well below the cut-off value of 3.3; thus, common method bias was not an issue in this study.

### **3.4 Data analysis**

The measurement and structural models were evaluated by the component-based partial least squares (PLS) approach using Smart-PLS 3 software to test the hypotheses. Then the data analysis was checked via fuzzy-set qualitative comparative analysis (fsQCA) because fsQCA provides a configurational approach to examining the way determinants interact to produce an outcome. FsQCA identifies patterns of causal conditions which produce the outcome, rather than focusing on how one individual independent variable relates to the outcome. The software used for the analysis was fsQCA 3.0 (Ragin & Davey, 2014).

## **4. Results**

In the measurement model, the reliability and validity of the model were assessed (see Table 1 and 2). All the Cronbach's alpha values of measurements were above the cut-off value of 0.70 (Nunnally, 1994). The composite reliability of all constructs was above the recommended level of 0.7 (Nunnally, 1994). The convergent validity was confirmed when all the average variance extracted (AVE) values were higher than the threshold of 0.5 (Fornell & Larcker, 1981). The discriminant validity was confirmed as none of the construct correlations exceeded the corresponding square root of the AVE values.

Insert Table 1 and 2 here

In the structural model, the  $R^2$  value was 0.67, indicating sufficient explanatory power for all models. Table 3 shows the results of the structural model. H1 proposes that knowledge self-efficacy is positively related to online knowledge sharing behavior. As shown in Table 3, knowledge self-efficacy had a significant positive effect on online knowledge sharing behavior ( $\beta=0.28$ ,  $p<0.001$ ), thereby supporting H1. H2 postulates that perceived ease of use is positively related to online knowledge sharing behavior. The results in Table 3 showed that perceived ease of use had a significant positive influence on online knowledge sharing behavior ( $\beta=0.31$ ,  $p<0.001$ ), implying that the greater the perceived ease of use, the more the online knowledge sharing behavior. Thus, H2 was supported.

H3 hypothesizes that organizational rewards are positively related to online knowledge sharing behavior. As shown in Table 3, organizational rewards did not have a significant positive effect on online knowledge sharing ( $\beta=0.04$ ,  $p>0.05$ ); thus, H3 was not supported.

Top management support is proposed to be positively related to online knowledge sharing behavior in H4. Table 3 indicates that top management support significantly affected online knowledge sharing behavior ( $\beta=0.30$ ,  $p<0.001$ ), implying that the higher the top management support, the more the online knowledge sharing behavior, thus supporting H4.

Insert Table 3 here

As H3 was not supported, further data analysis was performed to provide further insights. As mentioned in the literature, participants in online knowledge sharing are often categorized as posters or lurkers. Two types of participants have different characteristics (Nguyen, 2020c); thereby, the insignificant effect of organizational rewards on online knowledge sharing behavior could be explained when making a comparison between them. The post-hoc analysis was conducted to compare the impact of determinants on online knowledge sharing behavior between the poster and lurker groups. Based on the definition of Preece et al. (2004), posters were classified as those who posted or shared knowledge, while lurkers were those who had not posted or had only requested information in the previous three months. Based on their answers about the frequency of their posting and knowledge requesting behavior, of 350 respondents, there were 223 posters and 127 lurkers. The results in Table 4 show that knowledge self-efficacy, perceived ease of use and top management support positively affected online knowledge sharing behavior of both groups. However, organizational rewards had a significant impact on lurkers' online knowledge sharing but had no effect on posters' online knowledge sharing behavior.

Insert Table 4 here

FsQCA was applied to examine the relationship between causal conditions of knowledge self-efficacy, perceived ease of use, organizational rewards and top management support and the outcome decision-making logic of online knowledge sharing behavior. The original scaled values were transformed into fuzzy-set membership scores for all conditions and outcomes based on substantive, theoretical knowledge using the direct method of calibration (Prentice & Loureiro, 2017; Prentice, 2019). This method requires three qualitative anchors being defined: the threshold for full non-membership, the crossover point, and the threshold for full membership. To generate these anchors, we used the 5th, 50th, and 95th percentiles, respectively (Prentice & Loureiro, 2017). Table 5 shows the calibrations for all conditions in this study.

Insert Table 5 here

The results of the data analysis using fsQCA (see Table 6) showed that there were five pairs of factors that significantly impacted on online knowledge sharing behaviour. The five pairs were: (1) knowledge self-efficacy and perceived ease of use, (2) knowledge self-efficacy and top management support; (3) perceived ease of use and organizational rewards; (4) perceived ease of use and top management support; and (5) organizational rewards and top management support.

Insert Table 6 here

## **5. Discussion**

The objective of this study was to examine the effect of knowledge self-efficacy, perceived ease of use, organizational rewards, and top management support on Vietnamese young employees' online knowledge sharing behavior. These four factors have been shown by previous studies (Al-Busaidi et al., 2010; Black & Laflin, 2009; Hsu & Lin, 2008; Nguyet et al., 2019b) to be of the most important determinants of employees' online knowledge sharing behaviour, including young employees'. In the early working career, young employees tend to not engage in online knowledge sharing due to perceptions of low job security and the fear of losing competitive advantage (Holten et al., 2016). As young employees often account for the majority of the labor force in an organization, it would be substantially beneficial to organizations if they encourage young employees to share knowledge online. The amount of knowledge shared among young employees would be enormous and could be captured with the support of AI tools to accelerate the search and retrieval of knowledge, promoting creative thinking and creating a competitive advantage. However, there is a lack of research investigating the determinants of young employees' knowledge sharing behaviour, especially in developing countries, including Vietnam. The findings of this study provide more insights into the relevance of these four factors impacting young employee online knowledge sharing within a developing country.

Especially, this study contributes to the online knowledge sharing literature, identifying that young employees' knowledge self-efficacy significantly affects online knowledge sharing behavior. This finding is aligned with the results of De Clercq et al. (2018) who revealed that

employees' knowledge self-efficacy improves their online knowledge sharing behavior because they experience less anxiety when they undertake their daily tasks. Similar findings were found in the studies by Nguyen (2020) and Lin (2007a). In their studies, they found that employees who have high knowledge self-efficacy are often likely to commit to organizational activities and want to contribute to the organization. In addition, such employees tend to share knowledge to ensure they work effectively and avoid errors or issues since they are dutiful and work well in their roles.

Perceived ease of use was found to have the most substantial influence on young employees' online knowledge sharing behavior. This result implies that young employees consider perceived ease of use the most important factor regarding decisions to share knowledge online. This result proves that emphasis needs to be placed on perceived ease of use to motivate young employees to participate in online knowledge sharing. This finding correlates with those by Hsu & Lin (2008), Nguyet et al. (2013) and Davis (1989) who believe that enhancing the ease of use could improve knowledge sharing intentions and behavior. Davis (1989) found that perceived ease of use led to usage intention and usage behavior. Chang et al. (2013) also found that perceived ease of use improves job performance, productivity and effectiveness. They explained that the easier employees perceive the use of online platforms to be, the less cognitive effort they must exert, and accordingly, they will concentrate more on the integration with online platforms and be more motivated. Gradually, they will be able to perceive the benefits of online platforms in knowledge sharing. Consequently, they will feel more comfortable participating in online knowledge sharing, explore the content shared and be willing to learn continuously, leading to the improvement of job performance.

Contrary to expectation, organizational rewards did not influence young employees' online knowledge sharing behavior. However, with further analysis with fsQCA, organizational rewards impact knowledge sharing behavior when integrating into pairs with either perceived ease of use or top management support. These results show that organisational rewards only work when employees either know how to use online platforms to share knowledge or perceive support from top management in online knowledge sharing. Interestingly, lurkers are more likely to be influenced by organizational rewards, as opposed to posters. Lurkers have a number of reasons that prevent them from posting, such as experiencing negative feedback (Amichai-Hamburger et al., 2016; Sun et al., 2014). Lurkers need an incentive such as organizational rewards to take a more active role. This finding is consistent with those by

Sun et al. (2014) and Amichai-Hamburger et al. (2016) who propose many strategies to incite lurkers to post, which is sometimes referred to as de-lurking strategies.

Top management support was found to have a significant impact on young employees' online knowledge sharing behavior. This result shows that with an increase of top management support, employees are motivated to share knowledge online and help each other accomplish organizational tasks. This finding is in accordance with the findings of Nguyen (2020) and Tan & Zhao (2003) which emphasized the important role of top management support in creating a favourable environment for knowledge sharing among employees.

## **6. Implications**

### ***6.1 Theoretical implications***

This study examines online knowledge sharing among young employees in the age of AI. The primary focus of the study is concerned with the factors which influence young employees' online knowledge sharing in Vietnam. Regarding theoretical contribution, this study extends the knowledge sharing literature by examining online knowledge sharing among young employees. Although young employees can bring many benefits, due to low job security, they tend to be inactive in knowledge sharing. Young employees have received less attention from prior scholars and previous studies on knowledge sharing in predominantly conducted in western countries. This study is one of the first to investigate this type of employee in knowledge sharing. In this way, the study sheds light on the benefits of knowledge sharing among the young workforce in a developing country such as Vietnam and suggests factors to encourage Vietnamese young employees to participation.

### ***6.2 Managerial implications***

The study suggests the following strategies for managers who desire to initiate knowledge sharing practices among young employees. First, the study provides evidence that knowledge self-efficacy is an important determinant of employee job performance. This implies that managers should enhance young employees' knowledge self-efficacy. Previous studies recommended a variety of methods to improve knowledge self-efficacy. Olatokun & Nwafor (2012) suggested that young employees' knowledge self-efficacy could be enhanced through

the provision of useful feedback. Nguyen (2020) suggested that when an organization recruits young employees, those who are proactive, have knowledge self-efficacy and self-esteem should be given more consideration. Second, perceived ease of use of online platforms is important to young employees. A user-friendly and appealing interface should be designed for organizational online platforms to encourage young employees to share knowledge online (Nguyen et al., 2015). A technical support team may be helpful to reduce employees' concerns when sharing knowledge online (Davis, 1989).

Third, organizational rewards such as salary incentives, bonuses or job security should be used to motivate lurkers to post. This implies that organizations may provide organizational rewards to initiate knowledge sharing behavior that leads to the improvement of young employees' online knowledge sharing. Management may consider using AI concepts like knowledge mapping and ontologies to identify and offer organizational rewards to those who have the first post that provides the most value to the organization (Neururer, 2015). Finally, top management should emphasize the importance of online knowledge sharing to the success of the company as a whole. Top management can encourage employees to share knowledge online and make them aware of the impact this has on the company's performance (Tan, 2016). Some rules should be applied to avoid impolite responses and potential conflict (Tan, 2016).

This study has some limitations, which open avenues for future studies. Firstly, the sample was collected from young employees in three industries in Vietnam, telecommunication, banking and insurance. Future researchers may wish to investigate the model in different industries and different countries to provide a more robust test of the hypotheses. Second, with a goal to gain a better understanding of factors driving young employees' online knowledge sharing, we did not differentiate the types of participant (posters and lurkers). Since the post-hoc analysis shows the different impacts of organizational rewards on job performance in the poster and lurker groups, future research may consider examining the two groups separately. Third, this study only focuses on extrinsic rewards which involve tangible incentives such as bonuses or promotions. Future research may consider investigating intrinsic rewards, which relate to intangible incentives such as reputation, as well as in a single study to shed more light on the impacts of organizational rewards on knowledge sharing behavior.



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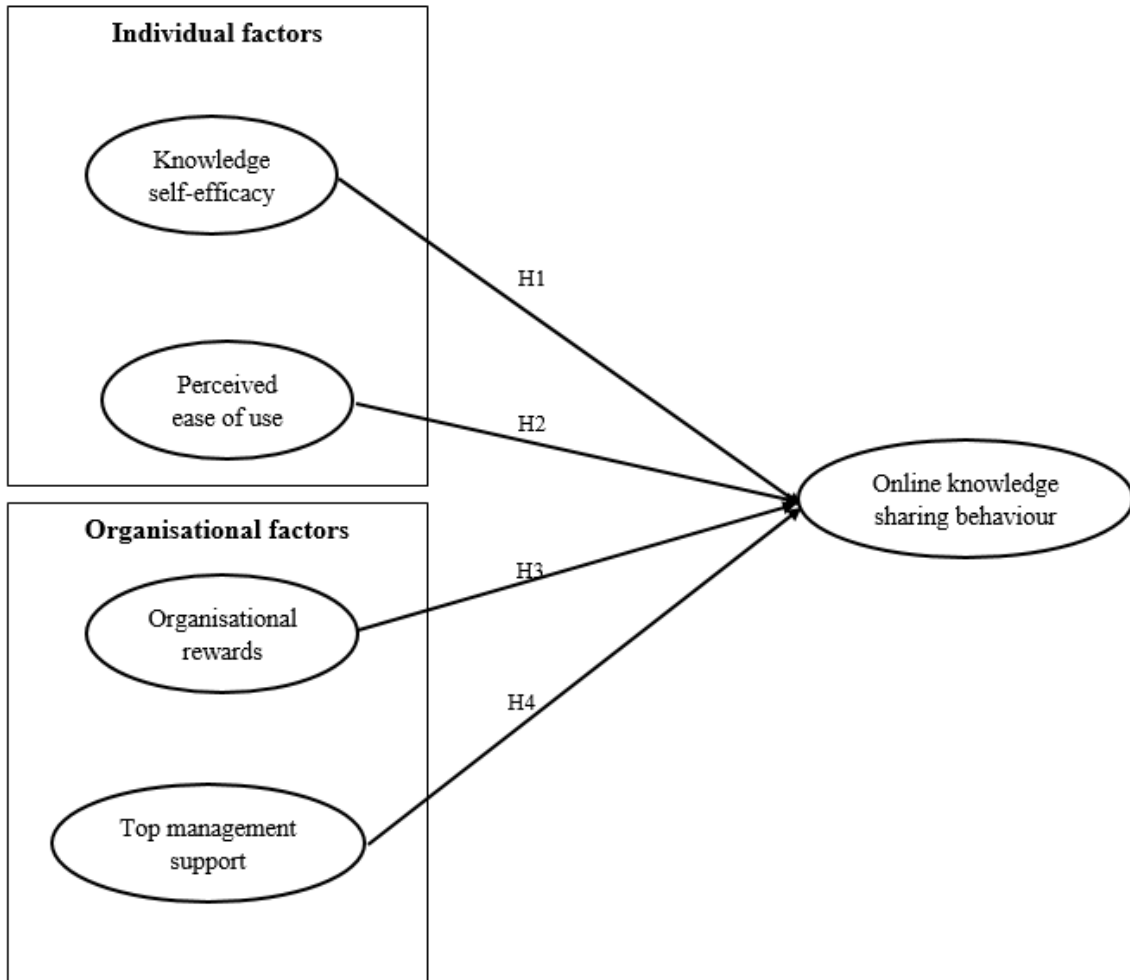
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**Figure 1:** Conceptual framework

**Table 1:** Measurement items

Factor	Item	Mean	SD	Factor loading	Alpha	
Knowledge self-efficacy (Bock et al., 2005; Kankanhalli et al., 2005)	SEF1	I am confident in my ability to provide knowledge that others consider valuable	4.69	1.45	0.78	0.95
	SEF2	I have the expertise required to provide valuable knowledge for my organization	4.75	1.46	0.75	
	SEF3	When sharing knowledge via online platforms, I feel confident in my ability to help colleagues to solve their problems	5.02	1.45	0.93	
	SEF4	When sharing knowledge via online platforms, I feel confident in my ability to create new business opportunities for my organization	4.74	1.50	0.79	

	SEF5	When sharing knowledge via online platforms, I feel confident in my ability to help my organization to improve work processes	5.04	1.44	0.88		
	SEF6	When sharing knowledge via online platforms, I feel confident in my ability to help my organization to increase productivity	5.08	1.44	0.91		
	SEF7	When sharing knowledge via online platforms, I feel confident in my ability to help my organization to achieve performance objectives and outcomes	4.95	1.38	0.87		
Perceived ease of use (Hsu & Lin, 2008)	PEU1	I find the online platform to be flexible to interact with	5.20	1.38	0.93	0.96	
	PEU2	It is easy for me to become skilful at using the online platform	5.13	1.41	0.94		
	PEU3	I find the online platform easy to use	5.16	1.39	0.94		
Organizational rewards (Lin, 2007a)	REW1	I share my knowledge online because in return I will receive increased promotion opportunities	4.23	1.73	0.78	0.86	
	REW2	I share my knowledge online because in return I will receive increased job security	4.17	1.74	0.97		
Top management support (Kang et al., 2008)	TMS1	The top management in my company emphasizes the importance of online knowledge sharing between work units	5.26	1.45	0.93	0.95	
	TMS2	The top management in my company highly encourages employees to share knowledge online	5.28	1.48	0.96		
	TMS3	The top management in my company makes consistent efforts to foster a culture of online knowledge sharing (e.g., offering rewards)	5.25	1.43	0.92		
Online knowledge sharing behavior (Akhavan & Mahdi Hosseini, 2016)	OKS1	I usually spend a lot of time sharing knowledge with other colleagues in the online platforms	5.36	1.37	0.87	0.97	
	OKS2	I actively share my knowledge with other colleagues in the online platform	5.33	1.37	0.92		
	OKS3	When I have learned something new I tell my colleagues about it on the online platform	5.43	1.38	0.94		
	OKS4	I usually involve myself in discussions in the online platform	5.45	1.37	0.96		
	OKS5	I usually respond to others' questions	5.44	1.37	0.93		

**Table 2:** Discriminant validity, CR and AVE

	CR	AVE	1	2	3	4	5
Knowledge self-efficacy	0.95	0.72	<b>0.85</b>				
Perceived ease of use	0.96	0.88	0.66*	<b>0.94</b>			
Organizational rewards	0.87	0.77	0.32*	0.23*	<b>0.96</b>		
Top management support	0.95	0.87	0.68*	0.74*	0.20*	<b>0.93</b>	
Online knowledge sharing behavior	0.97	0.86	0.69*	0.72*	0.26*	0.72*	<b>0.93</b>

\*p<.001



**Table 3:** Structural model results

Path	Hypothesis	$\beta$	t value	Sig.
Knowledge self-efficacy → Online knowledge sharing behavior	H1	0.28	3.57	*
Perceived ease of use → Online knowledge sharing behavior	H2	0.31	4.19	*
Organizational rewards → Online knowledge sharing behavior	H3	0.04	1.11	NA
Top management support → Online knowledge sharing behavior	H4	0.30	3.56	*
R <sup>2</sup>		0.67		

\*p<.001; NA: not significant

**Table 4:** Post host analysis

Path	Posters (n=223)	Lurkers (n=127)	T	Sig.
Knowledge self-efficacy → Online knowledge sharing behavior	0.22**	0.33**	0.11	NA
Perceived ease of use → Online knowledge sharing behavior	0.33**	0.30**	0.02	NA
Organizational rewards → Online knowledge sharing behavior	0.00	0.13*	0.13	NA
Top management support → Online knowledge sharing behavior	0.32**	0.27**	0.05	NA
R <sup>2</sup>	0.67	0.67		

\*\*p<.001, \*p<.05, NA: not significant

**Table 5:** Calibration of all conditions

Variable/antecedent	Descriptive statistics	Calibration (0.95, 0.50, 0.05)
Knowledge self-efficacy	$\mu = 4.90, \sigma = 1.26, \min = 1.00, \max = 7.00$	(6.86, 5.00, 2.29)
Perceived ease of use	$\mu = 5.16, \sigma = 1.34, \min = 1.00, \max = 7.00$	(7.00, 5.33, 2.52)
Organizational rewards	$\mu = 4.20, \sigma = 1.70, \min = 1.00, \max = 7.00$	(6.50, 4.00, 1.00)
Top management support	$\mu = 5.27, \sigma = 1.39, \min = 1.00, \max = 7.00$	(7.00, 5.67, 2.33)
Online knowledge sharing behavior	$\mu = 5.40, \sigma = 1.29, \min = 1.00, \max = 7.00$	(7.00, 5.80, 2.60)

Note:  $\mu$  = average value;  $\sigma$  = standard deviation; min = minimum value; max = maximum value

**Table 6:** Antecedent conditions of online knowledge sharing behavior

Model	Knowledge self-efficacy	Perceived ease of use	Organizational rewards	Top management support	Coverage		
					Raw	Unique	Consistency
1	O	O			0.75	0.01	0.89
2	O			O	0.73	0.01	0.89
3		O	O		0.73	0.02	0.87
4		O		O	0.76	0.02	0.89
5			O	O	0.72	0.01	0.89

Note: solution coverage: 0.90; solution consistency: 0.82; consistency cut-off: 0.91; O is indicative of full membership; blank represents absence from configuration