



Knowledge system commitment and knowledge sharing intention: The role of personal information management motivation

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ABSTRACT

Knowledge management systems (KMSs) provide organizations processes and tools to capture, organize, and manage knowledge. A plethora of research has investigated how technical and social aspects of KMSs impact users' intentions and usage behavior. Recent inquiries on KMSs have begun to explore individual related factors such as individual motivation and personal information management practices. This study explores the effect of personal information management motivation (specifically information proactiveness, transparency, and formality) on users' commitment to knowledge systems. Theoretically grounded in the three-component model of commitment, the research model tests the relationships between personal information management motivation and the affective, calculative, and normative dimensions of commitment. Survey results of 78 accounting professionals demonstrate that information formality has the strongest effect on users' knowledge system commitment compared to information proactiveness and transparency. This study contributes to knowledge management research by incorporating and emphasizing the power of "person" in knowledge management.

1. Introduction

Knowledge management systems (KMSs) provide organizations with processes and tools to capture, organize, and manage knowledge. A plethora of research across different disciplines has studied various facets of KMSs (e.g., Argote, McEvily, & Reagans, 2003; Alavi, 2000) applying a rich array of theoretical foundations and methodologies (e.g., He & Wei, 2009; Lin & Fan, 2012; Qian & Bock, 2005). While early KMS research focused on information technology (IT) related topics, in recent years researchers have realized that KMSs are socio-technical systems with both technological and social components across different levels of the organization (Alavi & Leidner, 1999). As a result, much previous research has examined the technical and social aspects of KMSs and their impact on individuals' knowledge sharing intentions and usage behaviors (e.g., He & Wei, 2009; Quian & Bock, 2005; Lin, 2007; Bringula, 2016; Savoy & Salvendy, 2016).

As research on KMSs continues to evolve from multiple perspectives, recent dialogues on knowledge management have started to emphasize the importance of "the individual" and "personal knowledge management" (Pauleen, 2009; Kelly, 2006). In his editorial paper in the European Journal of Information Systems, Baskerville (2017) explained

the importance of "individual" information systems (IS). He commented,

Does a meaningful IS always require an organization? Such a view point overlooks the essential human progress enabled by the ICT now available to individuals. It overlooks the way in which individual IS have evolved into rather a complete and legitimate form of IS. As technological evolution has enabled more-and-more complex individual IS, it seems that these could easily become the most prevalent of all kinds of such systems. Ignoring individual IS within our discipline is an evolutionary oversight that may simply reflect our own assumption that personal, individual IS are uninteresting. (2011, p. 253)

A recent review of the knowledge management literature demonstrates a relative disregard for the individual in previous research while IT oriented concepts are widely represented (Rechberg & Syed, 2012). In addition to system and technical factors, individual motivation and personal information management practices are also relevant and important to the success of KMSs in organizations. The role of the "personal" factors is especially imperative in knowledge-intensive firms such as accounting or law firms where knowledge is embedded in the creative minds of the employees and individuals' willingness to use knowledge systems is paramount to the success of such systems. It is not

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sufficient to focus only on the organizational perspective to examine knowledge management and neglect the influence of the “person” (Pauleen, 2009; Suh, Oh, & Yoon, 2016) because individuals are the originating sources of knowledge. Indeed, employees’ individual beliefs and motivations are equally as important to consider as system capabilities or technical functionalities of KMSs (Brazelton & Gorry, 2003; Ko, Kirsch, & King, 2005). Thus, it is instrumental for researchers to integrate the concept of personal information management and how individuals manage work-related information and knowledge into the research agenda.

Due to the increasing emphasis on personal factors in knowledge management research, the aim of this study is to examine the role of personal information management motivation on users’ commitment to knowledge management systems in the workplace and their intention to share knowledge. Specifically, we focus on individuals’ information proactiveness, transparency, and formality and how these information motivation factors affect affective, calculative, and normative commitment to the knowledge management systems, and consequently how the three dimensions of commitment impact users’ intention to share knowledge with others. Theoretically grounded in the three-component model of commitment (Allen & Meyer, 1990), we build and test a research model to further our understanding of the “personal” aspect of knowledge management. Using survey data collected from accounting professionals, the results demonstrate the importance of individuals’ information management motivation factors and their strong impact on KMS commitment. Particularly, the results show that information formality exhibits significant and positive influence on all three dimensions of system commitment. Information proactiveness is positively associated with calculative commitment only, while information transparency significantly affects affective commitment. In addition, the results reveal that affective and calculative commitments have a much more significant impact on users’ intention to share than normative commitment.

The rest of the paper is organized as follows: Section 2 discusses the conceptual foundation, which leads to the presentation of the research model and hypotheses. Section 3 describes the research methodology, which explains the data collection and survey administration procedures. Then, we discuss the data analysis and results in Section 4. Section 5 discusses the implications of this research and suggestions for future research. Section 6 concludes the paper.

2. Theoretical foundation and hypotheses

2.1. Knowledge system commitment

Previous IS research has demonstrated the significance of system commitment in studying system adoption and continued usage (Hwang, 2010; Li, Browne, & Chau, 2006; Malhotra & Galletta, 2005). Research findings have consistently shown that the success of knowledge management systems depends greatly on users’ sustained involvement and participation (He & Wei, 2009; Lin, 2007). Without users’ active participation and commitment, organizational effort on knowledge management is unproductive and wasteful. Commitment is an enduring and long-lasting attitude and it is especially relevant in knowledge management research as the use of these systems is often voluntary and not mandated by organizations. Thus, if users develop sustained and long-term positive attitudes toward knowledge systems and commit to using the knowledge systems, these systems are more likely to persevere and continue to add value to organizations.

In this research, we apply the three-component model of commitment developed by Allen and Meyer (1990) to develop the research model. The three components are affective, calculative, and normative commitments, and this commitment framework has been widely applied in research and has been tested and extended to various contexts (e.g., Lin, 2007; Bansal, Irving, & Taylor, 2004). Overall, the three components in organizational commitment generally refer to what

individuals want to do, what they need to do, and what they ought to do, respectively. Affective commitment refers to an individual’s emotional attachment to, identification with, and involvement with the KMS. In other words, an individual uses a KMS and shares knowledge on the KMS because he or she wants to or desires to. Calculative commitment is the “need” component because an individual weighs the perceived gains and losses of using a KMS. In other words, the user would calculate the cost of not using the KMS and the lack of alternatives to determine their level of calculative commitment. Lastly, normative commitment refers to the internalized pressure or feeling of obligation to continue using the KMS.

In this study, we aim to enrich the current research by investigating how personal information management motivation would affect users’ KMS commitment and their intention to share knowledge. We focus on the personal aspect of knowledge management because employees’ willingness to use and share knowledge is critical for KMSs to sustain and remain useful. Most organizations do not monitor employees’ KMS usage, and much of the failure of KMS implementation stems from lack of employee buy-in, a top-down approach rather than a user-driven approach to managing knowledge (Sinclair, 2007).

2.2. Intention to share knowledge

The major goal of KMS implementation is to enhance knowledge sharing among the users and employees in the organization. Nonaka (1994) also showed that different types of knowledge, such as tacit and explicit knowledge, can be effectively exchanged through technology based KMSs. We expect that calculative commitment toward a KMS is related to the intention to share knowledge as the main goal of the KMS is to share knowledge. Terry, Hogg, & White (1999) also suggested the relationship between affective commitment and attitude of the recycling behavior of community residents. Sun and Zhang (2006) argued that there are several marketing studies that show affective reaction, such as emotion or enjoyment, influences cognitive perceptions or behavioral attitudes. Limayem, Khalifa, & Frini (2000) showed that social norms (family, media, and friends’ influences) have direct positive effects on use intention in a Web based information systems environment. However, there are inconsistencies in the results of the test between normative factors and intention (Hwang, 2011). For example, Mathieson (1991) found no significant effect of social norms on intention. Davis (1989) also found that social norms had no significant effect on intention over and above perceived ease of use and usefulness. Although Davis (1989) omitted social norms from the original technology acceptance model, he did acknowledge the need for additional research to investigate the conditions and mechanisms governing the impact of normative influences on usage behavior (Venkatesh & Davis, 2000). We expect that three types of KMS commitment, such as affective, calculative and normative commitment, will influence intention to share knowledge in the organization (see Fig. 1). Thus, we hypothesize that:

H1a. Affective Commitment toward Knowledge Management Systems will positively influence Intention to Share Knowledge.

H1b. Calculative Commitment toward Knowledge Management Systems will positively influence Intention to Share Knowledge.

H1c. Normative Commitment toward Knowledge Management Systems will positively influence Intention to Share Knowledge.

2.3. Personal information management motivation

Motivation research generally defines motivation as one’s desire and willingness to perform an act (e.g., Ashford & Black, 1996). Without sufficient motivation, it is less likely to predict human behavior and performance (Hwang, Kettinger, & Yi, 2010). Thus, the study of motivation is both important and relevant in personal knowledge management.

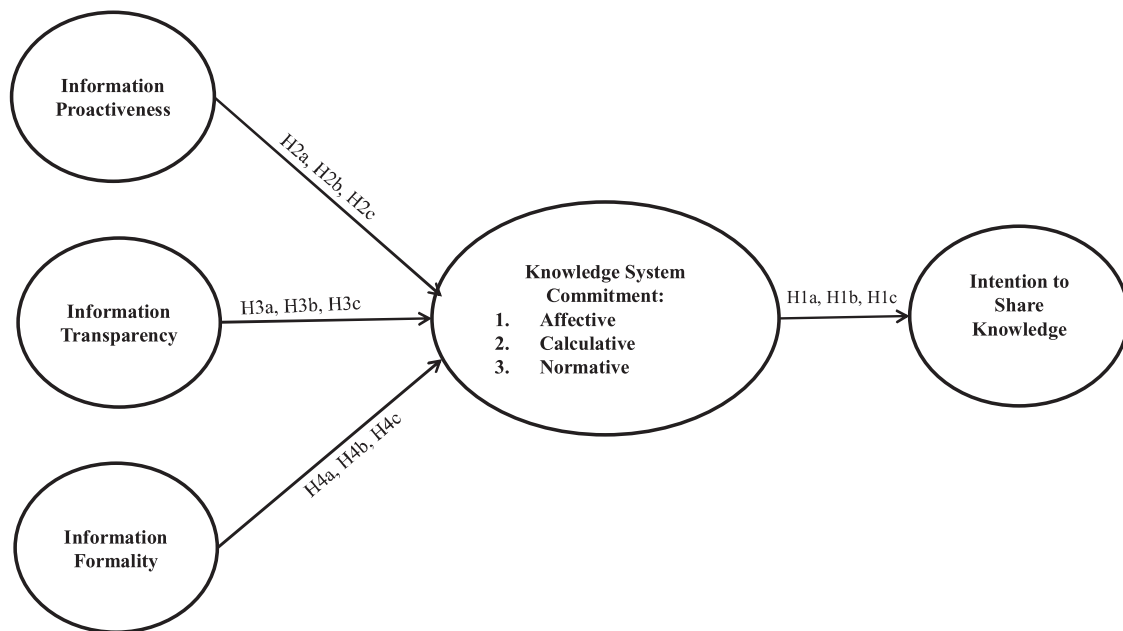


Fig. 1. Research Model.

Past research has studied users' intrinsic and extrinsic motivation (e.g., enjoyment in helping others, image, and organizational rewards) and how they impact knowledge sharing behavior in organizations and virtual communities (e.g., Kankanhalli, Tan, & Wei, 2005; Wasko & Faraj, 2005; Suh et al., 2016). Because we are emphasizing personal information management in this research, we focus on the individual's motivation to manage information and knowledge. Specifically, we examine the influences of three types of personal information management motivations (information proactiveness, transparency, and formality) on knowledge system commitment.

2.3.1. Information proactiveness

Information proactiveness motivation is defined as “a person's perceived willingness to actively use information for his job” (Hwang, Kettinger, & Yi, 2013; Hwang, Kettinger, & Mun, 2015). Proactive information use involves how a person is motivated to think about using information to create or enhance products and services, actively seek out information about business conditions to test these ideas, and respond quickly to this information. There is research evidence that suggests the existence of a behavioral predisposition toward information scanning and looking for meaning and new knowledge (Vandenbosch & Huff, 1997). For example, a person who is more proactive in his information usage behavior is motivated to think about, seek out, and respond to new information for their job. Such proactive information behavior would also seem to drive more effective information management practices as a person has a better understanding of the information required for performing their job. We assume that information proactiveness provides the preconditions of KMS commitment necessary for people to better define new information needs, allowing IT to fit more seamlessly into decision-making and problem solving. Thus, we hypothesize that:

H2a. Information Proactiveness Motivation will positively influence Affective Commitment toward Knowledge Management Systems.

H2b. Information Proactiveness Motivation will positively influence Calculative Commitment toward Knowledge Management Systems.

H2c. Information Proactiveness Motivation will positively influence Normative Commitment toward Knowledge Management Systems.

2.3.2. Information transparency

Information transparency motivation is defined as “a person's perceived willingness to disclose negative information about his job experience to other people so they will learn” (Hwang et al., 2013, 2015). Transparency is associated with four characteristics. First, transparency means being candid with one's thoughts—free from bias and accepting of the views of others. Second, transparency implies basic fairness—a person will be honest, impartial, and fair in dealing with decisions and situations that arise. Third, transparency requires trust between people—a sense of confidence that another person will not use your thoughts or information against you. Finally, transparency requires openness to other people's thoughts and concerns when the news is negative. People who are transparent in information use openly disclose mistakes to others because they believe this will be beneficial to themselves eventually. Transparent information use helps to acquire appropriate skills and role behaviors and gain a sense of organizational procedures (Morrison, 1993; Reichers, 1987). It builds friendship networks and social support (Nelson & Quick, 1991) that would influence KMS commitment. Thus, we hypothesize that:

H3a. Information Transparency Motivation will positively influence Affective Commitment toward Knowledge Management Systems.

H3b. Information Transparency Motivation will positively influence Calculative Commitment toward Knowledge Management Systems.

H3c. Information Transparency Motivation will positively influence Normative Commitment toward Knowledge Management Systems.

2.3.3. Information formality

Information formality motivation is defined as “a person's perceived willingness to readily use official sources of information” (Hwang et al., 2013, 2015). Formal patterns of communication and information use were generally considered more stable and predictable over time (Rogers & Agarwala-Rogers, 1976). Knowledge workers will generally use formal information sources and systems to assure efficiency in their jobs. Use of formal information over informal information sources can create one's willingness to use information effectively by providing easier access to information and knowledge (Rogers & Agarwala-Rogers, 1976; Nonaka and Takeuchi, 1995). Motivation to effectively use formal information over informal information can also be explained

by the tendency to reduce environmental uncertainty by the formal information guaranteed by the organization. Given that surprise and uncertainty are thought to be an adverse state for individuals who desire ownership (Louis, 1980), knowledge workers will use formal information sources that are attributed and proven to reduce these uncertainties. Increased feedback-seeking behavior with the formal sources will be beneficial to reduce these uncertainties and increase KMS commitment.

Based on the social influence theory (Kelman, 1958, 1961; Becker, Randall, & Riegel, 1995), an individual's commitment has both social influence and personal predispositions. We test the personal predisposition with information formality motivation based on the personal information management theory (Hwang et al., 2015) and its influence on different aspects of commitment. Based on research by Hwang et al. (2015), information formative motivation is different from normative commitment or other social influences as it is more related to an individual's information management motivation to enhance performance. Thus, we hypothesize that:

H4a. Information Formality Motivation will positively influence Affective Commitment toward Knowledge Management Systems.

H4b. Information Formality Motivation will positively influence Calculative Commitment toward Knowledge Management Systems.

H4c. Information Formality Motivation will positively influence Normative Commitment toward Knowledge Management Systems.

3. Research methodology

3.1. Data collection and sample characteristics

To test the research hypotheses proposed in the model, we surveyed accounting professionals from a corporation and public accounting firms. We decided to employ a homogenous sampling technique for several reasons. First, it provided us with stronger justification to make generalizations from the sample that was being studied. Second, accounting professionals are constantly engaged in knowledge inquiry and problem solving tasks; they often rely on documentation templates and previous deliverables to complete a task at hand. For example, auditors use prior year working papers as a baseline to complete the current year's audit. As a result, it is critical for accounting professionals to utilize knowledge systems to avoid "reinventing the wheel." Third, prior research has called for further investigation of knowledge management in the accounting domain (Chong, 2011; Lin & Fan, 2011).

Participating firms were recruited through an accounting alumni organization and the survey was sent out to the accounting professionals at the participating firms electronically. Data were collected over a period of six weeks. Of the 189 individuals that received the survey invitation, 78 completed the survey which yields a response rate of 41%. Table 1 provides a summary of the respondents' demographic information. Almost half of the survey participants had over ten years of work experience in accounting, and only 2 participants had less than 2 years of working experience. The numbers of male and female participants are roughly the same. 63 out of 78 participants indicated that they typically work in a team environment at their workplace. When asked about the participants' KMS usage, 66 out of the 78 participants stated that they use the KMS at work daily or at least more than once a week. Over 66% of them stated that they would spend more than 40 min using the KMS during a visit. As organizations invest heavily in KMSs, it is important to find out how individuals motivate themselves to commit using the knowledge systems.

3.2. Survey development

We created the survey instrument by adapting measures that had been developed by previous research to enhance the validity of the

Table 1
Summary of Respondents Demographics.

	Categories	Frequency	Percent
Gender	Male	36	47.37%
	Female	40	53.63%
Age Group	25 or younger	4	5.13%
	26–30	19	24.36%
	31–40	26	33.33%
	41–50	20	25.64%
	51–60	8	10.26%
	61 or older	1	1.28%
Years of Experience	Less than 1 year	1	1.28%
	1–2 years	1	1.28%
	3–5 years	15	19.23%
	6–10 years	15	19.23%
	Over 10 years	46	58.97%

research. Information proactiveness, transparency, and formality items are adapted from Hwang et al., 2013 personal information management research. We used all original items from Hwang et al., 2013 study but excluded one item from proactiveness, two items from transparency, and two items from formality items based on the reliability of test results in the pilot test. Commitment construct items are adapted from the original items of Li et al. (2006) and Meyer and Parfyonova (2010). Intention to share knowledge is adapted from the original items of He and Wei (2009).

All items used a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Table 2 provides the measurement items and their sources, along with their descriptive statistics and composite reliability (CR). It shows that CRs of all constructs are over 0.7 or higher, which are considered adequate (Mathieson, 1991).

4. Data analysis and results

Measure validation and model testing were conducted using Partial Least Square (PLS) Graph (Chin, 1998), a structural equation-modeling tool that utilizes a component-based approach to estimation. PLS makes few assumptions about measurement scales, sample size, and distributional assumptions (Chin, 1998; Fornell & Bookstein, 1982; Hwang et al., 2013). In general, PLS is better for explaining complex variables, as it avoids two problems: inadmissible solutions and factor indeterminacy (Fornell & Bookstein, 1982). Compared with covariance-based SEM tools such as LISREL and EQS, PLS is appropriate for the new research model, which is the case in our study (Chin, 1998; Fornell & Bookstein, 1982). Chin (1998, p. 311) advises that "if one were to use a regression heuristic of 10 cases per indicator," the sample size requirement would be 10 times (1) the largest number of formative indicators or (2) the largest number of independent variables impacting a dependent variable—whichever is greater. In our model, all items are modeled as reflective indicators because they are viewed as effects (not causes) of construct, and the largest number of independent variables estimated for a dependent variable is only three. Thus, our sample size of 78 is more than adequate for the PLS estimation procedures.

Before testing the hypothesized structure model, we first evaluated the psychometric properties of the study variables through confirmatory factor analysis using a measurement model in which the first-order latent variables were specified as correlated variables with no causal paths. The measurement model was assessed using PLS to examine convergent and discriminant validity (Chin, 1998). Two criteria are generally applied to assess convergent and discriminant validity: (1) the square root of the average variance extracted (AVE) by a construct should be at least 0.707 (i.e., $AVE > 0.50$) and should exceed that construct's correlation with other constructs and (2) item loadings should be at least 0.707 and an item should load more highly on the one it is intended to measure than on any other construct. Table 3 shows convergent and discriminant validities and correlations among latent

Table 2
Survey Items and Descriptive Statistics.

Construct	Survey Items	Mean	Std. Dev.	Source
Information Proactiveness (CR = 0.84)	I enjoy learning ways to improve the use of information with respect to my job.	6.10	0.89	Hwang et al. (2015)
	I am comfortable asking people for information that would help me to do my job better.	6.19	1.01	
Information Transparency (CR = 0.83)	People view me as an open person who volunteers information about my mistakes on the job.	5.49	1.17	Hwang et al. (2015)
	Even if I report my mistakes, people will not lose respect for me.	5.23	1.48	
Information Formality (CR = 0.86)	I communicate my mistakes to other people because I can learn from their feedback.	5.59	1.01	Hwang et al. (2015)
	When the information provided by the organization is easily accessible, I will use it instead of my own informal information.	5.89	1.03	
	When the organization's formal information systems are good, I use them over my own informal sources.	5.68	1.24	
	When I have a choice, I prefer using formal information over informal information for my job.	5.82	1.18	
Affective Commitment (CR = 0.83)	I enjoy discussing the good aspects of the knowledge systems at work with other people.	5.29	1.35	Li et al. (2006)
	It is easy to become attached to using the knowledge systems at work.	5.48	1.26	
Calculative Commitment (CR = 0.91)	The knowledge systems at work have a great deal of attraction for me.	5.02	1.31	Li et al. (2006)
	My work would be negatively affected if I stop using the knowledge systems at work.	5.97	1.20	
	It would be too costly for me to stop using the knowledge systems at work.	5.57	1.46	
Normative Commitment (CR = 0.87)	There is a high cost to stop using the knowledge systems at work.	5.74	1.42	Meyer and Parfyonova (2010)
	I would feel guilty if I stopped using the knowledge systems at work now.	4.69	1.61	
	I would not stop using the knowledge systems at work right now because I feel a sense of obligation to it.	4.68	1.62	
	The knowledge systems at work deserve my loyalty.	4.97	1.32	
Intention to Share Knowledge (CR = 0.83)	I will provide my knowledge at the request of other organizational members.	5.79	1.09	He and Wei (2009)
	I will try to share my expertise with other organizational members.	5.74	1.15	

constructs. Satisfying convergent and discriminant validity criteria, (1) the square root of the AVE was greater than 0.707 (at least 0.78) and greater than the correlation between that construct and other constructs without exception, and (2) the factor structure matrix (Table 4) shows that all items exhibited high loadings (> 0.707) on their respective constructs without exceptions and no items loaded higher on constructs that they were not intended to measure. Collectively, the psychometric properties of the study variables were considered excellent and sufficiently strong to support valid testing of the proposed structural model.

The PLS structural model and hypotheses were assessed by examining path coefficients and their significance levels. Following Chin (1998), bootstrapping was performed on the model to obtain estimates of standard errors for testing the statistical significance of path coefficients using *t*-test. The results are shown in Fig. 2. Hypotheses 1a and 1b were supported, but hypothesis 1c was not supported. In the information proactiveness and transparency, only hypotheses 2b and 3a were supported. In the information formality, all hypotheses (4a, 4b, and 4c) were supported. R square of intention to share knowledge was 0.17, and R squares of three commitments were 0.26, 0.19, and 0.13. Table 5 summarizes the hypotheses testing results.

5. Discussion

This study theorizes and tests the relationships between three motivational aspects of personal information management and three types of commitment toward KMSs. Furthermore, the model tests how three types of commitment toward KMSs influences knowledge sharing

intention. We found very interesting results based on the empirical test of 78 knowledge workers and accounting professionals. First, among three types of commitment toward KMS, affective and calculative commitments positively influence knowledge sharing intention, but normative commitment does not. There are inconsistencies in the results of the test between normative factors and intention in the previous studies (Hwang, 2011; Mathieson, 1991; Venkatesh & Davis, 2000). In our test, we found that knowledge sharing intention is more related to affective and calculative commitment rather than normative commitment. One plausible reason is because the usage of the KMS is often voluntary in an organization and the end users have full control over the adoption. This helps explain why most of the hypotheses related to normative commitment are insignificant. Normative commitment suggests that users will experience a sense of obligation when using knowledge systems, which in turn would encourage them to share knowledge with others. Due to the voluntary nature of the knowledge systems, users may not develop a sense of duty when it comes to knowledge system usage which is confirmed by the descriptive statistics in Table 2. The means that normative commitment measures were the lowest compared to affective and calculative commitment. Future research can compare and contrast how the results may differ in a mandatory KMS context.

Second, we found that, among the three personal information management motivations, information proactiveness motivation is only related to calculative commitment toward a KMS. Calculative commitment is formed when individuals go through a calculative evaluation process to realize that gains outweigh losses (Allen & Meyer, 1990).

Table 3
Correlations of Latent Constructs (Bolded diagonal values are square roots of AVE).

	Affective	Calculative	Formality	Proactive	Intention to Share	Normative	Transparency
Affective Commitment	0.78						
Calculative Commitment	0.63	0.88					
Information Formality	0.45	0.36	0.82				
Information Proactiveness	0.25	0.35	0.34	0.84			
Intention to Share	0.34	0.39	0.39	0.47	0.84		
Normative Commitment	0.60	0.53	0.31	0.22	0.25	0.82	
Information Transparency	0.30	0.19	0.11	0.38	0.41	0.20	0.78

Table 4
Cross Loadings.

	Affective	Calculative	Formality	Intention to Share	Normative	Proactive	Transparency
AFF_1	0.81	0.48	0.36	0.38	0.37	0.31	0.26
AFF_2	0.74	0.58	0.33	0.21	0.43	0.15	0.17
AFF_3	0.80	0.44	0.37	0.19	0.63	0.09	0.25
CALC_1	0.62	0.88	0.41	0.43	0.49	0.33	0.17
CALC_2	0.52	0.86	0.25	0.26	0.50	0.24	0.16
CALC_3	0.49	0.89	0.25	0.30	0.39	0.33	0.16
FORM_1	0.41	0.20	0.83	0.30	0.25	0.20	0.07
FORM_2	0.28	0.34	0.81	0.40	0.15	0.38	0.18
FORM_3	0.39	0.34	0.81	0.28	0.34	0.28	0.04
SHARE_1	0.35	0.36	0.31	0.90	0.23	0.36	0.33
SHARE_2	0.20	0.29	0.36	0.78	0.19	0.47	0.38
NORM_1	0.44	0.44	0.24	0.23	0.83	0.26	0.20
NORM_2	0.40	0.36	0.25	0.12	0.85	0.13	0.11
NORM_3	0.60	0.47	0.27	0.25	0.77	0.14	0.17
PRO_1	0.23	0.19	0.30	0.50	0.15	0.77	0.32
PRO_2	0.20	0.37	0.29	0.34	0.22	0.90	0.33
TRANS_1	0.20	0.07	0.03	0.31	0.14	0.24	0.77
TRANS_2	0.21	0.25	0.24	0.35	0.06	0.36	0.71
TRANS_3	0.27	0.12	0.01	0.31	0.24	0.30	0.86

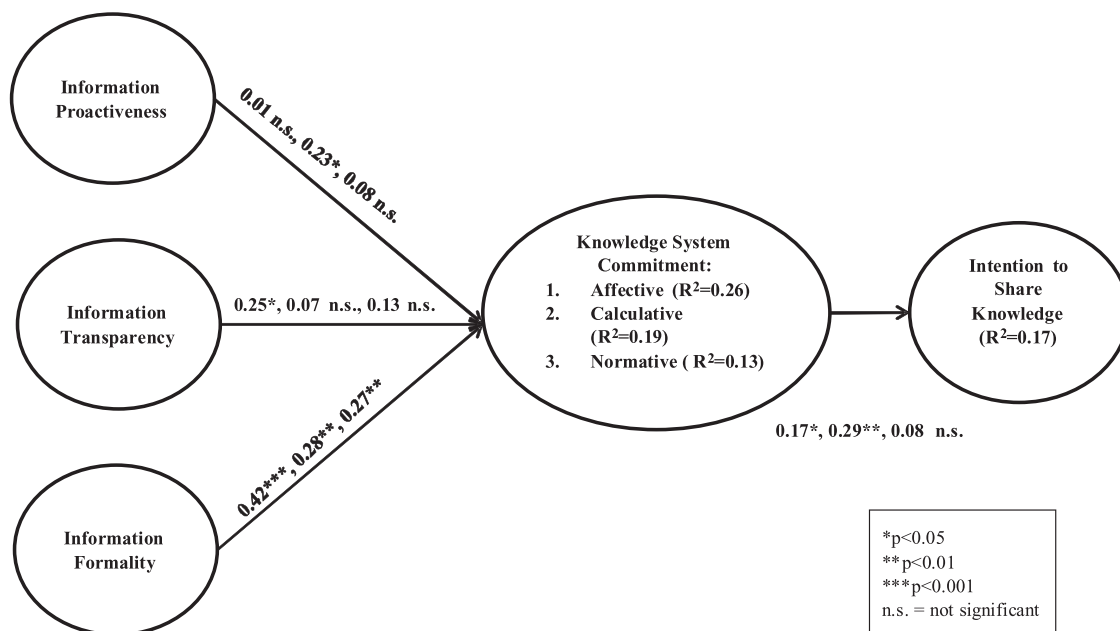


Fig. 2. Structural Model Results.

Table 5
Path Coefficients and Significance Level.

	Affective Commitment	Calculative Commitment	Normative Commitment	Intention to Share
Information Proactiveness	0.01 n.s. H2a not supported	0.02* H2b supported	0.08 n.s. H2c not supported	
Information Transparency	0.25* H3a supported	0.07 n.s. H3b not supported	0.13 n.s. H3c not supported	
Information Formality	0.42*** H4a supported	0.28** H4b supported	0.27** H4c supported	
Affective Commitment				0.17* H1a supported
Calculative Commitment				0.29** H1b supported
Normative Commitment				0.08 n.s. H1c not supported

Note. *p < .05, **p < .01, ***p < .001, n.s. = not significant.

Based on our findings, information proactiveness motivation is more related to calculative evaluation process or commitment rather than affective or normative commitment. Information proactiveness motivation is more related to the utilitarian aspect of personal information management where users weigh the benefits and risks of knowledge seeking source and how the proactiveness may result in the improvement of personal knowledge management.

Third, information transparency motivation is only related to affective commitment toward KMSs. Transparency is associated candidness, fairness, honesty, impartiality, trust, openness, and helpfulness (Morrison, 1993; Reichers, 1987), which would be basically related to affective and intrinsic aspects of commitment. It also builds friendship networks and social support (Nelson & Quick, 1991) systems that can be linked to affective commitment and self-identification (Hwang, 2011).

Our findings reinforce that there is a clear link between information transparency motivation and affective commitment, but the other aspects, such as calculative and normative commitment, are insignificant. In other words, information transparency induces a more emotional reaction to the knowledge systems than the technical aspects of information such as information source and accessibility.

Finally, information formality motivation is related to all three aspects of KMS commitment. One of the reasons for this interesting finding is that the sample of this test is accounting professionals. Accounting professionals use mostly formal reports and data in various financial statements and reports for analytical and managerial decisions in the organization. Thus, information formality would be the most powerful factor for knowledge workers and accounting professionals in this study to commit to a KMS. In this study, we found that the information formality motivation strongly influences all three aspects of commitment. This study helps understand that information formality is the most important motivational factor for individual's information management activities and KMS implementation in an organization. Future research can test the relationship between other individual characteristics, such as cognitive styles or learning styles, and information formality motivation to better understand how personal differences can influence this important motivation on information behavior.

Based on the research model and findings, the main research contribution of our study is the incorporation of “individual” factors and the commitment dimensions into KMS research. Previous research has not focused on the effects personal information management factors and the role personal factors may play on users' KMS usage behaviors. Our research represents one of the first to study personal motivational factors and how they influence different commitment dimensions and ultimately users' intention to share knowledge on KMSs. Our research contributes to the concept of personal information management and integrates “the person” and personal information management practices into KMS research. Although the previous technology acceptance studies have focused on the perceived usefulness and perceived ease of use as the main theoretical foundations of technology adoption intention, current KMSs include many “personal” and “individual” aspects as the mobile communication and web based systems are getting more popular. Thus, rather than traditional technology adoption factors, personal information management motivation in this study is the new and relevant factor in KMS adoption.

Interesting future research would be assessing the relationships among the current model of personal information management motivation and other organizational interventions, such as close or weak ties, incentive systems, and cultural changes. Further research is also needed to specifically examine the relationships among the motivational aspects and other individual characteristic constructs. These further tests would be helpful to understanding how individuals are likely to manage information differently regardless of technology support and what training or other organizational interventions are most effective in changing their information management practices. Given that “individual” information systems are more and more important (Baskerville, 2017), further research on the personal information management motivation and other aspects of the systems' adoption (e.g., human-computer interaction) would be beneficial to IS community.

The practical contribution of this research is to identify the motivational aspects of personal information management and provide practical insights to KMS implementation. The personal information management motivation can be used to directly assess how well a knowledge worker and accounting professional contribute to a company's information management processes and which part of information management activities needs further improvement through KMS training. Knowledge workers and accounting professionals' KMS training program can be developed to enhance the specific dimension (i.e., information formality) based on our findings. Information

proactiveness motivation should be focused for the calculative commitment while information transparency motivation should be emphasized for the affective commitment in KMS training and implementation. For example, a training program can focus on ways to improve how motivated professionals are at proactively seeking information. Organizations can be more effective at communicating the use of knowledge systems at the workplace and the preferred source of knowledge and knowledge sharing process among employees. Organizations can benefit from making knowledge systems more accessible to the professionals, which will impact where employees may source their information.

There are several design applications based on this research. For example, hedonic design application such as Avatar or game based functions can be applied as an affective commitment improvement and it is directly related to information transparency motivation of using a KMS. This means if the end users of KMSs are more transparent and open to the knowledge community, they feel that the system is fun and acceptable. Organizational intervention such as social network connection or “community of practice” in KMSs can be successfully implemented based on this finding. Also, information proactiveness is related to calculative commitment. Thus, new system design can be tested to these proactive end users and applied to the prototyping step to test the future success of this new design. Our measurement scales of personal information management are useful in this prototyping test and design process. Organizational intervention that can influence the knowledge workers to feel that the KMS is valuable and enjoyable would be more effective than rules or guidelines in KMS implementation. Our proposed model supports the overall understanding of these phenomena and the direct measurement methods in this situation.

6. Conclusion

As an organization is constantly faced with changes in the business environment, its ability to acquire appropriate information and reduce uncertainty in its decision making is an essential basis for its competitive advantage. The present research proposes and tests the relationship between personal information management motivation and different types of KMS commitment in the organization, representing an initial, yet important, step toward bridging the gap between individual information management activities and organizational information management processes. We argue that the information formality motivation assumes the formal sources of information is more reliable since it is defined as “a person's perceived willingness to readily use official sources of information when the organization's formal information systems are good” based on Hwang et al. (2013, 2015). We did not exclude the possibility of the other case that a person can perceive the informal sources of information as more reliable. Thus, the relationship between information formality motivation and the perceived reliability of the formal sources of information or perceived system quality can be tested in future research. Future studies can also test and compare how this model is different from the traditional technology acceptance model and other adoption models. As our study is based on the theory of reasoned action perspective, behavioral intention to share knowledge is used rather than actual behavior. However, future research can test the actual behavior as a dependent variable to complete the model. Furthermore, this study identifies the important picture of KMS implementation and knowledge sharing behavior, enabling organizations to understand this important phenomenon of “individual” IS in the organization.

References

- Alavi, M., & Leidner, D. (1999). Knowledge management systems: Issues, challenges and benefits. *Communication of the Association for Information Systems*, 1(1), 1–28.
- Alavi, M. (2000). Managing organizational knowledge, in framing the domains of IT management: projecting the future through the past. In R. W. Zmud (Ed.). *Pinnaflex*

- education resources: *cincinnati, OH*. (pp. 15–28).
- Allen, N., & Meyer, J. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1–18.
- Argote, L., McEvily, B., & Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emerging themes. *Management Science*, 49(4), 571.
- Ashford, S., & Black, J. (1996). Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology*, 81(2), 199–214.
- Bansal, H., Irving, P., & Taylor, S. (2004). A three-component model of customer commitment to service providers. *Journal of Academy of Marketing Science*, 32(3), 234–250.
- Baskerville, R. (2017). Individual information systems as a research arena. *European Journal of Information Systems*, 20, 251–254.
- Becker, T. E., Randall, M., & Riegel, D. C. (1995). The multidimensional view of commitment and the theory of reasoned action: A comparative evaluation. *Journal of Management*, 21(4), 617–638.
- Brazelton, J., & Gorry, A. (2003). Creating a knowledge-sharing community: If you build it, will they come? *Communications of the ACM*, 46(2), 23–25.
- Bringula, R. (2016). Factors affecting web portal information services usability: A canonical correlation analysis. *International Journal of Human Computer Interaction*, 32(10), 814–826.
- Chin, W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 195–336). Mahwah NJ: Lawrence Erlbaum Associates.
- Chong, S. (2011). KM implementation in a public sector accounting organization: An empirical investigation. *Journal of Knowledge Management*, 15(3), 497–512.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Fornell, C., & Bookstein, L. (1982). The structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, 19, 440–452.
- He, W., & Wei, K. (2009). What drives continued knowledge sharing? An investigation of knowledge-contribution and -seeking beliefs. *Decision Support Systems*, 46, 826–838.
- Hwang, Y., Kettinger, W., & Yi, M. (2010). Understanding information behavior and the relationship to job performance. *Communications of the AIS*, 27(8), 113–128.
- Hwang, Y., Kettinger, W., & Yi, M. (2013). A study on the motivational aspects of information management practice. *International Journal of Information Management*, 33(1), 177–184.
- Hwang, Y., Kettinger, W., & Mun, M. (2015). Personal information management effectiveness of knowledge workers: Conceptual development and empirical validation. *European Journal of Information Systems*, 24(6), 588–606.
- Hwang, Y. (2010). An empirical investigation of normative, affective, and gender influence on e-commerce systems adoption. *Computers in Human Behavior*, 26(6), 1753–1760.
- Hwang, Y. (2011). Predicting attitudes toward knowledge sharing by email: An empirical study. *International Journal of Human-Computer Interaction*, 27(12), 1161–1176.
- Kankanhalli, A., Tan, B., & Wei, K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly*, 29(1), 113–143.
- Kelly, D. (2006). Evaluating personal information management behaviors and tools. *Communication of the ACM*, 49(1), 84–86.
- Kelman, H. C. (1958). Compliance, identification, and internalization: Three processes of attitude change. *Journal of Conflict Resolution*, 2, 51–60.
- Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, 25, 57–78.
- Ko, D., Kirsch, L., & King, W. (2005). Antecedents of knowledge transfer from consultants to clients in enterprise system implementations. *MIS Quarterly*, 29(1), 59–85.
- Li, D., Browne, G., & Chau, P. (2006). An empirical investigation of Web site use using a commitment-based model. *Decision Sciences*, 37(3), 427–444.
- Limayem, M., Khalifa, M., & Frini, A. (2000). What makes consumers buy from Internet? A longitudinal study of online shopping. *IEEE Transactions on Systems, Man, and Cybernetics*, 30(4), 421–432.
- Lin, H., & Fan, W. (2011). Leveraging organizational knowledge through electronic knowledge repositories in public accounting firms: An empirical investigation. *Behavioral Research in Accounting*, 23(2), 147–167.
- Lin, H., & Fan, W. (2012). Examining commitment in electronic knowledge repository usage. *Journal of Computer Information Systems*, 52(4), 88–97.
- Lin, H. F. (2007). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science*, 33(2), 135–149.
- Louis, M. (1980). Surprising and sense-making. What new comers experience in entering unfamiliar organization settings. *Administrative Science Quarterly*, 25, 226–251.
- Malhotra, Y., & Galletta, D. (2005). A multidimensional commitment model of volitional systems adoption and usage behavior. *Journal of Management Information Systems*, 22(1), 117–152.
- Mathieson, K. (1991). Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173–191.
- Meyer, J., & Parfyonova, N. (2010). Normative commitment in the workplace: A theoretical analysis and re-conceptualization. *Human Resource Management Review*, 20, 283–294.
- Morrison, E. (1993). Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, 78, 173–183.
- Nelson, D., & Quick, J. (1991). Social support and newcomer adjustment in organization: attachment theory at work. *Journal of Organizational Behaviour*, 12, 543–554.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge creating company*. New York: Oxford University Press.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–36.
- Pauleen, D. (2009). Personal knowledge management: Putting the person back into the knowledge equation. *Online Information Review*, 33(2), 221–224.
- Qian, Z., & Bock, G. (2005). An empirical study on measuring the success of knowledge repository systems. *The 38th hawaii international conference on system sciences*.
- Rechberg, I., & Syed, J. (2012). In pursuit of the individual in the field of knowledge management. *International Journal of Learning and Change*, 6(1/2), 33–48.
- Reichers, A. (1987). An interaction perspective on newcomer socialization rates. *Academy of Management Review*, 12, 278–287.
- Rogers, E., & Agarwala-Rogers, R. (1976). *Communication in organizations*. The Free Press New York.
- Savoy, A., & Salvendy, G. (2016). Factors for customer information satisfaction: User approved and empirically evaluated. *International Journal of Human Computer Interaction*, 32(9), 695–707.
- Sinclair, N. (2007). The knowledge management phoenix. *Journal of Information and Knowledge Management Systems*, 37(3), 255–261.
- Suh, H., Oh, J., & Yoon, W. (2016). Which tags do we remember in personal information management? *International Journal of Human Computer Interaction*, 32(7), 568–583.
- Sun, H., & Zhang, P. (2006). The role of affect in IS research: a critical survey and a research model. In P. G. Zhang (Ed.), *HCI in MIS (I): foundations, series of advances in management information systems* (pp. 121–142). M.E. Sharpe Publisher.
- Terry, D., Hogg, M., & White, K. (1999). The theory of planned behavior: Self-identity, social identity, and group norms. *British Journal of Social Psychology*, 38, 225–244.
- Vandenbosch, B., & Huff, S. (1997). Searching and scanning. How executives obtain information from executive information systems. *MIS Quarterly*, 21(1), 81–108.
- Venkatesh, V., & Davis, F. (2000). A Theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Wasko, M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic network of practice. *MIS Quarterly*, 29(1), 35–57.

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