International Journal of Information Management 33 (2013) 133–146

Contents lists available at SciVerse ScienceDirect

International Journal of Information Management

journal homepage: www.elsevier.com/locate/ijinfomgt

Exploring the determinants of knowledge sharing via employee weblogs

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ARTICLE INFO

Article history:
Available online 7 September 2012

Keywords:
Employee weblogs
Knowledge sharing
Self-efficacy
Perceived enjoyment

ABSTRACT

Weblogs have been used by organisations as both a communication means and a knowledge sharing tool. Traditionally, research has explored the use of weblogs and virtual communities for knowledge sharing. Nevertheless, relatively little has been published focusing on the factors that influence the intention to share knowledge in employee weblogs. This paper aims to address this gap based on a survey of 175 respondents. The results indicate that self-efficacy, perceived enjoyment, certain personal outcome expectations, and individual attitudes towards knowledge sharing are positively related to the intention of knowledge sharing in employee weblogs.

1. Introduction

Since the Internet has become integrated with daily human life (Wyld, 2008), traditional communications have moved to online networking and Web 2.0 using social media, such as blogs, wikis, and social networking sites. Companies such as IBM, Intel, SAP, and Exxon have adopted, for instance, weblogs to facilitate internal communication and external customer interactions (Balmisse, Meingan, & Passerini, 2007; Wang & Lin, 2011). Furthermore, Web 2.0 and social media have had an impact on the way knowledge is enabled (von Krogh, 2012), and in particular on the processes of knowledge creation, sharing, and capture (e.g. Argote, McEvily, & Reagans, 2003; Nonaka & von Krogh, 2009). These processes have become "less costly, more cloud-based, ubiquitous, standardised, and mobile, but also more personalised and more effective in meeting individual needs" (von Krogh, in press, p. 1).

This paper is concerned with knowledge sharing, which constitutes the means through which employees can contribute to innovative organisational practices and subsequently to the competitive advantage of organisations (Wang & Noe, 2010) and to the improvement of the competencies of the employees involved (Nonaka & Takeuchi, 1995). Furthermore, we are focusing on employee weblogs (Blogs) which can offer benefits for both individual knowledge workers and their organisations (Ehrlich & Shami, 2010). An employee weblog, according to Efimova and Grudin (2007) is different from corporate blogging, which suggests "action that is authorised, acknowledged, or in a formal way associated with an organization" (p. 2).

The literature has looked into the antecedents and factors influencing the use of weblogs (Bock, Zmud, Kim, & Lee, 2005; Chai & Kim, 2010; Hsu & Lin, 2008; Hsu & Tsou, 2011; Lee & Choi, 2003; Lu & Hsiao, 2007; Wang & Lin, 2011; Wyld, 2008; Yu, Lu, & Liu, 2010) and virtual communities (e.g. Chen & Hung, 2010; Hsu, Ju, Yen, & Chang, 2007; Lin, Hung, & Chen, 2009) for knowledge sharing. Interestingly, no matter if the extant literature has discussed, for instance, the role of motivation and culture in participating, starting, and maintaining weblogs (e.g. Hsu & Lin, 2008; Yu et al., 2010), it has not shed relatively enough light into the factors influencing the *intention of employees to share knowledge in employee weblogs*. Furthermore, the literature on employee weblogs (e.g. Müller & Stocker, 2011; Riemer & Richter, 2010; Schoendienst, Krasnova, Guenther, & Riehle, 2011) has studied their adoption from a technology acceptance perspective (Böhringer & Richter, 2009) and has not provided a holistic understanding of the intention of users to share knowledge in Blogs (Schoendienst et al., 2011). Paraphrasing Chen and Hung (2010), to promote knowledge sharing in employee weblogs it is important to know the factors influencing the employees' intention to share knowledge with other employees. Therefore, the research question of this study is: *what are the factors behind the intention of employees to share knowledge in employee weblogs?*

In this paper a model is proposed and tested based on social influence (Dholakia, Bagozzi, & Pearo, 2004; Kelman, 1974; Shen, 2007; Zhou, 2011), technology acceptance (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989; Hsu & Lin, 2008; Yu et al., 2010), and social cognitive theories (Bandura, 1986; Kulviwat, Cuo, & Engchanil, 2004; Nahl, 1996; Vijayasarathy, 2004; Yi & Hwang, 2003) using 175 responses from email-based questionnaires in

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http://dx.doi.org/10.1016/j.ijinfomgt.2012.08.002

Thailand. Although 23% of Thai websites use weblogs (Philuek, Rueangprathum, & Fung, 2009), there is a need expressed in the literature (e.g. Kuzma, 2010; Philuek et al., 2009) to assist both public and private Thai organisations with their adoption of weblogs and have a better understanding of the users' perceptions of weblogs. We contribute to this need from a practical point of view by proposing and testing factors necessary for cultivating the participation of employees in weblogging for sharing knowledge. Our findings suggest that self-efficacy and attitudes towards knowledge sharing positively influence intentions to share knowledge, while perceived enjoyment and personal outcome expectations influence the intention to share knowledge through influencing attitudes towards knowledge sharing within Blogs.

The paper is structured as follows: after a brief review of the literature on knowledge sharing in organisations and weblogs (Section 2), the research model and hypotheses as well as the research methodology of the paper are presented (Sections 3 and 4). The findings of the study are presented next (Section 5), and are then discussed in the light of the extant literature (Section 6). Section 7 concludes the paper and suggests future research avenues.

2. Knowledge sharing in organisations

Knowledge has been characterised as the "only meaningful resource" (Drucker, 2001); that is, a resource which increases the capacity of an entity for effective action (Huber, 1991; Nonaka, 1994; Tsoukas & Vladimirou, 2001). The extant literature discusses knowledge from both an individual and social perspective, viewing knowledge as an object that could be stored, operated and reused for current and future situations (Carlsson, El Sawy, Eriksson, & Raven, 1996; Joseph & Jacob, 2011) or as the outcome of interaction and sharing within communities of practice (e.g. Brown & Duguid, 1991; Brown & Duguid, 2001; Contu & Willmott, 2003; Gherardi & Nicolini, 1998; Roberts, 2006).[1]

In this research we focus on knowledge sharing, which refers to "the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures" (Wang & Noe, 2010, p. 117). Knowledge sharing has been highlighted as an antecedent of sustainable competitive advantage (e.g. Alwis & Hartmann, 2008; Baskerville & Dulipovici, 2006; Grant, 1996; Kogut & Zander, 1992; Nonaka, 1994; Spender, 1996), uncertainty reduction (Bennet & Bennet, 2007), efficiency and effectiveness (Huang, Davison, & Gu, 2008; Reid, 2003), and individual learning (Nonaka & Takeuchi, 1995; Yu et al., 2010).

Recent literature on knowledge sharing has acknowledged the role of interactive technology – including, for instance, weblogs and wikis – on facilitating knowledge sharing (Anderson, McEwan, Bal, & Carletta, 2007; Ardichvili, Cardozo, & Ray, 2003; Levy, 2009; Paroutis & Al Saleh, 2009; Weinberger, 2007), and has highlighted their popularity in organisations (e.g. Dennison, 2006; Ferneley & Helms, 2010; Krasnova, Spiekermann, Koroleva, & Hildebrand, 2010). Driven by the aforementioned literature, this paper focuses on knowledge sharing in weblogs, which is discussed in the next section.

2.1. Knowledge sharing in weblogs

The extant literature discusses the role of weblogs in sharing knowledge from different perspectives (e.g. Bock et al., 2005; Hsu et al., 2007; Hsu & Lin, 2008; Lee & Choi, 2003; Lin et al., 2009; Lu & Hsiao, 2007; Wang & Lin, 2011; Huysman & Wulf, 2006; Wyld, 2008; Yu et al., 2010). It highlights various factors affecting an individual's willingness to share knowledge including the role of Information Technology (IT), and social and individual factors such as self-efficacy, social capital, social and personal cognition, attitude towards sharing, altruism, expected reciprocal benefits, and trust (Table 1).

Chen and Hung (2010) acknowledge the insufficiency of the extant literature in addressing both contextual and individual factors for knowledge sharing. They therefore propose and test a model which illustrates the importance of reciprocity and interpersonal trust in knowledge utilisation and community promotion. Individual factors such as self-efficacy, perceived relative advantage, and compatibility should be considered to decide on the selection of the knowledge-sharing activity "as predicator of knowledge utilisation and community promotion" (p. 233). Nevertheless, Chen and Hung do not consider the role of technology acceptance in positively influencing knowledge sharing, and this seems also the case for other inquiries (e.g. Hsu et al., 2007; Lin et al., 2009), who pay attention to social but not to technological factors in determining knowledge sharing behaviour. Lin, Wang, Tsai, and Hsu (2010) suggest that reciprocity seems to be negatively associated with knowledge sharing behaviour, but significantly associated with building trust which enables knowledge sharing and positively influences knowledge sharing behaviour. Still, technology acceptance factors seem to be ignored.

Hsu and Lin (2008) bring technology in the equation; they present and test a model discussing the role of technology acceptance (perceived usefulness, ease of use and enjoyment), knowledge sharing (expected reciprocal benefits, reputation, altruism and trust) and social influence (social norms and community identification) behaviours. They suggest that perceived ease of use, perceived enjoyment, altruism and reputation positively affect attitude towards blogging. In addition, the intention of using blogs is affected by community identification and attitude towards blogging. In a later study, Yu et al. (2010) explore the factors that facilitate voluntary knowledge sharing in Blogs and in particular the knowledge sharing behaviours of community members, finding that fairness, openness, and enjoyment related to helping others significantly affected the culture of sharing knowledge, whereas identification for a sharing culture was not found significant. Blogs and relevant technologies which connected loosely interest groups and established an open shared-knowledge repository were also important.

We could therefore presume that the behaviour of an individual to share knowledge is affected by social and individual perceptions, as well as by the technology which allows the sharing of knowledge to take place (Hsu & Lin, 2008). However, even when the existing studies discuss the factors behind the sharing of knowledge in weblogs, they do not differentiate between organisational blogs, individual/personal weblogs, and employee weblogs (Blogs) within organisations, which constitute a lightweight means of enhancing communication, collaboration, and sharing of knowledge, interests, work problems, and solutions. In particular, the literature highlights differences in the nature of blog posts, the technologies or platforms used, and the formality of the knowledge shared (e.g. Müller & Stocker, 2011; Riemer & Richter, 2010; Schoendienst et al., 2011). The literature on Blogs has investigated their adoption from a technology acceptance perspective, and has provided insights in terms of early adopters' views on the viability of such systems (Böhringer & Richter, 2009). Nevertheless, given the increasing interest in using Blogs as a platform for knowledge sharing in organisations, the emerging popularity of Blogs in contrast to the fact that they have "received no particular attention" (Schoendienst et al., 2011, p. 2), and the need stated in weblog literature to motivate employees to participate in Blogging activities

[1] A comprehensive review of the various classifications of knowledge is beyond the scope of this article. Some useful categorizations may be found in Blackler (1995) and Venzin, von Krogh, and Roos (1998).

Table 1
Factors influencing knowledge sharing in blogs.

Factors	Types	Effects	Indicative literature
Perceived usefulness	Technology acceptance	Attitude towards knowledge sharing	Böhringer and Richter (2009), Hsu and Lin (2008), Hsu et al. (2007), Lin et al. (2009), Yu et al. (2010), Zhou (2011)
Perceived ease of use	Technology acceptance	Attitude towards knowledge sharing	Böhringer and Richter (2009), Hsu and Lin (2008), Hsu et al. (2007), Lin et al. (2009), Yu et al. (2010), Zhou (2011)
Perceived enjoyment	Technology acceptance	Attitude towards knowledge sharing	Lin (2007), Ma, Li, and Clark (2006), Teo et al. (1999), Venkatesh et al. (2002), Yu et al. (2010)
Subjective norm	Social influence	Intention to share knowledge	Chow and Chan (2008), Hsu and Lin (2008), Huang et al. (2008), Joseph and Jacob (2011), Wang and Lin (2011)
Social identity	Social influence	Intention to share knowledge	Hsu and Lin (2008)
		Attitude towards knowledge sharing	Zhou (2011)
Group norm	Social influence	Intention to share knowledge	Preece (2000)
		Attitude towards knowledge sharing	Zhou (2011)
Attitude towards knowledge sharing	Attitude	Intention to share knowledge	Chow and Chan (2008), Hsu and Lin (2008), Joseph and Jacob (2011), Huang et al. (2008), Zhou (2011)
Policy	Social influence	Intention to share knowledge	Preece (2000), Wyld (2008)
Culture	Social influence	Intention to share knowledge	Huang et al. (2008), Huysman and Wulf (2006), Reid (2003)
Collectivism	Social influence	Intention to share knowledge	Chow, Deng, and Ho (2000), Hutchings and Michailova (2004)
Altruism	Knowledge sharing	Attitude towards knowledge sharing	Hsu and Lin (2008)
Expected reciprocal benefits	Knowledge sharing	Attitude towards knowledge sharing	Hsu and Lin (2008), Huang et al. (2008), Deci (1975)
Reputation	Knowledge sharing	Attitude towards knowledge sharing	Deci (1975), Hsu and Lin (2008), Huang et al. (2008), Reid (2003)
Trust (creditability)	Knowledge sharing	Attitude towards knowledge sharing	Chai and Kim (2010), Deci (1975), Hsu et al. (2007), Hsu and Lin (2008), Martin-Niemi and Greatbanks (2010), Sarker (2005)
Expected relationship	Knowledge sharing	Attitude towards knowledge sharing	Deci (1975), Hsu and Lin (2008), Huang et al. (2008)
Self-efficacy	Social cognitive	Attitude towards knowledge sharing	Bandura (1986), Lin (2007)
		Intention to share knowledge	Lu and Hsiao (2007)
Personal outcome expectation	Social cognitive	Attitude towards knowledge sharing	Bandura (1986)
		Intention to share knowledge	Lu and Hsiao (2007)
Community outcome expectation	Social cognitive	Attitude towards knowledge sharing	Bandura (1986), Lin (2007)
Social network	Social influence	Attitude towards knowledge sharing	Chow and Chan (2008)
		Subjective norm	Chow and Chan (2008)
Shared goal	Social influence	Attitude towards knowledge sharing	Chow and Chan (2008)
		Subjective norm	Chow and Chan (2008)
Information quality	Information system quality	Intention to share knowledge	Hsu and Tsou (2011), Wang and Lin (2011)
System quality	Information system quality	Intention to share knowledge	Wang and Lin (2011)
Blogging function quality	Information system quality	Intention to share knowledge	Wang and Lin (2011)

(Hsu & Lin, 2008; Yu et al., 2010), this paper proposes and tests a model to develop a more comprehensive perspective of the relationship between technological, social and individual factors for the intentions to share knowledge in Blogs. This framework is discussed in the following section.

3. Conceptual framework and research hypotheses

The aforementioned literature on weblogs has highlighted the need to provide a better understanding of the factors underpinning knowledge sharing from both a social and technological perspective. The research model builds on three perspectives: namely social influence, technology acceptance, and social cognitive theory, as well as on individual factors. They are briefly discussed in the next subsections (see Fig. 1).

3.1. Social influence

Social influence theory suggests that the behaviour of individuals is determined by compliance, identification and internalisation (Kelman, 1974). Compliance means that each individual needs to act so as to comply with the opinions of other people with which (s)he interacts and play an important role to him/her; identification means that individuals recognise themselves as part of a community; internalisation means that one accepts influence due to the congruence of due to the congruence of his/her values with those of group members (Dholakia et al., 2004; Zhou, 2011). These characteristics are determined by subjective norm, social identity and group norm, respectively (Dholakia et al., 2004; Zhou, 2011).

Subjective norm is defined as a situation where the individuals' behaviour is affected by environment (Huang et al., 2008). This includes culture, since it is the norm or pattern of shared beliefs that group of people could be taught to have the right way of their perceptions (Schein, 1985), and policy because it is used to make agreements as rules of the community that need to be followed by participants (Kim, 2011). Research (e.g. Chow & Chan, 2008; Hsu & Lin, 2008; Huang et al., 2008; Joseph & Jacob, 2011; Wang & Lin, 2011) suggests that subjective norm strongly affects the intention to share knowledge, leading thereby to the first hypothesis:

H1a. Subjective norm influences positively the intention of an individual to share knowledge in employee weblogs.

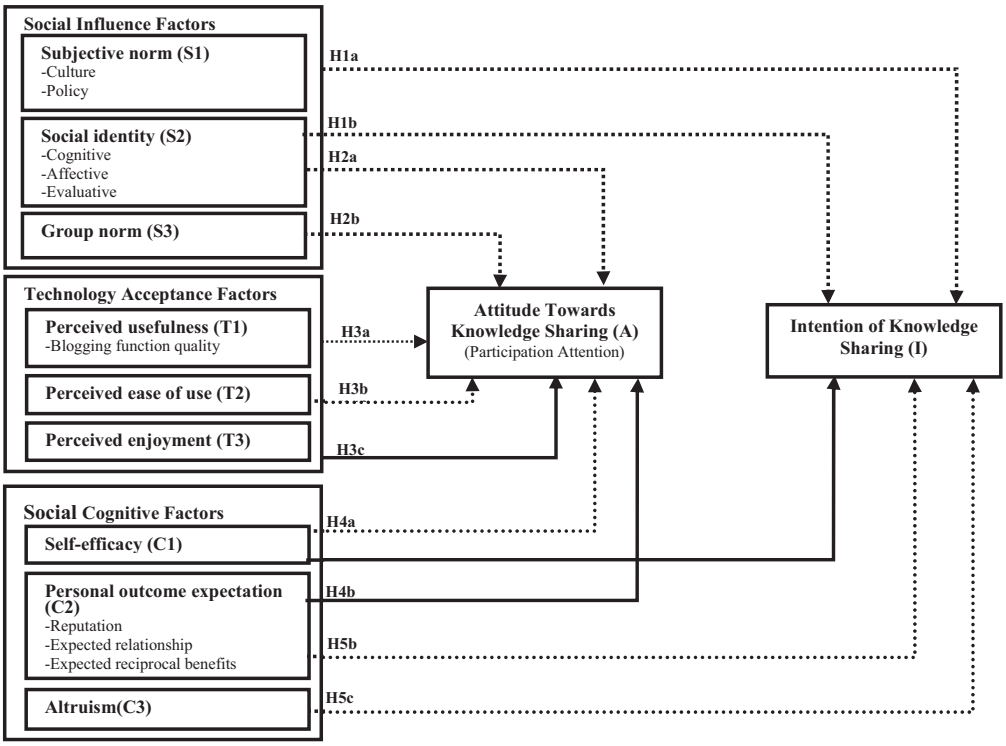

Fig. 1. The research model.

Social identity has the same meaning as community identification (Hsu & Lin, 2008). This assumes that the role of the individual is affected by him/her being identified in a particular social environment leading to the hypothesis:

H1b. Social identity influences positively the intention of an individual to share knowledge in employee weblogs.

Social identity consists of three dimensions, namely cognitive, affective and evaluative (Ellemers, Spears, & Doosje, 2002), which highlight the role of attitude as determined by the social environment in which individuals are embedded (Zhou, 2011). This leads to the next hypothesis:

H2a. Social identity influences positively the attitude of an individual to share knowledge in employee weblogs.

Group norm is defined as the consensus of the members of a community with regard to expectations and shared goals (Shen, Cheung, Lee, & Chen, 2011). Zhou (2011) postulates that if individuals share same goals with other individuals in the same group, they are likely to participate in the group. This leads to the following hypothesis:

H2b. Group norm influences positively the attitude of an individual to share knowledge in employee weblogs.

3.2. Technology acceptance

We adapt the concepts of "usefulness" and "perceived ease of use" from the "Technology Acceptance Model" (TAM) (e.g. Davis, 1989; Davis et al., 1989; Segars & Grover, 1993). "Perceived usefulness" is the perception of bloggers on their performance when they use blogs; "Perceived ease of use" can be expressed as the clear understanding of bloggers with regard to their use (Hsu & Lin, 2008; Yu et al., 2010). Blogging quality factors (Wang & Lin, 2011) contribute to perceived usefulness because if blogs could provide functions that meet users' needs, users will use the system. Additionally, Hsu and Lin (2008) have suggested that enjoyment – the degree to which an Internet user participates in a blog because the process "yields fun and enjoyment" (p. 67) – as a factor determining the intention of users to participate in blogs. Hence, perceived enjoyment is the degree of personal belief that the system (and Blog in this case) is enjoyable (Teo, Lim, & Lai, 1999). Since these factors have been acknowledged in the literature as positively impacting the acceptance of technology (e.g. Hsu et al., 2007; Hsu & Lin, 2008; Lin et al., 2009; Yu et al., 2010; Zhou, 2011), the following hypotheses are extrapolated:

H3a. Perceived usefulness influences positively the attitude of an individual towards knowledge sharing in employee weblogs.

H3b. Perceived ease of use influences positively the attitude of an individual towards knowledge sharing in employee weblogs.

H3c. Perceived enjoyment influences positively the attitude of an individual towards knowledge sharing in employee weblogs.

3.3. Social cognitive theory

Social cognitive theory examines *self-efficacy* and *personal outcome expectation* (Bandura, 1986). *Self-efficacy*[2] reflects the confidence of individuals to share knowledge with others (Constant, Sproull, & Kiesler, 1996). Research has illustrated the strong relationship between self-efficacy and the usage of web-based technologies (Kulviwat et al., 2004; Nahl, 1996; Vijayasarathy, 2004; Yi & Hwang, 2003). *Personal outcome* expectation refers to image and reward following actions of individuals, who share their information in return for benefits, such as reputation and expected relationship. Lu and Hsiao (2007) found that these factors directly influence attitude towards knowledge sharing. We therefore hypothesise:

[2] Lu and Hsiao (2007) refer to self-efficacy as "self-motivation."

H4a. Self-efficacy influences positively the attitude of an individual towards knowledge sharing in employee weblogs.

H4b. Personal outcome expectation influences positively the attitude of an individual towards knowledge sharing in employee weblogs.

H5a. Self-efficacy influences positively the intention of an individual to share knowledge in employee weblogs.

H5b. Personal outcome expectation influences positively the intention of an individual to share knowledge in employee weblogs.

3.4. Altruism

Altruism is defined as the willingness to help others without expecting benefits in return (Hsu & Lin, 2008). Following Hsu and Lin (2008) who proposed that altruism affects intention to share knowledge, we hypothesise that:

H5c. Altruism influences positively the intention of an individual to share knowledge in employee weblogs.

3.5. Participation intention and attitude

The literature has shown that participation intention or attitude towards blogging positively affects knowledge sharing (Chow & Chan, 2008; Hsu & Lin, 2008; Huang et al., 2008; Joseph & Jacob, 2011; Zhou, 2011). Therefore:

H6. Attitude towards knowledge sharing influences positively the intention of an individual to share knowledge in employee weblogs.

4. Research methodology

This research proposes and tests a model to explicate the intention to share knowledge in employee weblogs. The subjects for this research were Thai organisations which have used or have the potential for knowledge sharing through employee weblogs from a directory of Thailand organisations registered in the Thai Stock Exchange. According to a recent study by Philuek et al. (2009), 27.6% of Thai organisations utilise Web 2.0 (including weblogs), while the uptake of social media in the public sector administration is also limited (Kuzma, 2010). Therefore, the importance of conducting this study in a Thai context is twofold: firstly, the study implicitly makes the case for the use of weblogs as a means to share knowledge based on the numerous benefits of knowledge sharing using Blogs as stated in the aforementioned literature; secondly, through the model, the study proposes and tests factors that are necessary for sharing knowledge in employee weblogs and therefore provides "food for thought" to managers in both public and private organisations to cultivate the necessary factors in order to enhance knowledge sharing using weblogs and develop a strategy for employee weblogging.

The simple random sample was chosen as the sampling method. A web-based questionnaire was developed using iSurvey and was structured into four parts, namely organisational information, blogging behaviour, factors influencing knowledge sharing and personal information. Our scale followed Bock et al. (2005), Hsu and Lin (2008), Lu and Hsiao (2007), and Zhou (2011) (Appendix A, Tables A1 and A2). The questionnaire was developed in both Thai and English languages. To develop the Thai language questionnaire, back-translation technique was chosen. A pilot test was conducted before the final questionnaire was distributed to the subjects. To ensure the appropriateness of the research design, the validity and reliability of the items were tested as well. The initial questionnaire was reviewed by three researchers on knowledge management and was further revised based on their comments.

Invitation emails were sent to potential participants, containing an attached URL linked to a web-based survey. The emails explained briefly the purpose of the study and the website URL for the actual survey. Participation was completely voluntary. In total 226 questionnaire responses were obtained and these responses were further validated, while those who contained missing data were deleted. To secure that each informant replies only once, duplicated IP addresses were also deleted (Hsu & Lin, 2008). After invalid data was eliminated, 175 questionnaires were appropriate to be further analysed. Data analysis was conducted using PASW 17.

The analysis of data was composed of different and complementary approaches. After data was described statistically, reliability testing and confirmatory factor analysis were required to ensure the reliability and validity of the questionnaire. Following that, independent-samples *t*-test and one-way ANOVA were used to explore additional associations in this research. Pearson's correlation coefficient was used to identify association among research variables. Thereafter, multiple regression analysis was used to test research hypotheses and compare strength of association between research variables.

5. Results

5.1. Summary of respondents

Table 2 provides a summary of the respondents' demographics.

5.2. Reliability test results

Cronbach's coefficient alpha was used to measure consistency between research variables (Table 3). The degree of Cronbach's coefficient alpha in terms of "social influence", "technology acceptance", and "social cognitive" factors were 0.746, 0.839 and 0.814, respectively. Therefore, the scales used were satisfactory in terms of measuring the constructs of interest.

Furthermore, item-total correlation was used to measure the reliability of each question item. As indicated in Table 4, all values of item-total correlation is more than 0.2 but only SI1 and SI2 are less than 0.3. Therefore, there is low reliability of these two items when compared to others.

5.3. Construct validity of the research model

Confirmatory factor analysis (CFA) was used to test the construct validity of the research model. Kaiser–Meyer–Olkin (KMO) and Bartlett's test was used to examine whether data is suitable for performing CFA. According to Table 5, a KMO value is 0.845 that is more than acceptable value of 0.5 (Hinton, Brownlow, McMurray, & Cozens, 2004); hence, CFA could effectively proceed. In addition, *p*-value of Bartlett's test is less than a significant value or 0.001 indicating that there is a relationship between research factors (Hinton et al., 2004). It also means that there are sufficient numbers of participants in this research.

CFA was performed to examine internal consistency, as shown in Table 6. From this table, question items are classified into four components of factors.

From the factor component 1, the results illustrate that most research items have been classified into the proper group of research factors. In addition, although SI1 and SI2 are not associated with SI3 in the component factor 1, these three items are associated together in the component factor 2. Also, there are associations in items of personal outcome expectation in the factor component 2. Therefore, construct validity of the research model is strong. Using

Table 2
Participant demographics.

Measure	Items	Count	%
Gender	Male	70	40
	Female	105	60
Age	<20	1	.6
	20–29	110	62.9
	30–39	41	23.4
	40–49	13	7.4
	50–59	9	5.1
	>59	1	.6
Education	High school	1	.6
	Bachelor's degree	100	57.1
	Master's degree	70	40
	Doctorate	4	2.3
Income	<10,000 Baht	11	6.3
	10,000–19,999 Baht	49	28
	20,000–29,999 Baht	31	17.7
	30,000–39,999 Baht	25	14.3
	40,000–49,999 Baht	16	9.1
	>50,000 Baht	43	24.6
Career	Accountant	2	1.1
	Architect	8	4.6
	Artist	6	3.4
	Designer	16	9.1
	Doctor	18	10.3
	Engineer	43	24.6
	Financial analysis	10	5.7
	Lawyer	3	1.7
	Marketing	18	10.3
	Reporter	6	3.4
	Sale	8	4.6
	Secretary	6	3.4
	Teacher	4	2.4
	Other	27	15.4
Organisational type	Architecture	15	8.6
	Computer	27	15.4
	Communication	17	9.8
	Education	7	4
	Entertainment	12	6.9
	Food production	4	2.3
	Gas and fuel	1	.6
	Hospital	11	6.3
	Hotel	2	1.1
	Sport	13	7.4
	Motor vehicle	13	7.4
	Other	53	30.2
Organisational size	<10 employees	23	13.1
	10–49 employees	70	40
	50–249 employees	41	23.5
	250–499 employees	13	7.4
	>499 employees	28	16
Blogging experience	Using only organisational blogs	30	17.1
	Using only private blogs	101	57.7
	Using both organisational and private blogs	44	25.2
Blogging behaviour	Share knowledge	87	49.7
	Receive knowledge	100	57.1
	Discuss interesting issues	74	42.3
	Share personal story	66	37.7
	Send information to others	57	32.6
	Share music, images, and videos	74	42.3

the results from both reliability and validity testing, there is no need to eliminate any items from the research model.

5.4. Two-way associations between independent variables

After using *t*-test, significant difference was found in the blogging role when dependent variables are factors influencing knowledge sharing. According to Table 7, there is a significant difference for social identity ($S2$; $p < 0.05$). In other words, the blogging reader and the blogging writer have different opinions about social identity.

5.5. Multiple associations between independent variables

Using one-way ANOVA to examine multiple comparisons, research factors were used to measure associations between groups of independent variables, including blogging types, career, organisation types, organisation size, blogging time, age, education level

Table 3
Cronbach's coefficient alpha.

Factor	Cronbach's alpha	Cronbach's alpha (based on standardised items)	No. of items
Social influence factors	.746	.749	6
Technology acceptance factors	.839	.839	5
Social cognitive factors	.814	.820	8

Table 4
Reliability values representing for each question item.

Factors	Corrected item – total correlation	Cronbach's alpha if item deleted
SI1	.228	.894
SI2	.245	.894
SI3	.455	.887
SI4	.513	.885
SI5	.473	.886
SI6	.512	.885
TA1	.538	.884
TA2	.505	.885
TA3	.620	.882
TA4	.525	.884
TA5	.629	.882
SC1	.560	.883
SC2	.551	.884
SC3	.524	.885
SC4	.586	.883
SC5	.451	.886
SC6	.383	.889
SC7	.573	.883
SC8	.520	.885
AT	.659	.882
IN	.608	.882

Table 5
KMO and Bartlett's tests.

Kaiser–Meyer–Olkin measure of sampling adequacy (KMO)		.845
Barlett's test of sphericity	Approx. chi-square	1916.991
	Df	210
	Sig.	0.0

and income. The results found an interesting difference in blogging types, as shown in Table 8.

There is a statistically significant difference in subjective norm ($F = 6.206$, $p < 0.05$) and perceived usefulness ($F = 4.774$, $p < 0.05$) between groups of people who use only employee blogs, only organisational blogs and both kinds of blogs. This result could be interpreted as indicating that at least two groups of population have different means about subject norm and perceived usefulness.

5.6. Two-way associations between research factors

Before using Pearson's correlation coefficient, items of each research factor could be combined into one variable. For example, subjective norm ($S1$) should be represented by combination of SI1, SI2 and SI3. Bryman and Cramer (1999) mentioned that the sum and mean of item values could be used for combining these items together. In this research, mean is more appropriate because different research factors have different numbers of question items.

Independent variables are $S1$, $S2$, $S3$, $T1$, $T2$, $T3$, $C1$, $C2$, $C3$ and A. According to Table 9, there is no strong association; therefore, all of these independent factors could be used in the regression analysis model. In addition, when examining significant values, only

Table 6
Rotated factor matrix (extraction method: principal axis factoring. Rotation method: varimax with Kaiser normalisation. Rotation converged in 7 iterations).

	Factor component			
	1	2	3	4
Subjective norm (S1)				
SI1	−.141	.080	.750	.081
SI2	−.195	.152	.739	.153
SI3	.283	.134	.393	.154
Social identity (S2)				
SI4	.328	−.004	.442	.277
SI5	.338	.033	.386	.227
Group norm (S3)				
SI6	.436	.063	.468	.054
Perceived usefulness (T1)				
TA1	.193	.790	.233	.077
TA2	.168	.805	.182	.082
Perceived ease of use (T2)				
TA3	.528	.523	.016	.147
TA4	.475	.538	−.060	.090
Perceived enjoyment (T3)				
TA5	.669	.274	.044	.181
Self-efficacy (C1)				
SC1	.763	.155	.022	.008
SC2	.731	.034	.089	.077
Personal outcome expectation (C2)				
SC3	.645	.186	.028	.053
SC4	.649	.047	.042	.343
SC5	.217	.014	.166	.645
SC6	−.016	.299	.299	.654
SC7	.336	.160	.102	.668
Altruism (C3)				
SC8	.500	.227	−.032	.288
Attitude towards knowledge sharing (A)				
AT	.687	.226	.063	.252
Intention of knowledge sharing (I)				
IN	.659	.224	.100	.142

subjective norm ($S1$) has no significant association with attitude towards knowledge sharing (A) and intention of knowledge sharing (I). On the other hand, other research factors positively associate with (A) and (I). Also, there is a very significant relationship ($p < 0.01$) between these variables. Although there is no two-way association between ($S1$) and both (A) and (I), this research decided to keep ($S1$) for multiple regression analysis in order to ensure whether ($S1$) influence (A) and (I).

5.7. Comparisons of strength and one-way associations between research factors

Based on the research model, two regression equations were set as the following lists:

$$A = a0 + (a1S2 + a2S3) + (a3T1 + a4T2 + a5T3) + (a6C1 + a7C2) + error$$

$$I = b0 + (b1S1 + b2S2) + (b3C1 + b4C2 + b5C3) + b6A + error$$

After performing multiple regression analysis, the results are displayed in Tables 10 and 11.

5.8. Testing research hypotheses

Null hypotheses are set as following:

H0. There is no association between dependent variable and independent variable.

H1. There is an association between dependent variable and independent variable.

Table 7
Independent-samples *t*-test of blogging role.

	Levene's test for equality of variances		*t*-Test for equality of means						
	F	Sig.	*t*	Df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
								Lower	Upper
S1									
EVA	2.805	.096	1.077	173	.283	.15843	.14708	−.13187	.44874
EvnA			.952	52.725	.345	.15843	.16636	−.17528	.49215
S2									
EVA	1.057	.305	2.485	173	.014	.33258	.13384	.06841	.59675
EvnA			2.573	64.778	.012	.33258	.12927	.07439	.59077
S3									
EVA	.059	.808	.652	173	.516	.10068	.15452	−.20432	.40568
EvnA			.654	61.809	.516	.10068	.15398	−.20715	.40850
T1									
EVA	.055	.814	.661	173	.509	.11048	.16706	−.21926	.44022
EvnA			.635	58.207	.528	.11048	.17389	−.23757	.45853
T2									
EVA	.269	.605	.388	173	.699	.05760	.14847	−.23544	.35064
EvnA			.413	67.814	.681	.05760	.13937	−.22053	.33573
T3									
EVA	5.540	.020	1.062	173	.290	.16233	.15284	−.13934	.46400
EvnA			1.235	79.727	.220	.16233	.13139	−.09916	.42382
C1									
EVA	.160	.690	.490	173	.625	.06674	.13633	−.20235	.33584
EvnA			.514	66.320	.609	.06674	.12974	−.19226	.32575
C2									
EVA	1.234	.268	1.628	173	.105	.17885	.10985	−.03797	.39566
EvnA			1.898	80.093	.061	.17885	.09422	−.00866	.36635
C3									
EVA	2.839	.094	.475	173	.636	.07089	.14935	−.22389	.36567
EvnA			.536	75.308	.593	.07089	.13218	−.19241	.33419
A									
EVA	1.376	.242	.173	173	.863	.02300	.13305	−.23961	.28561
EvnA			.199	77.900	.843	.02300	.11571	−.20737	.25337
I									
EVA	2.849	0.93	1.183	173	.239	.17308	.14633	−.11574	.46189
EvnA			1.299	71.452	.198	.17308	.13326	−.09260	.43875

EVA: equal variances assumed; EVnA: equal variances not assumed.

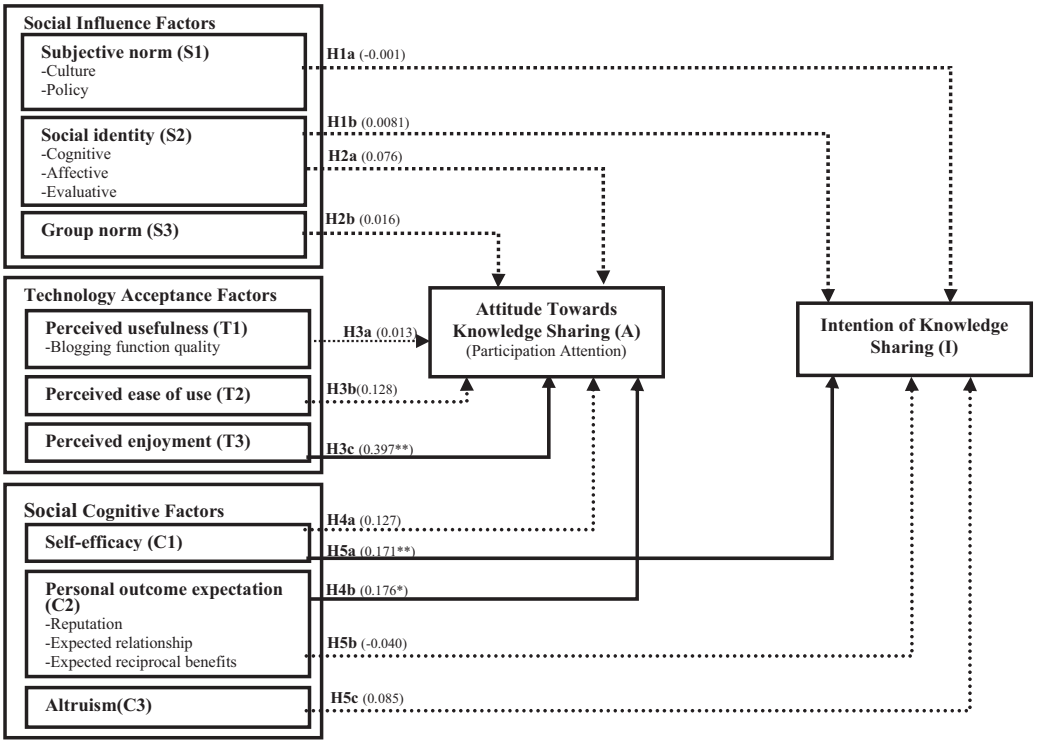

Fig. 2. Results of multiple regression analysis.

Table 8
One-way ANOVA of blogging types.

	Sum of squares	Df	Mean square	*F*	Sig.
*S*1					
Between groups	7.686	2	3.843	6.206	.002
Within groups	106.507	172	.619		
Total	114.193	174			
*S*2					
Between groups	.841	2	.121	.760	.171
Within groups	96.439	172	.561		
Total	97.280	174			
*S*3					
Between groups	1.017	2	.509	.703	407
Within groups	124.491	172	.724		
Total	125.509	174			
*T*1					
Between groups	7.716	2	3.358	4.774	
Within groups	138.993	172	.808		
Total	146.709	174			
*T*2					
Between groups	.292	2	.146	.218	.805
Within groups	115.385	172	.671		
Total	115.677	174			
*T*3					
Between groups	1.406	2	.743	1.049	.352
Within groups	121.794	172	.708		
Total	123.280	174			
*C*1					
Between groups	2.458	2	1.229	2.222	.122
Within groups	95.136	172	.553		
Total	97.594	174			
*C*2					
Between groups	.042	2	.021	.057	.945
Within groups	64.199	172	.373		
Total	64.241	174			
*C*3					
Between groups	0.365	2	.182	.269	.765
Within groups	116.744	172	.679		
Total	117.109	174			
A					
Between groups	.471	2	.235	.438	.646
Within groups	92.363	172	.537		
Total	92.834	174			
I					
Between groups	2.118	2	1.059	1.640	.197
Within groups	111.059	172	.646		
Total	113.177	174			

In terms of multiple regression analysis, the results are shown in Fig. 2.

To begin with significant paths, H0 of H3c, H4b, H5a and H6 are rejected ($p < 0.05$). Perceived enjoyment (*T*3) positively influences attitude towards knowledge sharing (*A*) with very significant value ($p = 0.000$; Beta = 0.397), while personal outcome expectation (*C*2) positively influences attitude towards knowledge sharing (*A*) with significant value ($p = 0.013$; Beta = 0.176). Self-efficacy (*C*1, $p = 0.007$; Beta = 0.171) and attitude towards knowledge sharing (*A*, $p = 0.000$; Beta = 0.602) positively influence intention of knowledge sharing (*I*) with very significant value.

In contrast, H0 of H1a, H1b, H2a, H2b, H3a, H3b, H4a, H5b and H5c are statistically accepted as represented by dashed lines. These results could imply that there are no associations of research variables in these hypotheses paths.

Based on the results, self-efficacy and attitude towards knowledge-sharing influence positively the intention to share knowledge, whereas perceived enjoyment and personal outcome expectation positively influence attitude towards knowledge-sharing. Therefore, perceived enjoyment and personal outcome expectation are indirectly associated with intention of knowledge sharing though attitude towards knowledge sharing.

Table 9
Pearson's coefficient.

	*S*1	*S*2	*S*3	*T*1	*T*2	*T*3	*C*1	*C*2	*C*3	*A*	*I*
*S*1	1										
*S*2	.397″	1									
*S*3	.343″	.527″	1								
*T*1	.277″	.249″	.272″	1							
*T*2	.110″	.251″	.260″	.491″	1						
*T*3	.101″	.308″	.356″	.348″	.550″	1					
*C*1	.063″	.327″	.333″	.276″	.451″	.578″	1				
*C*2	.270″	.507″	.363″	.321″	.436″	.482″	.475″	1			
*C*3	.123″	.234″	.129″	.297″	.404″	.420″	.443″	.499″	1		
A	.125″	.373″	.341″	.329″	.510″	.660″	.532″	.532″	.449″	1	
I	.117″	.361″	.351″	.372″	.395″	.606″	.537″	.445″	.430″	.740″	1

Table 10
Coefficient value of regression equation 1.

Model	*B*	Unstandardised coefficients Std. error	Standardised coefficients Beta	*t*	Sig.
1 (constant)	.488	.266		1.834	.068
*S*2	.074	.067	.076	1.111	.268
*S*3	.014	.056	.016	.247	.805
*T*1	.011	.050	.013	.214	.831
*T*2	.115	.063	.128	1.809	.072
*T*3	.345	.064	.397	5.411	.000
*C*1	.124	.067	.127	1.841	.067
*C*2	.212	.084	.176	2.507	.013

Dependent variable: *A*.
$R = 0.726$.
$R^2 = 0.527$.
Adjusted $R^2 = 0.507$.

Table 11
Coefficient value of regression equation 2.

Model	*B*	Unstandardised coefficients Std. error	Standardised coefficients Beta	*t*	Sig.
1 (constant)	.204	.280		.728	.468
*S*1	−.001	.055	−.001	−.022	.983
*S*2	.088	.067	.081	1.312	.191
*C*1	.184	.067	.171	2.734	.007
*C*1	−.053	.092	−.040	−.581	.562
*C*3	.084	.060	.085	1.406	.162
A	.665	.071	.602	9.303	.000

Dependent variable: *A*.
$R = 0.725$.
$R^2 = 0.585$.
Adjusted $R^2 = 0.570$.

6. Discussion

The paper considers the existing literature focusing on weblogs (e.g. Bock et al., 2005; Hsu & Lin, 2008; Hsu & Tsou, 2011; Lu & Hsiao, 2007; Yu et al., 2010; Zhou, 2011) and employee weblogs (e.g. Böhringer & Richter, 2009; Müller & Stocker, 2011; Schoendienst et al., 2011), and develops a holistic perspective incorporating technological, social and individual factors to study the intentions of employees to share knowledge (Table 12).

The results of this study indicate a positive association between *perceived enjoyment* of blogging with the *attitudes of individuals towards knowledge sharing*, in contrast to the extant weblogs' literature (e.g. Hsu & Lin, 2008; Lin, 2007; Teo et al., 1999; Venkatesh, Speier, & Morris, 2002; Venkatesh, Morris, Davis, & Davis, 2003), due to this factor's positive effects upon attitudes. This implies that the enjoyment of employee blogging is related to a positive attitude towards knowledge sharing in Blogs. From a practical perspective, as organisations need to reap the benefits of employee weblogs while at the same time they may limit access to 'social media' websites, the use of employee weblogs might be a legitimate way that people could use the Web.

The results also reveal that there is no association between self-efficacy and attitudes towards knowledge sharing (Bandura, 1986; Lin, 2007). This implies that experienced employees may like to share their knowledge though Blogs even though their attitude of blogging may be negative. Furthermore, it may also mean that these individuals will ensure that their knowledge could help others before posting their comments.

Although expectations of certain personal outcomes did not influence the intention to share knowledge, the results could imply that personal outcome expectations indirectly influence intention to share knowledge though influencing attitudes towards knowledge sharing (Bandura, 1986). This is because when people expect to derive benefits such as enhanced online reputation, they will have positive attitudes towards the knowledge sharing through Blogs (Lu & Hsiao, 2007; Hsu & Lin, 2008). However, such expected benefits would be probably intrinsic to the activity of online knowledge sharing because most research informants felt that they expected to increase relationships rather than receive extrinsic rewards (Cruz, Perez, & Cantero, 2009).

In terms of extrinsic outcomes, Eisenberger and Cameron (1996) mentioned that the intentions of users could be negatively affected by extrinsic rewards. Hence, any such rewards should be kept confidential to prevent conflict (Meyer, 1975). If rewards are publicly distributed, employees might have doubts as to whether the rewards were given appropriately. It may be thatemployees

Table 12
Findings of this study in comparison to the examples from the extant literature.

No.		Descriptions	Results	Literature that support results
1	H3c	Perceived enjoyment (*T*3) positively influences attitude towards knowledge sharing (*A*)	Accept	(Hsu & Lin, 2008; Teo et al., 1999; Venkatesh et al., 2002; Lin, 2007)
2	H4b	Personal outcome expectation (*C*2) positively influences attitude towards knowledge sharing (*A*)	Accept	(Bandura, 1986; Hsu & Lin, 2008)
3	H5a	Self-efficacy (*C*1) positively influences the intention to share knowledge (*I*)	Accept	(Lu & Hsiao, 2007)
4	H6	Attitude towards knowledge sharing (*A*) positively influences the intention to share knowledge (*I*)	Accept	(Bock et al., 2005; Hsu & Lin, 2008; Joseph & Jacob, 2011; Huang et al., 2008; Zhou, 2011; Chow & Chan, 2008)

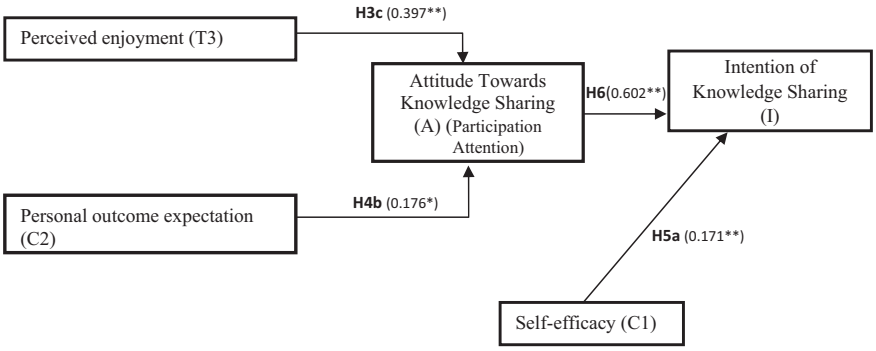

Fig. 3. The final research model.

might not want to be more dominant than others, but may wish to retain reciprocal, non-hierarchical relationships. In fact, this might be the main reason why research informants in this study rejected expectations of any public outcomes from blogging, even though their attitudes towards knowledge sharing were strongly positive.

The results of this study show that there is positive relationship between attitudes towards knowledge sharing and intention to share knowledge (Bock et al., 2005; Chow & Chan, 2008; Hsu & Lin, 2008; Huang et al., 2008; Joseph & Jacob, 2011; Zhou, 2011). Furthermore, "community opinion" did not affect either attitudes or intentions towards knowledge sharing (e.g. Hsu & Lin, 2008; Huang et al., 2008; Zhou, 2011), contrasting Joseph and Jacob (2011). This may be partially attributed to the low reliability of the questions in this study's questionnaire, since two out the three questions regarding the "subjective norm" had Cronbach's Alpha value of less than 0.3. Hence, although "subjective norm" was still used in the regression model, in fact, it might not underlie any answer the research question. It is possible that the respondents might not clearly have understood the meanings of the subjective norm questions. Furthermore, this finding could imply that people in the organisations were not affected by extrinsic influences such as policy, culture and management style. This finding is in contrast to Preece (2000) who found that the intentions of people to share knowledge could be increased by adopting specific policies. Additionally, the respondents might have felt that there was no necessity to agree with recommendations of others to use blogs (Zhou, 2011).

The results of this study illustrate that social identity is not associated with attitudes or intentions towards knowledge sharing (Zhou, 2011; Hsu & Lin, 2008). Additionally, based on the results of independent-samples *t*-test, it is shown the different perspectives of blogging readers and writers towards social identity. For instance, communities of respondents in this study might have lacked influential people who could be trusted by others. Therefore, to enhance the use of blogging, influential people should be selected as trusted community leaders who will recommend the use of blogging and increased interpersonal contact (Zhou, 2011).

The results of this study indicate that the concept of "group norm" is not associated with attitude towards knowledge sharing (Preece, 2000; Zhou, 2011), that is, the participants of the study were not able to use blogs to achieve the same objectives. For instance, employees might post meaningless information on the blog for the sheer enjoyment of doing so, while it would clearly be more beneficial and professional to share reasonable ideas on organisational blogs. Consequently, organisations may still prefer the traditional methods of collaborating for instance through face-to-face meetings rather than discussions though organisational blogs.

With regard to the perceived usefulness of blogging, the findings of the study are similar to the findings of Hsu and Lin (2008) in that there is no association between the perceived usefulness of blogging and attitudes towards knowledge sharing. This can be attributed to the fact that different employees have differing opinions about what constitutes usefulness, as shown in ANOVA results. Blogging may be useful when it meets the user needs for knowledge sharing. However, it was pointed out that if blogs had a very large number of functions, they might be not used because of the complexity of the blogging activity. Furthermore, the "perceived ease" of Blog use was not found to be correlated to the positive attitude towards knowledge sharing (cf. Hsu & Lin, 2008). A possible interpretation of this finding may be that the respondents had difficulties in using technology and blogging, especially between older age groups which might be resistant to new technologies. However, since 82% of the participants are under 29 years old and virtually well-educated, a more plausible explanation might lie in the *culture of sharing*, which has been highlighted in the literature (Yu et al., 2010) as important in affecting the participants' preferences of communication, collaboration, and knowledge sharing methods. The culture of sharing can be facilitated or reinforced by the underlying organisational culture, which is strongly linked to knowledge sharing behaviours (Alavi, Kayworth, & Leidner, 2006). Moreover, it can be also influenced by the national culture and in particular the "relationship between the individual and the collectivity that prevails in a given society" (Hofstede, 2001, p. 209) that may imply that withholding of knowledge may be the key to success (Hofstede, 2001, p. 244). Hence, it may be that the Thai organisational and national contexts – being individualistic (e.g. Embree, 1950) – may contribute to this finding. From a practitioner's perspective, this finding means that managers should focus on providing the appropriate incentives to their employees in terms of time and resources (e.g. provide the technology required). Such incentives could cultivate a necessary shift from an individualistic to a sharing behaviour, facilitating thereby knowledge sharing. Furthermore, a sharing culture will not differentiate or penalise useful and non-useful knowledge since all contributions of employees will be regarded equally important. Thus, employees will focus on sharing knowledge through their Blogs for both organisational and individual learning.

Finally, the results indicate that altruism does not influence attitudes and intentions to share knowledge (Hsu & Lin, 2008). It might be implied that some workers who are deeply knowledgeable in any particular areas have negative attitudes about knowledge sharing. In this competitive era, they might not want to spend their valuable time to help others. Employees might feel that knowledge sharing is a 'one-way benefit' in favour of the organisations; for example, even in a case of an employee resignation, his/her knowledge would still be stored in the weblog, which would act as knowledge repository.

The findings could lead to the creation of guidelines for organisations to create the necessary policies to facilitate employee weblogging. For instance, since enjoyment is an important factor influencing knowledge sharing, organisations could be concerned with how to increase intrinsic rewards of employee weblogging. Furthermore, since people will share knowledge when they realise the potential of their knowledge, organisations should support organisational training to increase personal expertise. Finally, based on the fact that personal expectations of certain outcomes also affect attitudes towards knowledge sharing, organisations might usefully reward people who contribute useful knowledge.

The final research model is depicted in Fig. 3.

7. Conclusions

This research focused on the factors that influence the intentions to share knowledge though employee weblogs in Thai organisations. The study suggested a research model based on social influence, technology acceptance, social cognitive theories, and individual factors. The results showed that self-efficacy and attitudes towards knowledge sharing could positively influence intentions to share knowledge, while perceived enjoyment and personal outcome expectations indirectly influenced intention to share knowledge through influencing attitudes towards knowledge sharing. In addition, there was no relationship between social influence factors and intentions to share knowledge. In contrast to the extant literature, the research found no associations between subjective norms, social identity, group norms, the perceived usefulness of blogging, the perceived ease of use of the blog and altruism to intentions towards knowledge sharing.

There are also limitations associated with this study. Firstly, respondents to this study were not differentiated in terms of how they used blogs. In fact, people who only read blogs of organisations might have different opinions from blog writers. Secondly, our focus was not on trust, so as to differentiate from the extant literature (e.g. Chai & Kim, 2010; Hsu & Lin, 2008; Martin-Niemi & Greatbanks, 2010). It may be that future research should include trust as well as additional factors in knowledge sharing within Blogs. Finally, our results may possibly suffer from method or response biases. However, it is our belief that the concurrence of this study's results with the results stemming from extant literature using other methods suggests that there is no substantial effect of biases in this research.

Further research can involve respondents from other countries to understand the cultural differences of participants and allow the researchers to examine the impact of national culture, for instance, to knowledge sharing in organisational blogs. Secondly, a differentiation between writers and readers of employee weblogs could take place. Since this research found that Blogs writers and readers hold differing opinions future researchers might explore results from participants who hold different roles. Furthermore, because this research found that mostly IT organisations use employee blogs, future research might compare the blogging behaviour between IT and non-IT organisations. Finally, it may be fruitful to use both quantitative and qualitative data. Using in-depth interviews rather than questionnaires, more details surrounding the actual behaviours of respondents could be found. Then, the results of the interviews could be utilised for the development of a questionnaire which would identify further important factors regarding knowledge sharing in employee weblogs.

Appendix A.

See Tables A1 and A2.

Table A1
Questionnaire explained.

Questions	Objectives
Organisational information	• To sum up organisational information of research informants • To be used in the statistical model to examine interesting relationships with research factors
Blogging behaviour	• To sum up blogging behaviour of research informants • To be used in the statistical model to examine interesting relationships with research factors
Factors influencing knowledge sharing	• To examine informants' perception about blogging • To test research hypotheses
Personal information	• To sum up demographic data of research informants • To be used in the statistical model to examine interesting relationships with research factors

Table A2
Research constructs and corresponding question items.

Research constructs	Items and indicative literature
Subjective norm	• I use blog because of organisational policy (Bock et al., 2005) • My manager suggests me to use blog (Hsu & Lin, 2008). • My friends suggest me to use blog (Hsu & Lin, 2008)
Social identity	• My image can represent group's image (Zhou, 2011) • I am an influential member of the community (Zhou, 2011)
Group norm	• In community, I and others often do the same things (Zhou, 2011)
Perceived usefulness	• Using blogs improves my work performance (Hsu & Lin, 2008) • Using blogs enhances my work effectiveness (Hsu & Lin, 2008)
Perceived ease of use	• Blogging tool is easy to use (Hsu & Lin, 2008) • Learning to use a blog is easy (Hsu & Lin, 2008)
Perceived enjoyment	• Using blog, I enjoy sharing knowledge (Hsu & Lin, 2008)
Self efficacy	• Sharing my knowledge via blog can help others (Lu & Hsiao, 2007) • Sharing my knowledge via blog can attract others' intentions (Lu & Hsiao, 2007)
Personal outcome expectation	• Blogging integrates knowledge to everyone (Hsu & Lin, 2008) • Blogging increases relationship between me and others (Bock et al., 2005) • Using blog, I expect to have good image (Bock et al., 2005) • Using blog, I expect to get reward (Bock et al., 2005) • People know me via using blog (Lu & Hsiao, 2007)
Altruism	• I help others via blogging without expecting benefits (Hsu & Lin, 2008)
Attitude towards knowledge sharing	• I like participating in blogs (Hsu & Lin, 2008)
Intention to share knowledge	• I will share knowledge using blog (Bock et al., 2005)

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