A "Collaborative Me" Crossroad: Individual Beliefs and the Adoption of Corporate Blogs

Pedro Fernández-Cardador, Ángel Hernández-García and Santiago Iglesias-Pradas

Abstract Collaboration has become an essential process to improve business performance. Firms need to enhance innovation, and this is where 2.0 collaborative tools are expected to play a key role. Corporate weblogs are one of the main 2.0 tools that have raised more interest among managers, due to their ease of use and potential to bring together employees and partners who have to collaborate in order to achieve a common goal. However, individuals' reactions to the use of such new systems may differ, which in turn might lead to rejection of corporate blogs. Thus, the objective of this exploratory research is to study the influence of individuals' beliefs in the adoption of corporate weblogs; more specifically, the factors discussed in this research are self-efficacy, personal outcomes expectations and anxiety. In order to assess predictive ability for the exploratory research model, we have developed a theory grounded model, which has been validated with data from 70 employees from the Information Technology department of a large industrial Spain-based company. Findings from the results show that perceived usefulness is predicted by anxiety and personal outcomes expectations, perceived ease of use is predicted by blog anxiety, and behavioral intention to use corporate blogs is predicted by perceived usefulness.

Keywords Corporate blog · Technology acceptance · Self-efficacy · Personal outcomes expectations · Computer anxiety

P. Fernández-Cardador (✉)
Universidad Politécnica de Madrid, Madrid, Spain
e-mail: pedro.fernandez.cardador@alumnos.upm.es

Á. Hernández-García · S. Iglesias-Pradas
Departamento de Ingeniería de Organización, Administración de Empresas y Estadística, Universidad Politécnica de Madrid, Av. Complutense 30, 28040, Madrid, Spain
e-mail: angel.hernandez@upm.es

S. Iglesias-Pradas
e-mail: s.iglesias@upm.es

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1 Introduction

Collaboration is a fundamental process in knowledge creation and sharing which takes place through interaction among individuals. Collaboration is also one of the main drivers of change in organizations, and especially in knowledge-oriented organizations [27]. According to Prahalad and Ramaswamy [26], there is a strong link between collaboration within a company and firm's profitability, and this also holds true when considering collaboration with other companies. However, adoption of collaborative technologies is not happening as fast as expected [24].

There are five major groups of characteristics influencing adoption of collaborative tools; these characteristics are related to the technology, individual, group, task, and context [4], respectively. In the mid-seventies, many technology adoption processes were failing due to fear of new technologies [16] and doubts of employees about their own ability to use a new technology and obtain the expected results in return [7]. In organizational contexts, these behaviors are user-specific, as different users have different needs depending on their role [4].

Collaborative systems in corporate settings have undergone a radical change with the introduction of 2.0 tools, such as wikis and weblogs [6]. Blogs allow readers and writers to express their opinions, exchange different points of view and add new complementary knowledge [30]. In the early days of weblogging, their use was limited to personal journals; but later on, blogs began to receive significant attention as useful knowledge sharing tools [5] due to their potential to facilitate exchange of knowledge among people [17] with a significant cost reduction [31].

The fact that the beliefs which lead to adoption and rejection of technologies highly depend on intrinsic characteristics of the individual has not been previously addressed in the context of corporate blog adoption. Therefore, the main objective of this exploratory research is to study the influence of individual characteristics—namely, self-efficacy, personal outcomes expectations and anxiety—in the adoption of 2.0 collaborative tools and, more specifically, in the adoption and use of corporate blogs.

The remainder of this chapter is organized as follows: Section 2 presents the theoretical framework and research hypotheses; research methodology, procedures and measures are shown in Section 3; Section 4 covers the data analysis technique and empirical results for the study, which are followed by a discussion of results and implications for theory and practice in Section 5.

2 Theoretical Framework and Research Hypotheses

The Technology Acceptance Model (TAM) [9] explains how and why individuals adopt and use a technology—in this case, corporate blogs. According to Davis, an individual's behavioral intention towards the use of a new technology is the best predictor of actual use. In TAM, behavioral intention is influenced by two beliefs: **perceived usefulness (PU)** and **perceived ease of use (PEOU)**; in this study, PU

and PEOU refer to the users' perception of their own performance when using corporate blogs and the degree to which a user believes that using a corporate blog is free of effort [15], respectively. Applying TAM relations to the case of corporate blogs, we find that perceived ease of use (*H1*) and perceived usefulness (*H2*) positively predict intention to use corporate blogs, and also that perceived ease of use positively predicts perceived usefulness (*H3*).

Anxiety is a generalized emotional distress [21] experienced by an individual. According to Bandura [2], anxiety appears when individuals try to carry out behaviors they do not feel competent to perform. There are two kinds of anxiety: trait-based, i.e. personality anxiety, and anxiety associated to a specific situation; computer anxiety falls into the second category, and may be defined as an irrational "generalized emotional distress experienced by an individual" when using or considering the use of computers [16]. Based on this concept, we have defined **blog anxiety** as the anxiety experienced by individuals when they perceive themselves to be underperforming at using corporate blogs. Previous studies found that computer anxiety causes computer use avoidance [7]; following this rationale, we posit that blogging anxiety negatively predicts perceived usefulness (*H4*) and perceived ease of use (*H5*).

Personal outcomes expectations refer to prospective rewards and/or improvements of perception of an individual's image by other members of the organization [8]. This concept is based on the Social Cognitive Theory [3], which states that an individual will engage in a behavior if he expects some kind of reward after performing it. We have adapted this concept taking into consideration that users may post in corporate blogs when they expect some pleasure such as enjoyment, organizational recognition or improvement of their image in return. Previous studies about outcomes expectations are inconclusive; for instance, Papadopoulos et al. [25] found that people will continue to share information on the Internet if they expect praise or rewards and Kankanhalli et al. [18] found a positive relation between outcomes expectations and intention to use knowledge sharing systems, while Lu and Hsiao [20] found that this relation was non-significant in the case of blogs. Given this lack of consensus, we will assess the nature of this relation in the case of corporate blogs, and therefore posit that personal outcomes expectations positively predict perceived usefulness (*H6*) and perceived ease of use (*H7*).

Self-efficacy is a human regulatory mechanism which affects individuals' judgments about their ability to perform a given task [2]. We will adapt this concept to our research context by defining **blogging self-efficacy** as the self-confidence in one's ability to collaborate using corporate blogs. Blogging self-efficacy emerges thus as a barrier for corporate blog adoption; i.e., if users believe that they are not able to use blogs, they will most likely be reluctant to collaborate with their community via corporate blogs.

Prior research has found that computer self-efficacy may be an antecedent of perceived ease of use [1]. Moreover, previous studies have found that computer self-efficacy may increase personal outcomes expectations [7] and perceived usefulness [19]. Empirical studies have also found a negative correlation between self-efficacy and anxiety [29] and other research has established that increasing levels of

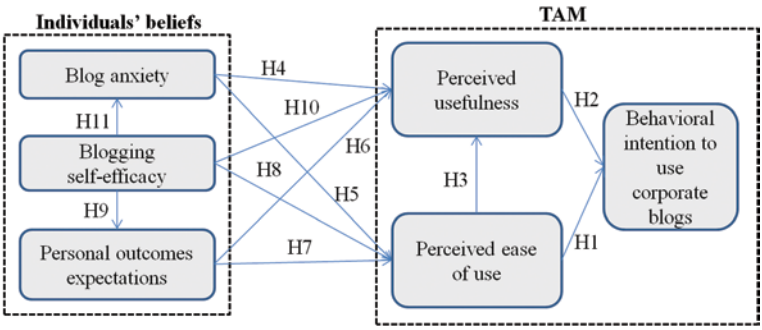

Fig. 1 Research model

self-efficacy cause anxiety reduction [10]. Taking all this into account, we find that blogging self-efficacy positively predicts perceived ease of use (*H8*), personal outcomes expectations (*H9*) and perceived usefulness (*H10*), and negatively predicts blogging anxiety (*H11*).

Following the hypotheses presented in this section, the complete research model for this study is presented in Fig. 1.

3 Research Methodology

For this study, we have selected a sample of employees from a Spain-based large industrial company where 2.0 collaborative tools are currently being deployed as part of a plan to establish a new collaborative culture. Data were gathered via online survey during January and February 2013. Ninety employees from the IT department were invited to participate in this study, and 70 valid answers—70 % from male and 30 % from female respondents—were collected, for a total response rate of 77.8 %. The Likert-7 scales used have been validated in prior literature, and were adapted to the context of corporate weblogs: blog-anxiety scales were adapted from Heinssen et al. [14]; self-efficacy and personal outcomes expectations were taken from Kankanhalli et al. [18]; perceived ease of use and perceived usefulness were based on Davis [9]; scales for intention to use corporate blogs were adapted from Oum and Han [23].

4 Data Analysis

We used a partial least squares (PLS) technique in order to assess the structural model and the software used was SmartPLS 2.0M3 [28]. Since this was an exploratory research focused on prediction, PLS was chosen instead of covariance-based

Table 1 Item reliability and convergent validity

Constructs	Item	Outer loadings	Composite reliability	AVE
Blog anxiety	BBA01	0.809		
	BBA03	0.700	0.806	0.581
	BBA04	0.774		
Blogging self-efficacy	BSE01	0.934	0.920	0.852
	BSE03	0.913		
Personal outcomes expectations	BPO03	0.884	0.879	0.784
	BPO04	0.887		
Perceived usefulness	BPU02	0.760	0.867	0.619
	BPU03	0.789		
	BPU04	0.812		
	BPU05	0.785		
Perceived ease of use	BPE01	0.726	0.893	0.737
	BPE03	0.901		
	BPE04	0.934		
Behavioral intention to use blogs	BBI01	0.883	0.926	0.758
	BBI02	0.835		
	BBI03	0.862		
	BBI04	0.901		

Significance level $p < 0.001$ for all items

structural equation modeling [13]. Besides, PLS does not need strict assumptions of sample size or measurement scales and allows using smaller sample sets.

Item reliability was evaluated by observing the standardized loadings of latent variable indicators—all the indicators were defined as reflective. Indicators with loadings not exceeding the ideal cutoff level of 0.7 [22] were dropped for subsequent analysis. Item reliability results are shown in Table 1. A bootstrap resampling procedure was used to test the stability of the estimates, with significance values of $p < 0.001$ for all cases. To ensure convergent validity we calculated the constructs' composite reliability and average variance extracted (AVE). Values were higher than 0.81 and 0.60 respectively (see Table 1), well over the acceptable threshold values of 0.7 [12] and 0.5 [11]. Discriminant validity was confirmed upon Fornell and Larcker's [11] recommendation, as the square root of AVE was greater than bivariate correlations between each construct and the rest of constructs.

The results related to the prediction of behavioral intention to use corporate blogs showed that perceived usefulness had significant and large effect supporting H2 but perceived ease of use did not exert a significant effect and thus, H1 was not supported. Moreover, perceived ease of use had no significant effect on perceived usefulness, leading to the rejection of H3.

Perceived usefulness was predicted by blog anxiety and personal outcomes expectations supporting H4 and H6 respectively, but not by self-efficacy, thus not supporting H10. On the other hand, perceived ease of use was only predicted by

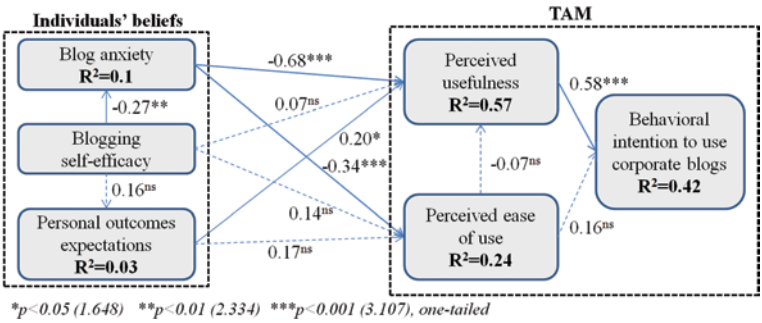

Fig. 2 PLS research results

blog anxiety—supporting H5—but not by blog self-efficacy and personal outcomes expectations—leading to rejection of H7 and H8.

Blogging anxiety was significantly predicted by blog self-efficacy—supporting H11, and blog self-efficacy did not exert a significant influence on personal outcomes expectations—and then H9 was rejected. As for variance explained, the model is able to explain 42 % of behavioral intention to use corporate blogs, a value which stresses the relevance of individual beliefs in the process of corporate blog adoption. We also calculated the Stone-Geisser (Q^2) values to test predictive relevance, and all values were positive, confirming predictive relevance. Figure 2 summarizes the structural model analysis results.

5 Discussion

This study emphasizes the fundamental role played by anxiety in the adoption of corporate blogs. From the results, when the most common communication and collaboration tools, such as e-mail, are replaced, employees may believe they will not be able to catch up on new tools or to achieve an optimal use of their functionalities, which may lead to a lower perceived usefulness, resistance and, ultimately, to rejection. On the other hand, fear of making fatal errors, loss of information when using corporate blogs, or fear of blogs itself, were not found to be a significant cause of anxiety, and nor did they exert significant influence on perceived usefulness.

As for blogging self-efficacy, the results—consistent with previous studies—reveal a negative relation with anxiety, but only explaining 10 % of variance. Some of the rest of variance might be explained by the traditional concept of self-efficacy, which was omitted in this research. Therefore, the study of its effect on anxiety is recommended for subsequent research.

We have also found that users are not expecting monetary rewards or promotions in exchange for the use of blogs, but they do perceive that corporate blogs may be useful inasmuch as they may lead to improvements in their image and prestige within the organization.

Finally, the high value of R^2 for perceived usefulness suggests that the perceived usefulness of corporate blogs for collaboration is mainly determined by individuals' beliefs, stressing out the need to consider these factors in adoption processes. In addition, perceived usefulness is the main driver of corporate blog adoption, as expected, but perceived ease of use had no significant influence on behavioral intention to use corporate blogs; a possible explanation for this finding is that the sample was selected from IT-oriented professionals with high experience on the use of collaboration tools; however, this finding should be confirmed by further research.

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