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Research in Progress

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Abstract

An online community's (OC) long term success depends on its members' willingness to stay and continue using the OC. Continuous use of an OC is closely related to knowledge sharing activity. However there is a limited understanding of this behavior especially within business online communities. This paper proposes an integrated approach combining motivational, sociological and technological perspectives to model this behavior. The model is grounded in Expectation-Confirmation Theory and the antecedents of this behavior are predicted using Expectancy-Value of Achievement model and Technology Acceptance Model.

Keywords

Knowledge contribution, continuous use, business online communities

1. Introduction

Online communities have created new social spaces for individuals to interact with one another through discussion forums, bulletin boards etc. However encouraging users to share and update current knowledge within online communities is one of the biggest challenge (Chiu et al., 2006). The success of an OC depends on continuous usage rather than its initial adoption (Bhattacherjee, 2001a). A prior study has found that most online communities fail to retain their members' repeat participation (Sangwan, 2005).

There is limited research in the knowledge sharing (KS) field relating to behavior continuous use in an OC context. Prior studies have indicated that the understanding of individuals continuous use behavior from KS context is still in its infancy (Cheung & Lee, 2007; He & Wei, 2009). Furthermore, most of the previous studies that examined continuous use behavior focus on professional OC such as teachers (Cheung & Lee, 2007) and programmers (Chen, 2007; Chiu et al., 2011).

Understanding this behavior in the context of business online communities is a worthwhile research effort because organisations are increasingly acknowledging such communities as an innovation tool. For instance, Nike uses an OC as a medium for its customer to contribute in the 'joint-innovation' process of a new basketball shoes (Fuller et al., 2007). Thus, understanding users' continuous behavior (e.g. give feedback and responses about their products or services) is very important.

Therefore, we will incorporate the use of motivational (Expectation-value of achievement model - EVM), sociological (trust and commitment constructs) and technological (Technology acceptance model (TAM)) perspectives with Expectation confirmation model of IS (ECM-IT) to investigate user's continuous knowledge contribution behavior. This is because KS is a complex phenomenon (Ford & Staples, 2008) and is mainly influenced by three main types of factors – motivation, social and technology (Ardichvili et al., 2003). This study also adopts Bhattacherjee et al.'s (2008) suggestion to extend the existing ECT-IT, which focuses on intention only, by including actual behavior as the final dependent variable. This is because the final objective of any IT implementation/development is to understand users' actual behavior on the application rather than their intention (Bhattacherjee, et al., 2008).

2. Literature Review

2.1. Continuous use

The study of user continuous behavior originated from marketing through the Expectation-confirmation Theory (Oliver, 1980). Bhattacherjee (2001b) then extended this theory into IS continuance context and introduced ECM-IT. This model has been widely used in research into many technologies such as online banking (Bhattacherjee, 2001b), online community (Chen, 2007), e-learning (Chiu et al., 2007; Limayem & Cheung, 2008) and mobile internet (Hong et al., 2006).

2.2. Continuous knowledge contribution

Based on IS continuance literature, *continuous use* refers to individual continued behavior use of a particular IS application long after an initial acceptance decision (Bhattacherjee, 2001b). Knowledge contribution using OC can take many forms. For instance, posting the knowledge; redirecting or contacting someone else who might be able to help; or answering questions. Hence knowledge contribution within OC can be defined as a process to convey effectively what they know (Sharratt & Usoro, 2003). Therefore translating it into continuance context, *continuous knowledge contribution* is defined as users repeated act of conveying what they know using a business OC.

2.3. Expectation-confirmation model of IS continuance (ECM-IT)

Based on ECM-IT, an individual's behavior use a technology is positively related to his/her intention, feeling of satisfaction, cognitive and affective beliefs and the extent of user's confirmation of beliefs. According to this model, when user's feel that her beliefs are confirmed, she will be satisfied and continue using the technology (Bhattacherjee, 2001b; Bhattacherjee, et al., 2008).

2.4. Motivation: Task value dimensions

Within IS continuous use literature, there is little understanding of how motivational beliefs influence continuous behavior. This understanding is important because individuals still need motivation to conduct an act even though they think they are able to perform it (Eccles & Wigfield, 2002). For instance, there is no guarantee that OC users will keep sharing their knowledge with others even though they capable of doing it.

Motivation has been identified as one of the important factors that influence user's knowledge contribution behavior using OC (Ardichvili, et al., 2003; Bock et al., 2005; Wasko & Faraj, 2000). This is because in OC context, users are more interested to use rather than contribute their knowledge to the pooled resources – free riding/lurking (Sohn & Leckenby, 2007). Thus the role of motivation is important to drive users to continue contributing their knowledge (Ardichvili, et al., 2003). In free-riding literature, an individual will avoid free riding if he/she beliefs that the task they are doing will generate valuable outcome (Vroom, 1964).

According to Expectancy-Value of Achievement model (EVM), users will feel satisfied and will continue using the technology if they think the task conducted using the technology as valuable (Chiu & Wang, 2008). For instance, if users feel that contributing knowledge is a valuable task, they will feel satisfied and keep on contributing (using) the OC. Therefore, we predict that if a user positively values the task of knowledge contribution - *as enjoyable (intrinsic value)*; *has personal importance (attainment value)*; and *are related to his/her current and future goals (utility value)* she will feel satisfied and continue contributing knowledge. Through knowledge contribution user will feel enjoyable when she view her contribution as helping others (Lee et al., 2006; Wasko & Faraj, 2000); user will feel it is important to do her very best when contributing knowledge because it is related to her reputation (Wasko & Faraj, 2005); and contributing knowledge is important for one's future goals because it can ensure generalized reciprocity (Wasko & Faraj, 2000) and to some extend it can advance one's career development (e.g. open source community). Furthermore, this model also predicts that cost from contributing knowledge will has a negative influence on user's satisfaction and intention to continuously contribute knowledge.

2.5 Sociology: Sense of belonging & Trust

Knowledge contribution is also influenced by sociological factors behavior (Ardichvili, et al., 2003). Both trust (Ridings et al., 2002) and commitment are two important factors that influence knowledge exchange within OC. To our very best knowledge trust and commitment have never been used to examine user's continuous knowledge contribution behavior, although these factors have been identified in marketing literature to explain consumer's repurchase behavior (Yoo et al., 2008).

2.6 Technology beliefs

Previous studies on IS continuance used perceived usefulness (PU) and perceived ease of use (PEoU) as technology beliefs to explain continuance behavior. Users who feel that the system is useful and easy to use will maximize his/her feeling of satisfaction and continue using behaviour the technology (Bhattacherjee, 2001a; Bhattacherjee, et al., 2008; Hong, et al., 2006; Thong et al., 2006). In KS context, technology beliefs have been identified to influence KS behavior. For instance, knowledge flow in an online community context would not take place without having appropriate technologies (Herath & Sanders, 2007) and channel richness.

Based on the above, we propose the following model that aims to predict continuous knowledge contribution behavior in the context of business online communities.
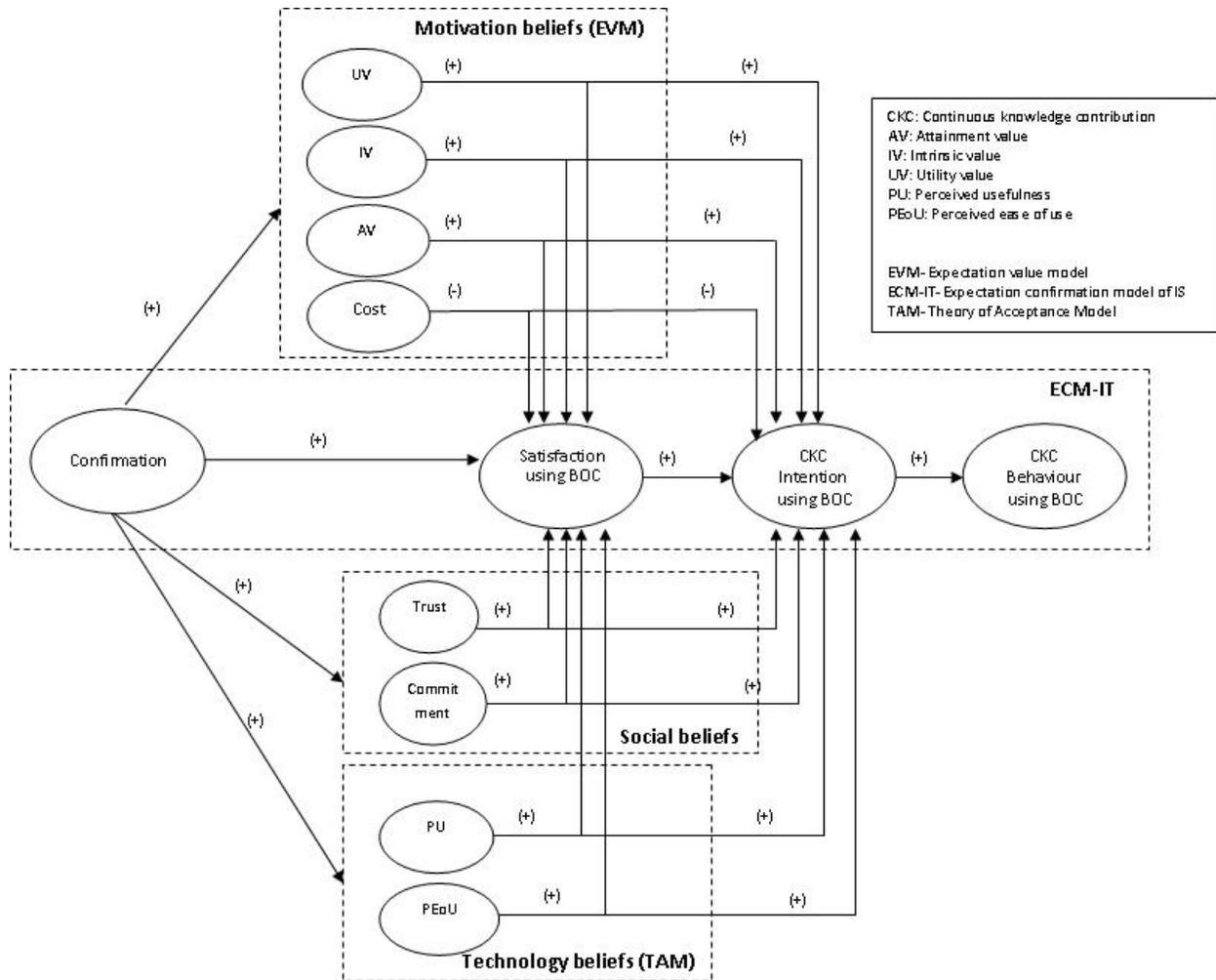
Motivation beliefs (EVM)

UV (+) (+)

IV (+) (+)

AV (+) (+)

Cost (-) (-)

CKC: Continuous knowledge contribution
AV: Attainment value
IV: Intrinsic value
UV: Utility value
PU: Perceived usefulness
PEoU: Perceived ease of use

EVM- Expectation value model
ECM-IT- Expectation confirmation model of IS
TAM- Theory of Acceptance Model

(+)

ECM-IT

Confirmation (+) Satisfaction using BOC (+) CKC Intention using BOC (+) CKC Behaviour using BOC

(+)

Trust (+) (+)

(+) Commitment (+) (+)

Social beliefs

PU (+) (+)

PEoU (+) (+)

Technology beliefs (TAM)

Figure 1: Proposed research model

3. Proposed Methodology

3.1 Scope and sample

This study will focus on individuals who have experience contributing knowledge continuously in business OC. This study requires at least 250 respondents because it will use structural equation modelling to analyze the proposed research model (Hair et al., 1995).

3.2 Pilot Phase

During this phase, experts (3 IS academics and 2 IS PhD students) were invited for rounds of discussion. During the discussion, experts were asked to comment on selected measurement items in order to increase content validity. Based on the discussion, a list of measurement items was developed. Subsequently, online focus group sessions were conducted to refine the research concept and hypotheses. Three online focus group sessions involving eight participants were conducted. From these sessions changes were made to the research model (see Figure 1) and the questionnaire finalized. A pilot study involving a group of 50 Masters and PhD students will be conducted to check the questionnaire's validity and reliability (Straub et al., 2004).

3.3 Testing Phase

A web survey will then be administered (using www.survs.com) for three weeks. For this study, a business OC (BOC) is defined as a company owned and created online community consisting of individuals who interact about a specific product that is produced or service that is offered by the company.

The invitation to participate will be done using two approaches: 1) direct invitation – a personal email will be sent out directly to BOC users who are active contributors and are listed in the 'top contributor' section, 2) indirect invitation - a general invitation will be posted in the business OC discussion forum. This approach is to include OC users who have contributed knowledge in the form of feedback, giving opinions and directing knowledge seeker to other sources.

4. Contributions

The expected theoretical contribution of this research can be summarized in the following points:

1. Extending the ECM-IT model by integrating motivational, social and technological perspectives. This integration should enhance of ECM-IT model. The need to integrate the ECM-IT model with other perspectives has already been recognized in the literature (Thong, et al., 2006).
2. To our best knowledge, this is the first attempt at using motivational, sociological and technological perspectives in understanding user's continuous knowledge contribution behavior. Previous studies have focused heavily on the sociological perspective (Chen, 2007; Cheung & Lee, 2007; Chiu, et al., 2011).
3. This study will extend the understanding of user's continuous knowledge contribution behavior within BOC domain.

The practical contribution of this research is:

1. To provide suggestions to BOC developers or administrators on how to encourage continuous knowledge contribution among members of the BOC.

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