

The Role of Web-Forums in Knowledge Sharing and Its Impacts on Consumer's Purchase Intention in E-Marketplaces

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Abstract

Forums or discussion boards are one of the most vital Internet applications used for communication and knowledge sharing. Forums are known as a kind of knowledge sharing mechanisms, where people can get involved in the topics of their interests. In general of e-commerce, and e-marketplace in particular, forums are used to assist members in interaction and communication of their experiences regarding business transactions, as well as to create trusting environment among members in e-marketplace. Base on Social Cognitive Theory (SCT), this study investigated the relationship between trust among individuals who used discussion forums and their behavioral intentions reflecting a possibility to follow advices and/or make a purchase of products in the future. A total of 240 respondents were collected from five leading e-marketplaces in Thailand. The results show positive relationships between trust variables and behavioral intention. Self-efficacy in using forums is also vital in creating affective temper, which leads to trust formation.

1. Introduction

People have experienced a crucial role of Web-based information systems in many aspects of social and business environment in these recent years. Internet enables millions of people worldwide to exchange information and conduct business around the world. In addition, Internet has become an essential business platform for trading, distributing and selling products and/or services between business organizations and consumers, and among consumers themselves [1].

In 1990s, an explosive growth of business transactions conducted over the networks across countries has facilitated buyers and sellers around the world who benefit from speedy transactions and cost savings. E-commerce has become a new and

inexpensive business platform where business transactions take places. Actual business processes are integrated and shortened to facilitate consumers with simplicity and flexibility. However, this new form of online business contexts still has a major weakness, which is most transactions are occurred asymmetrically between sellers and buyers who never met before. The buyers have to acquire uncertain information about product description and price. Although they can compare among uncounted numbers of buyers and product offering, they may require a tremendous time to do so.

Online consumers increasingly depend on what others say about products and prices on discussion forums, a kind of Computer-Mediated Communication (CMC) mechanisms, in order to get information they want and to base their decisions on [2]. Like other CMC mechanisms, forums are used primarily to share opinions, create knowledge, and get connected with others as it can be expanded to a small or large group of people online, as known as a virtual community [3].

The importance of virtual communities is obvious as people are getting together more and more nowadays to discuss a common hobby, medical affliction, personal experience or even develop relationships. Virtual community members are typically strangers to one another without the cues that face-to-face contact affords. Many studies tried to find the ways to encourage individuals to share personal experiences and assist members to provide useful information that can contribute and benefit other members in community (e.g., [4]). In e-commerce, various types of CMCs such as rating and feedback systems are known as a necessary tool in helping consumers in making decisions related to business transactions [5, 6].

Accordingly, the motivations of knowledge sharing behavior in forums depend on a degree of willingness to share knowledge with other members. It is important to explain the reasons individuals elect to share or not to share knowledge with other members when they have a choice. There are two basic modes

that members can use forums: get knowledge (or information), and give knowledge (or information) [7]. Getting knowledge and information is reading a conversation as well as soliciting information by posting questions and comments. Giving knowledge and information, on the other hand, is done by posting conversations, either in direct response to another member's post or starting a new topic in forums. However, forums may require trust for successful communication and seek to examine the emergence of trust in this environment. Trust among members is crucial in fostering knowledge sharing in forums. This study investigates various dimensions of trust created between individuals when using feedback forums in e-marketplace Websites, as well as the likelihood of trusting dimensions in creating or changing behavioral responses.

2. Objectives and Contributions

The primary objective of this research is to investigate the relationship between trust among individuals who use feedback forums and its effect on behavioral intention, i.e., possibility to follow advices and/or make a purchase of products or services on e-marketplace websites. Research findings should provide a useful insight for e-marketplace executives who plan to adopt forums as a means for knowledge sharing and customer experience management.

3. Literature Review and Proposed Research Hypotheses

3.1 Electronic Commerce and Virtual community

The characteristic of Internet in supporting multi-directional communication facilitates general users in forming shared interest group or communities. Virtual communities, such as feedback forums or discussion board, are places on the Web where people can find and "talk" electronically to other with similar interests, endure friendships, share opinions, purchase and obtain products and services [8]. These can provide members with opportunities to access more product information from others who already experienced the products or from the sellers directly. On the other hand, sellers can also use this channel in providing customized service and creating customer relationships. In addition, virtual community is known as an effective tool to monitor any violations of community rules and also becomes a sanction mechanism to fraudulent behaviors [9]. Virtual communities used in e-commerce Websites can

enhance trust among members, thereby reducing risk and encouraging members to participate in more business activities.

3.2 Social Cognitive Theory

Community members not only use forums for seeking knowledge or information for solving problems, but also meeting others, seeking supports, building friendships and getting a sense of belongingness[10]. They attempt to develop social relationships with others in the community. Social Cognitive Theory (SCT) suggests that a person's behavior is shaped and controlled by initial and extended relationships created within a social system, as well as the person's cognition known as expectations and beliefs [11]. They have focused on the impersonal configuration of linkages between people as community ties or social interaction or network of relationships (e.g. trust, norms and identification.) For instance, strong community ties could provide important environmental conditions for knowledge exchange [12].

Bandura [13] suggests two types of the major cognitive forces that shape behavior: outcome expectations and self-efficacy. During the past decade, studies in the information systems investigated the importance of self-efficacy and outcome expectations on predicting and improving computer training performance, computer usage, and user behaviors. If individuals are not confident in their ability to share knowledge, they are unlikely to perform the behavior, especially when knowledge sharing is voluntary.

Self-efficacy is defined as beliefs about one's ability to perform a specific behavior [13, 14]. Self-efficacy also implies that an expectation of positive outcomes of a behavior is meaningless if there is a doubt on capability to successfully execute the behavior in the first place. Much research has shown a strong link between self-efficacy and individual reactions to computing technology such as adoption (or use) of computer and computer software [15].

Specifically, self-efficacy in using forums directly impacts user knowledge sharing behavior that requires users to have some abilities such as transfer skills, seeking skills and comprehension skills. If users lack these skills and abilities, they will not be able to conduct knowledge sharing in forums. Emotional responses of individuals toward abilities in using feedback forums can be divided into two types: affect and anxiety [16]. Affect represents the positive side such as the enjoyment a person derives from using feedback forums. On the contrary, anxiety represents the negative side such as the feelings of apprehension

ones experienced when using feedback forums. Both affect and anxiety are both influenced by self-efficacy. Thus, an individual judgment of self-efficacy, measured at one point in time, can be viewed as both a cause and an effect.

H1: Self-efficacy in using feedback forums positively influences affect (or positive emotional responses).

H2: Self-efficacy in using feedback forums negatively influences anxiety (or negative emotional responses).

Feedback forums in e-marketplaces are typically informal. It is likely to affect individual's attitude and behavior only if the participants perceive that feedbacks effectively provide them distinct and credible suggestions. In this study, the perceived effectiveness of the feedback forums is defined as the extent to which a buyer believes that the feedback forums in a particular e-marketplace provides accurate and reliable information about the past transactional behavior of the marketplace's sellers [17].

H3: Self-efficacy in using feedback forums positively influences perceived effectiveness.

3.3 Trust Theory

In the online environment, trust is discussed as one of the important factors affecting knowledge transfer in society [18]. Trust emerging in the Web environment and in society is an initial condition for users to participate in trusting relationship, in which they transfer and exchange knowledge and information among members of community or society. Trust implies the success of virtual communities, in which members are usually anonymous and do not engage in direct face-to-face communication. Trust plays a significant role in shaping behaviors since people generally act more enthusiastic and encourages more interactions in the virtual environment [19].

Trust among members in community, also known as interpersonal trust, is resulted to a high social involvement. In other words, a person who gets involved more in virtual community will perceive a higher level of trust towards intermediaries (i.e., e-marketplace), as well as vendors, than those who get involved less often. Consequently, trust is vital for the continuity of virtual community [7] and is essential in general social exchange situations. In addition, trust is also resulted from a good reputation captured from the word-of-mouth of community members [20].

Cognitive and Affective Trust. In marketing literature, definitions of cognitive and affective trust

are consistent with basic notions [21]. Cognitive trust is knowledge-driven. In this case it is the need to trust assuming a state of incomplete knowledge, hence implies the level of confidence or the willingness to take action is relied on other members' suggestions. Affective trust is the confidence that a person places on the basis of feelings generated by the level of care and concern such as the feelings of security and the perception of relationship ties among members in forums [22].

Trust is related to Social Cognitive Theory as it represents an environmental factor affecting a self-efficacy, which represents a personal factor. Trust can establish a credible environment in forums, reduce user perceived risk and increase their belief in other members' ability, integrity and benevolence [23, 24].

H4: Affect (or positive emotional responses) positively influences cognitive trust.

H5: Affect (or positive emotional responses) positively influences affective trust.

H6: Anxiety (or negative emotional responses) negatively influences cognitive trust.

H7: Anxiety (or negative emotional responses) negatively influences affective trust.

Disposition to trust. Disposition to trust is defined as a psychological trait reflecting the extent to which one displays a consistent tendency of willingness to depend on others across a broad spectrum of situations and persons [24]. However, disposition to trust not necessarily implies that one believes others to be trustworthy. Whatever the reasons are people may grow up with a disposition to trust or may develop it later in their lives when there is enough accumulated life experiences.

Previous e-commerce studies posited that disposition to trust is related to trust formation in a specific manner i.e., an interpersonal trust in seller. However, disposition to trust is merely affected trust formation in the initial state or when other members are still unfamiliar with one another [25].

H8: Disposition to trust positively influences cognitive trust.

H9: Disposition to trust positively influences affective trust.

Trusting Intentions. The definition of trusting intentions involves two bodies of concepts. First, trusting intention implies willing to depend or intends to depend, meaning that one is volitionally prepared to make oneself vulnerable to the other party in a situation by relying on the other party e.g., the trustee relies on the trustor's Web or a person (a trustee)

chooses to believe in opinions provided in forums. Second, trusting intention is a subjective probability of depending, meaning that the extent to which one forecasts or predicts that one will depend on the other party e.g., the trustee predicts that they will rely or depend on the trustor's Web in the future. This also includes a subjective possibility to follow advice, give personal information and make a purchase [26].

- H10: Trusting Intentions are positively influenced by perceived effectiveness.
- H11: Trusting Intentions are positively influenced by cognitive trust.
- H12: Trusting Intentions are positively influenced by affective trust.

The proposed research framework and hypotheses are shown in Figure 1. By testing these hypotheses, the results can explain what factors affect trusting intentions and which relationships, according to the framework, are existed.

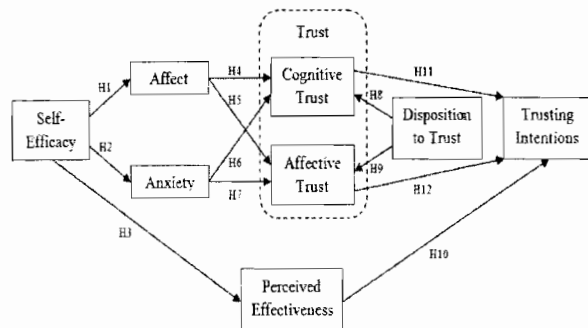


Figure 1. Theoretical research model

4. Methodology and Results

This research uses empirical method to examine the relationships between the proposed research constructs. The data were collected using Web-based questionnaires that can be accessed through the survey links that were placed on five leading e-marketplace websites in Thailand¹. The selected e-marketplaces incorporated with a knowledge sharing mechanisms, such as a forum or a discussion board. Participants of the survey are general users of these selected e-marketplaces, and whose experiences in using forum and discussion board are unknown.

¹ The surveyed e-Marketplace sites are: www.weloveshopping.com, www.tarad.com, www.thaionline.com, www.pantipmarket.com, 88db.com

The online questionnaire consists of three parts that are used to gather different kind of data as follows: (1) personal information such as gender, age, education, occupation and income; (2) usage information such as usage frequency and experience with forums or discussion boards; and (3) measurements of the main research constructs using five-point Likert scales ranging from 5 (strongly agree) to 1 (strongly disagree). There were a total of 240 respondents who participated in the online questionnaire. Of this number, there were only 128 valid responses from participants who previously had experiences in using forums or discussion boards in making a purchase decision. These valid questionnaires were used in data analysis.

There were approximately the same proportions of male and female respondents (49.2% and 50.8% respectively). Most of the respondents are in between 21 and 30 years old (65.4%), followed by those whose age are between 31 and 40 years old (22.1%). Majority of respondents obtained an undergraduate degree (67.1%) and most of them are private employees (46.7%), followed by privately owned business (23.3%). For income, majority of respondents are having a monthly income more than 10,001 Baht (310 U.S. Dollars) but less than 20,000 Baht (620 U.S. Dollars). The respondents mentioned the main purposes of using forum as follows: searching for product and/or service information (70.5%), obtaining information and gaining knowledge about products/services and/or sellers (16.7%), and looking for other trading partners or sellers (11.4%).

Table 1 and Table 2 show the results of reliability test and the pairwise correlation matrix of the main research constructs, respectively. For reliability, all research constructs, including self-efficacy (SE), perceived effectiveness (PE), affect (AF), anxiety (AX), cognitive trust (CT), affective trust (AT), disposition to trust (DT) and trusting intentions (INT), contains reliable scales, which can be seen as the values of Cronbach's α are over .70 [27]. In addition, Pearson's correlation matrix shows the absence of multicollinearity problem, which can be detected when the correlation coefficient is greater than .80 [28]

Table 1. Results of reliability test (Cronbach's α)

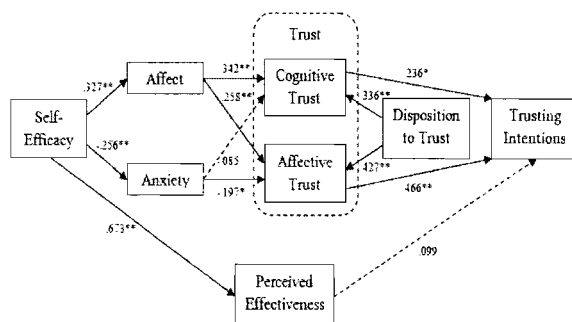
Variables	Count	Mean	S.D.	Alpha(α)
Self-efficacy (SE)	128	3.52	.601	.7567
Perceived effectiveness (PE)	128	3.57	.510	.7400
Affect (AF)	128	3.41	.782	.8150
Anxiety (AX)	128	2.20	.804	.8372
Cognitive Trust (CT)	128	3.30	.609	.8589
Affective Trust (AT)	128	3.45	.600	.8358
Disposition to trust (DT)	128	3.03	.741	.7483
Trusting intentions (INT)	128	3.29	.554	.7180

Table 2. Pearson's correlation matrix

	SE	PE	AF	AX	DT	CT	AT	INT
SE	1.00	.673**	.327**	-.256**	.313**	.480**	.511**	.495**
PE	.673**	1.00	.356**	-.229**	.284**	.474**	.476**	.433**
AF	.327**	.356**	1.00	-.198*	.337**	.492**	.410**	.426**
AX	-.256**	-.229**	-.198*	1.00	.019	-.145	-.242**	-.118
DT	.313**	.284**	.337**	.019	1.00	.512**	.427**	.407**
CT	.480**	.474**	.492**	-.145	.512**	1.00	.658**	.589**
AT	.511**	.476**	.410**	-.242**	.427**	.658**	1.00	.668**
INT	.495**	.433**	.426**	-.118	.407**	.589**	.668**	1.00

** significant at the 0.01 level (2-tailed), *significant at the 0.05 level (2-tailed)

The results of path analysis (as shown in Figure 2) support many hypotheses at .05 significant levels, except for H6 and H10. In other words, the results can be inferred that there are no significant relationships for path Anxiety (AX) → Cognitive Trust (CT), and path Perceived Effectiveness (PE) → Trusting Intentions (INT).



Note: ** Significant at the 0.01 level (2-tailed), * Significant at the 0.05 level (2-tailed)

Figure 2. Final research framework

The results suggest that anxiety does not negatively influence cognitive trust, even though the anxiety represents an emotional state of a person involving apprehension or uncomfortable situation.

In contrast to the significant result of the relationship between affect and cognitive trust, the unsupported relationship between anxiety and cognitive trust implies that anxiety is not related to cognitive trust as it does not represent the incomplete knowledge about the systems and the people whom the users are interacted with, but it is better explained by the negative feelings and concerns about the security of the systems or uncertainties about other people's comments. Furthermore, the result of no significant relationship between perceived effectiveness and intention to use implies that there is not enough reason to support that consumers should use the system even though they feel that it is effective.

4. Conclusions and Implications for Business

The research results confirm that self-efficacy in using feedback forums impact both emotional statuses (i.e., affect and anxiety) and perceived effectiveness of feedback forums in providing suggestions and generating knowledge. The research also reveals that trust dimensions, including cognitive and affective trust, are significantly related to consumer's behavioral intention, i.e., possibility to follow advices, or make a purchase of products and/or services on the e-marketplace Websites. On the contrary, people who have anxiety or negative emotional responses when using feedback forums are not likely felt comfort or confidence in taking actions suggested by other members in the community.

This research affirms other previous research that trust is vital in shaping consumer's behavioral intention in e-marketplace websites (e.g., [6], [29]). Furthermore, this research extends the previous research on trust in e-commerce by adopting Social Cognitive Theory to explain a phenomenon of a person's emotional perception towards his or her capability in using feedback forums to build trust and shape other people's behaviors.

The research provides a useful insight for e-marketplace owners and designers in creating and enhancing trusting environment of their Websites by using simple but effective social and communication mechanisms, such as forums and discussion boards. As being proved clearly in this research, a presence of forums can facilitate consumers in making purchase decision and create impression towards the Website.

Not only that the system designer has to focus more on enhancing the ability and self-efficacy of the users in using such knowledge-based mechanisms in information sharing, but also using the aesthetic design and engendering relationship creation to help reducing the anxiety of the users. It should be note also that creating trustful environment is vital in every business and social environment, in which the

feelings of uncertainty and fear of opportunistic behaviors are presented [26]. In sum, reducing user's anxiety regarding information exchange in e-marketplace sites and enhancing user's ability to safely exchange information and experiences certainly create trust and facilitate business functions of e-marketplaces.

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