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Using Customer Review Systems to Support Purchase Decisions:
A Comparative Study Between the U.S. and Thailand

Chuleeporn Changchit, Texas A&M University–Corpus Christi, USA
Timothy Klaus, Texas A&M University-Corpus Christi, USA
Alicha Treerotchananon, Chiang Mai University, Thailand

ABSTRACT

Online reviews have emerged as influential sources of information that greatly affect customers' pre-purchase decisions. Some studies have found that culture impacts online reviews, but many aspects of online review usage are still not well-understood. This study seeks to understand what factors influence the usage of online reviews and consumers' intention to use online reviews influenced by culture. This study collects data from U.S. and Thai consumers to examine what factors affect user attitudes and intentions. Structural equation modeling is used to analyze the data, and the findings reveal that most of the proposed factors influence online review adoption for these two nationalities. One significant difference was found between the respondents of the two countries. The results should help online businesses gain a better understanding of these factors and thus direct their efforts to develop features that positively influence online review usage.

KEYWORDS

Ecommerce, Online Review Credibility, Online Review Usage, Perceived Online Review Importance, Technology Acceptance Model (TAM), Thailand, U.S

INTRODUCTION

During the past two decades, there are numerous new technologies that enabled E-commerce websites to evolve (Zhao et al., 2020). Electronic commerce (E-commerce) has developed to become a more efficient marketplace that enables customers to easily evaluate products and services. Without the ability to see an actual product, online product review systems are becoming more important to customers considering purchasing items (Filieri, 2015; Liu & Du, 2020). Online reviews take various forms, such as words describing a product, rating scale assessments, and picture/video feedback from customers (Lai et al., 2013; Mudambi & Schuff, 2010). A 2019 study found that 62% of customers indicated that online reviews were very helpful and thought that they received the most accurate information on product performance and prior customer satisfaction by reading online reviews (Clement, 2019). Previous studies have also shown that online reviews have a significant influence

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on customers' purchase intentions (Chen & Xie, 2008; Godes & Mayzlin, 2004; Klaus & Changchit, 2019; Li et al., 2019).

Online review systems are a source of information that improve trust between buyers and sellers (Ketelaar, 2015). They are a good proxy for receiving information from friends and acquaintances. Such reviews can significantly influence customers' decisions on product purchasing (Zhu & Zhang, 2010). Information from a customer review system is considered by some customers to be a more trustworthy source of information as compared with other sources (Clement, 2019; Obiedat, 2013). Obiedat (2013) revealed that buying intention of online consumers increased with the quantity and quality of online reviews. However, not all reviews are considered equal as the credibility of online reviews is an important factor that affects how people perceive the online reviews (Jensen et al., 2013; Thomas et al., 2019).

Customers consider review systems helpful in determining whether to purchase products or services from online retail stores (Lai et al., 2013; Weathers et al., 2015). In addition, E-commerce websites and brands highly value the reviews posted about their products or services. Empirical findings over the last two decades have found a consistent relationship between online reviews and revenues (Mariani & Borghi, 2020; Zhu & Zhang, 2010). Studies have also revealed that higher online product ratings increase the online market share and sales of products (Duan et al. 2008; Forman et al., 2008; Spiegel Research Center, 2017).

Although there is widespread usage of online reviews in E-commerce, previous studies have indicated that culture impacts online reviews. For example, consumers from a collectivist culture deviate less from the average prior rating and found intensive emotion in reviews to be less helpful (Hong et al., 2016). In addition, a study examining reviews from the U.S. and from China found that U.S. reviewers are more likely to express their own opinions on products and recommend products more often than reviewers from China (Lai et al., 2013). Also, a study that looked at movie reviews in the U.S. and China found rating distribution differences in how the both top-rated and low-rated movies were rated (Koh et al., 2010). However, these studies do not gather information on factors affecting users' attitudes and behaviors even though the attitudes and behaviors of users are likely more important to the companies that create and maintain online review systems.

This study specifically seeks to examine the factors that affect users' attitudes and behaviors as well as to see what differences exist between respondents from a collectivist culture versus an individualist culture. Some prior research has attempted to find factors explaining online review usage and found factors related to the system adoption such as perceived ease to use and perceived usefulness of the system (Cheung et al. 2008; Klaus & Changchit, 2019; Willemsen et al. 2011). However, very few studies have examined cross-cultural factors that influence perceptions and usage of online review systems (Lee et al., 2013). As cross-cultural factors have been shown to play an important role in explaining the adoption of information systems (Arpaci, 2015; Changchit, et al., 2019), such factors will likely also affect online review system usage.

In this study, the role of cultural differences is examined. As people in two countries, the U.S. and Thailand, have been shown to exhibit distinct cultural characteristics, we believe examining online review system adoption among these two groups is appropriate to examine cultural differences. For example, people in the U.S. tend to have an individualist culture (Hofstede, 1984) which is a tendency to hold an independent view of self that emphasizes separateness, internal attributes, and the uniqueness of individuals. On the other hand, people in Thailand tend to have a collectivist culture which is a tendency to hold an interdependent view of self that emphasizes connectedness, social context, and relationship (Changchit et al., 2018; Hofstede, 1984; Lee et al., 2013). In addition, people in Thailand have been shown to be influenced by others on the adoption of technology much more than people in the U.S. (Changchit et al., 2018). One study examining cultural effects on online reviews found a distinct cultural effect between the U.S. and China. The finding revealed that U.S. users are more willing to provide feedback and express opinions as compared to Chinese users (Lee et al., 2013).

For this research study, we focus on comparing the factors influencing the intention to use online review systems for U.S. and Thai respondents. We have incorporated variables from the Technology Adoption Model (TAM) which help to explain system usage and explore other factors related to the impact of the context of online review systems. Specifically, we introduce the additional variables of perceived computer self-efficacy, perceived online review credibility, perceived online review usefulness, perceived online review ease of use and perceived online review importance to examine the intention to use online review systems. In this study we are not only examining user perception and usage models, but also comparing the results of U.S. respondents to Thai respondents in order to examine cultural effects on online review system perceptions and usage.

This research provides several contributions. First, this research contributes to existing information systems theory by identifying multiple constructs in addition to the TAM's constructs which affect users' perceptions and usage intentions. The findings reveal that there are other variables besides perceived usefulness and perceived ease of use that affect user perceptions and/or usage intention. Second, the role of credibility is examined, and the results show that this factor which is not related to system design also has an effect on user perceptions of the system. Third, the study contributes to the literature by examining the role of culture in influencing users. The results indicate that culture has an effect on the intention to use online review systems as the influencing factors are not the same between U.S. and Thai respondents. These findings can help businesses better understand how their customers perceive online review systems. Through a better understanding on how customers are impacted by online reviews, companies can better design online review systems that meets the type of system that customers want.

The following section examines the literature related to online customer reviews and cross-cultural effects on system usage, followed by the hypotheses. The data collection methodology is then described, followed by the data analysis and results. Results are then discussed and both research and practical implications are described.

LITERATURE REVIEW

Customers purchasing through an online platform often value online reviews (Baek et al., 2012). A recent study found that although only 17% of people look at reviews every time they purchase online, expensive items have a much higher review read rate with 70% of people reading reviews when considering purchasing electronics (Clement 2019). In the following paragraphs, the findings of prior studies are described which address the impact of online reviews and online review systems as well as the cultural impact on customers perceptions and usage of online review systems.

Impact of The Reviews On Customer Perceptions

Online reviews have been shown to affect product perceptions and customer attitudes (Klaus & Changchit, 2019). Reviews that customers consider useful have been found to significantly influence purchase decisions (Li et al., 2013; Spiegel Research Center, 2017; Weathers et al., 2015; Zhu & Zhang, 2010). Lee and Ro (2016) found that customer attitudes change after they read the reviews of others although the attitudes are moderated by the valence of reviews. However, the relationship between the valence of reviews and purchasing intention does not appear to be linear as Ketelaar et al. (2015) found asymmetric effects of the review valence on purchasing intention.

Although reviews are considered to be important by customers, all reviews are not evaluated as equal, and customers perceive some online reviews differently than others. For example, reviews in the form of simple recommendations are viewed in a different light by customers compared to reviews that are supported by extensive reasoning (Willemsen et al., 2011). Another study found that a customer's perceived quality of an online review impacts a customer's buying intention and generally the quality of reviews has a greater impact on buying intention than the quantity of reviews (Obiedat 2013). However, Obiedat (2013) also found that the buying intention of online customers with low

cognitive needs were affected more by the quantity of reviews rather than the quality of arguments. As such, it is interesting to examine what factors influence customer perceptions and usage of online review systems. Our research considers such factors as it examines cross-cultural effects.

The credibility of reviews is an important issue for customers who rely on online reviews to make their purchase decision. Customers' perceptions of the trustworthiness of the review impacts its perceived usefulness (Baek et al. 2012). Despite this importance, much of the past research ignores the effect of reviewer credibility (Jensen et al., 2013). Credibility of online reviews occurs when reviewers have no vested interest in recommended products (Bickart & Schindler, 2001; Klaus & Changchit, 2019; Willemsen et al. 2011).

Evidence from focus group participants indicate that trust is an important factor for customers using online reviews (Malbon, 2013). Multiple studies have found that customers consider reviews to be highly trusted sources of information (Filieri, 2015; Nielsen, 2013). In addition, if a review is attributed to an expert, then the review is found to be both more trustworthy and more useful (Willemsen et al. 2011). We propose that perceived credibility of reviews will be a relevant predictor of intention to use an online review system. Thus, credibility of reviewers is a factor we will include in an extended TAM model. Consumer perceptions toward the importance of online reviews is also included in this study to examine how customers' perceptions towards the importance of online reviews will influence the decision to use online reviews.

Cultural Impact

Culture has been defined by Matsumoto (1994) as the degree to which people share attributes, values, beliefs, and behaviors. The definition provided by Hofstede (1984) may be the most cited as it defines culture as "the collective programming of the mind which distinguishes the members of one group from another". Theoretically, culture plays an important role in explaining behavioral differences between people from different countries. According to Hofstede (1984), there are four dimensions that differentiate cultures. The first dimension is that of power distance and refers to the extent that members of an organization accept that power is distributed unequally. The second dimension is individualism, which refers to the degree to which individuals emphasize self-interest over that of the group. The third dimension is masculinity, which attaches importance to goals such as career and material success versus social goals. The fourth dimension is uncertainty avoidance and is the degree to which people of a society feel uncomfortable with uncertainty and ambiguity. For example, individualistic cultures tend to hold an independent view of the self that emphasizes separateness, internal attributes, and the uniqueness of individuals. On the other hand, collectivistic cultures tend to hold an interdependent view of the self that emphasizes connectedness, social context, and relationship (Hofstede, 1983).

Consumers from a collectivist culture deviate less from the average prior rating and found intensive emotion in reviews to be less helpful (Hong et al., 2016). One study examined reviews from the U.S. and from China and found that U.S. reviewers more likely express their own opinions on products and contain more recommendations than reviewers from China (Lai et al., 2013). Another study looked at movie reviews in the U.S. and China and found rating distribution differences in how the both top-rated and low-rated movies were rated between the two countries (Koh et al., 2010).

As technology helps to globalize business, cross-cultural issues play an important role in explaining the development, design, and use of information systems (Arpaci, 2015; Baker et al., 2010; Changchit et al., 2019; Lee et al., 2013). Baker et al. (2010) studied the cultural effect on technology adoption using Saudi subjects and found that both the collectivist culture and workers' focus on the managerial father figure influences the individual acceptance of technology. A study by Srite et al. (2008) also revealed that cultural values significantly influence technological acceptance and use.

Culture has been found to affect system usage and adoption. Information systems generally are viewed as culture-free, but culture affects the interaction people have with the information system (Calhoun et al., 2002). The usage patterns of information systems vary by country and the cultural

values shape how people use information systems and usage outcomes (Downing et al., 2003). Culture has been found to affect perceptions of Perceived Ease of Use and Perceived Usefulness (Kaba, 2013), technology adoption, technology usage, and attitudes about information system usage patterns (Chen et al., 2020). Kappos and Rivard (2008) found that culture moderates the relationship between the information system characteristics and the level of user acceptance of the information system.

Changchit et al. (2019) tested the effects of cultural differences in mobile banking adoption in Thailand and in the U.S. and found that although people from the two countries do not have significantly different perceptions towards mobile banking adoption, Thai people perceived higher usefulness of mobile banking which affected the adoption of mobile banking. Changchit et al. (2019) also found that the influence of others plays a more important role in Thai culture than in U.S. culture. Lee et al. (2013) found that American and Chinese are different on various dimensions in regard to their behavior toward decision-making. Americans were found to be more willing to provide feedback, more willing to make recommendations to others and focus on a wider variety of aspects in their product reviews as compared with Chinese customers.

The Internet has allowed interpersonal communication to be without physical constraints (Duan et al., 2008) and thus information on a product can be obtained from a much larger segment of the population through electronic means. Culture affects the way in which information is communicated. Although both Thai and the U.S. customers share a similar trend of an increasing use of online reviews, the two countries have different cultures (Hofstede, 1984; Lai et al., 2013; Öğüt, & Taş, 2012) which can alter the perceptions and use of online review systems. Such differences are a major focus of this study.

One study examining online reviews of hotels in Thailand found that a hotel's ranking is the most important factor customers depend on for their decision to book a hotel (Promma and Worapishet 2015). The study further found that the number of reviews is the second most important factor. Another study of customers in Thailand also found that online customer reviews were one of the important factors influencing the purchase decision (Sirichannchuen et al., 2017). According to a 2019 report of Nielsen Company Thailand, online customers in South East Asia including Thailand are mostly young. Due to this large young age group segment, Thai customers overall tend to adapt to Information Technology faster than people in countries who have a larger portion of older age groups using Information Technology like the U.S., U.K., or Japan (Nielsen Thailand Report, 2019). The age difference may help to explain the differences in online review adoption of the two countries.

There are very few studies that have considered cross-cultural issues in examining online reviews (Lee et al., 2013). Although there are many dimensions of online reviews which researchers have examined, few have examined the effect of online reviews across cultures. However, culture is likely an important factor influencing online review usage. Significant differences have been found between customers in different countries (Lee et al. 2013) and so the culture may affect customers' perceptions and usage of online review systems.

Impact of Online Review Systems

Since online review systems are systems that customers can choose to use, the Technology Acceptance Model (TAM) (Davis et al., 1989) may be used to explain some of the intention to use online review systems as the TAM focuses on the voluntary use of information systems. The TAM has been used to explain the effect of information adoption in the context of online reviews (Ayeh, 2015; Casaló et al. 2010; Flavian & Guinaliu, 2006; Hsu et al., 2013).

The baseline theory of the TAM argues that perceived usefulness and perceived ease of use are important factors that affect whether users intend to use a new technology. In the context of online review systems, the perceived usefulness of reviews is used as a measure of perceived value and used to explain the intention to use online reviews. Perceived usefulness of online reviews is considered by customers to enhance their online shopping or product experience and has been found to be a significant predictor of consumers' intention to use a review (Cheung et al., 2008; Elwalda et al.,

2016; Klaus & Changchit, 2019; Willemsen et al., 2011). Perceived ease of use in the context of online reviews refers to the perception of simple and straightforward use of online reviews. Liang et al. (2013) found that both perceived usefulness and perceived ease of use have positive effects on the overall attitude customers have towards using electronic word-of-mouth communication. We propose that these factors will affect the intention of customers to use the online review system.

However, for online review systems, those two factors alone cannot explain the user's intention to use the system (Klaus and Changchit, 2019). Although TAM is appropriate for examining the adoption of new technology, the model has some limitations when used to explain the adoption of technology in making a purchase decision. In the following section, we propose the modified research model which expands the TAM variable to include the perceived importance on usage of online reviews as well as other variables relevant to the usage of online review systems.

Theoretical Background and Research Model

This study extends the framework of the Technology Acceptance Model (TAM) to examine factors that influence the online review perceptions of people in two countries. The TAM has been proven to be popular in information systems research due to its predictive ability of users' acceptance and thus has been used to study the factors that influence the acceptance of several information systems (Bagozzi 2007; Davis et al. 1989; Lee et al. 2003).

In this study, we chose to use TAM as the original framework because this model is considered the most influential and commonly employed theory for describing an individual's acceptance of information systems (Changchit et al. 2018, Lee et al. 2003). The TAM model was modified to fit within the context of social commerce adoption through the addition of three additional factors: (1) Perceived Computer Self-Efficacy (PCSE), (2) Perceived Online Review Credibility (PORC), and (3) Perceived Online Review Importance (PORI) were examined in the proposed model.

The constructs perceived online review usefulness and perceived online review ease of use are constructs in the TAM, which have widely been used to examine users' acceptance of new technology. We thus believe that these two constructs should be included in the study. In addition, we proposed the construct perceived computer self-efficacy. Typically, consumers with a high computer self-efficacy are expected to have positive attitudes on new technology. Thus, it is likely that this construct can impact a consumer's intention to use online review.

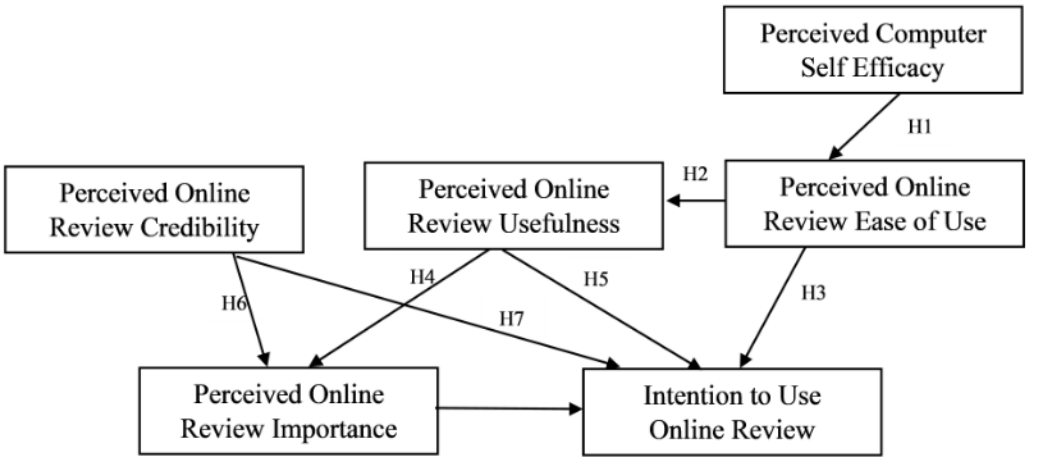
The second proposed construct we added is perceived online review credibility as the lack of trust is a concern for consumers who do not use online reviews. As prior studies show that credibility affects user perceptions, we believe that perceived online review credibility should be investigated as a factor as it likely will impact consumers' intention to use online reviews.

The third construct we added into this proposed research model is perceived online review importance. The importance of online reviews is likely a factor that will influence the intention to use online reviews since customers who consider online reviews to be important will likely use the online reviews for their purchase decision. We thus believe that this factor should be part of the research model. The relationships of the proposed factors we are examining regarding user perceptions and intention to use online review systems are shown in Figure 1.

Perceived Computer Self-Efficacy

Perceived Computer Self-Efficacy is defined as an individual's assessment of his or her capability to use computers in a variety of situations (Hsia et al., 2014). People with greater perceived computer self-efficacy generally have a larger motivation to use technology to accomplish tasks as they have a higher level of confidence in their ability to accomplish the tasks on a computer. In addition, employees in a company are more likely to use an information system if they have a higher level of computer self-efficacy (Yang, 2010). In regard to using online review systems, it is likely that customers who have a higher perceived computer self-efficacy will use an online review system as part of their purchasing process. Thus, we propose:

Figure 1. Research Model



H1: Perceived computer self-efficacy positively affects subjects' perceived online review ease of use.

Perceived Online Review Ease of Use

Perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). Ease of use in the context of online consumer reviews is defined as the degree to which a user believes it is simple and straightforward to use the online review system (Elwalda et al., 2016). Although online review systems tend to be simpler to use than organizational information systems, the layout and ease by which users can view and sort online user reviews from others can vary greatly. Empirical evidence from previous studies indicates that both perceived usefulness and perceived ease of use positively impacts intention to use online reviews (Elwalda et al., 2016; Liang et al., 2013). Prior research in organizational information studies has also shown that ease of use significantly affects perceived usefulness (Agarwal & Prasad 1999; Venkatesh & Davis, 2000). In Taiwan, a study found that perceived online review ease of use and perceived online review usefulness have a significant and positive influence on the sense of belonging to virtual communities which in turn affects purchase intention (Lin 2007). We thus propose the following hypotheses:

H2: Perceived online review ease of use positively affects subjects' perceived online review usefulness.
H3: Perceived online review ease of use positively affects subjects' intention to use online reviews.

Perceived Online Review Usefulness

Perceived usefulness has been defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p.320). As we adapt this concept to online reviews, we define perceived online review usefulness as the degree to which a customer believes that using online consumer reviews enhances the online shopping experience (Elwalda et al., 2016). Prior studies report that perceived usefulness significantly impacts usage intention (Davis et al., 1989; Venkatesh & Davis, 2000). Hsu et al. (2013) found that the perceived usefulness of blogger recommendations has a significant impact on customer attitude and purchase intention. As perceived usefulness has been shown to be a factor that influences attitudes and intentions, we propose that perceived online review usefulness will also affect attitudes and intentions. In particular, we propose

that this construct will affect the users' perspective of the importance of the review as well as the intention to use the review:

H4: Perceived online review usefulness positively affects subjects' perceived online review importance.
H5: Perceived online review usefulness positively affects subjects' intention to use online reviews.

Perceived Online Review Credibility

The usage of online reviews may be affected by the credibility of reviewers. We define perceived online review credibility as the confidence that a product review is believable, factual, and unbiased. Credible reviews that are not incentivized by manufacturers, brand owners, competitors, and others yield the most benefit to potential buyers as the bias of reviews is minimized (Jensen et al., 2013). Overall, users seem to have a high level of trust in online reviews and one study revealed that website users believe that user reviews are an important source of information that is more credible than other sources of commercial information (Flanagin et al., 2014). Most research in the past has ignored the effect of online credibility although one study found that when a review addresses both positive and negative aspects, it appears to be more credible (Jensen et al., 2013). It has also been found that credibility of online reviews significantly affects the intention to purchase a product (Benlian et al., 2012) and that credibility significantly affects customer perceptions of a product (Jensen et al., 2013). Hsu et al. (2013) examines the effect of trust and found that perceived usefulness is influenced by the level of trust in the blogger. As prior studies show that credibility affects user perceptions, we propose that perceived online review credibility will affect subjects' perceptions on both the importance of online reviews as well as intention to use online reviews:

H6: Perceived online review credibility positively affects subjects' perceptions on the importance on online reviews.
H7: Perceived online review credibility positively affects subjects' intention to use online reviews.

Perceived Online Review Importance

Prior studies have examined the role of online reviews in purchase decisions and have found that online reviews significantly affect purchase decisions (Wang et al., 2017; Ruiz-Mafe et al., 2018). However, these studies have not focused on how the importance that a customer places on online reviews affects the purchase decision. In this study, the perceived online review importance is defined as the level of significance that a consumer places on online reviews when examining products online. The importance of online reviews is likely a factor that will influence the intention to use online reviews since customers who consider online reviews to be important will likely use the online reviews for their purchase decision. Klaus and Changchit (2019) define Perceived Online Review Importance as the level of impact that online reviews have on a purchase decision and created the construct Perceived Online Review Importance to assess the importance that online reviews have on the purchase decision. For this paper, we also assess the influence of Perceived Online Importance on the intention to use online reviews and propose the following hypothesis:

H8: Perceived online review importance positively affects the intention to use online reviews.

RESEARCH METHODOLOGY

Measurement Development

The questionnaire designed for this study adapted some of the scales developed from TAM research and added additional constructs as described in the research model development section of this paper.

The questions used to measure perceived online review usefulness and perceived online review ease of use were adapted from studies conducted by Venkatesh & Davis (2000) and Venkatesh et al. (2003). Other questions were designed specifically for this study to measure the constructs that impact consumer attitudes on online user review usage. Several tests such as reliability, KMO and Barlett's, common method bias, and factor analysis were conducted in this study to verify and validate their suitability for the measurement model in this study. These results are described in the data analysis section of this paper.

The questionnaire consisted of thirty-four (34) questions. Twenty-four (24) questions with a six-point Likert scale were designed to measure subjects' perceptions and the usage of online reviews. The remaining ten (10) questions were asked to gather some demographic data of the subjects. To validate the clarity of these questions, three professors and three research assistants were asked to read through the survey questions. For construct improvement and validity, revisions to the survey were made based on the feedback received. The Thai questionnaire was then translated into English by one researcher and then translated back into Thai by another researcher in order to check for translation accuracy. The original Thai questionnaire and the translated questionnaires were found to be equivalent.

DATA COLLECTION

Data were collected in both the U.S. and Thailand for this study. Prior research has suggested that students are acceptable surrogates for online customers since those that generally participate in online commerce tend to be younger and more educated than the general population (Bellman el al., 1999). The use of students in E-commerce research is common since students mostly have experience with online shopping and share other common characteristics with general online shoppers (Palvia, 2009).

For the U.S. data, surveys were distributed to students enrolled in a southern United States university. For Thai data, surveys were distributed to students enrolled at universities in northern Thailand. For the data collection in both countries, a researcher contacted instructors from each university to gain their consent to hand out the surveys in their classes. In each class, a researcher spent about ten minutes explaining the importance of the study and asked students to read each item carefully as their responses are very important to this study. Then, all students were provided with sufficient class time to respond to the survey. Students were informed that participation in the study was voluntary and that their responses would be kept anonymous.

In the U.S., three hundred eighty (380) subjects participated in this study and three hundred thirty-nine (339) responses were valid. In Thailand, four hundred twenty-six (426) subjects participated in this study and four hundred twenty-one (421) responses were valid. The use of students as subjects are appropriate for this type of study as students of this generation are certainly part of target groups for Internet shopping and online review usage. 97.35% of U.S. respondents and 95.49% of Thai respondents indicated that they have made at least one online purchase in the last year. Demographics of both U.S. and Thai respondents are shown in Table 1 below.

Data Analysis

Table 2 summarizes the items measuring the attitude towards the intention to use online reviews and eight factors affecting it. All items use a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

The following paragraphs describe the statistical analyses of the data. Several tests were first conducted in this study to verify and validate each factor's suitability for the measurement model in this study. The analyses such as reliability, factor analysis, and the model's overall goodness of fit is described below.

Table 1. Subjects' demographics ($n_{U.S.}$=339, n_{Thai}=421)

	U.S.		Thai			U.S.		Thai	
	No.	%	No.	%		No.	%	No.	%
Gender					**Online Purchase Last Year**				
Male	148	43.66	124	29.45	None	9	2.65	19	4.51
Female	191	56.34	297	70.55	1-2	43	12.68	55	13.06
No Answer	0	0.00	0	0 .00	3-5	75	22.12	99	23.52
Highest Level of Education					6-9	68	220.06	95	22.57
					10-20	77	22.71	74	17.58
High School	251	74.04	55	13.06	More than 20	67	19.76	79	18.76
Associate Degree	42	12.39	3	0.71	No Answer	0	0.00	0	0.00
Bachelor's Degree	36	2.65	312	74.11	**Items Regularly Purchased Online**				
Master's Degree	9	10.62	44	10.45					
Doctoral Degree	0	0.00	7	1.66	Books	172	50.74	20	4.95
No Answer	1	0.29	0	0.00	Software/Apps	89	26.25	5	1.24
Age (in years)					Computers/ Electronics	103	30.38	45	11.14
					Media(Video/Music)	93	27.43	3	0.74
18-25	304	89.68	275	65.32	Clothing/Shoes	216	63.72	148	36.63
26-35	25	7.37	95	22.57	Food	37	10.91	4	0.99
36-45	8	2.36	45	10.69	Health/Beauty	93	27.43	91	22.52
46-55	2	0.59	5	1.19	Sports/Outdoors	68	20.06	11	2.72
No Answer	0	0.00	1	0.24	Industrial/ Automotive	20	5.90	9	2.23
Use Credit Card/Debit Card					Home/Garden	17	5.01	17	4.21
					Other	24	7.08	17	4.21
Yes	328	96.76	309	73.40	Nothing	2	0.59	30	7.43
No	10	2.95	112	26.60	**Employment Status**				
No Answer	1	0.29	0	0.00					
Online Purchase per Month					Full-time	47	13.86	159	37.77
					Part-time	148	43.66	86	20.43
None	78	23.01	92	21.85	Not employed	143	42.18	174	41.33
1-2	148	43.66	211	50.12	No Answer	1	0.29	2	0.48
3-5	80	23.60	93	22.09	**Student**				
6-9	21	6.19	16	3.80					
10-20	4	1.18	5	1.19	Undergraduate	312	92.04	230	54.63
More than 20	6	1.77	4	0.95	Graduate	26	7.67	138	32.78
No Answer	2	0.59	0	0.00	Not a student	0	0.00	52	12.35
Return Product Purchased Online					No Answer	1	0.29	1	0.24
Yes	159	46.90	101	23.99					
No	177	52.21	318	75.53					
No Answer	3	0.88	2	0.48					

Table 2. Measure subscales, internal consistency, means (M), and standard deviation (SD)

		U.S.		Thai	
		M	**SD**	**M**	**SD**
Perceived Computer Self-Efficacy (α = 0.863)		5.23	0.76	5.00	0.76
	I like using a computer				
	I feel confident with my ability to use computers				
	I am confident with my ability to find information on the Internet				
	I am confident in my ability to purchase items online				
	I enjoy working with computers				
Perceived Online Review Usefulness (α = 0.898)		4.71	1.04	4.92	0.79
	Online consumer reviews are a useful tool for online shopping				
	Online reviews provide useful information				
	I find that online reviews are valuable for my online purchase decisions				
	The online consumer review systems are useful				
Perceived Online Review Ease of Use (α = 0.915)		4.78	0.96	4.58	0.77
	Overall, online consumer review systems are easy to use				
	It is not difficult to figure out how to use online reviews				
	It is easy to read online reviews about a product				
	It is very simple for me to use online review systems				
Perceived Online Review Credibility (α = 0.908)		3.90	0.98	4.14	0.86
	Online consumer reviews overall are trustworthy				
	Most of the time, online consumer reviews seem credible to me				
	Overall, I believe I can trust the online reviews				
	Online reviews are written by people who honestly state their product views				
Perceived Online Review Importance (α = 0.888)		4.49	1.20	4.99	0.85
	I believe everyone should read online reviews before making a purchase decision				
	No one should purchase the product online before reading the online reviews				
	I usually read online reviews before making an online purchase				
	I believe that online reviews should be read prior to placing an order				
Perceived Intention to Use Online Review (α = 0.695)		4.54	0.73	4.76	0.96
	I definitely will use online reviews for future purchases				
	I intend to use online reviews to help guide my purchases				
	I will use online reviews again				

Reliability Test

To verify the suitability of the measurement model and scales used, various statistical analyses (reliability, validity, exploratory, and confirmatory analyses) were conducted using SPSS 25.0 and AMOS 24 software. A reliability test was conducted to examine the internal consistency of the

Table 3. KMO and Bartlett's test

		U.S.	Thai
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.936	0.914
Bartlett's Test of Sphericity	Approx. Chi-Square	7080.917	6163.329
	df	300	231
	Sig.	0.000	0.000

research instrument. The test confirmed the reliability of the research items with Cronbach's alpha coefficient of 0.935 for U.S. data and 0.927 for Thai data.

KMO and Bartlett's Test

As shown in Table 3 below, the KMO and Bartlett's Test was conducted to assess the degree of unidimensionality of the scales. The test confirmed the sampling adequacy with the value of 0.936 for the U.S. data and 0.914 for Thai data. The Bartlett's test of sphericity showed a p-value of 0.000 for both sets of data. Thus, the null hypothesis was rejected regarding no difference between the correlation matrix and the identity matrix.

Common Method Bias

To ensure that the model is free from common method bias, which is a measurement error that threatens the validity of conclusions drawn from statistical results, the Harman's single factor test was conducted. The Harman's single factor test which is the most widely used in the literature was conducted (Roni, 2014) and was obtained by running an un-rotated, single-factor constraint of factor analysis in SPSS statistics. As shown in Table 4 below, the variance explained by a single factor (44.516% for U.S. data and 40.231% for Thai data) shows that the common method bias is not a major concern in this study (less than the recommended 50% cut-off point) (Roni, 2014).

Factor Analysis

The convergent validity of each construct was assessed with a factor analysis to ensure that the survey items produced the expected number of factors and whether each item was loaded on their appropriate factor. An Exploratory Factor Analysis (EFA) was used to reveal the underlying structure of constructs. As demonstrated in Tables 5 and 6 below, factor analysis results show that the measurement items were loaded on six (6) factors. All factor loadings below the suggested 0.5 threshold were removed from data analysis (Hair et al., 2009) and all items show high communality values. The results show that the construct measures were valid and thus could be used to measure the six (6) factors in the research model.

Structural Equation Model (SEM)

In this study, SPSS 25.0 and AMOS 24 software were used to test the structural equation model. In order to test the fitness of the model, seven (7) common model-fit measures were conducted to assess the model's overall goodness of fit: the ratio of Chi-square (CMIN) to degrees-of-freedom (df); goodness of fit index (GFI); adjusted goodness-of-fit index (AGFI); normalized fit index (NFI); Tucker Lewis Index (TLI); comparative fit index (CFI); and root mean square error of approximation (RMSEA). As shown in Table 7, all the model-fit indices exceeded their respective common acceptance levels suggested by previous research, thus demonstrating that the measurement model exhibited a good fit with the data collected (Browne and Cudeck, 1989; Byrne, 1994; Hair et al., 2009; Hu and Bentler, 1995; Kline, 1998; Schumacker and Lomax, 2004; Ullman, 2001).

Table 4. Total variance explained

Component	U.S.						Thai					
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	11.129	44.516	44.516	11.129	44.516	44.516	8.851	40.231	40.231	8.851	40.231	40.231
2	3.234	12.936	57.452	3.234	12.936	57.452	2.593	11.784	52.016	2.593	11.784	52.016
3	1.770	7.082	64.534	1.770	7.082	64.534	1.832	8.325	60.341	1.832	8.325	60.341
4	1.286	5.145	69.679	1.286	5.145	69.679	1.444	6.562	66.903	1.444	6.562	66.903
5	1.219	4.875	74.553	1.219	4.875	74.553	1.131	5.141	72.044	1.131	5.141	72.044
6	.811	3.245	77.798	.811	3.245	77.798	.936	4.257	76.301	.936	4.257	76.301
7	.679	2.718	80.516	11.129	44.516	44.516	.608	2.761	79.063	8.851	40.231	40.231
8	.653	2.612	83.128	3.234	12.936	57.452	.523	2.378	81.441	2.593	11.784	52.016
9	.413	1.651	84.779	1.770	7.082	64.534	.459	2.086	83.527	1.832	8.325	60.341
10	.409	1.635	86.414				.440	1.998	85.525			
11	.395	1.580	87.994				.397	1.804	87.329			
12	.344	1.376	89.370				.364	1.656	88.985			
13	.307	1.229	90.599				.341	1.551	90.536			
14	.293	1.171	91.771				.316	1.435	91.971			
15	.274	1.095	92.866				.297	1.348	93.319			
16	.259	1.034	93.900				.256	1.164	94.483			
17	.246	.983	94.883				.241	1.094	95.578			
18	.219	.875	95.758				.220	.999	96.577			
19	.203	.810	96.568				.215	.979	97.556			
20	.190	.759	97.328				.200	.909	98.465			
21	.160	.639	97.967				.175	.794	99.259			
22	.141	.562	98.529				.163	.741	100.000			
23	.136	.546	99.075									
24	.117	.468	99.543									
25	.114	.457	100.000									

* Extraction Method: Principal Component Analysis.

The goodness-of-fit indices show a good fit to the data for the models of both countries. All the goodness of fit indices falls within the acceptance levels recommended in the literature (Bagozzi & Yi, 1988; Baumgartner & Homburg, 1996; Bentler & Bonett, 1980; Hu & Bentler, 1999; Tucker & Lewis, 1973). The following paragraphs address the results for each of the hypotheses.

Results

Properties of the causal paths including standardized path coefficients are presented in Figures 2 and 3. The results of hypothesis testing are shown in Table 8.

For hypothesis H1, the results for both countries demonstrated a significant relationship between subjects' perceived computer self-efficacy and their perceived online review ease of use ($\beta_{U.S.}$=0.430, β_{Thai}=0.239, p-value<0.01). This finding indicates that subjects who consider themselves confident

Table 5. Factor analysis – U.S. data

Q#	Constructs	Components					
		1	2	3	4	5	6
1	Perceived Computer Self-Efficacy 1	.088	**.825**	.064	.106	.130	-.061
2	Perceived Computer Self-Efficacy 2	.013	**.875**	.117	.045	.033	-.006
3	Perceived Computer Self-Efficacy 3	-.059	**.816**	.143	.017	.062	.127
4	Perceived Computer Self-Efficacy 4	.138	**.623**	.255	-.023	-.151	.235
5	Perceived Computer Self-Efficacy 5	.035	**.800**	.141	.092	.125	-.065
6	Perceived Online Review Usefulness 1	.293	.130	.362	.281	**.706**	.153
7	Perceived Online Review Usefulness 2	.360	.070	.346	.303	**.684**	.178
8	Perceived Online Review Usefulness 3	.400	.042	.269	.382	**.661**	.186
9	Perceived Online Review Usefulness 4	.331	.126	.340	.353	**.691**	.154
10	Perceived Online Review Ease of Use 1	.296	.164	**.756**	.153	.222	.159
11	Perceived Online Review Ease of Use 2	.234	.151	**.801**	.217	.067	.111
12	Perceived Online Review Ease of Use 3	.183	.241	**.799**	.137	.262	.067
13	Perceived Online Review Ease of Use 4	.138	.313	**.790**	.155	.247	.029
14	Perceived Online Review Credibility 1	**.847**	.056	.117	.177	.128	.076
15	Perceived Online Review Credibility 2	**.774**	.031	.235	.272	.199	.142
16	Perceived Online Review Credibility 3	**.808**	.075	.252	.250	.229	.110
17	Perceived Online Review Credibility 4	**.769**	.019	.224	.127	.282	.079
18	Perceived Online Review Importance 1	.155	.093	.237	**.767**	.273	.154
19	Perceived Online Review Importance 2	.193	.035	.050	**.848**	.148	-.025
20	Perceived Online Review Importance 3	.230	.084	.253	**.677**	.288	.274
21	Perceived Online Review Importance 4	.282	.086	.208	**.787**	.173	.229
22	Intention to Use Online Review 1	.260	.125	-.012	.284	.457	**.605**
23	Intention to Use Online Review 2	.041	.006	.194	.091	.044	**.825**
24	Intention to Use Online Review 3	.290	.072	.044	.320	.440	**.645**

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

with using computers also find it easy to use online review systems. There was not any cultural difference found in this relationship.

Regarding hypothesis H2, the results in both countries were consistent with previous findings in the TAM literature, showing that subjects' perceived online review ease of use significantly affects their perceived online review usefulness ($\beta_{U.S.}$=0.592, β_{Thai}=0.470, p-value<0.01). Today's customers tend to use online reviews more often and incorporate them into their product search and purchase decision making if they perceive that it is not difficult to use. This result indicates that if consumers find that the online review system is easy to use, they will tend to agree that the system is beneficial to them.

The results in hypothesis H3 were different between the two countries. The relationship between perceived online review ease of use and the intention to use online reviews was found to be significant for Thai subjects, but for U.S. subjects the relationship is not supported ($\beta_{U.S.}$=-0.044, p-value$_{U.S.}$=0.427, p-value$_{Thai}$<0.01). This finding suggests that U.S. subjects do not associate online review ease of use as being a factor that will influence their intention to use online reviews. This may be because

Table 6. Factor analysis – Thai data

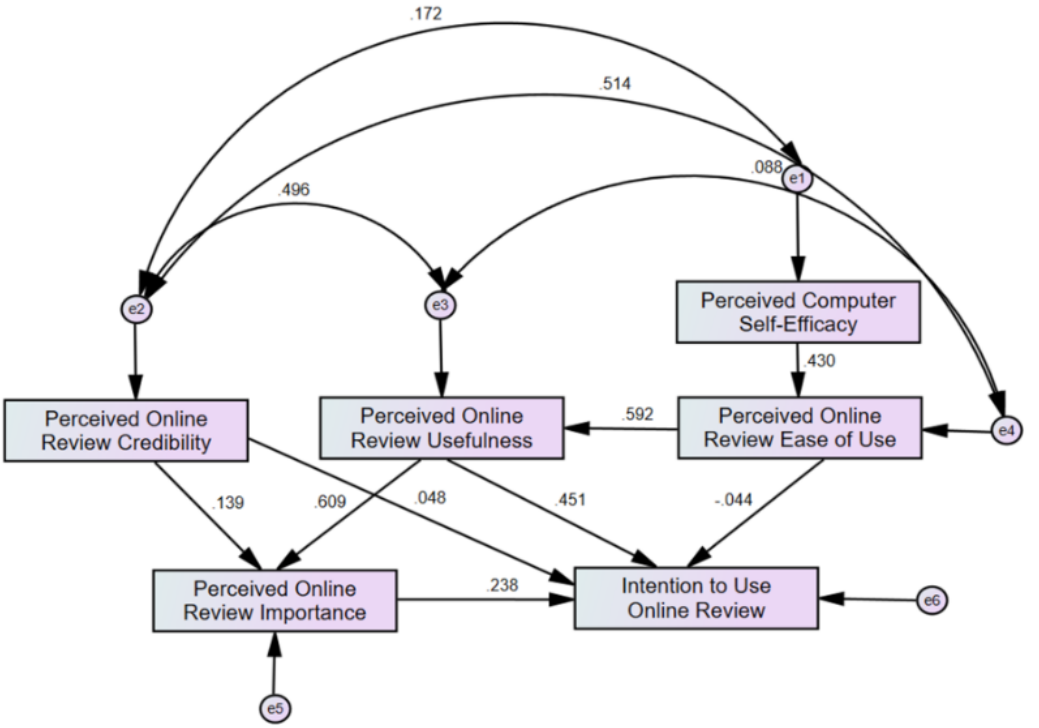
Q#	Constructs	Components					
		1	2	3	4	5	6
1	Perceived Computer Self-Efficacy 1	.109	-.021	.043	**.860**	-.001	.004
2	Perceived Computer Self-Efficacy 2	.064	.101	.025	**.863**	.033	.015
3	Perceived Computer Self-Efficacy 3	.012	.092	.150	**.740**	.202	.077
5	Perceived Computer Self-Efficacy 5	.114	-.007	.091	**.841**	.083	.054
6	Perceived Online Review Usefulness 1	.268	.235	**.746**	.151	.227	.174
7	Perceived Online Review Usefulness 2	.211	.371	**.729**	.074	.146	.181
8	Perceived Online Review Usefulness 3	.251	.269	**.748**	.106	.187	.220
9	Perceived Online Review Usefulness 4	.315	.266	**.737**	.134	.179	.196
10	Perceived Online Review Ease of Use 1	.168	.180	.083	.114	**.810**	.055
11	Perceived Online Review Ease of Use 2	.188	.130	.203	.127	**.810**	.055
12	Perceived Online Review Ease of Use 3	.098	.255	.213	.063	**.721**	.100
14	Perceived Online Review Credibility 1	.187	**.777**	.180	.091	.148	.137
15	Perceived Online Review Credibility 2	.178	**.794**	.232	.075	.155	.154
16	Perceived Online Review Credibility 3	.164	**.797**	.284	-.007	.114	.184
17	Perceived Online Review Credibility 4	.088	**.759**	.165	.023	.228	.091
20	Perceived Online Review Importance 3	.101	.233	.054	.039	-.008	**.834**
21	Perceived Online Review Importance 4	.301	.116	.315	.070	.173	**.733**
22	Perceived Online Review Importance 5	.252	.165	.344	.057	.117	**.738**
23	Intention to Use Online Review 1	**.828**	.166	.233	.028	.103	.210
24	Intention to Use Online Review 2	**.866**	.152	.162	.102	.127	.127
25	Intention to Use Online Review 3	**.838**	.127	.238	.131	.196	.111
26	Intention to Use Online Review 4	**.824**	.192	.202	.116	.135	.183

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 7. Fit indices for measurement and structural models

Fit Indices	Recommended Value	U.S.	Thai
		Measurement Model	Measurement Model
Chi-square (CMIN)/df	<=3.00	0.546	0.906
Goodness-of-fit (GFI)	>=0.90	0.998	0.998
Adjusted goodness-of-fit (AGFI)	>=0.80	0.989	0.985
Normed fit index (NFI)	>=0.90	0.998	0.997
Tucker Lewis Index (TLI)	>=0.90	1.008	1.002
Comparative fit index (CFI)	>=0.93	1.000	1.000
Root Mean Square Error of Approximation (RMSEA)	<=0.06	0.000	0.000

Figure 2. Structural equation model path analysis- U.S. data



online review systems are considered different from most other systems and are only considered worth using if the system has perceived value rather than ease of use. Regardless of how easy it is for online shoppers to use the review system it may only be worth using if it is perceived to be useful and important for their purchase decision.

For Hypothesis H4, significant results were found in both countries. The results reveal that perceived online review usefulness significantly impacts subjects' perceptions on the importance of online reviews ($\beta_{U.S.}$=0.609, β_{Thai}=0.533, p-value=<0.01). It is apparent that if consumers believe that online reviews are useful, they will tend to agree that the online reviews are important for their purchase decision-making.

Results were also shown to be significant among the two countries for hypothesis H5. The results reveal a significant effect of subjects' perceived online review usefulness on their intention to use online reviews ($\beta_{U.S.}$=0.451, β_{Thai}=0.478, p-value<0.01). This finding is consistent with TAM which found that subjects whose perceived usefulness of a system is high will be more likely to use the system. Also, this indicates that the TAM is a model which can contribute to a partial understanding of factors influencing the use of online review systems.

Regarding hypothesis H6, results for both countries demonstrate that perceived online review credibility played an important role on whether subjects will perceive online reviews to be important ($\beta_{U.S.}$=0.139, β_{Thai}=0.180, p-value<0.01). One major concern of the consumers who use online reviews is whether they can believe that the reviews are not fraudulent (Clement, 2019). So, it is not surprising that the perception of online review credibility plays an important role in whether subjects will use online reviews. This result suggests that trust plays a significant role in consumers' perceptions of online review importance, thus significantly impacting the decision on whether a product should be

Figure 3. Structural equation model path analysis- Thai data

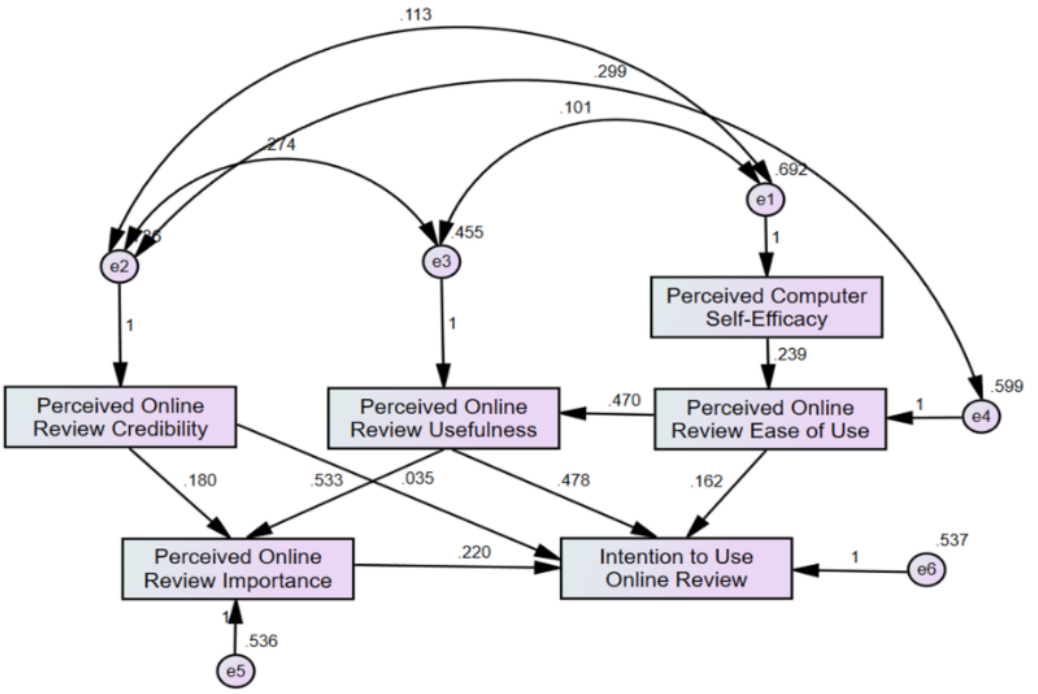


Table 8. Hypothesis Testing and Results

H#	Hypothesis Testing			U.S.			Thai		
				β	C.R.	p-value	β	C.R.	p-value
H1	Perceived Computer Self-Efficacy		Perceived Online Review Ease of Use	.430	8.759	***	.239	5.276	***
H2	Perceived Online Review Ease of Use		Perceived Online Review Usefulness	.592	6.079	***	.470	11.229	***
H3	Perceived Online Review Ease of Use		Intention to Use Online Review	-.044	-.794	.427	.162	3.013	***
H4	Perceived Online Review Usefulness		Perceived Online Review Importance	.609	11.474	***	.533	9.077	***
H5	Perceived Online Review Usefulness		Intention to Use Online Review	.451	6.079	***	.478	7.113	***
H6	Perceived Online Review Credibility		Perceived Online Review Importance	.139	2.620	***	.180	3.352	***
H7	Perceived Online Review Credibility		Intention to Use Online Review	.048	.824	.410	.035	0.626	.531
H8	Perceived Online Review Importance		Intention to Use Online Review	.238	4.026	***	.220	4.505	***

*** indicates significant level p<0.01

purchased. This finding expands on previous literature by establishing that credibility is important to consider in the use of online review systems.

Concerning hypothesis H7, the results in neither of the countries provided support for the relationship between perceived online review credibility and intention to use online reviews ($\beta_{U.S.}$=0.048, β_{Thai}=0.035, p-value$_{U.S.}$=.410, p-value$_{Thai}$=.531). The result implies that review credibility alone does not directly impact consumers' decisions to use online reviews. However, the result of H6 suggests that review credibility positively influences customer perceptions on review importance and H8 suggests that review importance affects customer intentions to use online reviews. So, these findings reveal that review credibility indirectly influences customers' intention to use online reviews through its impact on consumers' perceptions of review importance.

For the last hypothesis H8, the results from both countries indicate that if users perceive that online reviews are important for their purchase decision making, they also intend to use online reviews ($\beta_{U.S.}$=0.238, β_{Thai}=0.220, p-value<0.01). This finding suggests that if subjects believe that online reviews are meaningful as they consider their purchase decision, then they will likely use the online review system.

DISCUSSION AND CONCLUSION

This study examined factors that influence customers' intention to use online review systems and compared factors and results between the respondents from the U.S. and Thailand. This research builds upon the TAM factors of Perceive Usefulness and Perceived Ease of Use. The resulting research model that consisted of six factors was analyzed using SEM with the SPSS 25.0 and AMOS 24 statistical software applications.

Most of the proposed relationships were found to be supported in both of the countries. The only significant difference between the results of respondents from the two countries is shown in H3 that perceived online review ease of use impacted the intention to use online reviews for Thai respondents, but not for U.S. respondents. Although determining what aspect of each culture affects technology perceptions is beyond the scope of this study, the results suggest that the culture may influence user perceptions and impact how customers choose to use online review systems.

In regard to the other seven hypotheses, the model was strongly supported by respondents from both countries for all of the relationships except hypothesis 7. The results of hypotheses 1, 2, 4, 5, 6, and 8 all show strong support for the proposed model. Therefore, perceived self-efficacy, perceived online review credibility, perceived online review usefulness, perceived online review ease of use, and perceived online review importance all either directly or indirectly affect a customer's intention to use online reviews. Although E-commerce websites cannot control the perceived computer self-efficacy of customers, they can put forth a strong effort to develop a well-designed online review system that is easy to use and can put adequate controls in place in order to increase the perceived credibility and usefulness of the reviews. For example, algorithms which assess the number and types of user reviews posted by each user often can detect users that are posting reviews that are fraudulent. In addition, Ecommerce websites can require customers to purchase an item before posting a product review in order to increase review credibility, minimizing the opportunity of users to post reviews without ever purchasing the product. Also, allowing users to rate the reviews of others can often help the online review system to assess which reviews are more valuable and accordingly arrange reviews so that the reviews with the highest value to customers will be prominently displayed.

This research provides several contributions to both existing systems theory as well as to practitioners. This study contributes to existing information systems theory by expanding on the constructs that affect users' perceptions and usage intentions. The results of this study indicate that there are other variables besides perceived usefulness and perceived ease of use that affect user perceptions and/or usage intention. These factors are perceived computer self-efficacy, perceived online review credibility, and perceived online review importance. Related to this, the finding that

review credibility affects perceived online review importance suggests that there are non-system factors that affect user perceptions. Thus, in studies examining the user acceptance of systems, factors other than the system design factors should be considered. In addition, this study found that there were cultural implications that affected the model and that culture affected one of the relationships in the model. Because of this finding, we propose that culture should be considered when considering implementing information systems as users from one country may have different perceptions and usage intentions than users from one country. Even within the same company, it may be necessary to adapt system implementation strategies as following an implementation plan that was successful in one country may not be successful in another country (Mukesh et al., 2009).

The results of this research provide scientific and practical insights to the online review and system adoption literature as well as to businesses. This study contributes to the literature by expanding on the system adoption and technology acceptance literature by finding multiple constructs that influence user perception and usage intentions. The investigation on the role of review credibility in influencing perceived online review importance and intention to use are relationships examined which expand on prior research. This shows that there are factors other than the system design that influence user perceptions. In addition, this study contributes to the literature examining the role of culture in influencing users. Although only one relationship was not significant in the U.S. even though it was significant in Thailand, it shows that culture had an effect on system perceptions. Future literature investigating system acceptance should consider the role of culture in impacting users.

From a practical perspective, this study demonstrates the factors that online consumers find important in their decision to use online review. Today's customers tend to believe that the use of technology should only require minimal effort. The findings of this study suggest that online businesses must ensure that their online review system is easy to use. User perceptions of review credibility influence how they perceive the importance of the review. Ecommerce companies that want users to be influenced by reviews need to have appropriate measures in place to ensure that reviews overall are perceived as credible. These findings can help businesses to better understand how their customers perceive online review systems. Through a better understanding of how customers are impacted by online reviews, companies can better design online review systems that meet the type of system that customers want.

As with many empirical studies, there is an inherent limitation due to the sample used. The sample data was collected from students at universities in Thailand and the U.S. Nevertheless, prior research has suggested that students are acceptable surrogates for online customers since those that generally participate in online commerce tend to be younger and more educated than the general population (Bellman el al., 1999). The use of students in E-commerce research is common since students mostly have experience with online shopping and share other common characteristics with general online shoppers (Palvia, 2009). Regardless, the ability to generalize based on the results of this study may be limited, since university students are not representative of all online shoppers. Future studies could reduce this possible limitation by collecting sample data that may produce more generalizable results. Future research could also introduce culture into the model to identify specific differences between collectivist cultures and individualistic cultures as well as other cultural effects. Additional factors such as demographic factors could also be examined in future research.

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Chuleeporn Changchit is a Professor of Management Information Systems at Texas A&M University – Corpus Christi. She holds a Ph.D. in Decision Sciences and Information Systems from the University of Kentucky. Dr. Changchit is actively engaged in the scholarly activities. She has published articles in many journals such as Decision Support Systems, Information Systems Journal, Expert Systems with Applications, the Journal of Computer Information Systems, and International Journal of Intelligent Systems in Accounting, Finance, and Management. She also serves as an Ex-Editor-in-Chief for the Journal of Information Privacy and Security (JIPS), serves as an Associate Editor for the Journal of Organizational Computing and Electronic Commerce (JOCEC) and the Journal of Electronic Commerce in Organization (JECO), and serves on editorial review board for several journals.

Tim Klaus is a Professor at Texas A&M University – Corpus Christi. He earned his PhD (Management Information Systems) from University of South Florida. His primary research interests are ERP implementations, Financial Systems, and Mobile and Web Applications. He has published papers in journals such as Communications of the ACM (CACM), Journal of International Technology (JIT), Journal of Global Information Management (JGIM) and European Journal of Information Systems (EJIS).

Alicha Treerotchananon is an Assistant Professor of Mass Communications. She received a Ph.D. in Buddhist Studies from Mahachulalongkornrajavidyalaya University, A Master of Art in Journalism and Mass Communications, Thammasat University, Thailand. She is currently a lecturer at the Division of Marketing Communication, Faculty of Mass Communications, Chiang Mai University. Dr. Treerotchananon is active in communication for social empowerment. She received several of national awards and recognition in Socio-Academic Engagement and Social Innovations and also participated in many academic conferences.