Research Article

Global Media Journal
ISSN 1550-7521

2017
Vol. 15 No. 28: 67

Why Do People Continue Using Facebook: An Empirical Study from the Perspectives of Technology Adoption and Social Contract

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Citation: Chang CW, Xue F. Why Do People Continue Using Facebook: An Empirical Study from the Perspectives of Technology Adoption and Social Contract. Global Media Journal. 2017, 15:28.

Abstract

Online stalking, identity theft, and other privacy-related issues have become the major reasons that impede users from continuously using their Facebook accounts. To better understand how privacy risks, among other factors, have come into play, in terms of affecting users' intention to continue using social networking sites, the present study applies three theories (i.e., the unified theory of acceptance and use of technology 2, social contract theory, and technology continuance theory) to develop a new model for Facebook use continuance. An online survey (N=450) was performed by administrating a random sampling method in January and February of 2014. Data analysis employing structural equation modeling (SEM) reveals the predictors (i.e., performance expectancy, hedonic motivation, trust, attitude, and satisfaction) accountable for the intention to continue using Facebook, with the entire model explaining 65% of the variance. Theoretical ramifications for future research and practical implications for social media companies and marketers are also discussed.

Keywords: Facebook; Social media; Technology continuance; UTAUT2; Social contract

Received: April 06, 2017; **Accepted:** April 16, 2017; **Published:** April 26, 2017

Introduction

Background of the problem

In the past decade, social media has become a major part of people's everyday lives. According to Experian Marketing Services, users in the United States spend 16 minutes out of every hour on social media [1]. Among the various online platforms, Facebook makes up 83% of the total time Americans spend on social-networking sites [2]; therefore, Facebook has been ranked the most popular social media platform from among the many other competitors in the market (e.g., Twitter, LinkedIn, and Pinterest). As of September 30, 2012, Facebook had more than 166 million users in the United States, meaning that one out of every two Americans had a Facebook account [3]. Because of its high penetration rate, Facebook has not only played an important role in users' everyday lives, but has also become one of the most efficient and effective marketing tools.

Since Facebook requires its users' personal information to provide customized services (e.g., suggestions of friends and fan pages, location-based services, etc.), collecting private personal data and tracking a user's online activities are necessity for Facebook [4]. On the other hand, advertising is Facebook's major revenue source, accounting for $1.33 billion earned in the fourth quarter of 2012 [5]. Because most advertising on Facebook targets certain audiences, the amount of user-related information Facebook can collect from its users significantly impacts the revenue Facebook gets from targeted marketing and advertising. Although revealing personal information seems natural to most Facebook users, online stalking, identity theft, harassment, and other privacy-related issues have gradually become major concerns that impede users from continuously using their Facebook accounts. For example, Stieger, Burger, Bohn, and Voracek's [6] study found that nearly half the users (48%) who quit their Facebook accounts did so because of privacy concerns– the number one reason that users deactivated their Facebook pages. There is an urgent need for Facebook, as well as other social media organizations, to understand how to keep their existing users, and how privacy-related issues, among other factors, can come into play to affect users' continued use of social networking sites. This study would therefore attempt to enrich the literature in this field by proposing a new behavior model explaining users' intention to continue using Facebook.

Purpose of the study

The present study aims to answer the following two overarching questions: 1) What are the reasons behind Facebook continuance? and 2) How do different factors explain such intention? This study administered an online survey to address these issues. Three theories are utilized to create a new behavior model: The unified theory of acceptance and use of technology 2 [7], social contract theory [8], and technology continuance theory [9]. The constructs from UTAUT2 (i.e., performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation) and social contract theory (i.e., trust and perceived risks) are examined as exogenous predictive variables. Satisfaction and attitude, the precursors for behavioral intention suggested by TCT, are examined as endogenous predictive variables. This study investigates the various predictors' influence on a user's continued intention to use Facebook, the outcome variable for the proposed behavior model. Therefore, the purpose of this study is four-fold: 1) It investigates the proposed model's explanatory ability for predicting users' intention to continue using Facebook; 2) It examines the effects of users' attitude toward and satisfaction with Facebook on their continuance intention, as well as examining the precursors of attitude and satisfaction; 3) It probes each exogenous predictive variable's influence on the gauged intention, mediated through users' attitude toward and satisfaction with Facebook; and, 4) It provides theoretical ramifications for future research, as well as practical implications for social media companies and marketers, by discussing a strategy for keeping existing users active on the sites.

Significance of the study

The significance of this study is both theoretical and practical. First, social media use is different from traditional media consumption in that social media use requires a user's active participation to create user-generated content and online interaction [10]. Because of this participation, social media use, known as a form of computer-mediated communication, is considered a behavior relying more on information and communication technology (ICT) than on the use of traditional media. This leads to the present study's intention to adapt theories from the field of ICT. Because UTAUT2 has been empirically verified to have the highest predictive ability toward users' adoption of ICT compared to other technology acceptance models [7], examining how UTAUT2 can be applied to Facebook use would lead to a significant theoretical contribution in the field of social media research. Additionally, because online stalking, identity theft, harassment, and other privacy-related issues have become the major reason why users discontinue their Facebook accounts in recent years [6], the present study regards the use of Facebook as a risky behavior by incorporating the concepts of trust and perceived risks from social contract theory to better understand users' intention to continue using Facebook. Furthermore, previous studies have explored various online platforms and proposed insightful arguments regarding the factors influencing users' adoption of social media [11,12].

However, as Facebook's penetration rate rises, retaining existing users instead of attracting newer ones is considered a more significant agenda for Facebook. Early studies on Facebook continuance either do not comprehensively examine aforehand mentioned factors or simply focus on small Facebook markets. For example, Hsu and Wu [13] and Wu, Huang, and Hsu [14] explore Facebook continuance in Taiwan, yet their studies fall short of a small Facebook population and snowball sampling method. For a better understanding of continuance intention, technology continuance theory (TCT) suggests that attitude and satisfaction are the two precursors of users' intentions to continue using ICT [14]. Previous literature also found that users' attitude and satisfaction could serve as the outcomes for the predicted variables proposed by this study (for more details, see research hypotheses and model). Therefore, the mediating role of users' attitude and satisfaction are investigated to provide in-depth information for theoretical and practical implications.

Literature Review

Facebook and Its privacy controversies

Facebook, one of the most popular social networking sites, was launched by Mark Zuckerberg in 2004, then a sophomore at Harvard University [15]. At first, Facebook only accepted membership registrations from Harvard University students, and it later expanded to general users and soon became one of the most popular social media outlets [15]. In May 2008, Facebook surpassed MySpace as the most visited social networking site worldwide [16]. In October 2009, Facebook again beat MySpace to become the most popular social networking site in the United States [17]. As of the first quarter of 2013, Facebook reported that there are 1.19 billion global Facebook users [18]. According to Experian Marketing Services, online users in the United States spend 16 minutes out of every hour on social media [1], of which Facebook makes up 83% of the total time Americans spend on social-networking sites [2]. As of September 30, 2012, Facebook had more than 166 million users in the United States, meaning that one out of every two Americans had a Facebook account [3]. This high penetration rate has made Facebook an indispensible part of Americans' everyday lives.

Facebook tracks users' online activities and requires users to voluntarily disclose personal information to provide customized service such as suggestions of friends and fan pages, location-based services, etc. [18]. For example, Facebook's "nearby places" function provides its users with information about nearby stores based on users' specific geographical locations. There is no service fee required from Facebook users because Facebook also utilizes users' information for targeted advertising and marketing. According to Cutler [5], advertising is Facebook's major revenue source, accounting for $1.33 billion earned in the fourth quarter of 2012. Since most advertising on Facebook targets certain audiences, the amount of user-related information Facebook collects severely impacts the revenue Facebook can get from targeted marketing and advertising. This business mechanism has been proven successful because Facebook has become one of the most efficient and effective marketing tools in recent years.

However, Facebook has faced a major challenge with regard to privacy-related issues, and this challenge has further led to both users' reluctance to use Facebook and the discontinuance of their existing Facebook accounts [6]. Because active users are considered to be Facebook's major asset, this problem has caused an unprecedented crisis for this social media giant.

Even though Facebook claims it only utilizes users' information for advertising and marketing purposes, security malfunctions, which could possibly compromise users' information safety, have been regularly reported. For example, a severe security glitch that released users' personal information to unauthorized personnel was discovered on Facebook in 2010 [19]. This has made Facebook users vulnerable to online predators, harassment, identity theft, and other potential risks. For example, Facebook's location-based service may disclose users' physical locations, providing burglars with the opportunity to break into users' houses. Furthermore, Facebook utilizes users' personal information for advertising, even though it may cause potential risks for its users. For example, Working to Halt Online Abuse [20] reported that cyber-stalking on Facebook threatens young adults and female users. Nevertheless, Facebook allows teenagers' status postings to be viewed by the general public to gain more profit from advertisers targeting young Facebook users [21]. Perhaps most importantly, Facebook shares its users' personal information with third parties to boost its profit, although Facebook claims that, in doing so, it aims to provide a better personalized experience [22]. In this respect, if users log into a third party's website by using their Facebook accounts (i.e., users "link" their Facebook accounts with the third party's website), their Facebook friends logging into the same site later on could possibly see the users' relevant activities (e.g., news users have read, music users have listened to, products users have purchased, etc. [23]. Thus, Facebook users' information is at risk of being improperly used, which could lead to potential property loss and endangerment of personal lives.

Even though Facebook tried hard to improve its privacy protection, its regular technological glitches and the sharing of personal information for targeted advertising make users' privacy concerns inevitable. Consequently, privacy-related issues on Facebook have become the major reason leading to users' discontinuance of their Facebook accounts [24]. Stieger et al.'s [6] study found that nearly half of the users (48%) who quit their Facebook accounts did so because of privacy concerns–the number one reason for users deactivating their Facebook pages. In this respect, there is an urgent need for Facebook and other social media companies to understand how to keep their existing users, and how privacy-related issues, among other factors, can come to affect users' intention to continue using social media. Although privacy-related issues on Facebook have recently received a lot of attention from the public, the surprisingly limited development of research in this field requires more exploration [25]. This study would therefore attempt to enrich the literature in this field by proposing a new behavior model for explaining users' intention to keep using Facebook.

Theoretical Background

Social media use is different from traditional media consumption in that social media use requires users' active participation to create user-generated content and online interaction [9]. Because of this reason, social media use, known as a form of computer-mediated communication, is considered to be a behavior relying more on ICT than the use of traditional media. This leads to the present study's intention to adapt theories from the field of ICT. Because UTAUT2 has been empirically verified to have the highest predictive ability toward users' adoption of ICT compared to other technology acceptance models [9], this study examined how UTAUT2 can be also applied to the field of social media research.

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

UTAUT is a combination of eight behavioral models and theories that have been frequently used to examine users' adoption of ICT: the theory of reasoned action (TRA), the technology acceptance model (TAM), the motivational model (MM), the theory of planned behavior (TPB), the combined theory of planned behavior/technology acceptance model (C-TPB-TAM), the model of personal computer use (MPCU), the innovation diffusion theory (IDT), and the social cognitive theory [9]. By empirically examining users' adoption of information technology in an organizational context, Venkatech, Morris, Davis and Davis found that UTAUT predicts 70% of users' adoption intentions and 50% of their adoption behavior, which are better results than other existing technology acceptance models. A decade after UTAUT was first introduced to academia, Venkatesh, Morris, Davis and Davis's article was ranked the second most cited paper in *MIS Quarterly* [7]. The core constructs for UTAUT are all borrowed and developed from the previously mentioned eight models and theories (**Table 1 and Figure 1**).

UTAUT has been applied and extended to other contexts. For example, Hsu and Wu [12] and Wu, Huang, and Hsu [13] extend UTAUT to examine Facebook continuance in Taiwan. Their findings suggest that performance expectance, effort expectancy, social influence, and facilitating conditions are the predictors for Facebook continuance intention. However, Venkatesh et al. [7] believed it can be problematic if researchers directly apply UTAUT to examine consumers' adoption of ICT because of the difference of users' roles as employer and consumer. Therefore, three additional predictors (i.e., hedonic motivation, price value, and habit) were added to the UTAUT2, based on the literature on consumer research, to examine general users' adoption of ICT [7] **(Table 2 and Figure 2)**.

UTAUT2 has not only been extended to different types of ICT adoption [26,27], but also been used to examine users' ICT adoption under diverse cultural contexts [28,29]. Because social media use, known as a form of computer-mediated communication, relies more on technology than on the consumption of traditional media, incorporating the major predictors from UTAUT2 to the proposed model would provide a significant theoretical contribution in this field of social media

Table 1: Core constructs and root constructs/theories for UTAUT.

Performance	Definition	Root Constructs/Theories
Expectancy	"The degree to which an individual believes that using the system will help him or her to attain gains in job performance" (p. 447).	1. Perceived Usefulness (TAM/TAM2/C-TAM-TPB)
		2. Extrinsic Motivation (MM)
		3. Job-fit (MPCU)
		4. Relative Advantage (IDT)
		5. Outcome Expectations (SCT)
Effort Expectancy	"The degree of ease associated with the use of the system" (p. 450).	1. Perceived Ease-of-Use (TAM/TAM2)
		2. Complexity (MPCU)
		3. Ease-of-Use (IDT)
Social Influence	"The degree to which an individual perceives that important others believe he or she should use the new system" (p. 451).	1. Subjective Norm (TRA, TAM2, TPB/DTPB, and C-TAM-TPB)
		2. Social Factors (MPCU)
		3. Image (IDT)
Facilitating Conditions	"The degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (p. 453).	1. Perceived Behavioral Control (TPB/DTPB, C-TAM-TPB)
		2. Facilitating Conditions (MPCU)
		3. Compatibility (IDT)

Note: More details can be found from Venkatesh et al. (2003). User acceptance of information technology: Toward a unified view, MIS Quarterly, 27(3), 425-478

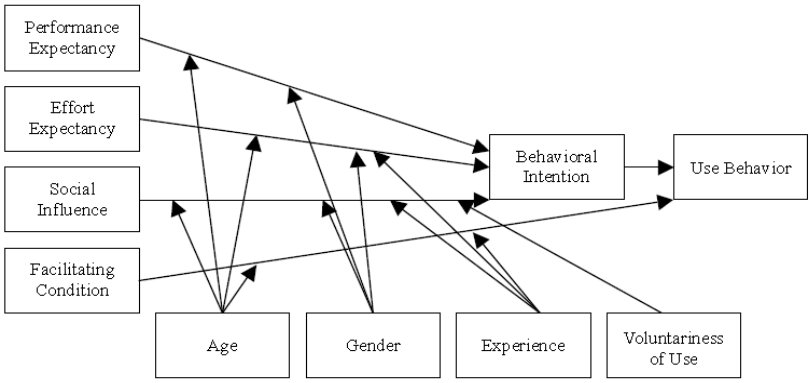

Figure 1 Unified Theory of Acceptance and Use of Technology (UTAUT).

Table 2: Added constructs and root studies for UTAUT2.

Constructs	Definition	Root Studies
Hedonic Motivation	"The fun or pleasure derived from using a technology" (p. 161)	1. Brown and Venkatesh (2005)
		2. Childers et al. (2001)
		3. Thong et al. (2006)
		4. Van der Heijden (2004)
Price Value	"Consumers' cognitive tradeoff between the perceived benefits of the applications and the monetary cost for using them" (p. 161).	1. Chan et al. (2008)
		2. Dodds et al. (1991)
		3. Zeithaml (1988)
Habit	"The extent to which people tend to perform behaviors automatically because of learning" "Scholars also equate habit with automaticity" (p. 161).	1. Ajzen (2002)
		2. Ajzen and Fishbein (2005)
		3. Kim and Malhotra (2005)
		4. Limayem et al. (2007)
		5. Ouellette and Wood (1998)

Note: More details can be found from Venkatesh et al. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. MIS Quarterly, 36(1): 157-178.

research. To make the analysis more manageable, the present study only used five predictive variables (i.e., users' performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation) and excluded the influences from moderators suggested by UTAUT2. "Price value" was withdrawn from the proposed model since Facebook does not charge a fee from its users; "habit" was also eliminated because of a lack of literature support.

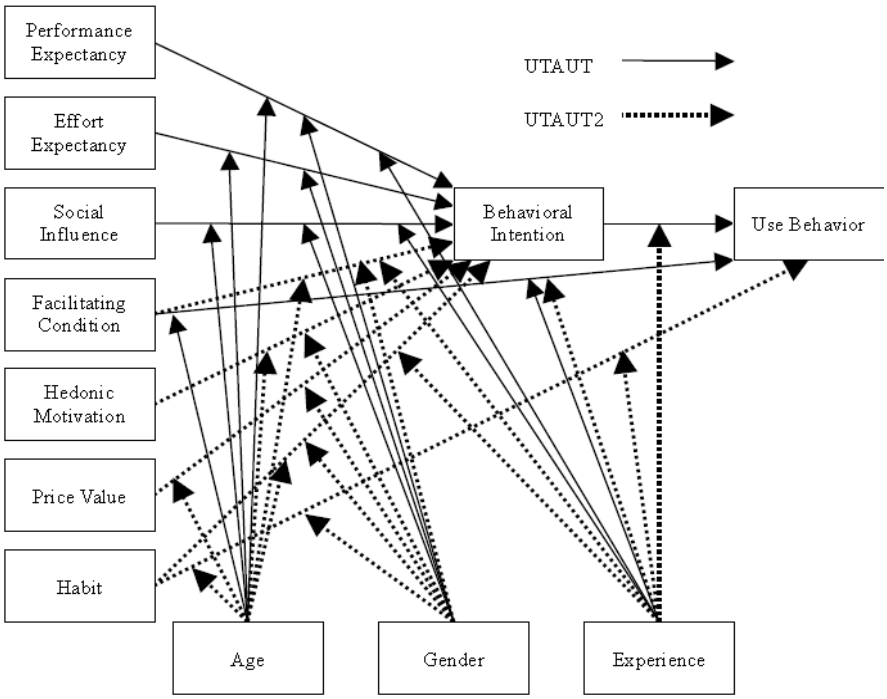

Figure 2 The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2).

Social contract theory

Social contract theory is also applied for the model construction based on prior literature on Internet online social community [30]. This is because online stalking, identity theft, harassment, and other privacy-related issues have become the major reason for why users discontinue their Facebook accounts in recent years [6]. The present study therefore regards the use of Facebook as a risky behavior, different from general technology adoption, by including social contract theory as its theoretical framework.

Social contract theory is a political philosophy that is used to explain the relationship among the individual, government, and society [31-34]. Social contract theory assumes that the individual is rational and understands that his/her unlimited freedom in our society may pose a risk of harm to others. In this the individual voluntarily gives up certain degrees of freedom (e.g., not breaking the laws and regulations made by the government) in exchange for a better social order [68]. This kind of voluntary consent is therefore considered a "social contract," ensuring the benefit to our society and the individuals living within it [32-34]. Previous studies have applied social contract theory to examine the "implicit social contract" [8], a relative concept compared to the "explicit (legal) social contract (i.e., law)," between marketers/advertisers and consumers [8,35]. Based on the assumption that businesses and firms provide advantages to our society [36], the implicit social contract implies that consumers would voluntarily provide personal or private information for services if marketers/advertisers keep their promise to use consumers' information for proper purposes only [8,18]. In this respect, consumers' trust toward marketers/advertisers, in terms of whether they would behave in a responsible way, plays an important role in consumers' voluntary consent for this implicit social contract [35]. Moreover, when providing personal information in exchange for services, consumers perceive not only benefits from the services, but also risks from unexpected problems [30,36]. Culnan and Armstrong's [37] study suggests that consumers would provide information in exchange for services only under the circumstances that their perception of the benefits is higher than the risks [18]. Additionally, consumers' perceived risks can be mitigated if their level of trust is high [38]. In other words, consumers' trust, perceived benefits, and perceived risks all play a role in affecting their voluntary consent for this implicit social contract.

Based on the assumptions of social contract theory, this study regards Facebook users' voluntary disclosure of personal information in exchange for social networking services as a form of implicit social contract. When using Facebook, users are required to provide personal information and allow the Facebook server to track their online activities for providing customized services [39]. In this respect, users trust that Facebook will behave properly and protect their personal information from unauthorized use. However, if Facebook fails to keep its promise, consumers would be less likely to trust Facebook, leading to their reluctance to provide personal information. Previous studies have provided empirical evidence supporting the postulation that users' trust affects their information disclosure on the web [40]. Trust is also considered to be the precursor of other kinds of social contracts such as online transactions. Furthermore, users understand that the disclosure of personal information, on one hand, guarantees a better user experience on Facebook and, on the other hand, may also cause potential problems such

as online stalking, identity theft, harassment, and other privacy issues [41,42]. A previous study has found empirical evidence that users' privacy concern on Facebook is one of the significant precursors predicting his or her discontinuance of Facebook use [6]. Krasnova, Spiekermann, Koroleva, and Hildebrand [38] also suggest Facebook users' perceived risks affect their willingness to disclose personal information. Consequently, this study borrows the constructs of users' trust and perceived risks from social contract theory for the model construction. Because the construct of perceived benefits is very similar to performance expectancy from UTAUT2, the researcher decided not to include it in the research model.

Technology Continuance Theory (TCT)

Previous studies have explored various online platforms and proposed insightful arguments regarding the factors influencing users' adoption of social media [10,11]. However, as Facebook's penetration rate rises, retaining existing users, instead of attracting newer ones, is considered a more significant agenda for Facebook. For example, Hsu and Wu [12] and Wu, Huang, and Hsu [13] explore Facebook continuance in Taiwan, yet their studies fall short of a small Facebook population and snowball sampling method. For a better understanding of continuance intention, technology continuance theory (TCT) was also applied for the model construction in this study. TCT was proposed by Liao, Palvia, and Chen's [14] study on information system adoption and continuance. It is an integrated model, incorporating the technology acceptance model (TAM), the expectation confirmation model (ECM), and the cognitive model [14]. The core constructs for TCT are all borrowed and developed from the previously mentioned three models **(Table 3 and Figure 3)**.

Although TCT has not been widely applied to different research, this study considers TCT useful for suggesting the predictive roles of users' attitude and satisfaction on their continuance intention of information systems.

Research Hypotheses and Model

This study employed three theoretical frameworks and relevant literature to propose the research model. Five exogenous predictive variables (i.e., performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation) were borrowed from UTAUT2 because of the theory's strong predictive power and the variables' high relevance for the adoption of information technology. Users' trust and perceived risks, as two additional exogenous predictors, were developed from social contract theory to reflect the privacy-related issues Facebook users encounter. The present study also applied TCT and relevant literature to its model construction, assuming that users' attitude toward and satisfaction with Facebook are the endogenous predictors for the proposed model. By including both exogenous and endogenous variables, the present study provided a holistic understanding of Facebook continuance.

Attitude, satisfaction, and continuance intention

TCT has been empirically verified by previous studies. Ho's [43] study on e-learning continuance successfully replicated the relationships among attitude, satisfaction, and continuance intention, as suggested by TCT. Because Facebook use is similar to the adoption and continuing use of information technology, this study hypothesizes that users' attitude toward and satisfaction with Facebook positively influence their intention to continue using Facebook. Moreover, based on the assumptions of TCT, users' satisfaction with Facebook also positively affects their attitude toward Facebook. Thus, three hypotheses are proposed:

H1: Attitude toward Facebook positively predicts intention to continue using Facebook.

H2: Satisfaction with Facebook positively predicts intention to continue using Facebook.

H3: Satisfaction with Facebook positively predicts attitude toward Facebook.

Table 3: Core constructs and root constructs/theories for TCT.

Core Constructs	Definition	Root Constructs/ Theories
Perceived Usefulness	"The prospective user's subjective probability that using a specific application system will increase job performance (Davis, Bagozzi and Warshaw 1989, p. 985)" (p. 310).	Technology Acceptance Model (TAM)
Perceived Ease-of-Use	"The degree to which the prospective user expects the target system to be free of effort (Davis et al., 1989, p. 985)" (p. 310).	Technology Acceptance Model (TAM)
Confirmation	"Disconfirmation is defined as the discrepancy between a user's pre-adoption expectations and perceived performance (Churchill and Suprenant, 1982; Oliver, 1980). The polarity of disconfirmation is positive when the perceived performance is higher than pre-adoption expectations and the user is satisfied, or is negative when perceived performance falls short of expectations and the user is dissatisfied" (p. 311).	Expectation Confirmation Model (ECM)
Satisfaction	"An individual's post-consumption evaluation of a specific transaction (Bolton and Drew, 1991; Hunt, 1977)" (p. 311).	Cognitive Model (COG)
Attitude	"An individual's overall evaluation of a product or service offering (Bolton and Drew, 1991; Hunt, 1977)" (p. 311).	Cognitive Model (COG)

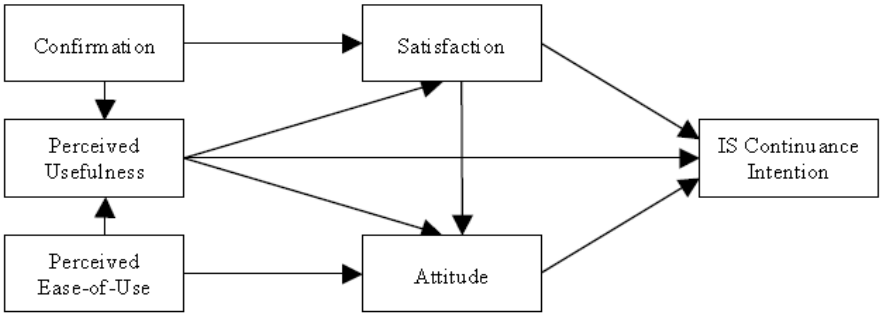

Figure 3 Technology Continuance Theory (TCT).

Exogenous predictors and their effects on attitude and satisfaction

Performance expectancy: The construct of performance expectancy was originally developed from perceived usefulness, both of which measure similar psychological concepts. Because perceived usefulness influences one's attitude toward and satisfaction with information systems [14,43], it is reasonable to assume that performance expectancy would have the same effects under the context of Facebook use, which was verified by Bonson, Escobar, and Ratkai's [44] study:

H4a: Performance expectancy on Facebook positively predicts attitude toward Facebook.

H4b: Performance expectancy on Facebook positively predicts satisfaction with Facebook.

Effort expectancy: Previous studies found that users' perceived ease-of-use influences their attitude [14,43] toward and satisfaction with Facebook use [45]. Because users' perceived ease-of-use is exactly the same as the construct of users' effort expectancy from UTAUT2, this study hypothesizes that users' effort expectancy on Facebook would negatively influence their attitude toward and satisfaction with Facebook:

H5a: Users' effort expectancy on Facebook negatively predicts their attitude toward Facebook.

H5b: User's effort expectancy on Facebook negatively predicts their satisfaction with Facebook.

Social influence: UTAUT2 and several behavioral and technology acceptance models (e.g., TPB, TRA, C-TAM-TPB, TAM2 and MPCU) have provided empirical evidence that users' social influence affects their intention to adopt ICT. Although there is still a lack of research examining how users' social influence affects their attitude in a social media or ICT context, previous studies have suggested that consumers' subjective norms, a construct very similar to social influence, affect their attitude toward products and consumption behaviours [46-49]. Thus it is reasonable to hypothesize that users' social influence, such as the opinions or suggestions from their family members and close friends, would positively influence users' attitude toward Facebook. Because Hsu and Chiu's [50] study also suggests that users' interpersonal influence affects their satisfaction with information systems, this study hypothesizes that users' social influence on Facebook use would positively influence their satisfaction with Facebook:

H6a: User's social influence on Facebook use positively predicts their attitude toward Facebook.

H6b: User's social influence on Facebook use positively predicts their satisfaction with Facebook.

Facilitating conditions: A study on consumer behavior found that users perceiving better facilitating conditions would have more positive attitudes toward the behaviour [51]. Yen and Gwinner's [52] study also provides empirical evidence that users' perceived behavior control directly influences their satisfaction with information systems. Thus, this study assumes that users' facilitating conditions on Facebook use would positively influence their attitude toward and satisfaction with Facebook:

H7a: User's facilitating condition on Facebook use positively predicts their attitude toward Facebook.

H7b: User's facilitating condition on Facebook use positively predicts their satisfaction with Facebook.

Hedonic motivation: Hedonic motivation is considered the precursor of users' attitude toward information systems [53]. A previous study on consumer behavior also suggests both consumers' utilitarian and hedonic values predict their satisfaction [54]. Thus, this study hypothesizes that users' hedonic motivation for using Facebook would positively influence their attitude toward and satisfaction with Facebook:

H8a: User's hedonic motivation for using Facebook positively predicts their attitude toward Facebook.

H8b: User's hedonic motivation for using Facebook positively predicts their satisfaction with Facebook.

Trust: Early literature found that trust predicts users' attitude toward social networking systems [55]. A study on consumer behavior also suggests that users' trust in technology systems predicts their satisfaction with online consumer-to-consumer platforms [56]. Based on previous findings, this study postulates that users' trust in Facebook would positively predict their attitude toward and satisfaction with Facebook:

H9a: User's trust in Facebook positively predicts their attitude toward Facebook. H9b: User's trust in Facebook positively predicts their satisfaction with Facebook.

Perceived risks: De Matos et al.'s [47] study on consumer behavior found that users' perceived risks predict their attitude toward products [47]. Although there is a lack of literature exploring the effect of users' perceived risks on their satisfaction with information technology or social media, it is reasonable that users' perceived risks would affect their satisfaction with Facebook use. Hence, this study hypothesizes that users' perceived risks of Facebook use would negatively predict their attitude toward and satisfaction with Facebook:

H10a: User's perceived risks of Facebook use negatively predict their attitude toward Facebook.

H10b: Users' perceived risks of Facebook use negatively predict their satisfaction with Facebook.

Based on the hypotheses, the research model was proposed (**Figure 4**).

Method

This study used an online survey to collect data and later conducted a modeling test in IBM SPSS Amos. The data were collected in late January and early February, 2014.

Sample

In order to generalize the results to the general population, the subject population for this study is Facebook users over 18-years old in the United States (the relevant research laws and regulations also require the participants to be 18-years old or older). This study administrated a random sampling method by recruiting participants from Amazon Mechanical Turk (MTurk). Previous studies have suggested that MTurk represents a larger population and is considered reliable [57]. Besides the representativeness of sampling, SEM also requires large numbers of cases. Kenny [58] and Kline [59] suggest that a study of at least 200-400 cases is considered a suitable sample size for running a SEM analysis. For this study, 450 cases were used for the data analysis (see **Table 4** for descriptive demographic statistics).

Procedure

Preparation: As a survey research involving human subjects, this study was approved by the IRB office to ensure its less than minimum risk. In order to reach participants all around the United States, an online questionnaire consisting of 81 questions on Qualtrics was designed for data collection. All the questions were either borrowed or adapted from previous scales that have been verified to have high reliabilities. Social media professionals and heavy users were asked to examine the questionnaire for the pretest. An introduction page was produced to ensure the participants answer the questionnaire truthfully and to the best of their knowledge. The researcher's contact information was also provided to the participants, in case they had any questions or concerns about this study.

Administration: This study recruited participants from Amazon Mechanical Turk (MTurk) by paying each of them 50 cents (USD) as compensation. Participants were provided a URL link to Qualtrics to answer the questionnaire individually at their own convenience. To ensure privacy, all the questionnaires were collected anonymously. For each part of the questionnaire, the researcher provided detailed instructions to help participants answer individual questions. The function of "force answering" for individual questions was also used in Qualtrics to prevent participants from skipping any questions. Only when the participants completed all of the questions, could they be considered valid cases.

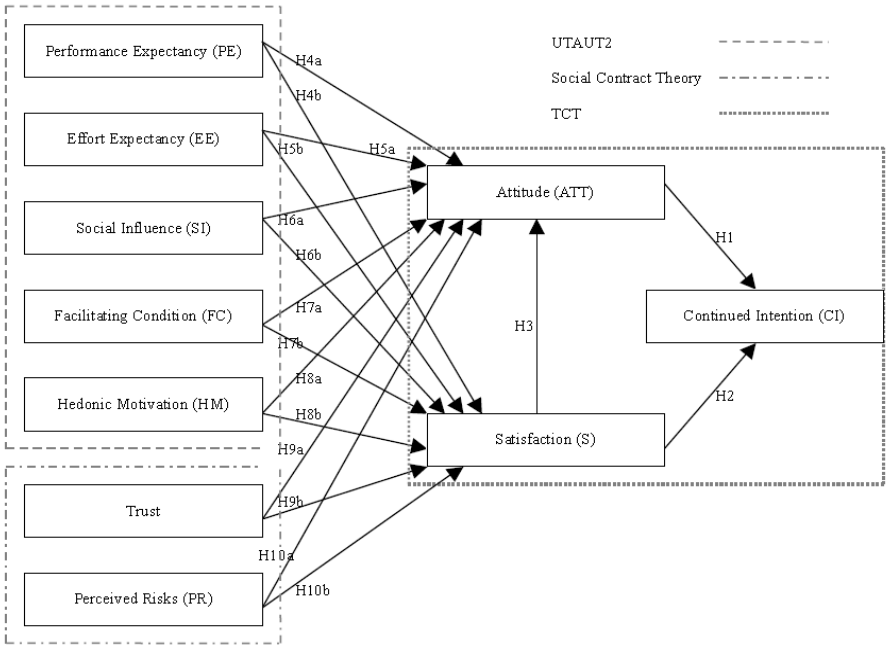

Figure 4 The research model.

Table 4: Descriptive Demographic Statistics.

	N	%
Gender		
Male	289	64.2
Female	161	35.8
Age		
18 to 24 years	108	24
25 to 34 years	227	50.4
35 to 44 years	63	14
45 to 54 years	36	8
55 to 64 years	13	2.9
Age 65 or older	3	0.7
Ethnicity		
White	333	74
Black or African American	40	8.9
Hispanic or Latino	26	5.8
Native American or American Indian	6	1.3
Asian	42	9.3
Other Race	3	0.7
Education Level		
Less than high school	4	0.9
High school or equivalent	49	10.9
Some college, no degree	140	31.1
Associate's degree	49	10.9
Bachelor's degree	169	37.6
Master's degree	32	7.1
Professional degree (MD, JD, etc.)	6	1.3
Other	1	0.2
Household Income		
Less than $10,000	37	8.2
$10,000 - $19,999	48	10.7
$20,000 - $29,999	76	16.9
$30,000 - $39,999	63	14
$40,000 - $49,999	51	11.3
$50,000 - $59,999	43	9.6
$60,000 - $69,999	40	8.9
$70,000 - $79,000	31	6.9
$80,000 - $89,000	12	2.7
$90,000 - $99,000	12	2.7
$100,000 to $149,999	27	6
$150,000 or more	10	2.2

Note. The total number of cases is 450.

Instrumentation

Screening questions: Three screening questions (yes/no) were used for filtering the participants in this study. The first screening question was used to ensure that the respondents were US-based Mturk participants. The second screening question was asked to make sure all of the participants were Facebook users. To comply with relevant research laws and regulations, the third screening question was asked to guarantee the participants in this study were at least 18-years old or older. Those participants answering "no" for any of the screening questions were immediately led to a thank you page and considered invalid cases for this study.

Exogenous Predicted Variables from UTAUT2

Five predicted variables for this study (i.e., performance expectancy, effort expectancy, social influence, facilitating condition, and hedonic motivation) were borrowed from UTAUT2. To measure these variables, questions using a 7-point Likert scale (disagree/agree) were developed from the UTAUT2 and UTAUT models.

Performance expectancy: Four questions were asked to measure the degree to which users believe using Facebook increases their effectiveness and efficiency in their everyday lives: "I find Facebook useful in my daily life;" "Using Facebook increases my chances of connecting with people that are important to me;" "Using Facebook increases my chances of obtaining information that is important to me;" and "Using Facebook increases my efficiency in everyday life."

Effort expectancy: Three questions were asked to investigate the degree to which Facebook users believe using Facebook is effortless for them: "Learning how to use Facebook is easy for me;" "I find Facebook easy to use;" and "It is easy for me to become skilled in using Facebook."

Social influence: Three questions were asked to gauge the degree to which Facebook users' significant others believe they should use Facebook: "People who are important to me think that I should use Facebook;" "People who influence my behavior think that I should use Facebook;" and "People whose opinions that I value prefer that I use Facebook."

Facilitating conditions: Four questions were asked to examine the degree to which Facebook users believe they have the appropriate technologies/knowledge/resources to use Facebook: "I have the technologies necessary (e.g., computer or smartphone) to use Facebook;" "I have the knowledge necessary to use Facebook;" "Facebook is compatible with other technologies I use;" and "I can get help from others when I have difficulties using Facebook."

Hedonic motivation: Three questions were asked for measuring the degree of fun or pleasure a user obtains from using Facebook: "Using Facebook is fun;" "Using Facebook is enjoyable;" and "Using Facebook is very entertaining."

Exogenous predicted variables from social contract theory

Trust and perceived risks were developed from social contract theory. Because the construct of perceived benefits is considered similar to the performance expectancy metric from UTAUT2, trust and perceived risks were measured.

Trust: To examine the degree to which users trust in Facebook, questions using a 7-point Likert scale (disagree/agree) were directly borrowed from Fogel and Nehmad's [30] study, which was originally developed by Pan and Zinkhan [60]. Four questions were asked: "Facebook is a trustworthy social network;" "I can count on Facebook to protect my privacy;" "I can count on Facebook to protect customers' personal information from unauthorized use;" and "Facebook can be relied on to keep its promises."

Perceived risks: Regarding the measurement for perceived risks, questions using a 7-point Likert scale (disagree/agree) were developed from Debatin, Lovejoy, Horn, and Hughes's [61] study on Facebook and online privacy. Three questions were asked to measure the degree of risks users perceive while using Facebook: "I'm worried that I may encounter unwanted advances, stalking, or harassment on Facebook;" "I'm worried that I may encounter damaging gossip or rumors on Facebook;" and "I'm worried that I may encounter personal data stolen/abused by others on Facebook."

Endogenous predicted variables from TCT

Based on TCT and previous literature, the constructs of attitude and satisfaction were examined as the two endogenous predicted variables for the proposed model.

Attitude: Developed from Liao et al.'s [14] study, four questions using a 7-point Likert scale (disagree/agree) were asked to measure users' general attitude toward Facebook use: "Using Facebook would be a good idea;" "Using Facebook would be a wise idea;" "I like the idea of using Facebook;" and "Using Facebook would be a pleasant experience."

Satisfaction: The questions for measuring users' satisfaction with Facebook use were adapted from Liao et al.'s [14] study, which was originally developed by Spreng, MacKenzie, and Olshavsky [62]. A statement was provided to the participants: "My overall experience of Facebook use was _____." Four 7-point semantic differential scales (displeased/pleased, frustrated/contented, terrible/delighted, and dissatisfied/satisfied) were used for measuring users' satisfaction with Facebook use.

Dependent variable

The dependent variable measured by this study is users' continued intention of Facebook use. Three questions using a 7-point Likert scale (disagree/agree) were developed from Liao et al.'s [14] study: "I intend to continue using Facebook rather than discontinue its use;" "My intentions are to continue using Facebook rather than using any alternative social media;" and "If I could, I would like to continue using Facebook as much as possible."

Demographic information

Five questions concerning participants' gender, age, ethnicity, education level, and household income were also asked to gather basic demographic information.

Results

This study used IBM SPSS 22 and IBM SPSS Amos 22 to conduct a structural equation modeling (SEM) analysis. The researcher followed Anderson and Gerbing's [63] two-step modeling approach. For the first step of the analysis, a measurement model was created to examine the validity (i.e. convergent validity and discriminant validity) and reliability and to conduct a model fit analysis. For the second step, a structural model was constructed to examine the regression paths between the variables proposed in this study.

Validity and reliability measures

Convergent validity: After cleaning the data in IBM SPSS 22, the researcher created a measurement model in IBM SPSS Amos 22. Followed by Hair et al. [64], Kline [59], and Schumacker, and Lomax's [65] suggestions, the researcher examined the factor loading for each measurement item and calculated the average variance extracted (AVE) and composite reliability (CR) values to ensure the convergent validity for the measurement model. As can be seen from **Table 5**, the factor loadings for all the measurement items ranged from 0.715 to 0.965 (after deleting those items below 0.70), which are all greater than the threshold value of 0.70. The AVE values for the constructs also meet the threshold requirement (>0.50), ranging from 0.764 to 0.982. For CR values, all the constructs are above the minimum threshold of 0.60. The examination of factor loading, AVE, and CR values indicates the convergent validity was met by the proposed model (for details, see **Table 5**).

Discriminant validity: Followed by Hair et al. [64] Kline [59], and Schumacker, and Lomax's [65] suggestion, discriminant validity was tested by comparing the square root of the AVE of a specific construct (the bold numbers in **Table 6**) to the factor correlation coefficients between the specific construct and other constructs. The results show the square root of the AVE for each construct is greater than its correlation coefficients with other constructs, indicating a good discriminant validity for the proposed model.

Reliability: This study used Cronbach's alpha to examine reliability because it is considered the most common measurement among many other reliability statistics. The Cronbach's alpha reliability for the constructs of PE, EE, SI, FC, HM, Trust, PR, ATT, S, and CI were calculated using IBM SPSS 22. The results showed the coefficients for Cronbach's alpha range from 0.84 to 0.96 for the constructs of EE, SI, FC, HM, Trust, PR, ATT, S, and CI, indicating a high internal consistency. The construct of PE had an acceptable internal consistency with 0.77 for Cronbach's alpha. Overall, the measurement items for individual constructs are considered reliable based on the threshold value of 0.70 suggested by Hatcher and Stepanski **(Table 5)**

Examination of model fit

To examine the measurement model fit, a list of goodness-of-fit indices were used for comparison based on the suggestions by Hair et al. [64], Kline [59], and Schumacker and Lomax [65]. The results indicate that the proposed model has a good fit to the collected data when rounding the actual values of indices to one decimal place. **Table 7** shows the recommended value and actual value for individual indices.

Hypotheses testing

For the second step of the data analysis, the researcher drew all the paths hypothesized by this study to construct a structural model in IBM SPSS Amos 22. As can be seen from **Figure 5**, 8 out of 17 paths were supported at a significance level of 0.001. Attitude is influenced by satisfaction (β=0.158), performance

expectancy (β=0.137), hedonic motivation (β=0.713. Satisfaction is affected by performance expectancy (β=0.238), hedonic motivation (β=0.515), and trust (β=0.289). Continuance intention is predicted by attitude (β=0.374) and satisfaction (β=0.464). The R^2 value shows that the model explains 92% of the variance in users' attitude toward Facebook, 79% of the variance in users' satisfaction with Facebook, and 65% of the variance in users' intention to continue using Facebook. **Table 8** shows a summary table of the hypotheses testing in this study.

Mediation analysis

Following the suggestion of Baron and Kenny [66], this study used the technique of bootstrap in SPSS AMOS 22 to examine the direct, indirect, and total effects on users' continuance intention from various predictors in the research model. **Table 9** shows the bootstrap values based on a sample size of 2000 and with 95% bias-corrected confidence intervals. The results of the total effects suggest that attitude (β=0.374), satisfaction (β=0.523), performance expectancy (β=0.176), hedonic motivation (β=0.536), and trust (β=0.157) are all determinant factors for Facebook use continuance. These total effects include two direct effects from attitude (β=0.374) and satisfaction (β=0.464). Regarding the indirect effects, satisfaction (β=0.157), performance expectance (β=0.176), hedonic motivation (β=0.536), and trust (β=0.157) are all considered significant predictors for continuance intention of Facebook use.

Discussion

Discussion of results

This theory-driven study establishes a new continuance model for Facebook use,

explaining 65% of the variance for Facebook users' continuance intention. The results suggest the following five major findings:

1. Users' attitude toward Facebook (β = .374, p < .001) and satisfaction with Facebook use (β = .464, p < .001) are the two strongest predictors for their continuance intention.
2. Users' satisfaction with Facebook use affects their attitude toward Facebook (β = .158, p < .05), which indirectly influences their continuance intention of Facebook use (β = .059, p < .05, 95% C.I. = .002, .176).
3. Users' performance expectancy and hedonic motivation directly influence their attitude toward Facebook (performance expectancy: β = .137, p < .01; hedonic motivation: β = .713, p < .001) and satisfaction with Facebook use (performance expectancy: β = .238, p < .01; hedonic motivation: β = .515, p < .001), which later affect users' Facebook continuance intention (indirect effect from performance expectancy: β = .176, p < .01, 95% C.I. = .087, .294; indirect effect from hedonic motivation: β = .536, p < .001, 95% C.I. = .420, .640).
4. Users' trust in Facebook affects their satisfaction with Facebook use (β = .289, p < .001), which later influences their continuance intention of Facebook use (indirect effect from users' trust: β = -.067, p < .01, 95% C.I. = .092, .224).

Theoretical ramifications

The findings from this study are consistent with the TCT model, and a previous study [43] in information system use continuance. For example, the total effects for the structural model suggest that users' attitude and satisfaction with Facebook are the two strongest precursors for Facebook use continuance intention. The mediation analysis also reveals both the direct and indirect effects from users' satisfaction on continuance intention. Regarding the indirect effect, users' satisfaction with Facebook influences their attitude toward Facebook, which later predicts users' continuance intention of Facebook use. Although the proposed research model in this study did not comprehensively test all the assumptions by TCT, this study suggests the potential for the TCT model to be extended to the context of social media research.

Because of social media's unique characteristics compared to other technology, a couple of constructs in UTAUT2 are not as strong predictors for continued use as other literature suggests. Performance expectancy and hedonic motivations from UTAUT2 are considered two determent predictors for continuance intention of Facebook, mediated through users' attitude toward Facebook and satisfaction with Facebook use. This means that users continue using Facebook if they consider Facebook useful or fun either for their everyday lives or jobs. However, when using users' attitude and satisfaction with Facebook as two mediating factors, this study did not find any statistically significant influences from effort expectancy, social influence, and facilitating conditions. It is possible that the prevalence of wireless internet and mobile devices as well as the popularity of Facebook have decreased the influences from users' effort expectancy and facilitating conditions. Since users' mobile technology and prior use experience has made Facebook use an effortless activity, users' effort expectancy and facilitating conditions may no longer predict their attitude toward Facebook, satisfaction with Facebook, and intention to continue using Facebook. Users' social influence, on the other hand, may be a strong predictor for users' initial adoption of information technology [7,67] rather than continuance intention, and attitude and satisfaction from users' habitual use.

The results of this study also suggest that users' continuance of Facebook is an implicit social contract. When people use Facebook, they believe that Facebook is a reliable social networking company and trust that Facebook would not use their personal information for unauthorized purposes. Nevertheless, if Facebook breaks this social contract with its users, people will have lower degrees of trust in this online social networking platform. Facebook users' levels of perceived risks will also likely soar because they consider Facebook to be untrustworthy. In this respect, users' trust affects their attitude toward Facebook as well as their satisfaction with Facebook use, which indirectly determine their continuance intention of Facebook.

Table 5: Convergent validity.

Construct/Factor	Item	Standardized Loading	Average variance extracted (AVE)	Composite reliability (CR)	Reliability (Alpha Value)
Performance Expectancy (PE)	PE1	0.874	0.885	0.939	0.768
	PE2	0.715			
Effort Expectancy (EE)	EE1	0.91	0.947	0.982	0.918
	EE2	0.926			
	EE3	0.83			
Social Influence (SI)	SI1	0.908	0.982	0.99	0.932
	SI2	0.938			
	SI3	0.87			
Facilitating Condition (FC)	FC1	0.828	0.959	0.986	0.886
	FC2	0.964			
	FC3	0.762			
Hedonic Motivation (HM)	HM1	0.955	0.975	0.991	0.84
	HM2	0.965			
	HM3	0.879			
Trust	Trust1	0.829	0.964	0.991	0.958
	Trust2	0.964			
	Trust3	0.972			
	Trust4	0.925			
Perceived Risks (PR)	PR1	0.841	0.764	0.866	0.855
	PR2	0.888			
Attitude (ATT)	ATT1	0.805	0.962	0.987	0.895
	ATT2	0.934			
	ATT3	0.943			
Satisfaction (S)	S1	0.908	0.948	0.982	0.896
	S2	0.938			
	S3	0.87			
Continuance Intention (CI)	CI1	0.806	0.914	0.97	0.87
	CI2	0.807			
	CI3	0.875			

Table 6: Discriminant Validity.

Construct	PE	EE	SI	FC	HM	Trust	PR	ATT	S	CI
PE	0.94									
EE	0.515	0.973								
SI	0.258	0.066	0.991							
FC	0.212	0.007	0.444	0.979						
HM	0.7	0.425	0.312	0.126	0.987					
Trust	0.477	0.344	0.147	-0.009	0.496	0.982				
PR	-0.049	0.009	-0.076	-0.149	-0.028	-0.238	0.874			
ATT	0.735	0.428	0.299	0.108	0.941	0.55	-0.113	0.981		
S	0.704	0.374	0.293	0.193	0.809	0.651	-0.189	0.845	0.974	
CI	0.865	0.393	0.246	0.185	0.717	0.537	-0.138	0.757	0.767	0.956

Practical and marketing implications

Based on the empirical findings in this study, several marketing and practical suggestions are also provided to improve the business practices of social media companies and marketers. For social media companies and marketers, this study suggests that boosting users' positive attitude toward and satisfaction with Facebook would ensure their use continuance intention. To ensure users' positive attitude, social media companies are suggested to enhance users' satisfaction, performance expectancy, and hedonic motivation. On the other hand, users' satisfaction with Facebook use can be boosted by ensuring their performance expectancy, hedonic motivation, and trust are met. Other than enhancing users' positive attitude toward Facebook and satisfaction with Facebook use, increasing users' performance expectancy, hedonic motivation, and trust, would ensure users' continuance intention, mediated through their attitude toward and satisfaction with Facebook.

Based on the direct and indirect effects of performance expectancy, users are more likely to continue using Facebook when they consider Facebook to be useful in their everyday lives

Table 7: Fit indices for the measurement model.

Goodness-of-fit indices		Recommended value	Actual value
Absolute fit indices	χ2/df	<3	2.263
	GFI	>0.90	0.893
	AGFI	>0.80	0.86
	RMSEA	<0.08	0.053
Incremental fit indices	NFI	>0.90	0.943
	RFI	>0.90	0.93
	IFI	>0.90	0.967
	TLI	>0.90	0.96
	CFI	>0.90	0.967
Parsimonious fit indices	PCFI	>0.50	0.791
	PNFI	>0.50	0.777

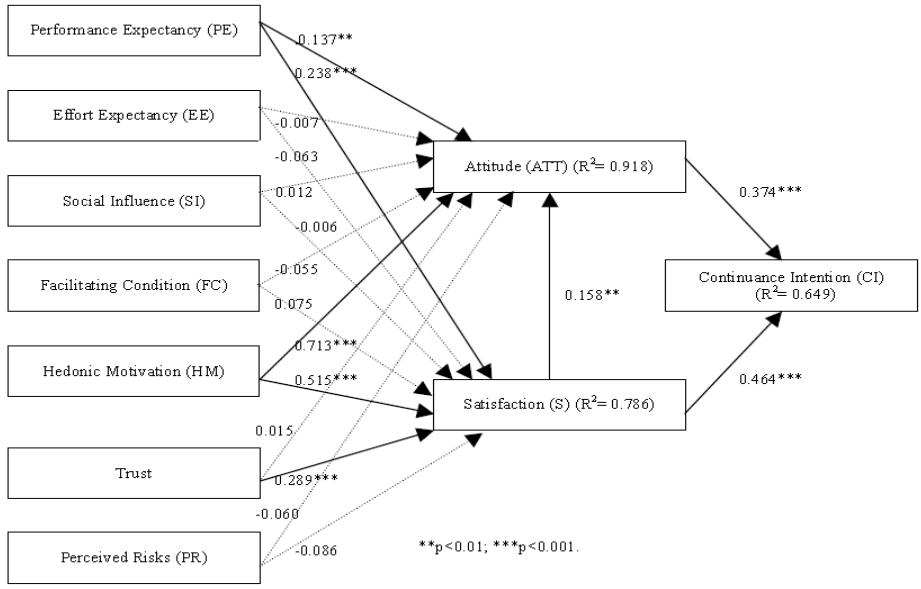

Figure 5 Structural model.

Table 8: Hypotheses Testing.

Hypothesis	Path	β	t	p	Result
H1	ATT → CI	0.374	4.99	***	Supported
H2	S → CI	0.464	5.993	***	Supported
H3	S → ATT	0.158	3.075	0.002	Supported
H4a	PE → ATT	0.137	3.175	0.001	Supported
H4b	PE→ S	0.238	4.259	***	Supported
H5a	EE→ ATT	-0.007	-0.268	0.789	Not Supported
H5b	EE → S	-0.063	-1.822	0.068	Not Supported
H6a	SI → ATT	0.012	0.521	0.602	Not Supported
H6b	SI → S	-0.006	-0.186	0.853	Not Supported
H7a	FC→Att	-0.055	-2.280	0.023	Not Supported
H7b	FC →S	0.075	2.291	0.022	Not Supported
H8a	HM → ATT	0.713	15.539	***	Supported
H8b	HM→S	0.515	10.146	***	Supported
H9a	Trust → ATT	0.015	0.520	0.603	Not Supported
H9b	Trust → S	0.289	7.975	***	Supported
H10a	PR→ ATT	-0.060	-2.588	0.010	Not Supported
H10b	PR →S	-0.086	-2.761	0.006	Not Supported

***p<0.001.

Table 9: Bootstrap values for direct, indirect, and total effect (continuance intention).

Variable	Direct Effect			Continuance Intention			Total Effect			R^2
				Indirect effect						
	β	p	95% C.I.	β	p	95% C.I.	β	p	95% C.I.	
ATT	0.374	0.001	(0.147, 0.609)	-	-	-	0.374	0.001	(0.147, 0.609)	0.649
S	0.464	0.001	(0.328, 0.710)	0.059	0.041	(0.002, 0.176)	0.523	0.001	(0.328, 0.710)	
PE	-	-	-	0.176	0.002	(0.087, 0.294)	0.176	0.002	(0.087, 0.294)	
EE	-	-	-	-0.035	0.146	(-0.085, 0.012)	-0.035	0.146	(-0.085, 0.012)	
SI	-	-	-	0.002	0.879	(-0.037, 0.048)	0.002	0.879	(-0.037, 0.048)	
FC	-	-	-	0.019	0.332	(-0.022, 0.072)	0.019	0.332	(-0.022, 0.072)	
HM	-	-	-	0.536	0.000	(0.420, 0.640)	.536	0.000	(0.420, 0.640)	0.649
Trust	-	-	-	0.157	0.001	(0.092, 0.224)	.157	0.001	(0.092, 0.224)	
PR	-	-	-	-0.067	0.003	(-0.115, -0.023)	-0.067	0.003	(-0.115, -0.023)	

or jobs. This study therefore encourages social media companies to develop useful functions for their users. For example, the birthday reminder is considered practical for most Facebook users, as Facebook users will now not forget to send birthday wishes to their friends. Based on the effects of hedonic motivation, social media companies are encouraged to increase users' fun and enjoyable experience while using social media. For example, game applications have been widely applied by Facebook, which might explain part of the reasons for why Facebook has been rated the most popular social networking website. This study suggests that other social media platforms adopt a similar strategy to provide a more fun and enjoyable experience for their users, which will enhance their use continuance intention.

Additionally, this study suggests that the business integrity of social media companies plays an important role in users' continuance intention of social media. Based on the effect of trust found in this study, social media companies may consider enhancing users' trust beliefs for using their platforms. To achieve this goal, up-to-date terms and policies regarding how social media companies can utilize users' personal information for customized service are required. Social media companies also need to keep their promises to behave properly and to protect users' personal information from unauthorized use. In addition to the use of an up-to-date encryption algorithm for the security of online platforms, social media companies are strongly encouraged to perform data anonymization before applying users' personal information for targeted advertising and marketing. When sharing information with third parties for services, no personally identifiable information should be included or provided.

Limitations and Future Research

Although this study creates a strong and holistic model for predicting Facebook use continuance, the research has its limitations. Future research projects are encouraged based on the following suggestions.

First, this study borrows constructs and develops its measure scales from other research in the fields of ICT and information science. Because social media use may be different from the adoption of communication technology, this discrepancy might cause doubt about the validity of this study regarding what has been measured. Future studies should develop original scales as well as modify relevant psychological constructs based on the context of social media use. For example, the construct of "effort expectancy" or "perceived effort" has been widely applied to ICT adoption studies. When it comes to Facebook, already having a high penetration rate in the United States, no one really needs to take the effort to use it. Nevertheless, to use Facebook and to be proficient in using it might be different for different users. Some people use Facebook without the ability to manage their content and privacy settings, which may be a potential factor affecting their willingness to continue using Facebook.

Second, although Facebook is one of the most popular social networking sites, it might not be a good representative for other social media platforms, such as Twitter, Instagram, Google Plus, etc. As more and more alternative social networking sites become more popular and reach large numbers of users, follow-up research projects may apply a similar research model for examining other social media platforms as well as comparing the similar and contradictory results among different social media outlets. This type of cross-platform research will enrich our understanding of social media use continuance both at the theoretical and practical levels. As modern advertisers and marketers target their customers through multiple social media platforms simultaneously, it is essential for researchers to examine multiple social networking sites as a whole rather than focus on one single social media company.

Third, the nature of social media is globalized and geographically boundless. As advertisers and marketers utilize social media to target customers all around the world, it is imperative for researchers to continue exploring overseas users from diverse

cultural backgrounds or geographical areas. To better understand universal users' social media use continuance, studies must take cultural factors, which have not been fully explored by the existing social media literature and the present study, into consideration.

References

1 Tatham M (2013) For every hour online Americans spend 16 minutes on social networks.

2 Leonard H (2013) Americans Still Spend Far More Time On Facebook Than Other Social Media.

3 Internet World Stats (2012) Retrieved fromhttp://www.internetworldstats.com/stats2.htm

4 Facebook terms and policies (2013) Retrieved from https://www.facebook.com/policies/

5 Cutler K (2013) Facebook's Q4 revenue rises 40% to $1.59B, shares down slightly in after-hours. Retrieved from http://techcrunch.com/2013/01/30/facebooks-q4-revenue-rises-40-to-1-59b-shares-decline-7-percent-in-after-hours/

6 Stieger S, Burger C, Bohn M, Voracek M (2013) Who commits virtual identity suicide? Differences in privacy concerns, Internet addiction, and personality between Facebook users and quitters. Cyberpsychology, Behavior, and Social Networking, 16: 629-634.

7 Venkatesh V, Thong JYL, Xu X (2012) Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. MIS Quarteryl 36: 157-178.

8 Milne GR, Gordon ME (1993) Direct mail privacy-efficiency trade-offs within an implied social contract framework. Journal of Public Policy and Marketing, 12: 206-215.

9 Gallant LM, Boone GM (2011) Communicative informatics: An active and creative audience framework of social media. Cognition, Communication, Co-Operation, 9: 231-246.

10 Hargittai E (2007) Whose space? Differences among users and non-users of social network sites. Journal of Computer-Mediated Communication, 13: 276-297.

11 Hargittai E, Litt E (2011) The tweet smell of celebrity success: Explaining variation in Twitter adoption among a diverse group of young adults. New Media & Society, 13: 824-842.

12 Hsu CL, Wu CC (2011) Understanding users' continuance of Facebook: An integrated model with the unified theory of acceptance and use of technology, Expectation disconfirmation model, and flow theory. Int J virt commu and soc net (IJVCSN) 3: 1-16.

13 Wu CC, Huang Y, Hsu CL (2014) Benevolence trust: a key determinant of user continuance use of online social networks. Information Systems and e-Business Management 12: 189-211.

14 Liao C, Palvia P, Chen J (2009) Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT) Int J Infor Manage 29: 309-320.

15 Nicholas C (2010) At Last-The Full Story Of How Facebook Was Founded.

16 McCarthy C (2008) ComScore: Facebook is beating MySpace worldwide.

17 Smith J (2009) December data is in: Facebook surpasses MySpace in US uniques.

18 Chang C-W, Heo J (2014) Visiting theories that predict college students' self-disclosure on Facebook. Computers in Human Behavior 30: 79-86.

19 Wortham J (2010) Facebook and privacy clash again.

20 WHOA (2009) 2009 cyberstalking statistics.

21 Kelly H (2013) Facebook changes privacy settings for teens.

22 Pegoraro R (2010) The latest Facebook fracas: Your privacy vs. its profit.

23 Wolverton T (2010) Wolverton: New Facebook changes threaten privacy.

24 Smith C (2010) Delete your Facebook account: 'Quit Facebook day' wants users to leave.

25 Piotrowski C (2012) Facebook: A bibliographic analysis of the PsycINFO database. Journal of Instructional Psychology 39: 63.

26 Huang CY, Kao YS, Wu MJ, Tzeng GH (2013) Deriving factors influencing the acceptance of Pad Phones by using the DNP based UTAUT2 framework. Proceedings of PICMET 2013 San Jose, CA, pp: 880-887.

27 Slade EL, Williams M, Dwivedi Y (2013) An extension of the UTAUT 2 in a healthcare context. UK Academy for Information Systems Conference Proceedings 2013 (paper 55) Oxford, United Kingdom.

28 Alawan AA, Dwivedi YK, Williams MD (2013) Adoption of self-service technology by Jordanian customers. Proceedings of Swansea University Business School Postgraduate Research Conference Swansea, Wales, United Kingdom, pp: 8-16.

29 Chong AYL, Ngai ETW (2013) What influences travelers' adoption of a location-based social media service for their travel planning? PACIS 2013 Proceedings (paper 210) Jeju Island, Korea.

30 Fogel J, Nehmad E (2009) Internet social network communities: Risk taking, trust, and privacy concerns. Computers in Human Behavior 25: 153-160.

31 Locke J (2007) The social contract. In: Adler JE, Elgin CZ (eds.) Philosophical inquiry: Classic and contemporary readings Indianapolis, IN: Hackett Publishing Company, pp: 653-663.

32 Macneil IR (1974) The many futures of contracts. Southern California Law Review, 47: 691-816.

33 Riley P (2006) The social contract and its critics. In: Goldie M, Wokler R (eds.) The Cambridge history of eighteenth-century political thought, Cambridge UK: Cambridge University Press, pp: 347-375.

34 Rousseau JJ (1971) The social contract. London: Penguin Books.

35 Okazaki S, Li H, Hirose M (2009) Consumer privacy concerns and preference for degree of regulatory control. Journal of Advertising 38: 63-77.

36 Quelch JA, Jocz KA (2008) Greater good: How good marketing makes for better democracy. Cambridge, MA: Harvard Business Press.

37 Culnan MJ, Armstrong PK (1999) Information privacy concerns, procedural fairness, and impersonal trust: An empirical investigation. Organization Science 10: 104-115.

38 Krasnova H, Spiekermann S, Koroleva K, Hildebrand T (2010) Online social networks: Why we disclose. J Infor Tech 25: 109-125.

39 Facebook (2013) Facebook reports first quarter 2013 results.

40 Hoffman DL, Novak TP, Peralta M (1999) Building consumer trust online. Communications of the ACM 42: 80-85.

41 Ibrahim Y (2008) The new risk communities: Social networking sites and risk. Int J Med & Cul Pol 4: 245-253.

42 Tufekci Z (2008) Can you see me now? Audience and disclosure regulation in online social network sites. Bulletin of Science, Technology & Society 28: 20-36.

43 Ho CH (2010) Continuance intention of e-learning platform: Toward and integrated model.

44 Bonsón E, Escobar T, Ratkai M (2014) Testing the inter-relations of factors that may support continued use intention: The case of Facebook. Social Science Information 53: 293-310.

45 Sibona C, Choi JH (2012) Factors affecting end-user satisfaction on Facebook.

46 Ang SH, Cheng PS, Lim AC, Tambyah SK (2001) Spot the difference: Consumer responses towards counterfeits. J Consu Mark 18: 219-235.

47 De Matos CA, Ituassu CT, Rossi CAV (2007) Consumer attitudes toward counterfeits: A review and extension. J Consu Mark 24: 36-47.

48 Phau I, Teah M (2009) Devil wears (counterfeit) Prada: A study of antecedents and outcomes of attitudes towards counterfeits of luxury brands. J Cons Mark 26: 15-27

49 Tang JH, Farn CK (2005) The effect of interpersonal influence on softlifting intention and behaviour. J Bus Eth 56: 149-161.

50 Hsu M, Chiu C (2004) Predicting electronic service continuance with a decomposed theory of planned behaviour. Behav & Infor Tech 23: 359-373.

51 Limayem M, Khalifa M, Chin WW(2004) Factors motivating software piracy: A longitudinal study. IEEE Transactions on Engineering Management 51: 414-425

52 Yen HJR, Gwinner KP (2003) Internet retail customer loyalty: The mediating role of relational benefits. Intern J Serv Indus Manage 14: 483-500.

53 Childers TL, Carr CL, Peck J, Carson S (2001) Hedonic and utilitarian motivations for online retail shopping behavior. J Ret 77: 511-535.

54 Ryu K, Han H, Jang SS (2010) Relationships among hedonic and utilitarian values, satisfaction and behavioral intentions in the fast-casual restaurant industry. International journal of contemporary hospitality management 22: 416-432.

55 Shin DH, Kim Y (2010) Effect of trust and privacy concerns on social networking: A trust-based acceptance model for social networking systems. Paper presented at the annual meeting of the International Communication Association.

56 Lu J, Wang L, Hayes LA (2012) How do technology readiness, platform functionality and trust influence C2C user satisfaction? Journal of Electronic Commerce Research 13: 50-69.

57 Buhrmester M, Kwang T, Gosling S (2011) Amazon's Mechanical Turk A New Source of Inexpensive, Yet High-Quality, Data? Perspectives on Psychological Science 6: 3-5.

58 Kenny DA (2012) Measuring model fit.

59 Kline RB (2011) Principles and practice of structural equation modeling (3rdedn) New York: The Guilford Press.

60 Pan Y, Zinkhan GM (2006) Exploring the impact of online privacy disclosures on consumer trust. J Ret 82: 331-338.

61 Debatin B, Lovejoy JP, Horn AK, Hughes BN (2009) Facebook and online privacy: Attitudes, behaviors, and unintended consequences. JComp-Med Comm 15: 83-108.

62 Spreng RA, MacKenzie SB, Olshavsky RW (1996) A reexamination of the determinants of consumer satisfaction. J Mark 60: 15-32.

63 Anderson JC, Gerbing DW(1988) Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin 103: 411-423.

64 Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL (2006) Multivariate data analysis (6thedn) Upper Saddle River NJ: Pearson.

65 Schumacker RE, Lomax RG (2004) A beginner's guide to structural equation modeling. Mahwah, NJ: Lawrence Erlbaum Associates.

66 Baron RM, Kenny DA (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology 51: 1173.

67 Venkatesh V(2012) Models.http://www.vvenkatesh.com/organizations/models.asp

68 Rachels J, Rachels S (2011) Elements of moral philosophy. New York: McGraw-Hill.