

**Predicting Facebook Fans' Continuance Intention to Interact with Facebook
Hospitality Company Fan Pages**

*A Previsão de Continuidade da Interação de Fãs com Páginas de Hotelaria do
Facebook*

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ABSTRACT

This study proposes and tests a new synthesized model by integrating the expectation-confirmation model, the technology acceptance model, one affective factor and two information-sharing factors to examine fans' intention to continue interacting with hospitality company pages. Facebook fans from Taiwan are recruited as participants via an Internet survey. Data from 354 usable questionnaires were tested against the research model. The results show that satisfaction has the most pronounced effect on fans' continuance intention, followed sequentially by significant but weaker predictors: perceived enjoyment, perceived usefulness, and attitude. Meanwhile, expected relationships and altruism are both verified as having a notable influence on fans' continuance intention by affecting their attitude toward company's page. This study targeted Facebook fans of hospitality business pages. Therefore, a validation using another large sample gathered elsewhere is required to generalize the findings. The findings of this paper can give both page managers and academics an increased understanding of fans' continuance intention to interact with company fan pages; the results may then be employed as a guideline to develop more appropriate business strategies for hospitality organizations by which to promote their products/services. The proposed model is a new synthesized model; little research has been done on examining Facebook fans' continuance intention toward interacting with hospitality company fan pages. This study contributes to an understanding of the factors that influence fans' intention to continue interacting with company fan pages through an empirical investigation.

Keywords: Facebook fans; Company pages; Synthesized-model.

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RESUMO

Este estudo propõe e testa um novo modelo que integra o modelo de expectativa-confirmação, o modelo de aceitação de tecnologia, um fator afetivo e dois fatores de partilha de informações para analisar a intenção dos fãs de continuar a interagir com páginas do Facebook de empresas de hotelaria. Os fãs do Facebook de Taiwan foram recrutados e selecionados como participantes através de uma pesquisa na Internet. Foram analisados dados de 354 questionários e os resultados mostram que a satisfação tem o efeito mais pronunciado sobre a intenção de continuação dos fãs, seguidos sequencialmente por preditores significativos, mas mais fracos: prazer percebido, utilidade percebida e atitude. Entretanto, as relações esperadas e o altruísmo são ambos verificados como tendo uma influência notável sobre a intenção de continuação dos fãs, afetando a sua atitude em relação à página da empresa. Este estudo foi dirigido aos fãs do Facebook das páginas de negócios de hotelaria. Portanto, uma validação dos resultados recorrendo a uma amostra mais abrangente é necessária para generalizar os resultados. No entanto, as conclusões deste artigo podem dar aos gestores de páginas e aos académicos uma maior compreensão da intenção de continuação dos fãs de interagir com as páginas de fãs da empresa. Os resultados podem então ser utilizados como orientação para desenvolver estratégias empresariais mais adequadas para a hotelaria através das quais podem promover melhor os seus produtos/serviços. O modelo proposto é um novo modelo sintetizado. Trata-se de uma pesquisa que foi feita para analisar a intenção de continuidade da interação dos fãs do Facebook com as páginas de empresas de hotelaria que contribui para a compreensão dos fatores que influenciam a intenção dos fãs de continuar a interagir com as páginas de fãs da empresa através de uma investigação empírica.

Palavras-chave: Fãs do Facebook; Páginas de Empresa; Modelo sintetizado.

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1. INTRODUCTION

Social networking sites (SNSs) have significantly changed the strategies that companies utilize to interact with customers (Mangold & Faulds, 2009). Many investigators suggest that SNSs be considered as a cost-effective marketing tool which provides firms with additional opportunities to affect customer selections and behavioral intentions (Drury, 2008). The Internet abounds with SNSs, such as Facebook, MySpace, Twitter, LinkedIn, and so on. In recent years, Facebook has surpassed MySpace to become the most popular social network (Nations, 2013). In the context of Facebook, a Facebook

“fan” is a user who “likes” a particular page (Rouse, 2010). If a user chooses to press “likes” on a page, he/she can get updates from that page’s administrator through status updates, link posts and event invitations. In their profiles, fans display lists of pages they have “liked” under the “interests” section of their information tab. Unlike a personal page, a Facebook company fan page is specific to a business/organization or a common interest (Report from Squidoo, 2013). Once a hospitality firm creates a Facebook company fan page, it can communicate on a regular basis with all of their fans via their personal feed.

Although initial acceptance of a Facebook company fan page is an important first step toward achieving fan page success, actual success still needs fans’ continued interaction with it. Therefore, understanding the factors affecting fans’ intention to continue interacting with company fan pages will not only assist hospitality personnel in designing popular contents, but also help them to develop strategies that are more likely to increase the amount of fans of their Facebook fan pages, as well as ensure their continuance. In this article, we synthesize an expectation-confirmation model (ECM) (Bhattacharjee, 2001b), technology acceptance model (TAM) (Davis, 1989), one affective factor (i.e., perceived enjoyment) and two information sharing factors (i.e., altruism, expected relationship) to hypothesize a new model with which to explain fans’ intention to continue interacting with Facebook fan pages. Firstly, although prior research has considered ECM to be a robust model for continued information technology (IT) adoption (Bhattacharjee, 2001a, 2001b), it merely utilizes three variables to explain behavioral intention: satisfaction, confirmation and post-adoption expectations. However, a user’s behavioral intention to adopt IT will also be influenced by other factors, such as the immediate personal pleasure or joy derived from partaking in an activity involving a particular technology (perceived enjoyment) (Kim & Han, 2009; Pelling & White, 2009). Many forms of information sharing occur due to the ubiquitous nature of the Internet. Among them, Facebook can be considered as one of the major venues of information sharing. We therefore believe that some determinants regarding information sharing should be included in our study. For example: fans may have a strong intention to perform a behavior if they are willing to improve the welfare of others without the expectation of any personal return (altruism) (Deci, 1975), and hope to develop expected social associations with other *members* or *kindred spirits*

(expected relationship) (Davenport & Prusak, 1997). Moreover, based on Taylor and Todd's studies (1995a, 1995b), TAM provides two variables: perceived ease of use and perceived usefulness as major antecedents of attitude toward adopting IT. Because each theory has different cognitive processes related to IT usage, it is possible that, when combined, these theories may jointly offer an improved and more exhaustive understanding of the behaviors related to IT usage than when each theory is considered alone.

In Facebook settings, some scholars have investigated Facebook addictions (Błachnio, Przepiorka, Senol-Durak, Durak, & Sherstyuk, 2017), Facebook use among adolescents (Dhir & Tsai, 2017), Facebook use to enhance course content (Akcaoglu & Bowman, 2016), and Facebook's impact on psychological well-being (Jung, Pawlowki, & Kim, 2017), and so on. However, to the best of our knowledge, no study has yet theoretically combined ECM and TAM models and added some affective and information sharing factors to examine Facebook fans' behavior intention toward interacting with company fan pages. Thus, the purposes of this study were as follows: (1) to propose and examine an integrated model that combines ECM, TAM, one affective determinant (i.e., perceived enjoyment) and two information-sharing determinants (i.e., altruism, expected relationship) in explaining Facebook fans' long-term intention to interact with company fan pages; and (2) to provide an empirical evaluation of which factors are critical in affecting this intention. The findings of this paper are expected to give both page managers and academics an increased understanding of fans' continuance intention to interact with company fan pages.

2. THEORIES AND THE RESEARCH MODEL

This study develops a research model incorporating one affective and two information sharing factors into a combination of ECM and TAM in order to examine which factors determine Facebook fans' continuance intention to interact with company fan pages. The proposed research model is presented in Figure 1.

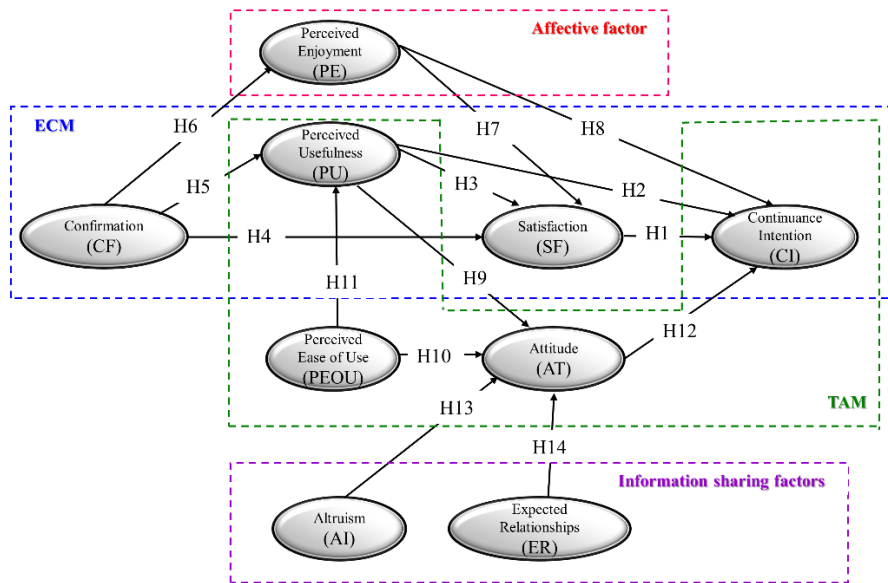


Figure 1. Research Model.

2.1. Expectation-confirmation model (ECM)

Expectation-confirmation theory (ECT) has been extensively used to study post-purchase behavior (e.g., repurchase) and service marketing (Dabholkar, Shepard & Thorpe, 2000; Oliver, 1980). The major emphasis in ECT may be summarized as follows (Oliver, 1980): First, customers develop an original expectation of a specific product or service prior to purchase. They then use that product/service, and after a period of consumption, generate perceptions about its performance. Next, they evaluate its perceived performance against their initial expectation and decide the degree to which their expectation is confirmed or contradicted. Finally, based on the differences between their confirmation level and expectation, satisfied customers shape a repurchase intention, while dissatisfied users forgo subsequent use. Based on the ECT, and integrated with prior IT use research, Bhattacharjee (2001a, 2001b) proposed an ECM to theorize a model of IT continuance. The ECM posits that an individual's intention to continue IT usage is determined by three variables: (1) the user's level of satisfaction with the IT, (2) the degree of the user's confirmation of expectations and (3) the user's post-adoption expectations in regard to perceived usefulness.

User satisfaction refers to the user's overall evaluation of a product or service (Rust &

Oliver, 1994). Previous marketing studies have indicated that the critical factor for a customer's decision to repurchase products or patronize services is his/her degree of satisfaction (Oliver, 1993; Szymanski & Henard, 2001). Due to the similarity between repurchasing products/services in a customer context and the continued usage of IT products/services, users are likely to be satisfied if the performance of IT meets or exceeds their expectations. Actually, many studies have demonstrated that user satisfaction with the prior use of IT is an important determinant in establishing long-term relationships between IT companies and their current users (Bhattacharjee, 2001b; Kim & Han, 2009). In the context of Facebook, fans may be looking for worthwhile services and wonderful products in their business page, where the page manager can deliver high quality content that is worth sharing, as well as offer incentives for fans, such as free items, special discounts, exclusive coupons, free downloads, etc. It is therefore expected that a high level of Facebook fans' satisfaction with a business page will result in a stronger likelihood in shaping their continuance interacting intention. *Thus, the following hypothesis is proposed:*

H1. Overall satisfaction has a positive effect on continuance intention.

ECM argues that users' satisfaction with IT is dependent on their perceived usefulness of IT. Perceived usefulness, derived from TAM, is defined as the extent to which the users believe that using IT will promote their performance in accomplishing their tasks (Davis, 1989). Originally, a user's perception of usefulness illustrates how IT increases the employee's work performance in an organization context (Davis, 1989). However, recent studies have demonstrated that the influence of perceived usefulness on behavioral intention is also salient in a non-working environment (Kim, Choi & Han, 2009; Kim & Han, 2009). In this study, perceived usefulness refers to *the extent to which* Facebook fans consider that the page content (e.g., value-added services, great products, new ideas and information) is useful when it provides what they are actually looking for to improve their work/life performance. Meanwhile, prior research related to investigating online virtual communities pointed out that perceived usefulness has a significant influence on user satisfaction with the virtual community (Lin, 2006). Through continuing interaction, leaving comments and giving feedback, Facebook fans can tell a page manager a lot about what they want. The page manager can thereby collect useful information and rich content for users via their participation, in order to improve their day to day problems and issues. As a result, from a Facebook fan's point

of view, it could be inferred that a higher level of perceived usefulness is associated with stronger satisfaction and *continuance intention to interact with the brand page*. *The following hypotheses are offered:*

H2. Perceived usefulness has a positive effect on continuance intention.

H3. Perceived usefulness has a positive effect on satisfaction.

Also, ECM demonstrates that a user's satisfaction with IT is determined by the user's confirmation of expectations. In ECM, confirmation viewed as a cognitive evaluation of IT at the post-adoption stage, is defined as users' perception of the congruence between expectation of IT use and its actual performance (Bhattacharjee, 2001b). In other words, the confirmation of expectations indicates that users obtained the expected advantages through their usage experience with IT, therefore leading to a positive effect on users' satisfaction (Bhattacharjee, 2001b; Kim & Han, 2009). Meanwhile, when users perceive their actual experiences with IT use as surpassing their expectations, this confirmation positively affects their perceived usefulness (Bhattacharjee, 2001b; Hong, Thong & Tam, 2006; Kim & Han, 2009). In this study, confirmation refers to *the extent to which* Facebook fans consider that the page content (e.g., offerings, videos, images, podcasts, etc.) posted by a page manager is rich enough to engage and benefit fans, so as to exceed their prior expectations and deliver good value to them. Accordingly, it is anticipated that in the context of Facebook fan pages, *the higher level of confirmation that Facebook fans perceive, the greater the likelihood that fans will have a positive perception of usefulness and be satisfied with their interaction with business pages*. *The following hypotheses were examined:*

H4. Confirmation of expectations has a positive effect on satisfaction.

H5. Confirmation of expectations has a positive effect on perceived usefulness.

Built upon the successful use of the ECM in IT, this study extends the knowledge of ECM into the usage of Facebook fan pages; the argument posits that fans' positive emotions are the key factor in determining their continue acceptance of Facebook fan pages. Therefore, perceived enjoyment is adopted in this study. Based on the work of Davis, Bagozzi and Warshaw (1992), this study defines perceived enjoyment as the extent to which fans perceive the activity of interacting with a Facebook brand page as enjoyable. Davis et al. (1992) investigated the use of computer technology and assert that customers value the pleasure involved in using such technology. Kim, Chan and

Gupta (2007) also demonstrate that individuals who experience immediate joy from using technology are more likely to perceive the technology as valuable and to adopt it. Some research has provided evidence that perceived enjoyment can lead to increased levels of user satisfaction and continuance intention (Kim & Han, 2009; Pelling & White, 2009), and that confirmation of expectation positively affects individual's perceived enjoyment of the online social media community (Kim & Han, 2009). Facebook fan pages enable businesses to identify their true nature through listing product offerings and services, as well as by sharing links, images and posts on customizable pages. When fans enjoy viewing images, videos, infographics and connecting to links shared by a page manager, they may be motivated to continue interacting with that brand page. Therefore, the fans' satisfaction with the intention to continue interacting with a business page may be affected by the level of enjoyment the fans experience while using the page. Also, since a higher level of confirmation of expectations related to the business page increases the fan's perception of enjoyment in using that page, *the following hypotheses are offered:*

H6. Confirmation of expectations has a positive effect on perceived enjoyment.

H7. Perceived enjoyment has a positive effect on satisfaction.

H8. Perceived enjoyment has a positive effect on continuance intention.

2.2. Technology acceptance model (TAM)

TAM, developed by Davis (1989) and extended from the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), was originally developed to predict IT acceptance and usage on the job; it has since been extensively applied to users of various types of technologies. Perceived usefulness and perceived ease of use are the two main determinants in TAM. The definition of perceived usefulness in this research work was clarified above. Perceived ease of use in this study is defined as the degree to which fans believe that using a Facebook fan page will be free of physical and mental effort. Facebook fans may visit a company page to look for useful information (e.g., price cuts, special offers, meaningful post updates, etc.) that can satisfy their needs, improve the efficiency of solving daily problems, and enable them to better communicate with their friends, colleagues and others online by sharing and recommending the page. Moreover, fans need to feel that the business page has a more intuitive interface and is easy to use. Both perceived usefulness and perceived ease of use, beliefs derived from TRA (Fishbein & Ajzen, 1975), will influence users' attitude and positively influence their

intention to use IT. On the other hand perceived ease of use also influences behavioral intention indirectly through perceived usefulness (Davis, 1989), implying that the easier that fans consider the interaction with company pages to be, *the greater the likelihood* that they will generate useful perceptions in this regard. Thus, *the following hypotheses are proposed:*

H9. Perceived usefulness has a positive effect on attitude toward Facebook fan pages.

H10. Perceived ease of use has a positive effect on attitude toward Facebook fan pages.

H11. Perceived ease of use has a positive effect on perceived usefulness.

Based on TRA (Fishbein & Ajzen, 1975), this study defines attitude as the extent of a fan's favorable or unfavorable evaluation or appraisal of utilizing a Facebook company fan page. According to the theory of planned behavior (TPB) (Ajzen, 1991), attitude affects users' behavioral intention, which in turn impacts their actual behavior. Launching Facebook fan pages enables a company to become known throughout the web, and increases the likelihood of enlarging its earnings via customers attracted by its Facebook fan page (Report from Free Facebook iFrame Templates, 2011). People who become interested in a business and show a positive attitude toward using their business page will generate a stronger intention toward interacting with it, and are more likely to purchase their products/services. Thus, *the following hypothesis is offered:*

H12. Attitude toward Facebook fan pages has a positive effect on continuance intention.

When fans interact with a page manager's posts and brand through the company page, the page will show up on their friends' newsfeeds. This form of information sharing is voluntary, and one of the keys to gaining new fans. Accordingly, this study proposes that *altruism* and *expected relationships* affect Facebook fans' attitude. Altruism in this study refers to the degree to which a fan is willing to provide other people with useful/advantageous information such as quality products/service, dining locations, hotels, bars, live events, news and opinions among others without expecting any direct return. *Expected relationship* is defined as the degree to which a fan believes that he/she could obtain an improved mutual relationship through sharing information on company pages (e.g., sharing products/services, tips, how to information, tutorials, videos, images, podcasts, contests, etc.). In the context of online SNCs, a company page manager can put photos, videos, articles, links, discussions, events, news, offers, etc. (i.e. sharing all forms of information related to the business) in one place, the Facebook business page.

Potential customers will get updated with the latest offers and news related to the company's products/services. Every time a fan shares a post from the fan page, a link to the fan page is included in the fan's news stream, and broadcast to all of his/her friends. The more interesting things that the company posts, the more likely the company's fans will share its content. Sharing posts on certain company pages is a voluntary act of information sharing among Facebook fans. Therefore, those with stronger inclination to help others tend to be more willing to share information with others by pressing a link or clicking "Likes" on a fan page. Therefore, the *following hypotheses are proposed*:

H13. Altruism has a positive effect on attitude toward Facebook fan pages.

H14. Expected relationships have a positive effect on attitude toward Facebook fan pages.

3. RESEARCH METHODOLOGY

3.1. Measures

Since no existing measurement scales can be found in the extant literature, this study developed the questionnaire items by adapting relevant material from several previous studies. Following are the details concerning the measurement composition.

Ten items adapted from Bhattacharjee (2001a, 2001b), were designed by this study to measure confirmation, satisfaction and continuance intention. Nine questions for measuring perceived usefulness, perceived ease of use and attitude were mainly derived from Davis (1989). Three items, based on Moon and Kim (2001), were devised by this research to assess perceived enjoyment. Finally, eight measures, in referring to Hsu and Lin (2008), were devised by this study to gauge altruism and expected relationships.

We developed the original questionnaire in English, which was then translated into Chinese by a professional bilingual academician. The Chinese questionnaire was translated back into English by another bilingual academician. Two researchers and one bilingual academician compared the two English versions to resolve discrepancies in order to confirm translation equivalence and consistency.

3.2. Data Collection

The target population was Facebook users. Similar to web-related studies, this study intended to recruit participants via an Internet survey. Survey messages were sent to several popular online communities in Taiwan for about 10 weeks to invite online Facebook users to fill out the questionnaire. At any time during the 10 weeks,

participants could respond to the online questionnaire by clicking the URL provided on the message, which also summarized the purpose of this study, provided a hyperlink to the electronic survey form and illustrated that there were 50 NT\$100 gift coupons as a reward for respondents in a drawing at the completion of this survey. In the ten-week period, a total of 426 responses were received. Of the 426 responses, 72 questionnaires were invalid or repeated (duplicate IP addresses), which amounted to 354 usable responses, for a valid response rate of 83%.

Among those responding, 46.6% of the respondents were male and 53.4% were female. The respondents had an average of 9.83 years of computer experience (standard deviation [SD] = 4.37) and 8.24 years of Internet experience (SD = 3.45). Also, 41.0% of respondents had a bachelor's degree. The characteristics of the respondents are shown in Table 1.

	Frequency	Percentage	Cumulative
Gender			
Female	189	53.4	
Male	165	46.6	
Age			
<20	98	27.7	27.7
21-30	172	48.6	76.3
31-40	54	15.3	91.6
41-50	26	7.3	98.9
>51	4	1.1	100.0
Education level			
Senior high school	65	18.4	18.4
Some college	123	34.7	53.1
Bachelor's degree	145	41.0	94.1
Graduate degree (or above)	21	5.9	100.0
Industry			
Manufacturing	64	18.1	
Service	135	38.1	
School	85	24.0	

	Frequency	Percentage	Cumulative
Government agencies	25	7.1	
Self-employed	27	7.6	
Others	18	5.1	
Machine utilized to log in to Facebook (multiple responses)			
Desktop computer	67	7.8	
Laptop computer	194	22.6	
Tablet computer	284	33.1	
Smart phone	312	36.4	
Time in using Facebook each time			
Under 1 h	63	17.8	17.8
1-2 h	106	29.9	47.7
2-3 h	68	19.2	66.9
Over 3 h	117	33.1	100.0
Experience in using Facebook			
Under 3 months	18	5.1	5.1
3 months-6 months	51	14.4	19.5
6 months-1 year	57	16.1	35.6
1 year-2 years	76	21.5	57.1
Over 2 years	152	42.9	100.0
Experience in being a fan of Facebook business pages			
Under 3 months	64	18.1	18.1
3 months-6 months	103	29.1	47.2
6 months-1 year	98	27.7	74.9
Over 1 year	89	25.1	100.0

Table 1. Demographic attributes of the respondents

4. DATA ANALYSIS AND RESULTS

4.1. Assessment of measurement model

Confirmatory factor analysis via AMOS 17.0 was conducted to test the measurement

model. Six common model-fit measures were employed to measure the model's overall appropriateness of fit: the ratio of χ^2 to degrees-of-freedom (df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normalized fit index (NFI), comparative fit index (CFI) and root mean square residual (RMSR). To obtain a better model fitness, two items were eliminated due to low or cross factor loadings. As shown in Table 2, all the model-fit indices exceeded their respective common acceptance levels suggested by previous research, thus demonstrating that the measurement model revealed a fairly good fit with the data collected. Moreover, we examined common method variance bias by Harman's single-factor test (Aulakh & Gencturk, 2000), and found the value for explainable variance to be 35.8% (i.e. not over 50%), so there was no common method variance bias. This study could therefore proceed to evaluate the psychometric properties of the measurement model in terms of reliability, convergent validity and discriminant validity.

Goodness-of-fit measure	Recommended value	Measurement model	Structural
χ^2 /degree of freedom	≤ 3.00	1.200	1.235
Goodness-of-fit index (GFI)	≥ 0.90	0.924	0.922
Adjusted goodness-of-fit index (AGFI)	≥ 0.80	0.858	0.857
Normed fit index (NFI)	≥ 0.90	0.952	0.950
Comparative fit index (CFI)	≥ 0.90	0.978	0.977
Root mean square residual (RMSR)	≤ 0.10	0.015	0.017

Table 2. Fit indices for measurement and structural models

According to Fornell and Larcker (1981), reliability and convergent validity of the factors were calculated by composite reliability and by the average variance extracted (see Table 3). The composite reliabilities can be calculated as follows: (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (summation of error variables)}. The interpretation of the resultant coefficient is similar to that of Cronbach's alpha. Composite reliability for all the factors in the measurement model was above 0.80. The average extracted variances were all above the recommended 0.50 level (Hair, Anderson, Tatham & Black, 1992), which implied that more than one-half of the variances observed in the items were accounted for by their hypothesized factors. Convergent validity can also be evaluated by observing the factor loadings and squared multiple correlations from the confirmatory factor analysis. Based on Hair et al.'s suggestion (1992), factor loadings greater than 0.50 were deemed as

very significant; all the factor loadings of the items in the research model were greater than 0.70. Thus, all factors in the measurement model had both adequate reliability and convergent validity.

Factor	CR	1	2	3	4	5	6	7	8	9
1.Confirmation	0.846	0.647								
2.Perceived usefulness	0.905	0.415	0.760							
3.Perceived ease of use	0.810	0.338	0.423	0.587						
4.Perceived enjoyment	0.888	0.395	0.323	0.288	0.723					
5.Altruism	0.921	0.486	0.353	0.461	0.552	0.796				
6.Expected	0.922	0.381	0.416	0.390	0.474	0.525	0.748			
7.Satisfaction	0.868	0.473	0.382	0.571	0.471	0.227	0.387	0.689		
8.Attitude	0.883	0.450	0.516	0.351	0.282	0.263	0.285	0.319	0.717	
9.Continuance intention	0.955	0.456	0.348	0.251	0.292	0.335	0.235	0.434	0.511	0.876

Table 3. Reliability, average variance extracted, and discriminant validity

CR = Composite Reliability

Diagonal elements are the average variance extracted. Off-diagonal elements are the shared variance.

To test discriminant validity, this study compared the shared variance between factors with the average variance extracted from the individual factors. This analysis exhibited that the shared variances between factors were lower than the average variance extracted from the individual factors, thus confirming the discriminant validity (see Table 3). In brief, the measurement model demonstrated adequate reliability, convergent validity and discriminant validity.

4.2. Structural model estimation and hypotheses testing

A similar set of model-fit indices was used to examine the structural model (see Table 3). The six common model-fit measures of the structural model also exceeded their respective common acceptance levels, as suggested by previous research. This result provided firm evidence of a good model-data fit. Thus, this study could proceed to investigate the path relationships hypothesized by this study. Figure 2 shows the standardized path coefficients for all of the respondents in the hypothesized model. All fourteen hypothesized associations were strongly significant at $p < 0.05$. To further assess the significance of the indirect effects of predictor variables on continuance intention to interact with company pages, a decomposition of the effects analysis was conducted based on Byrne (2001) (see Table 4). Finally, Table 5 summarizes the results

of the hypotheses testing.

Predictors	Criterion variable								
	Satisfaction			Attitude			Continuance intention		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
	effects	effects	effects	effects	effects	effects	effects	effects	effects
Confirmation	0.430***	0.160*	0.590***				0.320**	0.320**	
Perceived enjoyment	0.312**		0.312**				0.335**	0.058*	0.393**
Perceived usefulness	0.455***		0.455***	0.419***		0.419***	0.183*	0.164*	0.347**
Perceived ease of use		0.147*	0.147*	0.162*		0.162*		0.077*	0.077*
Altruism				0.423***		0.423***		0.180*	0.180*
Expected relationships				0.175*		0.175*		0.060*	0.060*
Satisfaction							0.469***		0.469***
Attitude							0.151*		0.151*

Table 4. Direct, indirect and total effects

* Significant at $p < 0.05$, ** Significant at $p < 0.01$, *** Significant at $p < 0.001$.

	Relationship	Hypothesis	Testing result
H1	SF->CI	Positive	Supported
H2	PU->CI	Positive	Supported
H3	PU->SF	Positive	Supported
H4	CF->SF	Positive	Supported
H5	CF->PU	Positive	Supported
H6	CF->PE	Positive	Supported
H7	PE->SF	Positive	Supported
H8	PE->CI	Positive	Supported
H9	PU->AT	Positive	Supported
H10	PEOU->AT	Positive	Supported
H11	PEOU->PU	Positive	Supported
H12	AT->CI	Positive	Supported
H13	AI->AT	Positive	Supported
H14	ER->AT	Positive	Supported

Table 5. Summary of testing results

H, hypothesis; PE, perceived enjoyment; PU, perceived usefulness; PEOU, perceived ease of use; CF, confirmation; AI, altruism; ER, expected relationships; SF, satisfaction; AT, Attitude; CI, continuance intention.

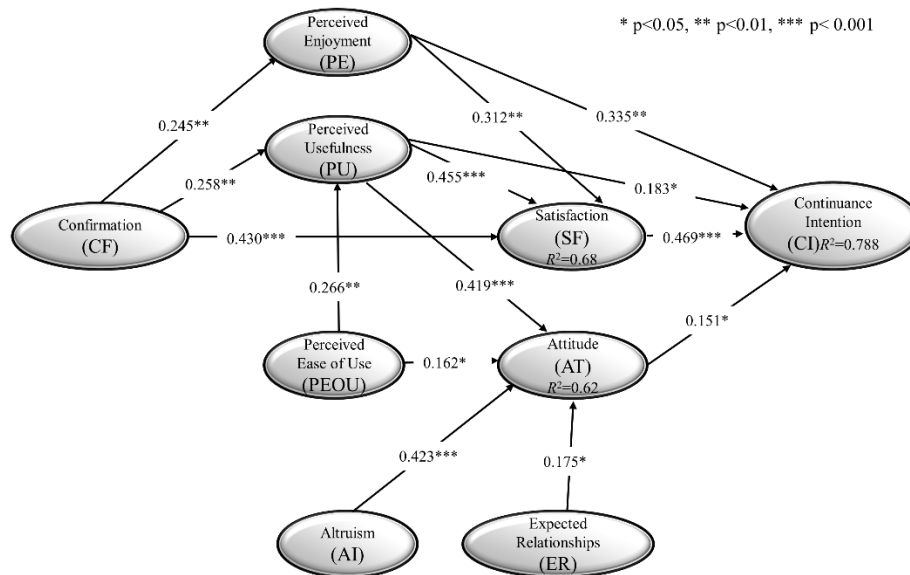


Figure 2. Results of structural modeling analysis.

Having delineated the results of the research model, we next discuss the theoretical and practical implications of the results.

5. DISCUSSION

Few studies explore Facebook fans' continuance intention to communicate with company pages. The present study can therefore be considered to bridge the gap in the literature by examining whether an extension of the traditional technology-related model could explain Facebook fans' intention to continue using company pages. The results of this study provide strong support for the research model and for the hypotheses about the cause-effect relationships among the model's variables. The entire explanatory power of the proposed model had an R-square of 78.8% for continued intention to interact with company pages, an R-square of 68% for satisfaction, and 62% for attitude toward continued intention, suggesting that this research model could explain a significant amount of variation of fans' continuance intention. The findings of this study provide several important implications for Facebook-related research and practice.

5.1. Relationships between antecedent factors and continuance intention

We have shown the effects of perceived enjoyment, perceived usefulness, satisfaction, and attitude on fans' continuance intention of interacting with company pages. The findings of this study attest that satisfaction is the strongest predictor of fans' continuance intention, followed sequentially by perceived enjoyment, perceived usefulness, and attitude as significant but weaker predictors. Consistent with previous consumer behavior research in product/service settings (Bhattacharjee, 2001a, 2001b; Szymanski & Henard, 2001), this study has revalidated the satisfaction-intention link in the Facebook business page context; this further confirms the robustness of this association. Additionally, dissatisfaction may be the answer to explaining fans' discontinuance of interacting with a company page after their initial acceptance to be fans. Because satisfaction was the strongest predictor of continuance intention compared to other predictors, fans dissatisfied with a company page may stop visiting it again. In contrast to our research model, TAM, designed to predict user intention based on perceived usefulness and attitude, cannot explain the phenomenon properly unless

the predictors' effects change from the initial to subsequent phases.

Perceived enjoyment was identified in this study as a secondary predictor of continuance intention. Consistent with prior technology and social networking related studies (Kim & Han, 2009; Pelling & White, 2009), this study shows that perceived enjoyment can increase the degrees of user satisfaction and continuance intention. Moreover, Curran and Lennon (2011) found that the level of enjoyment derived from using social networks has a significant positive influence on users' intention with regard to participating in social networks; our findings are in accordance. Satisfaction and perceived enjoyment both reflect users' affective belief. Accordingly, in the beginnings fans' visiting a company page may be based on second-hand information from referent others, advertising, the media, or other sources. However, fans' continuance in revisiting the company page depends on whether or not their participation in the page leads to pleasure and enjoyment, since affective factors play a very important role in determining continuance intention. Therefore company page managers should determine which features to use to increase fans' enjoyable feelings, in order to enhance fans' continued usage of the pages. Several popular features that may be effective include: (1) allowing fans to tag photos of themselves using a company's product to its business page would enhance their pleasure in visiting the page; (2) integrating an application into a company's page to create unique quizzes, games or other interactive features could be a good means to help fans experience joy from interacting with the page; (3) creating a smart, customizable landing page may result in fans experiencing more fun than the traditional layout; and so on.

5.2. Relationships between antecedent factors

In this study, perceived usefulness was found to have the most significant effect on satisfaction, which implies that a fan's belief in usefulness is a critical antecedent of his/her perception of satisfaction. Also, confirmation was a salient predictor of satisfaction and perceived usefulness in our proposed model, such that it affects the continuance intention in two ways: by impacting fans' satisfaction toward a company page and by influencing fans' perceptions of the page's usefulness.

Besides influencing continuance intention, perceived enjoyment strongly affects fans' attitude as well. This implies that when fans visit a company page, they not only want to obtain some useful product/service information, but also to communicate with other people and enjoy themselves. Accordingly, perceived enjoyment (i.e. a fan's hedonic

motivation) is as vital a consideration as perceived usefulness for Facebook business page managers.

While all the TAM and ECM variables are significant in this study, they imply that human behavior is voluntary. However, Facebook company pages include the impersonal characteristic of the online settings, and require users' mutual interaction (expected relationships), and users' willingness to share useful information (altruism). These issues called for the inclusion of expected relationships and altruism in our research model; both variables were verified as having a salient indirect influence on continuance intention. This finding implies that when fans constantly share posts on a company's page, they will spontaneously keep using the page. Company page providers need to regularly put interesting items such as offers, news and events to influence fans' attitudes toward the page so as to positively affect fans' continuance visit intention.

5.3. Implications for academics

From the perspective of theory building, this study intends to develop a new theory by integrating some variables from TAM and ECM with two additional information-sharing variables and apply them in a new social media context. It is worth noting that the two new variables are compatible with the TAM and ECM variables. This approach can aid in stable theory development. The proposed model thereby makes a contribution to the emerging literature on social network websites.

This research has two important implications for similar future research. First, our findings demonstrate that the integrated model supports all the hypotheses and possesses good explanatory power, implying that the combination of ECM and TAM provides a model with a theoretical basis for explaining social media. In the technology research field, there are many technology adoption models, like the Technology Acceptance Model (TAM) (Davis, 1989), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Theory of Planned Behavior (TPB) (Ajzen, 1991), the Unified Theory of Acceptance and Use of Technology Model (UTAUT) (Venkatesh, Morris, Davis & Davis, 2003), and so on. *Each of them has different sets of variables. It is expected that this study may encourage future studies to integrate the above listed models into unified ones.* Second, the results of this study show that satisfaction has the strongest effect on continuance intention. Because confirmation and expectations are important antecedents to satisfaction, future research may make an effort to explore

what determinants influence these variables and how they can be manipulated so as to enhance subsequent continuance visit intention of company pages.

5.4. Implications for managers

Hospitality company managers, marketers and page managers should make full use of social network websites, such as Facebook company pages, to better facilitate fans' understanding of the companies' products and service. Ultimately, fans are more likely to visit and continue to communicate with company pages if they find such action enhances their comprehension of a company's quality products/service. Recently, Facebook company pages have proven to be one of the best ways to communicate with customers. Potential customers will be grateful for the chance to get first-hand information about a company's latest updates. To attract new fans and keep old fans, managers of a company's page could: (1) post useful, relevant and interesting links, (2) ask fans to contribute comments, (3) organize contests and promotions, (4) provide a place to leave reviews and other feedback, and (5) offer incentives for activities on the page. The more fans a company page has, the more popular and appreciated the company will be. Finally, a huge number of fans implies a strong likelihood of increasing the company's profit via a social community.

6. CONCLUSIONS AND LIMITATIONS

This study's results should be interpreted with caution since the survey data have certain inherent limitations. First and foremost, the number of active Facebook users in Taiwan reached 15 million per month in the fourth quarter of 2013 (Report from Taipei Times, 2014). Therefore, personal bias exists since the sample was self-selected. Second, the research subjects were Facebook hospitality company fans in Taiwan. Lifestyle and culture may differ among countries; therefore, a cross-cultural validation using another large sample gathered elsewhere is required for further generalization of this study's findings. Third, this study was conducted with a snapshot research approach, so that longitudinal research efforts are needed to evaluate the validity of the proposed model and the findings. Thus, conducting a longitudinal observation inside the social networking site Facebook is a good way to enhance our understanding of causality among the variables that are important in influencing hospitality companies' fans' continuance intention to communicate with the companies. Moreover, conducting such a longitudinal observation may help to identify what types of fans are more likely to

conduct altruistic behaviors and also continually interact with hospitality companies. Fourth, some references show that gender differences can cause discrepancies in the effect of perceived ease of use and perceived usefulness on user's behavioral intention (Gefen & Staub, 1997). Accordingly, future research may be needed to examine the moderating effect of gender difference on the continuance visit intention of a company page's fan.

In summary, the major contributions of this study can be described as follows. First, this study proposes a new research model by synthesizing some traditional technology- and marketing-related factors that seem to be highly relevant to the perceptions of Facebook participants. Second, the results show the importance of the proposed variables in indirectly or directly influencing hospitality companies' fans' continuance intention to communicate with the companies that they have joined as fans. Third, fans' satisfaction appears to be a strong predictor of their *continuance intention*. Finally, all the significant factors explained about 78.8% of the variance in continuance intention, 68% of the variance in satisfaction, and 62% of the variance in attitude, demonstrating that they adequately describe the feelings of Facebook fans. The findings of this study will not only help hospitality managers in understanding the perceptions of Facebook fans, but also provide insights into research on technology's influence on the hospitality industry.

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