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What motivates people to continuously post selfies? The moderating role of perceived relative advantage

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ABSTRACT

Although there are numerous social media studies, relatively little attention has been paid to the moderating role of perceived relative advantage in selfie-posting behaviors. Accordingly, the primary purpose of this study is not only to examine the key elements that could facilitate better selfie-posting satisfaction and continuance intention, but also to investigate the moderating impact of perceived relative advantage on selfie-posting continuance intention. 468 undergraduate business students participated in this study and the partial least squares structural equation modeling (PLS-SEM) was used for examining the connections between latent variables. The study findings have revealed that habitual use and selfie-posting satisfaction will be positively linked to selfie-posting continuance intention. Additionally, it has been found that perceived usefulness and playfulness will positively predict habitual use and selfie-posting satisfaction. More importantly, the study results have shown that perceived compatibility will lead to better perceived usefulness and playfulness. Finally, the study findings have demonstrated that perceived relative advantage will play a key role in moderating the connection between habitual use and selfie-posting continuance intention, as well as the link between selfie-posting satisfaction and continuance intention.

1. Introduction

Due probably to the recent advances in information and communication technology, it has been shown that the tremendous growth of social networking sites (SNSs), and frequent use of mobile devices have not only created a fast and convenient way for people to communicate and connect with each other (Lee, So, & Leung, 2015), but also offered individuals a great channel and venue for self-presentation (Kim & Chock, 2017). For example, a truism study by Lyu (2016) has suggested that adopting mobile devices to post selfies has already become part of tourists' routine. Another recent review by Sung, Lee, Kim, and Choi (2016) indicated that "photo sharing on various social networking sites (SNSs) has become an important part of the online social experience" (p. 260). Additionally, Kim, Lee, Sung, and Choi (2016) revealed that "Millions of photos are posted and shared on SNSs daily; Instagram, for instance, hosts over 55 million photos and generates 1.2 billion likes each day" (p.117). In light of this, although a considerable number of studies have focused on the impact of social media on our lives (Sung et al., 2016), relatively little effort has been devoted to examining the key factors that will motivate people to continuously post selfies. In other words, what motivates people to continuously post selfies has not yet been fully examined in previous research. Hence, in order to close this research gap, the critical factors that lead to better selfie-posting continuance intention should merit further investigations in this study.

Moreover, although numerous researchers have highly focused on the key factors that could predict selfie-posting behaviors, there is still a dearth of studies investigating the moderating role of perceived relative advantage in selfie-posting satisfaction and continuance intention (Lin, Hung, & Chen, 2009). Specifically, whether perceived relative advantage, which refers to perceived advantages and benefits from posting selfies on social media, could play a key role in moderating the link between selfie-posting satisfaction and continuance intention, as well as the connection between habitual use and continuance intention has not yet been fully examined in previous reports. As the use of SNSs in posting selfies has gradually become common in our lives, it is important

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that more research should be devoted not only to the adoption of SNSs, but also to the key factors that could lead to better selfie-posting continuance intention. Accordingly, the primary purpose of this study is not only to examine the key elements that could motivate people to continuously post selfies, but also to investigate the moderating role of perceived relative advantage in selfie-posting continuance intention.

2. Literature review and hypothesis development

2.1. Motivations for posting selfies

Although there are several reasons why people would like to post their selfies on SNSs, it has been shown that one of the most obvious factors that influence selfie-posting behaviors could be closely associated with narcissism (Sung et al., 2016). Sung et al. (2016) suggested that narcissism should be regarded as a critical determinant of selfie-posting behaviors. For example, previous reports have revealed that narcissism would have positive relationship with selfie-posting frequency (Sung et al., 2016), and intention (Kim et al., 2016). Second, communication with friends and family members should be viewed as another key predictor of selfie-posting behaviors. Previous research has shown that sometimes people post their selfies just because they would like to share selfies with close friends and family members (Lyu, 2016; Sung et al., 2016). With particular respect to tourism studies, Lyu (2016) added that "a variety of social media channels also enable tourists using mobile devices to instantly generate, convey, and share their travel knowledge and experiences, including travel selfies and photographs" (p.185).

Moreover, Sung et al. (2016) indicated that attention seeking and archiving, should play a key role in determining selfie-posting behaviors. Specifically, people post their selfies not only because they would like to capture peoples' attention, but also because they want to document their lives in pictures. Finally, Kim et al. (2016) has suggested that subjective norm, which refers to suggestions and opinions from critical people, should have a positive influence on selfie-posting behaviors. In other words, people with better subjective norm are likely to have more positive selfie-posting behaviors.

In terms of social media research, although several researchers have highly concentrated on the pivotal impacts of social media on society, little has been known about the connections between perceived usefulness, playfulness, compatibility, habitual use, selfie-posting satisfaction, and continuance intention. More importantly, the moderating role of perceived relative advantage in selfie-posting behaviors has not yet been fully explored in previous research. Accordingly, based on prior suggestions, the key factors that influence selfie-posting satisfaction and continuance intention, and moderating impact of perceived relative advantage on selfie-posting behaviors should be worthy of further discussions in this report.

2.2. Habitual use, satisfaction, and continuance intention

Habits, which are described as "routine behaviours that repeat regularly and tend to occur subconsciously" (Shiau & Luo, 2013, p. 572), have received much attention in previous reports (Hsu, Chang, & Chuang, 2015), probably because of the pivotal impact of habits on user satisfaction (Khalifa & Liu, 2007; Shiau & Luo, 2013), and continuance intention (Chen, Lai, & Ho, 2015; Hsiao, Chang, & Tang, 2016). Specifically, consumers with higher levels of habitual use tend to have better satisfaction (Khalifa & Liu, 2007; Shiau & Luo, 2013), and continuance intention (Hsiao et al., 2016). For instance, an early study by Khalifa and Liu (2007) has demonstrated that online shopping habit could positively predict online shopping satisfaction. Another recent review by Hsiao et al. (2016) has suggested that habit should be one of the key antecedents of continuance intention. Similarly, in social media environments, as people fall into the habit of posting selfies on social media, it is possible that they will have more positive selfie-posting satisfaction and continuance intention. Accordingly, this study proposes the following hypotheses.

H1. Habitual use will have a positive impact on selfie-posting continuance intention.

H2. Habitual use will have a positive impact on selfie-posting satisfaction.

2.3. Selfie-posting satisfaction and continuance intention

Previous reports have indicated a positive correlation between consumer satisfaction and continuance intention (Hsiao et al., 2016; Oghuma, Libaque-Saenz, Wong, & Chang, 2016; Zhao & Lu, 2012). In other words, it is possible that consumers with higher levels of satisfaction are more likely to have better continuance intention. For example, an early study by Zhao and Lu (2012) demonstrated a positive connection between micro-blogging service satisfaction and continuance intention. Another recent review by Hsiao et al. (2016) suggested that user satisfaction should be one of the key antecedents of continuance usage of mobile social Apps. Moreover, Oghuma et al. (2016) indicated that consumer satisfaction could play a key role in determining continuance intention to adopt mobile instant messaging. Similarly, in social media environments, it is likely that individuals with better selfie-posting satisfaction will have more positive selfie-posting continuance intention. Consequently, this study proposes the following hypothesis.

H3. Selfie-posting satisfaction will have a positive impact on selfie-posting continuance intention.

2.4. Perceived usefulness, playfulness, habitual use, and satisfaction

Derived from the concept of technology acceptance model, perceived usefulness, which is described as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320), has been viewed as a key predictor of consumer satisfaction (Roca, Chiu, & Martínez, 2006), and habitual use (Chung, Lee, & Kim, 2014). In other words, consumers with higher levels of perceived usefulness are more likely to have better satisfaction and habitual use. For instance, an early report by Roca et al. (2006) has suggested that perceived usefulness of e-learning system would lead to better user satisfaction. Another recent review by Chung et al. (2014) has shown that perceived usefulness of mobile enterprise systems would positively predict habitual use. Moreover, several researchers have revealed that the computer playfulness, which refers to "the degree of cognitive spontaneity in microcomputer interactions" (Webster & Martocchio, 1992, p. 204), should be a key intrinsic motivation in previous research (Lee, Yoon, & Lee, 2009; Padilla-Meléndez, del Aguila-Obra, & Garrido-Moreno, 2013; Wang, Wu, & Wang, 2009). Specifically, the concept of perceived playfulness, which contains "individual's pleasure, psychological stimulation, and interests" (Padilla-Meléndez et al., 2013, p. 308), could be positively connected with habitual use, user satisfaction and continuance intention. For example, Yang, Wang, and Lu (2016) indicated that mobile social networking service enjoyment could have a positive influence on mobile social networking service habit.

Hsiao et al. (2016) suggested that perceived enjoyment should positively predict habitual use of mobile social Apps. Additionally, Coursaris and van Osch (2016) revealed that website playfulness would be one of the key determinants of website satisfaction.

Likewise, in social media environments, it is probable that the perceived usefulness, which is defined as perceived usefulness of SNSs, and playfulness, which simply refers to the degree to which an individual feels his or her enjoyment and joyfulness in posting selfies on social media (Wang et al., 2009), will be two key elements that potentially influence selfie-posting satisfaction and habitual use. Although there are numerous social media studies, relatively little work has been done on the connections between perceived usefulness, playfulness, habitual use, and selfie-posting satisfaction. According to previous suggestions, hence, this study proposes the following hypotheses.

H4. Perceived usefulness will have a positive impact on habitual use.

H5. Perceived usefulness will have a positive impact on selfie-posting satisfaction.

H6. Perceived playfulness will have a positive impact on habitual use.

H7. Perceived playfulness will have a positive impact on selfie-posting satisfaction.

2.5. Perceived compatibility

It has been found that perceived compatibility, which is described as "the extent to which the innovation is perceived to be consistent with the adopters' beliefs, lifestyle, existing values, experience, and current needs, and high compatibility can result in preferable innovation adoption" (Cheng, 2015, p. 112), could have a positive impact on perceived usefulness and playfulness. In other words, people with higher levels of perceived compatibility are likely to have more positive perceived usefulness and playfulness. For example, a recent mobile learning review by Cheng (2015) has indicated that perceived compatibility could positively predict perceived usefulness and playfulness. Another information technology report by Yang, Yu, Zo, and Choi (2016) has suggested that perceived compatibility of wearable devices should be one of the key determinants of perceived usefulness. Likewise, in social networking sites, as people have higher levels of perceived compatibility, which refers to the degree to which a social networking site "is perceived to be consistent with the users' beliefs, lifestyle, existing values, experience, and current needs" (Cheng, 2015, p. 112), it is probable that they will have more positive perceived usefulness and playfulness. Consequently, this study proposes the following hypotheses.

H8. Perceived compatibility will have a positive impact on usefulness.

H9. Perceived compatibility will have a positive impact on perceived playfulness.

2.6. Moderating role of perceived relative advantage

It has been suggested that the perceived relative advantage (PRA), which is described as perceived advantages and benefits from posting selfies on social media, should have a positive impact on self-posting behaviors (Chen & Hung, 2010). Chen and Hung (2010) added that "relative advantage is a measure of the degree to which an action provides more benefit than its precursor" (p.228). With particular respect to the knowledge sharing behaviors, previous research has shown that individual perception of potential benefits associated with knowledge sharing is one of the key components that could drive more positive knowledge sharing behaviors (Chen & Hung, 2010). For example, in an earlier study, Lin et al. (2009) has shown that knowledge sharing behaviors could be closely linked to perceived relative advantage. In another information management report, Chen and Hung (2010) have demonstrated that perceived relative advantage would positively predict knowledge collecting behaviors.

Moreover, although limited efforts have been made to investigate the moderating role of perceived relative advantage in previous studies, in SNSs, it is possible that perceived relative advantage will play a key role in moderating the link between habitual use and selfie-posting continuance intention, as well as the relationship between selfie-posting satisfaction and continuance intention. In order to further verify the moderating role of perceived relative advantage in social media research, accordingly, this study proposes the following research questions and framework (see Fig. 1).

RQ1. Will perceived relative advantage moderate the relationship between habitual use and selfie-posting continuance intention?

RQ2. Will perceived relative advantage moderate the relationship between selfie-posting satisfaction and continuance intention?

3. Research methodology

3.1. Demographic data for respondents

In Table 1, it was found that 468 undergraduate business students participated in this study. Except 2 missing data, the participants were 173 males (34%), and 303 females (65%). Additionally, most undergraduate students posted their selfies on Instagram (N = 308, 66%), and Facebook (N = 139, 30%) before. Third, the majority of participants were junior students (N = 140, 30%). Finally, the mean age and standard deviation of participants was 19.99 and 1.879, respectively.

3.2. Data collection

The data was gathered from three different colleges in Taiwan. That is, the researchers invited business college students with selfie-posting experience to finish the survey. This study finally obtained 468 complete surveys to analyze the data.

3.3. Control variables

This study contained three control variables: selfie-posting experience, business major, and undergraduate students. More precisely, the participants of this study were all undergraduate business students who posted selfies on social media before.

3.4. Instrumentation

The authors adopted the seven-point Likert scale (1 = strongly disagree to 7 = strongly agree) to measure different variables in this report (see Appendix A). The survey items that measured the construct of perceived playfulness were developed from Huang, Jang, Machtmes, and Deggs (2012). Sample items are "Using social networking sites is one of my enjoyments", and "Using social networking sites gives me fun". Moreover, three items which examined the construct of habitual use were taken from Chung, Lee, and Choi (2015). Sample items are "Posting selfies on social networking sites has become a habitual act", and "I use social

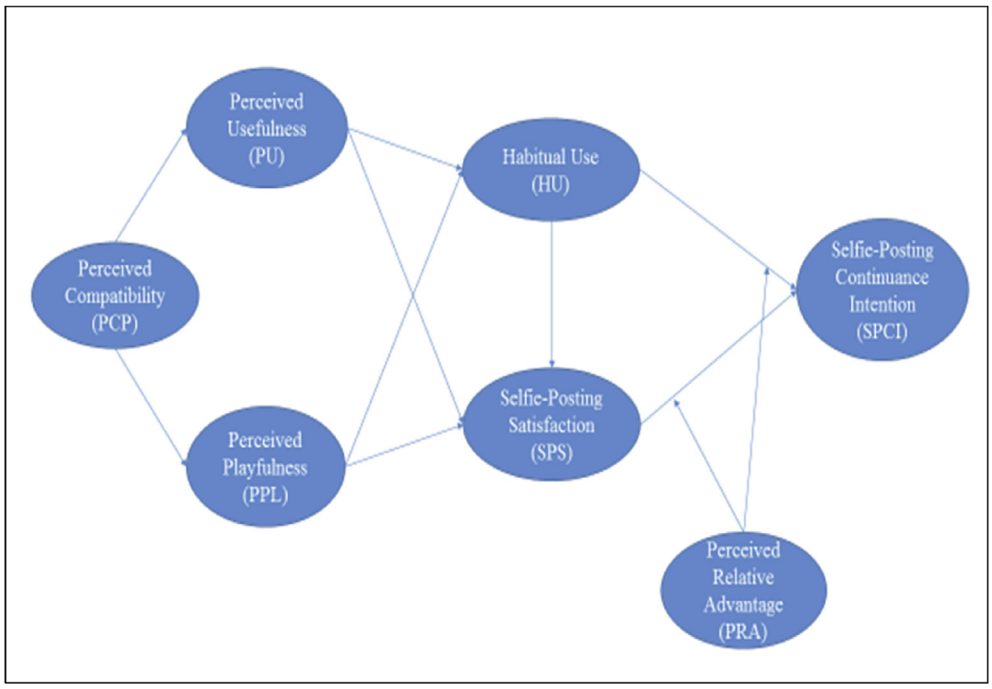

Fig. 1. Research framework of the study.

Table 1
Demographic data for respondents.

Demographics	Items	Number	Percentage of respondents
Gender	Male	163	34
	Female	303	65
	Missing data	2	1
Social Networking Sites	Facebook	139	30
	Instagram	308	66
	Others (Weblog)	21	4
Academic Level	Freshman	137	29
	Sophomore	110	24
	Junior	140	30
	Senior	81	17
Age	Valid participants	463	99
	Missing data	5	1
	Mean Age	19.99	
	Standard deviation	1.879	

networking sites to post selfies automatically". Third, this study adopted three items which were developed from Islam (2016) to examine the construct of perceived compatibility. Sample items are "Social networking sites are compatible with most aspects of my life", and "Using social networking sites fits with my lifestyle". Additionally, three items which examined the construct of perceived relative advantage were taken from Lin et al. (2009). Sample items are "Sharing selfies with my friends and family members will strengthen our relationships", and "Sharing selfies with other people will enable me to rapidly build the relationships with them". Finally, survey items which evaluated the constructs of perceived usefulness, selfie-posting satisfaction and continuance intention were adopted from Roca et al. (2006). Sample items are "I found social networking sites to be useful to me in building relationship with other people", and "My decision to adopt social networking sites to post my selfies is a wise one", as well as "I will continue to use social networking sites to post my selfies in the future".

4. Data analysis and results

In order to examine the connections between perceived compatibility, habitual use, perceived playfulness, selfie-posting satisfaction and continuance intention, the SPSS and smart PLS software were utilized to examine data. Because the partial least squares structural equation modeling (PLS-SEM) was popularly used for examining the connections between latent variables (Lu, Ma, Turner, & Huang, 2007), it was further implemented to examine the moderating role of perceived relative advantage in selfie-posting satisfaction and continuance intention. First, with regard to the adequacy of measurement model, several indicators, including the composite reliability (CR), factor loading, average variance extracted (AVE), and square root of AVE, were adopted not only to determine whether the reliability and internal consistency of the instrument were adequate, but also to examine whether the convergent and discriminant validity were satisfactory (Fornell & Larcker, 1981). In Tables 2 and 3, the study findings demonstrated that the composite reliability (CR) and AVE in three different

Table 2
Confirmatory factor analysis of each model.

Items	FM	α	CR	AVE	HPRA	α	CR	AVE	LPRA	α	CR	AVE
HU1	0.88				0.88				0.84			
HU2	0.91				0.88				0.91			
HU3	0.92				0.92				0.90			
HU		0.89	0.93	0.81		0.88	0.92	0.80		0.87	0.92	0.79
PCP1	0.91				0.91				0.88			
PCP2	0.92				0.93				0.89			
PCP3	0.86				0.81				0.86			
PCP		0.88	0.92	0.80		0.86	0.91	0.78		0.85	0.91	0.77
PPL1	0.89				0.89				0.86			
PPL2	0.93				0.93				0.90			
PPL3	0.93				0.93				0.90			
PPL		0.90	0.94	0.84		0.91	0.94	0.85		0.86	0.92	0.79
PU1	0.82				0.81				0.68			
PU2	0.86				0.85				0.75			
PU3	0.81				0.82				0.82			
PU4	0.81				0.84				0.75			
PU		0.84	0.89	0.68		0.85	0.90	0.70		0.76	0.83	0.56
SPCI1	0.93				0.93				0.92			
SPCI2	0.95				0.95				0.93			
SPCI3	0.86				0.85				0.82			
SPCI		0.90	0.94	0.84		0.90	0.93	0.83		0.86	0.92	0.79
SPS1	0.92				0.90				0.90			
SPS2	0.93				0.95				0.89			
SPS3	0.90				0.91				0.86			
SPS		0.90	0.94	0.84		0.91	0.94	0.85		0.86	0.92	0.78

Note. FM, full model; HPRA, high perceived relative advantage; LPRA, low perceived relative advantage; PCP, perceived compatibility; PU, perceived usefulness; PPL, perceived playfulness; HU, habitual use; SPS, selfie-posting satisfaction; SPCI, selfie-posting continuance intention; CR, composite reliability; AVE, average variance extracted; α, cronbach's alpha.

Table 3
The correlations of each construct among different models.

Construct	HU	PCP	PPL	PU	SPCI	SPS
Full Model						
HU	0.90					
PCP	0.43	0.90				
PPL	0.38	0.75	0.91			
PU	0.30	0.53	0.46	0.82		
SPCI	0.69	0.64	0.53	0.38	0.92	
SPS	0.63	0.56	0.53	0.41	0.76	0.92
HPRA						
HU	0.90					
PCP	0.41	0.88				
PPL	0.39	0.76	0.92			
PU	0.29	0.55	0.47	0.83		
SPCI	0.67	0.60	0.56	0.36	0.92	
SPS	0.63	0.61	0.60	0.41	0.77	0.92
LPRA						
HU	0.89					
PCP	0.29	0.88				
PPL	0.17	0.67	0.89			
PU	0.075	0.38	0.29	0.75		
SPCI	0.64	0.55	0.32	0.13	0.89	
SPS	0.53	0.37	0.29	0.20	0.67	0.88

Note. FM, full model; HPRA, high perceived relative advantage; LPRA, low perceived relative advantage; PCP, perceived compatibility; PU, perceived usefulness; PPL, perceived playfulness; HU, habitual use; SPS, selfie-posting satisfaction; SPCI, selfie-posting continuance intention; Diagonal elements are the square root of Average Variance Extracted.

models were above 0.80 and 0.50, respectively (Fornell & Larcker, 1981).

With specific regard to the factor loadings in three different models, although the factor loading of PU1 = 0.68 in low perceived relative advantage model was slightly lower than the suggested criteria 0.70, the other factor loadings in three different models were all higher than 0.70. Moreover, in three different models, off-diagonal correlations of latent variables were less than the square root of AVE on the diagonal. Because the indicators were adequate, the measurement model of this study was found to be acceptable (Fornell & Larcker, 1981).

Third, in order to examine the structural model, three indicators, including t-values, path coefficients (β), and R-square values, were utilized to probe into the associations between different variables. In Fig. 2 and Table 4, it was demonstrated that the study findings in the full model (FM) buttressed all hypotheses, which not only revealed that habitual use and selfie-posting satisfaction would be positively linked to selfie-posting continuance intention, but also indicated that perceived compatibility had a positive impact on perceived usefulness and playfulness, which in turn would lead to better habitual use and selfie-posting satisfaction. More specifically, the study findings indicated that habitual use (FM, $\beta = 0.335$, $t = 8.076$), and selfie-posting satisfaction (FM, $\beta = 0.540$, $t = 11.732$), which accounted for a total of 65.8% of variance in continuance intention, were positively linked to selfie-posting continuance intention. In addition, it was shown that habitual use (FM, $\beta = 0.479$, $t = 10.984$), and perceived usefulness (FM, $\beta = 0.134$, $t = 3.198$), and perceived playfulness (FM, $\beta = 0.291$, $t = 6.213$), which explained a total of 51.3% of variance in satisfaction, had a positive impact on selfie-posting satisfaction.

In addition, the study findings revealed that perceived usefulness (FM, $\beta = 0.165$, $t = 2.743$) and perceived playfulness (FM, $\beta = 0.302$, $t = 5.109$), which explained a total of 16.5% of variance in habitual use, would positively predict habitual use. Additionally, the study findings not only demonstrated that perceived compatibility (FM, $\beta = 0.539$, $t = 10.995$) accounted for a total of 29.1% of variance in perceived usefulness, but also indicated that perceived compatibility (FM, $\beta = 0.757$, $t = 29.558$) explained a total of 57.4% of variance in perceived playfulness. That is, it was found that perceived compatibility was positively connected with perceived usefulness and playfulness.

Finally, with respect to the moderating effect of perceived relative advantage on the relationship between habitual use and selfie-posting continuance intention, as well as the link between

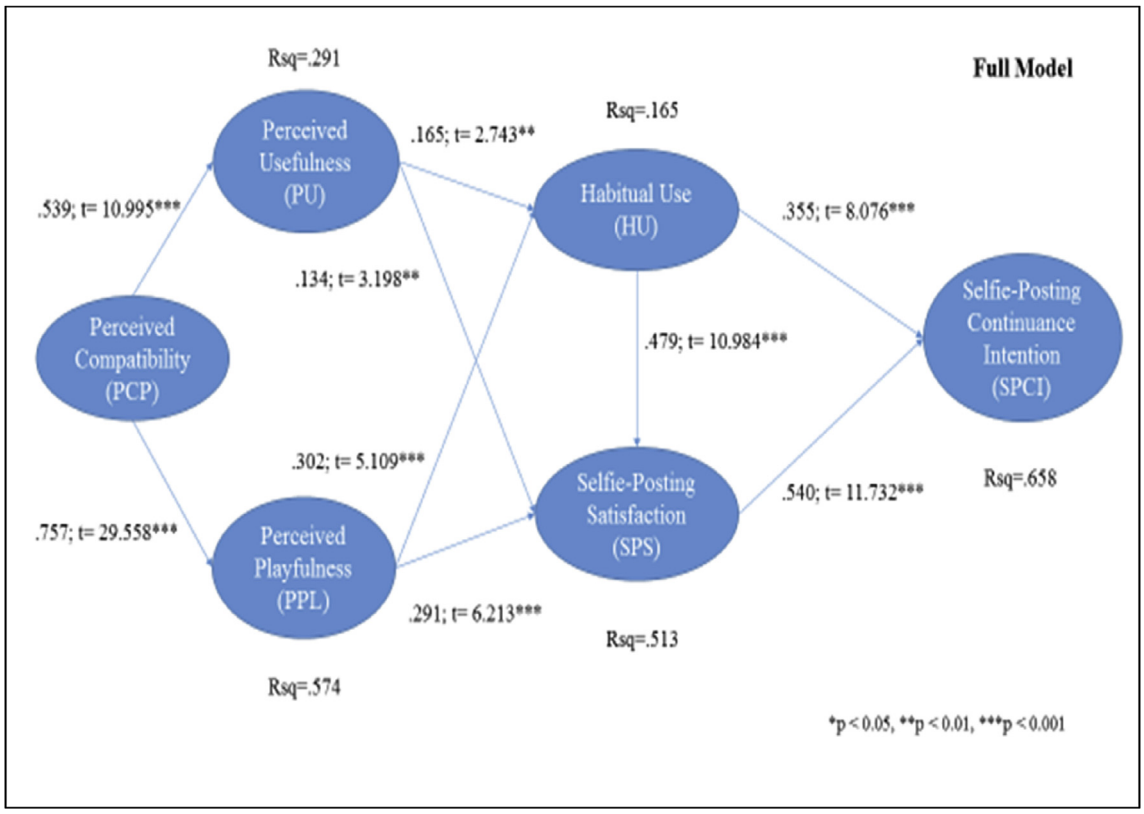

Fig. 2. The path coefficient of full model.

Table 4
Summary of hypothesis test results.

Hypothesis	Test Results
H1: Habitual use will have a positive impact on selfie-posting continuance intention.	Supported
H2: Habitual use will have a positive impact on selfie-posting satisfaction.	Supported
H3: Selfie-posting satisfaction will have a positive impact on selfie-posting continuance intention.	Supported
H4: Perceived usefulness will have a positive impact on habitual use.	Supported
H5: Perceived usefulness will have a positive impact on selfie-posting satisfaction.	Supported
H6: Perceived playfulness will have a positive impact on habitual use.	Supported
H7: Perceived playfulness will have a positive impact on selfie-posting satisfaction.	Supported
H8: Perceived compatibility will have a positive impact on usefulness.	Supported
H9: Perceived compatibility will have a positive impact on perceived playfulness.	Supported

selfie-posting satisfaction and continuance intention, this study utilized the following steps, which were proffered by Keil, Tan, Wei, and Saarinen (2000), to carry out the analysis of path coefficient comparison, and further answer the research questions.

$$Spooled\sqrt{\frac{(N1-1)\times SE1^2+(N2-1)\times SE2^2}{(N1+N2-2)}}$$

$$t=\frac{(PC1-PC2)}{\frac{Spooled}{\sqrt{\frac{1}{N1}+\frac{1}{N2}}}}$$

Spooled = pooled estimator for the variance
t = t-statistic with ($N1$+$N2$-2) degrees of freedom
$N1$ = sample size of high PRA group;
$N2$ = sample size of low PRA group;
$PC1$ = path coefficient in structural model of high PRA group;
$PC2$ = path coefficient in structural model of low PRA group;
$SE1$ = standard error of path in structural model for high PRA group;
$SE2$ = standard error of path in structural model for low PRA group;
PRA = perceived relative advantage

Based on the median of perceived relative advantage, the data were divided into two different categories. More precisely, this study utilized the data from two different groups: high perceived relative advantage (HPRA) group (N1 = 246) and low perceived relative advantage (LPRA) group (N2 = 222) to perform the Partial Least Squares (PLS) analysis, and further explore the moderating role of perceived relative advantage in selfie-posting satisfaction and continuance intention. In Fig. 3 and Table 5, the study findings indicated that perceived relative advantage would play a key role in moderating the connection between habitual use and selfie-posting continuance intention (t = −17.34, p < 0.001), as well as the relationship between selfie-posting satisfaction and continuance intention (t = 19.11, p < 0.001).

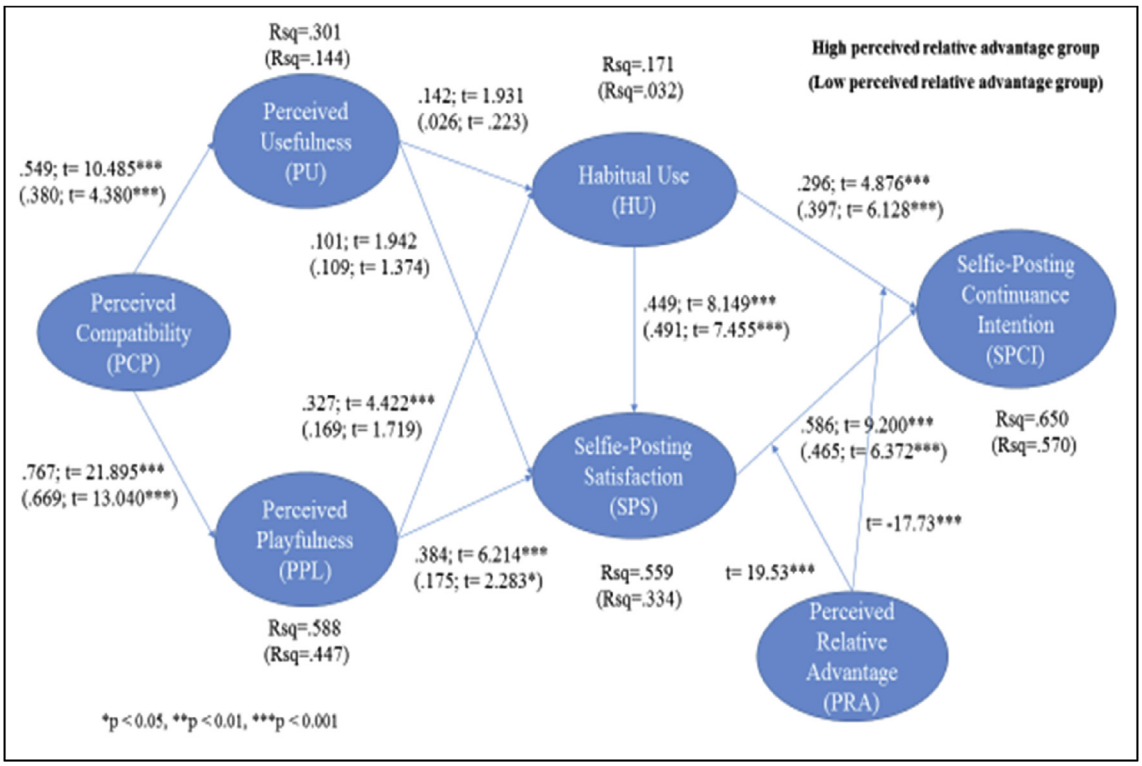

Fig. 3. PLS solution for different models.

Table 5
The moderating effect of perceived relative advantage.

Research Question	Path	HPRA (N1 = 246)		LPRA (N2 = 222)		Comparison P-value
		Path coefficient	SE	Path coefficient	SE	
RQ1	HU→SPCI	0.296	0.061	0.397	0.065	−17.34***
RQ2	SPS→SPCI	0.586	0.064	0.465	0.073	19.11***

Note. HRTC, HPRA, high perceived relative advantage; LPRA, low perceived relative advantage; PCP, perceived compatibility; PPL, perceived playfulness; HU, habitual use; SPS, selfie-posting satisfaction; SPCI, selfie-posting continuance intention; *p < 0.05, **p < 0.01, ***p < 0.001.

5. Discussions and implications

The primary purpose of this study is not only to examine the key elements that could motivate people to continuously post selfies, but also to investigate the moderating role of perceived relative advantage in selfie-posting continuance intention. First, in line with previous reports (Hsiao et al., 2016; Padilla-Meléndez et al., 2013), the study findings have not only demonstrated that habitual use will have a positive influence on selfie-posting satisfaction, but also indicated that habitual use and selfie-posting satisfaction will lead to better selfie-posting continuance intention. That is, as people have higher levels of habitual use and selfie-posting satisfaction, it is possible that they will have more positive selfie-posting continuance intention. It is suggested that more attention should be paid to enhancing individuals' habitual use, and selfie-posting satisfaction. For example, in order to let social media users be more used to using social networking sites, it is meaningful and considerable that social media service providers should offer them different tangible and intangible rewords such as vote for best selfie or free food and beverage coupons (Hsu et al., 2015).

In addition, congruent with prior research (Chung et al., 2015; Hsiao et al., 2016; Roca et al., 2006; Yang et al., 2016), the study results have indicated that perceived usefulness and playfulness will positively predict habitual use and selfie-posting satisfaction. Specifically, it has been found that customers with higher levels of perceived usefulness and playfulness are more likely to have batter better habitual use and selfie-posting satisfaction. Consequently, it is hinted that more efforts should be made to improve users' perceived usefulness and playfulness of SNSs. In order to enhance users' perceived usefulness and playfulness, more efforts should be made to give users and customers enjoyable and useful experiences. For example, it is suggested that animated selfies and stickers should be used to create more enjoyable and useful experiences for users (Hsiao et al., 2016; Padilla-Meléndez et al., 2013).

Third, the study findings, congruent with previous reports (Cheng, 2015; Yang et al., 2016), have indicated that perceived compatibility will have a positive impact on perceived usefulness and playfulness. In other words, people with higher levels of perceived compatibility will have better perceived usefulness and playfulness. Hence, it is implied that more attention should be paid to improving users' perceived compatibility. For example, it is critical that social media service designers and providers should make sure whether social networking sites are user-friendly to users and customers. More importantly, surveys related to perceived compatibility should be carried out in order to further improve the service and quality of social networking sites (Cheng, 2015; Chung et al., 2015; Yang et al., 2016).

Last but not least, the study findings are consistent with

previous suggestions, which reveal that perceived relative advantage will moderate the relationship between habitual use and selfie-posting continuance intention, as well as the association between selfie-posting satisfaction and continuance intention (Chen & Hung, 2010; Lin et al., 2009). More specifically, it has been shown that customers with higher levels of perceived relative advantage tend to have a better relationship between selfie-posting satisfaction and continuance intention, as well as a weaker link between habitual use and selfie-posting continuance intention than those with lower levels of perceived relative advantage. By contrast, customers with lower levels of perceived relative advantage will have a better association between habitual use and selfie-posting continuance intention, as well as a feebler relationship between selfie-posting satisfaction and continuance intention than those with higher levels of perceived relative advantage.

It is hinted that in terms of customers with higher levels of perceived relative advantage, more attention should be paid to enhancing customers' selfie-posting satisfaction, mainly because selfie-posting satisfaction will facilitate more positive selfie-posting continuance intention. On the contrary, in regard to customers with lower levels of perceived relative advantage, more efforts should be devoted to improving customers' habitual use, mainly because habitual use will play a more important role in determining better selfie-posting continuance intention.

6. Limitations and conclusions

Several limitations related to sampling and research design should be taken into account in this study. The first limitation is directly related to sampling design, mainly because the data was only obtained from undergraduate business students in Taiwan. Actually, in terms of selfie-posting studies, it is not unusual to use student samples in selfie-posting research. For example, an early report by Chen and Marcus (2012) investigated college students' self-presentation on Facebook. Another recent review by Limjuco and Bautista (2016) explored college students' behavioral intentions to indulge selfie and groufie activities. Nevertheless, it is necessary that more research should be needed in order to further verify the study findings in this report. Additionally, because this study did not investigate the influence of gender differences on selfie-posting behaviors, it is suggested that more efforts should be made to probe into gender differences in selfie-posting behaviors in order to further examine the key impact of gender on selfie-posting behaviors. Third, the role of age in selfie-posting behaviors was ignored in this report, mainly because the participants were all undergraduate students. Hence, it is considerable that future studies should pay more attention to the impact of age on selfie-posting continuance intention. Finally, this study did not focus on whether prior experience, timely supports and motivations from friends and family members would affect selfie-posting behaviors, so it is critical that more efforts should be made to examine the influences of prior experience, timely supports and motivations on selfie-posting behaviors.

In conclusion, the study findings have extended the body of knowledge in social media research, not only because this study has examined the connections between perceived compatibility, habitual use, perceived playfulness, selfie-posting satisfaction and continuance intention, but also because the moderating role of perceived relative advantage in selfie-posting continuance intention has been further verified through the analysis of empirical data. As the use of mobile devices and social networking sites has become more and more pervasive and popular in our daily lives, it is considerable that more efforts should be made not only to examine key elements which could result in selfie-posting behavior, but also to explore the moderating role of perceived relative advantage in selfie-posting satisfaction and continuance intention.

Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.chb.2017.11.007.

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