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Pei-Hsieh Hsieh
National Cheng Kung University, peihsuan@mail.ncku.edu.tw

Yu-Ting Hsiao
National Cheng Kung University, w082081@gmail.com

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Pei-Hsieh Hsieh, Institute of Information Management, National Cheng Kung University, Tainan, Taiwan, peihsuan@mail.ncku.edu.tw

Yu-Ting Hsiao, Institute of Information Management, National Cheng Kung University, Tainan, Taiwan, w082081@gmail.com

Abstract

Online users are free to register an account on a website for the purpose of enjoying various online services. More and more multi-service platforms are being developed. Users have the option to either create a new account or simply share their original account information, e.g., Facebook, to complete registration. However, when using the original account information on a new platform, online users are possibly at risk disclosing their personal information to platform vendors. Therefore, this study's purpose is to explore online user intention toward using shared accounts on another new multi-service platform. Individual aspects of perceived risk and perceived benefits for using shared accounts are examined through an online survey which was validated by MIS experts and passed a pilot test. The preliminary results of this study show that registration efficiency and perceived platform trust level have significant positive impacts on user intention, which further impacts their actual behavior related to using a shared account while user privacy concerns and the perceived security level of the platform have a significant negative impact on their use intention. Discussion is provided along with other data sources arguing the non-significant effects of perceived enjoyment and perceived usefulness on online user intention.

Keywords: Shared account, Self-disclosure, Online services.

1 INTRODUCTION

In recent research, open content, open data, and open innovation as they related to the *openness* of IT technology have received a great deal of attention (Parker & Van Alstyne 2014; Smith 2007). The concept of *openness* has thus provided insight to the online service providers who intend to co-create an innovative or open business model for the purpose of expanding their own customer bases as well as gaining more market share (Smith 2007). Due to the wide spread of the Internet and social networking sites, online users are usually free to register for membership on most sites for the purpose of enjoying various online services, such as gaming, learning, searching, shopping, and social networking. These users do not need to re-register on another account to sign onto another site; instead, they are asked to share their original Facebook, Google or Yahoo! accounts which were created before the new site was developed. Apparently, such account sharing behavior is a single sign-on, and has regarded as an emergent business value co-creation model (Parker & Van Alstyne 2014).

As multi-service platforms are rapidly developed, most of them offer users an alternative option to complete membership registration by simply sharing existing original account information which was already created before on another platform. For users, a complicated step can be omitted. The option of using shared accounts designed on such platforms is intended to offer not only diversity but also to provide aggregated online services to users (Lazzarotti et al. 2010). Users still have the option of deciding whether to create a new account or simply clicking some boxes to use the existing original account. For example, users can log in to a new platform via their original Facebook account after they accept or agree to some conditions stated on the new platform. However, sharing the existing original account on many other platforms becomes a concern to users who perceive that their privacy may be at risk. By sharing the original account information on a new platform, users possibly disclose their account information at the same time to unknown platform vendors.

The current literature pertinent to sharing the existing account is lacking, but similar concepts, such as perceived risks and benefits, can be drawn from the literature review pertinent to self-disclosure. Therefore, this study integrates social exchange theory (SET) and social penetration theory (SPT) to propose a theoretical model regarding account sharing for the purpose of exploring online users' intention to select the shared account option on a new platform. According to Social exchange theory (SET), exchange opinion is a social behavior that may result in both tangible and intangible outcomes (Homans 1958). By applying SET, two individual aspects (perceived risk and perceived benefits) can be separately explored for a discussion of self-disclosure intention and behavior in the e-commerce context (Sharma & Crossler 2014) as well as in social networking sites (Loiacono 2015). In addition, prior studies have combined SPT concepts to discuss the impact of self-disclosure on use intention (Liu et al. 2016; Loiacono 2015; Posey et al. 2010). In this study context, SPT was conceptualized as a form of accepting to enter a new social group for establishing relationship and becomes more intimate as the interaction time increases (Altman & Taylor 1973). Thus, the SET-SPT theoretical framework can be used to reflect the depth of self-disclosure occurring between two parties.

Overall, based on the SET and SPT concepts, the purpose of this study is to explore online users' intention and actual behavior to use a shared account on another new multi-service platform. The phenomenon of an open co-creation business model in terms of shared accounts and membership management is further discussed to explain why platform providers offer a shared account option to users and why users are willing to select a shared account option on these new platforms.

2 LITERATURE REVIEW

Self-disclosure refers to individuals who are willing to share their personal information, including their thoughts, emotions and experiences, with others (Spiekermann et al. 2010). Times and length of self-disclosure reflects the amount of personal information that is shared with others (Liu et al. 2016). In past research, self-disclosure models were built on SET by integrating the theoretical concepts of SPT. Thus, this study integrates SET and SPT to propose a theoretical model regarding account sharing in

order to separately examine online users' perceived risk (i.e., privacy concerns, platform trust level and security), and perceived benefits (i.e., enjoyment, usefulness, efficiency) as the shared account option available on a new platform. This study further explores online user intention as well as actual behavior related to selecting the shared account option on the new platform.

Privacy concerns refer to personal attitudes toward privacy. These attitudes could be negative when online users are worried about losing something after self-disclosure (Spiekermann et al. 2010), and thus, they may be concerned about revealing their own personal information (Paine et al. 2007). If users have a high standard for privacy concerns, they may refuse to provide personal information to any site or platform, or they may provide false information (Gross & Acquisti 2005). Privacy concern has been regarded as the critical factor in most online privacy-related studies (Dinev et al. 2013). Previous studies have also confirmed that privacy concerns affect the trust and decision-making of online users (Dinev & Hart 2006ab; Liu et al. 2005). Hence, we hypothesize:

H1: Privacy concerns have a negative impact on the intention to use shared accounts.

Trust is regarded by mangers as the key factor in managing e-commerce websites (Qu et al. 2015; Yoon & Occeñ 2015). Trust is positively related to behavioral intention. A high level of trust will reduce the perceived risk related to publishing sensitive information and thus will increase online users' intention to self-disclose (Posey et al. 2010). Users will tend to disclose personal information on trusted sites (Wakefield 2013). Hence, we hypothesize:

H2: Platform trust level has a positive impact on the intention to use shared accounts.

Platform security is tied to the safety level of transactions and privacy protection policies for consumers who shop online (Yang et al. 2015). Platform security is usually regarded as a major construct which can be used to measure the quality of an online platform, and it refers to the degree to which consumer privacy can be protected on a platform (Gnaneswaran et al. 2008). Because consumers have concerns about platform security, their risk awareness related to use of a platform will be increased and thus will reduce their purchasing intention (Miyazaki & Fernandez 2000). Hence, we hypothesize:

H3: Platform security has a positive impact on the intention to use shared accounts.

Enjoyment is characterized by a positive emotional effect, allowing users to experience intangible benefits, especially on social networking sites (Koufaris et al. 2001; Van der Heijden 2004). Also, when users enjoy staying on sites, they tend to have higher intention to use the technologies on the sites and are more likely to reveal more personal information to others (Liu et al. 2016). The direct relationship between enjoyment and behavioral intention and actual behavior is obvious (Wakefield 2013). Hence, we hypothesize:

H4: Perceived enjoyment has a positive impact on the intention to use shared accounts.

Previous studies have shown that on useful websites, users tend to disclose their information more and offset any risk they perceive (McKnight et al. 2011). Meanwhile, if users are willing to disclose their information on such websites, they consider this activity to be valuable (Han & Windsor 2011). Likewise, users are willing to self-disclose by using shared accounts as well as by giving up some personal privacy on websites due to the perceived usefulness of the sites. Hence, we hypothesize:

H5: Perceived usefulness has a positive impact on the intention to use shared accounts.

Since users have decided to use the original account, the complicated step of creating a new account on a new platform for completing registration can be omitted. For example, a user can share his/her original Facebook account information in order to efficiently log onto a new platform. Efficiency is regarded as a major construct which can be used to measure the quality of websites (Zeithaml et al, 2002; Yoo & Donthu 2001). As long as a platform is highly efficient, users will increase their intentions of using the same account on a new platform. Hence, we hypothesize:

H6: Perceived efficiency has a positive impact on the intention to use shared accounts.

From a behavioral point of view, behavioral intentions and behavior have a high degree of correlation (Venkatesh & Agarwal 2006; Venkatesh & Davis 2000). Websites usually offer users customized, personalized services and more services as long as the users are willing to share some of their personal information, such as friend list in the account (White 2004). Hence, we hypothesize:

H7: Intention to use shared accounts has positive impact on actual behavior of using shared accounts.
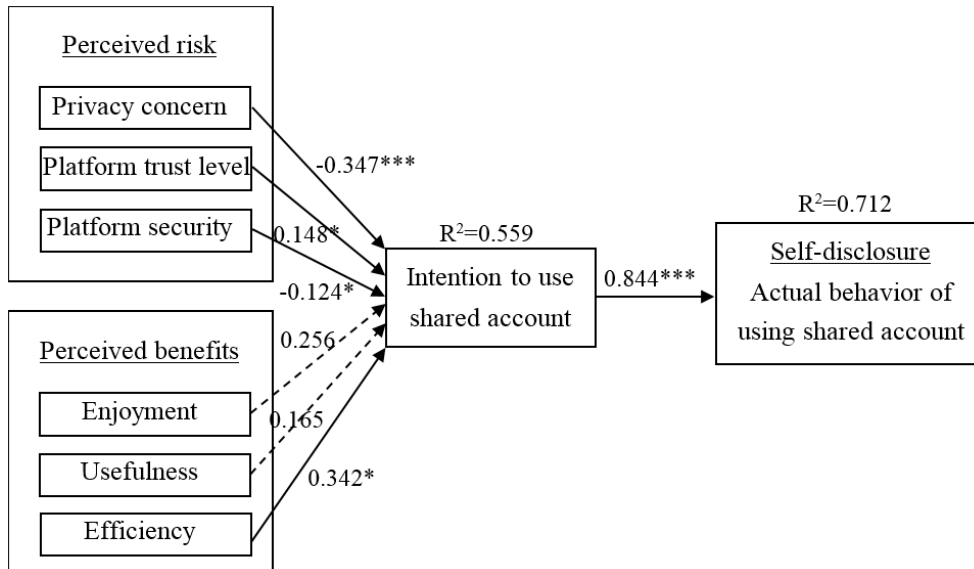

Figure 1.   Using shared account self-disclosure model

3   METHODOLOGIES

This study integrates the SET and SPT conceptual models to propose a theoretical self-disclosure model of online user intention and shared account use behavior. Online users' perceived risk and perceived benefits related to using shared accounts were respectively examined (Figure 1). A questionnaire with eight inverse items was developed. After the questionnaire was validated by four MIS experts, a pilot test was distributed online. Respondents' account sharing experience was initially verified. As a result, 28 valid responses (eight responses were discarded) resulted in a high level of reliability after removing one item from the privacy concern construct (Cronbach's $\alpha = 0.847$) (Hair et al. 2010). Two more items having inverse descriptions and thus causing inconsistent responses were also removed after factor analysis (Hair et al. 2010). Referring to KMO values and Bartlett's test *p*-value, two items from the platform security construct were not required to be removed (Kaiser 1974), but the descriptions of the items had to be revised to increase clarity.

The formal questionnaire contains 35 items, including eight demographic items and five inverse items. The participants in this study were first recruited from the researchers' friends on Facebook, and then more Facebook users were invited to voluntarily take the online questionnaire. All the respondents were required to have experience being asked to share their Facebook accounts with other platforms such as Instagram and Spotify. SPSS 17.0 and AMOS 20 are considered to be perfect software for analysing data collected from formal questionnaires. The analysis methods included a descriptive analysis and the structural equation model (SEM), which contains a measurement model and a structural model. In the measurement model, confirmatory factor analysis (CFA) was carried out along with Cronbach's α and item-to-total correlation values. Convergent validity and discriminant validity were also conducted to further verify the validity of the questionnaire. In the structural model, standardized path coefficients (β), coefficient of determination (R^2), and T-test were reported.

4 PRELIMINARY RESULTS

A total of 327 questionnaires were collected, and 277 questionnaires were found to be valid, giving a valid response rate of 84.7%. The size of the sample achieved the requirement suggesting that the sample be at least five times greater than the number of questionnaire items (Hair et al. 2010). The respondents were roughly split between genders (Male: 47.3%, Female: 52.7%), and half were aged between 21 to 30 years old (61.0%). Most have a college/university degree (72.6%) or master's degree (24.9%). Half of them had experience with agreeing to share their Facebook account information (90.6%). In addition, the Cronbach's α for all the measurement items was greater than 0.7. The item-to-total correlations were also greater than 0.35. Both results show that the questionnaire demonstrated excellent internal consistency. Also, convergent validity can be validated using three values: the factor loading of each observed variable, the composite reliability (C.R.) and the average variance extracted (AVE) of the latent variables. As a result, the factor loading of each construct was found to be greater than 0.5. The AVE values of all constructs were above the recommended minimum of 0.5, which established the convergent validity of the constructs. The C.R. values ranged from 0.748 to 0.899, which was above the acceptable 0.7 threshold (Nunnally 1978), suggesting high reliability of the constructs (Table 1). The discriminant analysis results showed that each construct developed in this research measures different concepts from the others (Hair et al. 2010) (Table 2).

Finally, the relationships among the constructs of the research model could be determined. The path analysis results indicated that H4 and H5 were not supported (a significance level of 0.05), and H3 produced unexpected results; while the remaining hypotheses H1, H2, and H7 were supported, as shown in Table 3.

Construct	Measurement items	Item-to-total correlation	Factor loading	C.R.	AVE	Cronbach's α
Privacy concern (PC)	PC1	.610	.754	.903	.758	.891
	PC2	.832	.917			
	PC3	.851	.930			
	PC4	.767	.879			
Platform trust level (PT)	PT1	.763	.871	.922	.748	.888
	PT2	.799	.894			
	PT3	.737	.853			
	PT4	.729	.841			
Platform security (PS)	PS1	.683	.857	.902	.754	.837
	PS2	.751	.898			
	PS3	.670	.850			
Perceived enjoyment (PEj)	PEj1	.754	.900	.917	.786	.857
	PEj2	.795	.920			
	PEj3	.663	.838			
Perceived usefulness (PU)	PU1	.698	.879	.896	.742	.820
	PU2	.749	.903			
	PU3	.588	.798			
Perceived efficiency (PEf)	PEf1	.677	.850	.913	.779	.857
	PEf2	.805	.922			
	PEf3	.712	.874			
Intention to use shared account (ITU)	ITU1	.464	.690	.837	.564	.738
	ITU2	.630	.830			
	ITU3	.620	.824			
	ITU4	.419	.643			
Actual behavior of using shared account (ABU)	ABU1	.749	.885	.936	.829	.897
	ABU2	.849	.937			
	ABU3	.793	.909			

Table 1.   Measurement model related statistical results.

	PC	PT	PS	PEj	PU	PEf	ITU	ABU
PC	0.871							
PT	-0.281	0.864						
PS	0.22	0.233	0.868					
PEj	0.105	0.354	0.29	0.869				
PU	0.113	0.386	0.31	0.853	0.861			
PEf	0.4	0.224	0.353	0.622	0.807	0.882		
ITU	-0.206	0.488	0.111	0.663	0.696	0.552	0.751	
ABU	-0.264	0.338	0.016	0.393	0.466	0.308	0.889	0.910

Table 2.   Discriminant validity analysis.

Path	Standardized Estimate	S.E.	*t*-value	*p*	Results
H1	-0.347	0.075	-4.637	0.000	Supported
H2	0.148	0.064	2.313	0.021	Supported
H3	-0.124	0.060	-2.063	0.039	Not supported
H4	0.256	0.147	1.738	0.082	Not supported
H5	0.165	0.238	0.694	0.488	Not supported
H6	0.342	0.156	2.19	0.029	Supported
H7	0.844	0.029	28.988	0.000	Supported

Table 3.   Path coefficients and testing of the overall model.

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