

Perceived Risk and Trust Influence the Privacy Abuse Concern and Enjoyment on Social Network Sites for Shopping Decisions

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Abstract

The development of digital media and technology has a significant influence on daily life. Since the global increase in the use and popularity of Social Network Sites (SNS), many researchers focus their attention on user attitude and adoption intention. As users rely increasingly on social networks as part of their social life, concerns about the privacy disclosure and abuse can create obstacles to the trust and use of SNS. Disclosed privacy has become one of the important concerns of users on SNS. The objective of this study is to examine perceived risk and trust in social networks affecting users' privacy abuse concerns. Perceived risk, trust in social networks and concern regarding privacy abuse are assumed to determine users' enjoyment and actual use of SNS. The participants were 276 college students aged between 18 to 24 years old from different majors. The PLS-SEM model was used to examine the causal model. The results indicate that perceived enjoyment and perceived risk are the important constructs for college students. Privacy abuse concern was positively significant to the perceived enjoyment of SNS, and trust in social networks was the least important performance construct related to SNS use. The findings have important practical implications regarding college students revealing private information on SNS even if they know there are disclosure risks on SNS. Perceived risk is not high enough to drive them to refuse the disclosure of personal privacy on SNS. College students may see online disclosure as a kind of lifestyle and communication approach.

Keywords: Perceived risk, Trust in social network, Privacy abuse concern, Perceived enjoyment, Social network sites

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Introduction

Social network sites (SNSs) are becoming increasingly important in our daily life, especially among the young generation. They are often trapped in the virtual but “real” world of the internet, such as maintaining interpersonal relationships and exercising real-life social support functions (Zhou, Lei, Wang, Fan and Wang, 2015). Joinson (2008) indicated that the use and gratification of social networking is due to staying in touch with common characteristics, to meet different usage patterns with photos, content, information exchange, browsing social networks and status updates. SNS not only promotes the existence of individual social relations, but also satisfies the needs of social life to become an important social tool for interpersonal and social connections (Heenrink, Krose, Wieling and Evers, 2008; Li and Bernoff, 2008; Choi and Bazarova, 2015). As users are increasingly merging SNS as a part of their social activities, they have grown more trusting and depend heavily on these sites to maintain their social relationships. However, SNS also poses risks. The majority of users have a high level of awareness of the risks associated with their online behavior, but many researchers indicate that inconsistency between young users’ personal privacy disclosure and online privacy concerns (Butler, McCann and Thomas, 2011; Bryce and Fraser, 2014).

The use and gratification theory asserts that users fulfill their need for entertainment, relationships and identity construction, and that this supposedly overrides their privacy concerns (Debatin, Lovejoy, Horn and Hughe, 2009). Users easily ignore that they are at risk, and as a result, their privacy concern diminishes (Debatin et al, 2009; Antonopoulos, Veglis, Gardikiotis, Kotsakis and Kalliris, 2015). The third-person effect posits that people perceive others to be more influenced by media than they are. Users believe that using SNS has a larger negative impact on others than on themselves (Paul, Salwen and Dupagne, 2011; Zhang and Daugherty, 2010). Schweisberger, Billinson and Chock (2014) employed the third-person effect approach to investigate the discrepancies concerning the effects of SNS. The third-person effect accounts for users’ lower online privacy concerns and protective behaviors on SNS. With the wider spread of SNS among the general population, sensitivity to privacy issues may have increased significantly among young users. While 66% of teens limit others’ access to their profiles on SNSs (Lenhart and Madden, 2007), young users still inadvertently disclose sensitive privacy and believe blindly in SNS. Therefore, we want to understand young users’ concern and trust on SNS.

Factors of Social Network Sites Use

In this study, two factors extracted from disclosure sensitivity are perceived risk and privacy abuse concern. Trust in social networks is selected for users’ positive involvement and interaction of SNS. Perceived risk and trust in social networks affect users' privacy abuse concern, and all three are assumed to determine the enjoyment and actual use of SNS.

Privacy Abuse Concern (PAC) and Perceived Risk (PR)

Privacy is constructed as a claim of individuals, groups or institutions to determine users’ communication with others. Privacy abuse concern refers to an individual’s

control over the disclosure of personal information to prevent unauthorized use or improper access (Li, Lin and Wang, 2015). Perceived risk indicates the uncertain negative feelings regarding personal sensitive information disclosed on SNS, and may lead to discomfort over reputation and emotions (Matikiti, Roberts-Lombard and Mpinganjira, 2016; Ernst, 2014). Both privacy abuse concern and perceived risk have strong influences on the particular structural relationships and behaviors of SNS. Shibchurn and Yan (2015) revealed that subjective norms influence information disclosure on SNS through perceived usefulness and risk. There is a significant relation between perceived risk and disclosure intention. Good use experiences raise the rewards from, and trust in, SNS. Alternatively, perceived risk may promote suspicion and concern.

Taking risk implies that users perceive high risk when it is perceived to be beneficial for users to disclose information on SNS. Users' willingness to still disclose privacy in exchange for social benefits is a kind of rational choice (Dinev and Hart, 2006). The perception of high privacy risk and low intention result in the reduction or rejection of using SNS. Privacy abuse concern may cause users to distrust SNS. Research has also found that young users do not always act rationally in relation to privacy risk. SNS has been likened to a stage upon which users can manipulate the consequences, choosing what to disclose and what to hide. They may take risks in disclosing sensitive privacy issues on SNS (Taddei and Contena, 2013).

Trust in Social Networks (TSN)

Trust implies the acceptance of a certain degree of risk of suffering potential losses when the expected outcome is positive. Trust in social networks is regarded as an important factor for online interaction, and also reveals the positive implications of SNS use (Dwyer, Hiltz and Passerini, 2007). Trust in social networks may encourage users' involvement in activities and inspire their willingness to accept vulnerability in offering information on SNS (Staples and Webster, 2008).

Users assess the trust of members to easily accept their suggestions on SNS (Grabner-Krauter, 2013). If users worry about suffering high potential loss from private disclosure and causing perceive abuse and damage, their trust and pleasure in using SNS will be blocked. According to Yang (2012), young users with negative experiences will experience increased privacy concerns, heightened risk perceptions of online disclosure and undermined trust in social networks. In addition, trust in social networks has become even more important due to the proliferation of online fraud. Trust in social networks not only significantly influences attitudes and responses, but also guides users' behaviors on SNS (Posey et al., 2010; Shafique, Ahmad, Kiani and Ibrar, 2015).

Perceived Enjoyment (EN)

Enjoyment means perceived enjoyment from participating in the activities of SNS. Most users feel comfortable communicating with members and accept SNS as a social tool. They post photos or videos, share life experiences, engage in group conversations, offer or accept advice, have fun and enjoy entertainment. When the usage experience of SNS is pleasurable or easy, users confirm the perceived enjoyment resulting therefrom (Hu Poston and Kettinger, 2011). Bataineh,

Al-Abdallah and Alkharabsheh (2015) conclude that perceived enjoyment impacts the actual use of SNS (supported by Ernst, Pfeiffer and Rothlauf, 2013; Ernst, 2014).

Perceived enjoyment will encourage users to trust and accept SNS. Meanwhile, SNS behaviors occur in remote, impersonal environments, without face-to-face contact with members. This imposes the perceived risk of SNS use and a distrust regarding the information providers on SNS. Distrust and unpleasant experiences become obstacles to the intention of SNS use; users will take certain actions to reduce risk, such as avoiding decisions, gathering more information, or refusing SNS use. Thus, one way for users who make up their mind to make a risky action is to try to reduce the possible loss. Trust in social networks supports the perceived enjoyment of SNS, and leads to the expectation decisions. Therefore, in this study, we expect trust in social networks and perceived enjoyment to be related to SNS use when making shopping decisions.

Proposed Research Model and Hypotheses

We propose the following hypotheses:

H1: Trust in social networks is negatively related to the privacy abuse concern of SNS.

H2: Perceived risk of disclosure sensitivity is positively related to the privacy abuse concern of SNS.

H3: Trust in social networks is positively related to the perceived enjoyment of SNS.

H4: Privacy abuse concern is negatively related to the perceived enjoyment of SNS.

H5: Perceived risk of disclosure sensitivity is negatively related to the perceived enjoyment of SNS.

H6: Trust in social networks is positively related to the actual use of SNS in making shopping decisions.

H7: Perceived risk of disclosure sensitivity is negatively related to the actual use of SNS in making shopping decisions.

H8: Perceived enjoyment of SNS is positively related to the actual use of SNS in making shopping decisions.

Methodology

The target population was individuals who have used an SNS to make online shopping decisions. The study used the convenient sampling technique by internet survey. A total of 276 questionnaires were completed. The scales adopted from the previous literature (see Appendix) were adjusted to suit the use of SNS to make shopping decisions. A six-point Likert Scale was used in this study, ranging from '1 = strongly disagree' to '6 = strongly agree' for all questions. A pilot test of the instrument was conducted with 10 college students who use SNS, to check whether the measurement scales were easy to understand regarding the requirements of the questionnaire. The data were analyzed using structural equation modelling (SEM) using partial least squares (PLS) version 3.0. The PLS model can be used to examine complex relationships and explain the important and total effects of facets (Chin, 1998). In the repeated extraction of 1,000 samples, the bootstrap resampling method was used for the parameter estimation and inference (Henseler and Chin, 2010; Hair, Hult, Ringle and Sarstedt, 2016).

Table 1: Reliability, convergent validity and discriminant validity

| Constructs | items | Loading>0.7 | VIF<10 | CA>0.7 | CR>0.7 | AVE>0.5 |
|-------------------------------|-------|-------------|--------|--------|--------|---------|
| Trust in Social Network (TSN) | TSN1 | .893 | 2.234 | | | |
| | TSN2 | .903 | 2.703 | .843 | .905 | .761 |
| | TSN3 | .818 | 1.739 | | | |
| Perceived Risk (PR) | PR1 | .920 | 3.032 | | | |
| | PR2 | .935 | 3.558 | .917 | .948 | .858 |
| | PR3 | .925 | 3.308 | | | |
| Privacy Abuse Concern (PAC) | PAC1 | .924 | 2.917 | | | |
| | PAC2 | .918 | 3.034 | .907 | .942 | .843 |
| | PAC3 | .912 | 2.985 | | | |
| Perceived Enjoyment (EN) | EN1 | .871 | 2.132 | | | |
| | EN2 | .938 | 3.822 | .891 | .932 | .821 |
| | EN3 | .909 | 3.143 | | | |
| Actual Use (AU) | AU1 | .901 | 2.121 | | | |
| | AU2 | .894 | 2.596 | .874 | .922 | .797 |
| | AU3 | .884 | 2.481 | | | |

Table 2: Correlation coefficient of facets and root value of AVE

| | AU | EN | PAC | PR | TSN |
|-----|-------------|-------------|-------------|-------------|-------------|
| AU | .893 | | | | |
| EN | .439 | .906 | | | |
| PAC | .380 | .263 | .918 | | |
| PR | .346 | .231 | .750 | .926 | |
| TSN | .160 | .420 | -.081 | -.074 | .872 |

Note: The diagonal of the matrix is the AVE root value

Model Fitness

To assess the reliability of the scales, the Cronbach alpha test was performed. The convergent validity of the construct was tested using average variance extracted (AVE) and composite reliability (CR), for which values must be greater than 0.7 (Hair, Hult, Ringle and Sarstedt, 2016). The results are shown in Table 1. All the constructs scored Cronbach alpha values above 0.7, indicating that the scales used for this study were reliable. All items had a CR value greater than 0.7, supporting the convergent validity of the variables (Hair et al., 2016). The values of AVE for the constructs exceeded 0.5, attesting that convergent validity is strongly demonstrated (Fornell and Larcker, 1981).

The VIF values (Variance Inflation Factor) of the indicators are all less than 10, indicating that the construct is not collinear (Hair et. al., 2016). The values of Fornell-Larcker Criterion are shown in Table 2; the diagonal AVE root number values are greater than the matrix corresponding to the correlation coefficient value, attesting that the model satisfied the requirements for discriminant validity.

The Structural Model

The results show PLS in Figure 1 and Table 3; they indicate that 56.1% of the variance in privacy abuse concern (PAC) is captured, only 25.8% of the variance in perceived enjoyment (EN) is captured and 24.8% of the variance in actual use (AU) is explained by the model. The results show that privacy abuse concern has high variation explanation in this model.

According to the PLS results, trust in social network ($\beta=-.02$, $p>.05$) insignificantly affects privacy abuse concern, and perceived risk ($\beta=.74$, $p<.001$) affects privacy abuse concern, thus rejecting Hypothesis 1, but supporting Hypothesis 2. Both trust in social network ($\beta=.44$, $p<.001$) and privacy abuse concern ($\beta=.23$, $p<.01$) affect perceived enjoyment, but privacy risk ($\beta=.09$, $p>.05$) does not affect perceived enjoyment, supporting Hypotheses 3 and 4, but not supporting Hypothesis 5. Trust in social network ($\beta=.02$, $p>.05$) insignificantly influences actual use of shopping decisions, and privacy risk ($\beta=.26$, $p<.001$) positively influences actual use of shopping decisions, thus rejecting Hypotheses 6, but supporting Hypothesis 7. Finally, perceived enjoyment ($\beta=.36$, $p<.001$) affects the actual use of shopping decisions, thus supporting Hypothesis 8.

The results in this study indicate that trust in social networks does not cause the actual use of shopping decisions, but does affect the perceived enjoyment of SNS use. Perceived risk strongly relates to privacy abuse concern and also affects the actual use of shopping decisions. Privacy abuse concern has a positive influence on perceived enjoyment, which affects the shopping decisions.

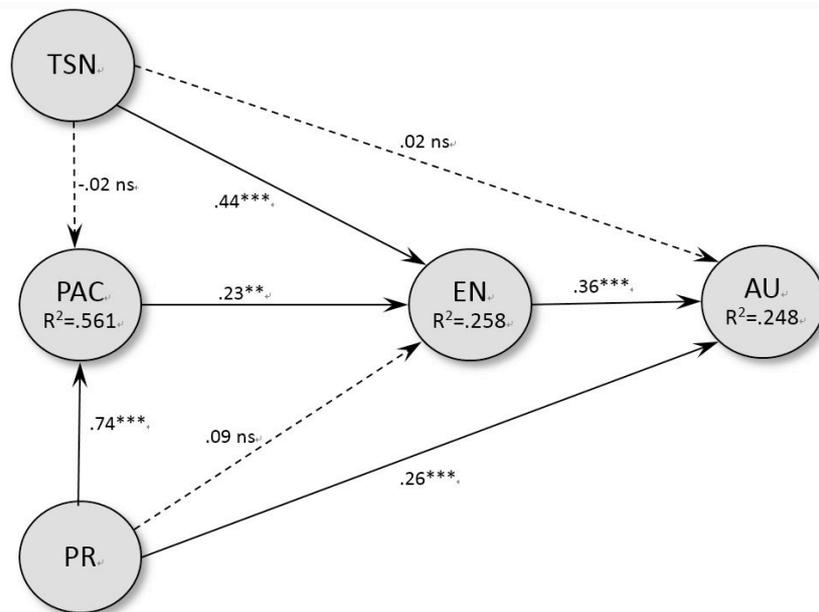


Figure 1: PLS results
 $*p<.05$, $**p<.01$, $***p<.001$

Table 3: Results of hypotheses

| Hypoth | Path | β | Mean | SD | T Statistics | P | Results |
|--------|---------|---------|-------|------|--------------|------|---------|
| H1 | TSN→PAC | -.026 | -.026 | .044 | .588 | .557 | reject |
| H2 | PR→PAC | .749 | .748 | .040 | 18.616 | .000 | support |
| H3 | TSN→EN | .444 | .445 | .062 | 7.114 | .000 | support |
| H4 | PAC→EN | .231 | .232 | .085 | 2.724 | .007 | support |
| H5 | PR→EN | .091 | .093 | .093 | .977 | .329 | reject |
| H6 | TSN→AU | .025 | .021 | .067 | .368 | .713 | reject |
| H7 | PR→AU | .264 | .261 | .067 | 3.918 | .000 | support |
| H8 | EN→AU | .368 | .370 | .073 | 5.042 | .000 | support |

Discussions

According to the correlation coefficient of constructs (see Table 3), both perceived risk ($r=-.074$) and privacy abuse concern ($r=-.081$) have insignificant negative correlations with trust in social networks in this study. Compared to the results of Yang's research, young American users' perceived risk has a significantly negative relation with trust, but privacy abuse concern is not supported as affecting trust. Young American users' privacy abuse concern is insignificantly related to trust, but greatly elevates perceived risk on SNS, serving as a partial mediator (Yang, 2012). In this study, privacy abuse concern does not serve as a mediator on perceived risk and trust among college students. Trust in social networks has an insignificant correlation with perceived risk and privacy abuse concern. These indicate that young Taiwanese users may exhibit more trust in social networks but still can considerably protect personal privacy disclosure.

Privacy abuse concern ($r=.263$) and perceived risk ($r=.231$) have low but positive correlations with perceived enjoyment of SNS, indicating that privacy abuse concern and perceived risk do not reduce the pleasure and ease of SNS use among college students. Perceived risk ($r=.346$) and privacy abuse concern ($r=.380$) are positively correlated to shopping decisions. The reason might be that college students confidently believe their judgment can make the right decisions; the other reason might be that information obtained from SNS may be the main source to make daily judgments and decisions among college students.

According to the PLS results, perceived enjoyment ($\beta=.36$) is the greater factor that motivates making shopping decisions by using SNS, mirroring the findings of Chen (2013) and Ernst (2014). However, trust in social networks ($\beta=.02$) is not found to have a directly significant influence on SNS use. Young users may enjoy using a particular SNS without trusting it. However, this finding is contrary to the findings of Matikiti, *et al.* (2016) and Posey *et al.* (2010), whose studies found that trust in social network significantly affects SNS use and other factors moderate the strength of the relationship between perceived enjoyment and SNS use to make shopping decision. The result is inconsistent with the findings of previous research.

Conclusions

This study focuses on the influential factors on perceived risk and trust in social networks that impact the privacy abuse concern and perceived enjoyment of SNS to

make shopping decisions. From the perspective of information sensitivity, less trust and high risk were of concern in this study. Users may feel mistrustful or experience reduced enjoyment to accept advice or provide information on SNS. We conclude that perceived enjoyment is significantly affected by both trust in social networks and privacy abuse concern among college students. Privacy abuse concern may not be negatively significant to perceived enjoyment of SNS. In addition, trust in social networks was not shown to be significantly related to actual use. Perceived risk is positively significant related to SNS use. These results indicate that more factors and significant relationships should be confirmed among different users. When other factors are applied to different users, topics and functions, different findings will be concluded.

In this study, willingness and response to engage in the actual action of young users was considered. Sometimes, differing from general users, high willingness causes high-level behavior among college students regardless of the disclosure risk. Privacy abuse concern may not be representative of reality. In other words, low concern or high risk still elicit highly active behavior (Li, Lin and Wang, 2015; Xu, Luo, Carroll and BethRosson, 2011). The risk of information collected or sensitive privacy disclosure on SNS can be identified as personalization for young users. Disclosed privacy sensitivity is a kind of communication approach and lifestyle on SNS. Trust and preference are also changeable at any time among young users.

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Appendix

Table 4: Operationalization of constructs

| Constructs codes | Measurements | References |
|-------------------------------|--------------|---|
| Trust in Social Network (TSN) | TSN1 | Social network sites are trustworthy. |
| | TSN2 | Social network sites keep users' best interests in |
| | TSN3 | Social network sites alert you when your information is abused. |
| Perceived Risk (PR) | PR1 | There is high potential for loss associated with using social network sites. |
| | PR2 | There is uncertainty associated with use of social network sites. |
| | PR3 | Using this social network site can result in many unexpected problems. |
| Privacy Abuse Concern (PAC) | PAC1 | I feel that the information I share on social network sites can be used in a way I did not |
| | PAC2 | I feel that the information I share on social network sites can become available to someone with whom I do not want to share information. |
| | PAC3 | I feel that the information shared on social network sites can be misused by others |
| Perceived Enjoyment (EN) | EN1 | Spending time on this social network site is |
| | EN2 | Spending time on this social network site is |
| | EN3 | Spending time on this social network site is |
| Actual Use (AU) | AU1 | Using this social network site is part of my |
| | AU2 | I regularly log into this social network site when shopping. |
| | AU3 | I visit this social network site frequently when searching for shopping information. |

Referenced by Matikiti, et al., (2016)

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