The Impact of Social Networks and Privacy
on Electronic Word-of-Mouth in Facebook:
Exploring Gender Differences

NAMSU PARK
YOOJUNG KIM[1]
Konkuk University, Seoul, South Korea

Using a privacy calculus perspective, this study examines how Facebook users' social networks, privacy concerns, understanding of privacy policies, and privacy protection behaviors influence electronic word-of-mouth (eWOM). It further investigates whether gender difference exists in relationships among variables. The results of an online survey of Korean adults (N = 522, 49.4% females) showed that users' social networks, privacy concerns, and privacy protection behaviors are significant factors in the increase of eWOM. Conversely, understanding privacy policies has no significant impact on eWOM. The findings about gender difference revealed that women, who have more actual friends, were more likely to engage in eWOM than were men, and that women prefer to create eWOM when they have a higher level of privacy protection behavior. Further implications are discussed in light of expanding social networks and effective privacy settings as well as the need for a gender-sensitive social media marketing strategy.

Keywords: electronic word-of-mouth, privacy concerns, privacy policy, privacy protection and gender

Social network sites (SNSs) have become a popular resource for people to use to communicate with each other, share ideas and content, and participate in discussions about the latest issues in mediated social settings. Consumers increasingly use this platform to communicate with each other about brands and exchange information and opinions about different products and services (Daugherty & Hoffman, 2014)— that is, create electronic word-of-mouth (eWOM). eWOM is defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004, p. 39). Scholars articulate that SNSs have become an ideal tool for eWOM in that these sites enable consumers to create and disseminate brand-related information through established social networks within the sites

Namsu Park: park.namsu@gmail.com
Yoojung Kim (corresponding author): ykim@konkuk.ac.kr
Date submitted: 2019–01–08

(Chu & Kim, 2011; See-To & Ho, 2014; Vollmer & Precourt, 2008). The benefits to consumers of SNSs are that they can obtain information on different topics, including other consumers' opinions on products and services, and communicate their consumption experiences and brand preferences (S. Yang, Lin, Carlson, & Ross, 2016). SNSs also help to spread positive eWOM about brands to build awareness and acquire new customers (Moran & Muzellec, 2014). For this reason, scholars have attempted to understand the effect of eWOM on consumers' purchase intentions and their motivations for using eWOM (A. J. Kim, Kim, & Johnson, 2016; J. Liu, Li, Ji, North, & Yang, 2017).

Although much research has examined the relationship between the use of SNSs and eWOM, there is still a gap in understanding privacy issues in the context of eWOM on SNSs. Privacy has long been a concern for Internet users when providing information online. Privacy concerns are further magnified in SNSs because of the nature of the latter—namely, that they connect people by sharing information and promoting communication with one another. Despite the risks of privacy concerns, users still disclose personal information on SNSs.

Previous research has applied a privacy calculus perspective to explain what makes people choose to use SNSs in the face of privacy concerns. The privacy calculus perspective is helpful for discussing the privacy paradox that people concerned about privacy may still reveal much personal information on SNSs (Chen & Chen, 2015; Dienlin & Metzger, 2016; Krasnova, Veltri, & Günther, 2012; Min & Kim, 2015). According to the privacy calculus perspective, people disclose information on SNSs when they perceive that the benefits of doing so outweigh the perceived risks of privacy concerns. Hence, earlier studies on the privacy calculus have indicated the potential risks and benefits based on the notion of the competing desires for disclosure and privacy protection in SNSs.

In this study, we attempt to answer the question of what makes people create eWOM on SNSs by applying the privacy calculus perspective. The aim of this study is to investigate the relationships between privacy and eWOM activities in the aspects of the risks of privacy concerns and benefits of social networks and privacy management. In response to the perceived risks of privacy concerns, one of the benefits of disclosing personal information is the gain of interpersonal relationships through social networking. Consumers in SNSs interact with their personal networks to disseminate brand-related information (Chu & Kim, 2011; S. Kim, Kandampully, & Bilgihan, 2018; Lee & Choi, 2019). Another potential benefit of motivating people to reveal personal information is to effectively protect privacy. To protect privacy on SNSs, users can adopt strategies to control their information disclosure (Ellison, Vitak, Steinfield, Gray, & Lampe, 2011), and service providers can make available their privacy policies to reduce the risk of privacy invasion (Chen & Chen, 2015). Thus, we examine how the factors of risks and benefits of using SNSs influence eWOM in SNSs.

Another aim of this study is to explore whether gender difference exists in the relationship among the variables. Gender difference has been discussed as an important issue in the use of SNSs (Boneva, Kraut, & Frohlich, 2001; Hargittai, 2007; Kimbrough, Guadagno, Muscanell, & Dill, 2013; Muscanell & Guadagno, 2012; Peluchette & Karl, 2008; Thelwall, 2008), perceived privacy risks in SNSs (Beer, 2008; boyd & Hargittai, 2010; Hoy & Milne, 2010; Madden, 2012), and privacy protection behaviors in SNSs (Tifferet, 2019). Scholars have examined the impact of gender on the acceptance of eWOM and found that

eWOM influences brand image, and the impact is more significant with women than with men (Abubakar, Ilkan, & Sahin, 2016; Torres, Arroyo-Cañada, Solé-Moro, & Argila-Irurita, 2018). Based on previous research about gender differences in eWOM behaviors in SNSs, the present study explores the role of gender in the relationship between the risks of privacy concerns and benefits of using eWOM in SNSs.

Literature Review

The Privacy Calculus Perspective and eWOM

The structural nature of SNSs encourages users to disclose a substantial amount of personal information, such as full name, birth date, and sexual orientation, and boyd and Jenkins (2006) attribute the popularity of SNSs to user willingness to converse with friends, develop a personal image online, share digital artifacts and ideas, and publicly articulate their social networks. Despite the benefits gained from the use of SNSs, the disclosure of personal information on the sites has raised concerns about potential and real privacy risks.

Given the concerns about privacy on SNSs, eWOM literature addresses the importance of consumer perceptions and preferences for privacy by explaining the individual differences in eWOM (Pasternak, Veloutsou, & Morgan-Thomas, 2017). Consumers' privacy concerns may be used as an internal psychological barrier of eWOM behavior on Facebook (Pasternak et al., 2017). Because of the openness of Facebook pages, individuals tend to be more cautious when they present their messages. Chu and Kim (2011) also articulated the need for privacy guidelines that enable consumers to trust their social contacts and thus promote eWOM in SNSs.

As participation in SNSs is associated with numerous privacy risks, a number of studies advocate the use of the privacy calculus perspective when investigating self-disclosure on SNSs (Chen & Chen, 2015; Dienlin & Metzger, 2016; Min & Kim, 2015; Trepte et al., 2017; Young & Quan-Haase, 2013). Dienlin and Metzger (2016) found that users who reported having higher perceived privacy risks had a less comprehensive Facebook profile than users who reported getting more benefits. Users' expected benefits include information exchange, relational development, or entertainment (Dienlin & Metzger, 2016). Although privacy concerns are a major issue for SNS users, individuals are still willing to disclose personal information on SNSs, which shows a contradiction between users' privacy concerns and their disclosure of personal information. This gap between privacy concerns and self-disclosure behavior is called the privacy paradox (Hallam & Zanella, 2017). The privacy calculus perspective is the theoretical foundation for explaining paradoxical behaviors in the context of SNSs.

To address elements of the benefit factors of using SNSs for eWOM, we focus on users' need for interpersonal relationships via their social networks. There is considerable empirical evidence that social interaction is a significant motivator of SNS use (Chu & Kim, 2011; S. Kim et al., 2018; Lee & Choi, 2019; Min & Kim, 2015). Users are motivated to communicate to maintain or intensify relationships characterized by some form of online and offline connection (Ellison, Steinfield, & Lampe, 2007). Hence, Facebook use stems from social networks structured in the site both to articulate existing connections and enable the creation of new ones.

In addition, users' privacy control is another benefit of self-disclosure behavior in SNSs. Users' privacy control refers to their belief that personal information can be protected (Krasnova et al., 2012). Users are afraid that SNS service providers will collect, process, and sell their personal information to third parties, as they have unlimited access to personal information. Users are less likely to disclose information about themselves when they perceive that they are less able to control information to protect themselves (Taddei & Contena, 2013). In contrast, when users perceive higher levels of privacy control, they are more willing to disclose personal information or use SNSs (Bandyopadhyay, 2012; Gangadharbatla, 2008).

Therefore, in our model, we integrate privacy concerns as a risk factor, and social networks and users' privacy control (i.e., understanding privacy policy and protection behavior) as benefit factors of eWOM in SNSs. Although previous studies have examined the impact of privacy concerns and privacy management on eWOM in SNSs (Pasternak et al., 2017; K. Yang, Li, Kim, & Kim, 2015), to the best of our knowledge no study has been conducted to investigate the relationships between privacy and eWOM behaviors based on the privacy calculus perspective. Therefore, this study will examine the implications about how consumers' perceived benefit and cost factors affect eWOM as an integrated model.

Social Networks on Facebook

Providing personal information is a precondition for any social relationship (Altman & Taylor, 1973). Sharing content about oneself or one's own thoughts and feelings is an important element of communication to maintain social networks on SNSs (Taddicken, 2013). Given that the core feature of SNSs is designed to facilitate the formation and maintenance of connections among people, different types of social relationships will lead users to actively share content about themselves with their friends on sites. The mechanism of conversing through Facebook can also induce and enhance social interaction through the processes of content creation, exchange, sharing, and collaboration. Accordingly, content sharing is linked as a motivator of mutual interaction for the formation of relationships and the maintenance of social networks on Facebook. Interactive communication goes through a recursive cycle of connecting social relations.

The literature articulates the influence of social relationships on eWOM on SNSs (Chu & Kim, 2011; Hsu & Tran, 2013; A. J. Kim et al., 2016; J. Liu et al., 2017; Steffes & Burgee, 2009). For example, SNS users' relationship with a strong and close social network has a significantly positive impact on eWOM behaviors (Hsu & Tran, 2013). Another study found that SNS users' perceived tie strength with their strong and weak social networks is positively related to their eWOM behaviors, such as opinion seeking, opinion passing, and opinion giving in SNSs (Chu & Kim, 2011). In a study highlighting the influence of referral information from social networks on consumer decision making, Steffes and Burgee (2009) found that information sources from acquaintances could be more influential on decision making than referral sources from close social ties.

Facebook users' social networks are created by their "friending behaviors": Facebook friends (friends that they have connected with through Facebook) and actual friends in their Facebook networks (Ellison et al., 2011). Facebook friends reflect wider and more diverse networks, whereas actual friends reflect close friendships (Ellison et al., 2011). Although actual friends exert a more significant impact at the individual and small group levels, Facebook friends can expand their potential influence by extending users' personal networks to a large-scale network. The social network based on both Facebook and actual friends stimulates users to communicate with one another and disseminate information, which encourages eWOM behavior. Therefore, the first hypothesis is formulated to explore the impact of social network on eWOM on Facebook.

H1a: The number of Facebook friends is positively related to eWOM on Facebook.

H1b: The number of actual friends is positively related to eWOM on Facebook.

Privacy Concerns

Privacy concerns can be defined as a user's feeling of anxiety about unwanted and unintended exposure of their personal information. Researchers have found that privacy concerns have negatively influenced SNS use and self-disclosure (Baruh, Secinti, & Cemalcilar, 2017; boyd & Hargittai, 2010; Dwyer, Hiltz, & Passerini, 2007; Young & Quan-Haase, 2013). Individuals who are highly concerned about privacy risks tend to avoid revealing personal information. On the other hand, despite privacy concerns, some users are willing to share their personal information, although, in this case, they control the range of disclosure to reduce privacy concerns (Hoadley, Xu, Lee, & Rosson, 2010; Lin & Lu, 2011; Shin, 2010). Given this discussion, the second hypothesis presented is to increase our understanding of the relationship between privacy concerns and eWOM on Facebook.

H2:   Privacy concerns are negatively related to eWOM on Facebook.

Understanding of Privacy Policy

Users tend to review and understand privacy policies about whether they are notified before personal information is collected, choosing to have options about how it is used, and thus have complete access to what they disclose. Users also want to confirm the integrity of their personal information and have guarantees of effective lawful enforcement against privacy invasions (C. Liu, Marchewka, Lu, & Yu, 2005; Wu, Huang, Yen, & Popova, 2012). Prior research primarily examined how user reviews of privacy policy affect the intention to adopt and use websites (C. Liu et al., 2005; Milne & Culnan, 2004; Wu et al., 2012). Wu et al. (2012) adopted the concept of privacy policy based on the U.S. Federal Trade Commission's (FTC) five principles of fair information practices: notice, choice, access, security, and enforcement. Users should understand and evaluate privacy policies about whether they are notified before personal information is collected (notice); they can choose to have options about how it is used (choice), and have complete access to their information (access). Users also need to confirm the integrity of their personal information (security) and have guarantees of effective lawful enforcement against privacy invasions (enforcement; C. Liu et al., 2005; Wu et al., 2012).

After conducting a principal component analysis (PCA), in this study we used two constructs: understanding of privacy rights and security policy. Understanding of privacy rights includes the notice, choice, and access measurements. These measurements address users' privacy rights, such as Facebook should inform its users about its collection of personal information and decisions to provide information to a third party. Understanding of the security policy includes the security and enforcement measurements. Details of the security policy regulations include website accountability in operating the security system properly and taking legal action against privacy violations. It has been noted that an SNSs' privacy policy can reduce user privacy concerns and the SNS will, as a result, gain personal information if users read and understand the information contained in the policies (Wu et al., 2012). In this regard, the third hypothesis, to understand the relationship between understanding of privacy policy and eWOM on Facebook, follows.

H3a: Understanding of policy on privacy rights is positively related to eWOM on Facebook.

H3b: Understanding of policy on privacy security is positively related to eWOM on Facebook.

Privacy Protection

Traditional privacy management theory noted that individuals are inclined to selectively control access to the self and regulate social interaction in interpersonal and face-to-face contexts (Altman, 1977). This theory provides a valuable theoretical framework for explaining the relationships between privacy issues and online behaviors in the computer-mediated communication environment (Margulis, 2003). Previous studies on communication privacy management theory have suggested that when personal information is shared in a computer-mediated communication environment, privacy can be referred to as the process of permitting or restricting access to personal information (Petronio, 2002).

Privacy management theory in the context of users' self-disclosing practices in SNSs has also been speculated. Prior research notes that SNS users engage in technological strategies to selectively control the flow of private information, such as revealing less personal information and changing the privacy settings on an SNS profile (boyd & Hargittai, 2010; Chen & Chen, 2015; Litt, 2013; Tufekci, 2008; Waters & Ackerman, 2011). Users expect to have the opportunity of restricting access to certain groups of people and enhanced privacy options. To respond to users' expectations, SNSs offer strategies that can be employed to protect sensitive personal details on the sites (Cohen, 2016). For example, Facebook's privacy settings allow users to select specific user groups or friends for information disclosures, delete posted content, and untag posts and images linked to their identities. These tools to protect user privacy within SNSs allow users to maximize the rewards derived from interactions with their networks on the sites. Therefore, it can be assumed that consumers who actively employ privacy settings within Facebook are more likely to engage in eWOM on the site.

H4:   Privacy protection is positively related to eWOM on Facebook.

Gender

Gender is an important issue in the academic field of social networks, privacy, and eWOM in SNSs. Research has shown that women are more willing to interact with their social networks more often than men are (Boneva et al., 2001; Hargittai, 2007; Kimbrough et al., 2013; Muscanell & Guadagno, 2012; Peluchette & Karl, 2008; Thelwall, 2008). The main reason for women's propensity for social networking is that women have more expressive communication styles of emotional intimacy and sharing in social relations than men do (Boneva et al., 2001).

According to privacy management theory, men and women have different strategies for delineating boundaries for privacy and different disclosure practices (Petronio, 2002). Research has specifically found relationships among gender, disclosure, and privacy protective behaviors (Boneva et al., 2001; Lewis, Kaufman, & Christakis, 2008; Litt, 2013; Tufekci, 2008; Waters & Ackerman, 2011). For example, women were more likely than men to have a private SNS profile (Lewis et al., 2008; Thelwall, 2008). Women are also more cautious than men about whom they allow access to their profile information (Fogel & Nehmad, 2009). Furthermore, women tend to be self-regulated to protect personal privacy information (Jianakoplos & Bernasek, 1998) because they are more sensitive to privacy issues than are men (Cho & Hung, 2011). Prior research has found that women are more likely than men to perceive a potential risk of privacy invasion and to selectively control the flow of content. Tifferet (2019) conducted a meta-analysis of previous studies relating to gender differences in privacy tendencies on SNSs. The study revealed that previous studies found a clear gender difference in activating privacy settings and untagging photographs. In other words, female users tend to activate SNS privacy settings more actively than their male counterparts do.

Significant gender differences were also found between men and women in the acceptance of eWOM information (Bae & Lee, 2011; Tabbane & Hamouda, 2013; Torres et al., 2018). Torres and colleagues (2018) revealed the moderating effect of gender in the perception of information usefulness of eWOM. For example, female users place more value on quality and the usefulness of eWOM information, whereas males perceive credibility of eWOM information to be of more significant value than usefulness (Torres et al., 2018). Bae and Lee (2011) examined gender differences in consumer responses to eWOM messages. The influence of negative messages, compared with positive messages, is more evident for women than for men. Previous studies have investigated the gender difference in diverse aspects of eWOM, including the characteristics of eWOM messages (positive vs. negative, objective vs. subjective), eWOM consistency, volume of eWOM messages, and consumer response to eWOM (Tabbane & Hamouda, 2013). In line with previous studies on gender differences in social networks' privacy and eWOM, this study explores the moderating effect of gender on the impact of social networks and privacy on eWOM behavior.

RQ1:   Is there any difference between women and men about the effects of privacy concerns, social networks, understanding of privacy policies, and privacy protecting behaviors on eWOM?

Methods

Data Collection and Procedure

Participants for an online survey were recruited through a quota sampling method to ensure that subgroups of gender were adequately represented in the sample targeting Facebook users 19 years of age and over. According to statistics from the Korea Information Society Development Institute (KISDI; Y. Kim, 2018), the leading social network site in Korea is Facebook. Of the respondents 35.8% ($N =$ 9,425) actively use Facebook, followed by KakaoStory (31.7%). The rationale for examining Facebook as an eWOM platform is that Facebook is an open SNS to manage the various types of social networks that are critical to eWOM, whereas KakaoStory is a closed SNS. Lee and Lee (2017) found that there is a difference in the types of friends listed for the users of these two services. Facebook friends include more strangers and celebrities, whereas KakaoStory users had a larger percentages of family members listed as friends.

The sample was collected from a Macromill Embrain online pool in Korea, and the survey was conducted in January 2015. The total valid sample was 522 cases. Approximately 50.6% of the respondents (264 cases) were men, and the remaining 49.4% were women (258 cases). The average age was approximately 34 years; the average monthly income was between US$3,000 and US$4,000, and the average level of education was college graduate.

Measures

We measured eWOM (M = 2.85, SD =.78, Cronbach's a =.85) with an index of five items to indicate each user's eWOM behavior on Facebook. The concept of eWOM in the present study was used as a more generalized act of eWOM, including both person-to-person and person-to-brand interactions. The scale was created by combining the items to address activities, including obtaining and providing knowledge and information, and posting personal thoughts and opinions on Facebook (Lenhart, Purcell, Smith, & Zickuhr, 2010; Stromer-Galley, 2004). The participants were asked to answer the questionnaires using a 5-point Likert scale (1 = *not at all,* 5 = *several times a day*).

"Social networks" refer to "friends" that Facebook users manage on the site. To measure social networks, this study adopted the concept of "friending behaviors" suggested by Ellison et al. (2011) in their social capital research on Facebook. According to Ellison et al. (2011), Facebook users interact with two types of friends: Facebook friends with whom they have connected through Facebook, and "actual" friends within their Facebook network. "Facebook" friends refers to the total number of friends that users have on Facebook. "Actual" friends refers to relationships rooted in an off-line connection. The number of actual friends was measured with the question "Approximately how many of your total Facebook friends do you consider actual friends?" The mean number for total Facebook Friends was 70.46, and the mean number of "actual" Facebook Friends was 14.02. To address the skewed data issue of the two variables, we ran the statistical analysis after the log transformation of the raw number of the variables.

"Privacy concerns" (M = 3.51, SD = 0.82, Cronbach's a =.86) was measured by modifying a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) of the three items of privacy concerns developed by Buchanan, Paine, Joinson, and Reips (2007). The three items included a user's worries about personal information leakage on Facebook.

"Understanding of privacy policy" was composed of two concepts: privacy rights (M = 2.86, SD =.74, Cronbach's a =.92) and security (M = 2.87, SD =.77, Cronbach's a =.92). Items were borrowed from questionnaires about a website privacy policy employed in Wu and associates' (2012) study. Wu and colleagues measured five constructs of privacy policy provided by a website: notice, choice, access, security, and enforcement. We conducted the PCA and created two constructs after deleting the two cross-loading items. The measurements of privacy rights include items in Facebook's privacy policy about informing users of the collection of personal information and giving users the decision whether or not to provide their information to a third party. The measurements of security address Facebook's privacy policy to keep upgrading the site's security system and enforce strict regulations on privacy invasion.

"Privacy protection" refers to users' behaviors to restrict the information they share through their profile on Facebook. We measured privacy protection with the five items used in the Pew Research Center's Internet and American Life Project study (Madden, 2012), about how Facebook users manage their profiles to protect their privacy and the content that is posted to their networks. The five items include profile managing behaviors such as deleting people from their friend lists or others' comments on their profile; removing their names from photo tagging or removing location information in their posts; and posting content that is later regretted. The five dichotomous items that ask for a yes or a no (Yes = 1, No = 0) were summed for the construct of privacy protection (M = 1.75, SD = 1.67). Table 1 presents all questionnaires used in this study and descriptive statistics for the main variables.

Table 1. Measures, Descriptive Statistics, and Reliabilities.

Variables	Questionnaire
Privacy concern ($M = 3.51$, $SD = .82$, Cronbach's $a = .86$)	I am concerned about my privacy while I am using FB. I am concerned that people I do not know obtain personal information about me from my Facebook activities. I am concerned that too much personal and family information is exposed while I am using FB.
Understanding of privacy rights policy ($M = 2.86$, $SD = .74$, Cronbach's $a = .92$)	Facebook discloses what personal information is going to be collected. Facebook explains why personal information is going to be collected. Facebook explains how the collected personal information will be used. Facebook informs whether personal information will be disclosed to a third party and explains under what conditions. Facebook gives clear choice (asking permission) before disclosing personal information to a third party. Facebook allows you to review collected personal information.
Understanding of security policy ($M = 2.87$, $SD = .77$, Cronbach's $a = .92$)	Facebook explains that it takes steps to provide security for personal information that has been collected. Facebook informs that any personal information will not be disclosed to a third party. Facebook has the advanced technology to protect your personal information. Facebook discloses that there is a law sanctioning those who violate the privacy statement. Facebook discloses that it will take actions according to the law against those who violate the privacy statement.
Privacy protecting behaviors ($M = 1.75$, $SD = 1.67$)	Thinking about the ways people might use Facebook. Do you ever . . . Delete people from your network or friends' list? Remove your name from photos that have been tagged to identify you? Delete comments that others have made on your profile? Post updates, comments, photos, or videos that you later regret sharing? Set up your account so that it automatically includes your location on your posts?
Electronic word-of-mouth (eWOM) ($M = 2.85$, $SD = .77$, Cronbach's $a = .85$)	I get knowledge and information from Facebook. I provide some useful information to Facebook users with the same interest. I talk about my thoughts or troubles to Facebook users. I post comments to a friend's Facebook profiles. I share material that you created yourself or other users uploaded, such as your own artwork, photos, stories, or videos on Facebook.
Number of Facebook friends ($M = 70.46$, $SD = 111.82$)	How many friends do you have on your Facebook?
Number of actual friends ($M = 14.02$, $SD = 26.27$)	Approximately how many of your total Facebook friends do you consider actual friends?

Results

This study conducted hierarchical regression analyses to test six hypotheses and answer one research question. To detect multicollinearity that occurs with regression analysis, the variation inflation factor (VIF) was checked, and no VIF above 10 was found (Hair, Anderson, Tatham, & Black, 1995; see Table 2).

Table 2. Summary of Multicollinearity Analysis.

Variable	Tolerance (min > .10)	VIF (max < 10)
Gender	.949	1.054
Number of Facebook friends	.445	2.245
Number of actual friends	.198	5.040
Understanding of privacy rights policy	.464	2.153
Understanding of privacy security policy	.491	2.037
Privacy concerns	.451	2.219
Privacy protection behaviors	.583	1.714
Gender × Number of Facebook friends	.386	2.588
Gender × Number of actual friends	.189	5.296
Gender × Understanding of privacy rights policy	.504	1.985
Gender × Understanding of privacy security policy	.543	1.841
Gender × Privacy concerns	.458	2.182
Gender × Privacy protection behaviors	.504	1.985

Note. Dependent variable is eWOM.

Thus, no multicollinearity issue was found for the regression analysis. With respect to the two first hypotheses (H1a and H1b), the results for Models 2 through 4 show that two types of social networks, Facebook friends and actual friends, tend to have strong positive impacts on eWOM. These results indicate that users reporting the most Facebook and actual friends showed a higher level of eWOM behavior than those with the fewest number of Facebook and actual friends. Thus, H1a and H1b are supported (see Table 3).

Table 3. The Predictors of eWOM on Facebook.

|	Model 1	Model 2	Model 3	Model 4
(Constant)	31.39***			
Gender (female = 0, male = 1)	−.10(−2.26)			
Incremental R^2 Change	.010*			
(Constant)		33.98***		
Gender (female = 0, male = 1)		−.12(−2.90)**		
# of Facebook friends		.25(5.21)***		
# of actual friends		.17(3.63)***		
Incremental R^2 change		.130***		
(Constant)			6.90***	
Gender (female = 0, male = 1)			−.11(−2.54)*	
Number of Facebook friends			.20(4.19)***	

Number of actual friends	.17(3.57)***
Privacy concerns	−.08(−2.01)*
Understanding of privacy rights policy	−.02(−.31)
Understanding of privacy security policy	−.04(−.08)
Privacy protection behaviors	.20(4.74)***
Incremental R^2 change	.042***
(Constant)	6.24***
Gender (female = 0, male = 1)	.20(−3.44)**
Number of Facebook friends	.18(2.92)**
Number of actual friends	.40(4.43)***
Privacy concerns	−.12(−2.03)*
Understanding of privacy rights policy	.03(.44)
Understanding of privacy security policy	−.03(−.52)
Privacy protection behaviors	.13(2.13)*
Gender × Number of Facebook friends	.00(.02)
Gender × Number of actual friends	−.27(−2.84)**
Gender × Privacy concerns	.06(.98)
Gender × Understanding of privacy rights policy	−.07(−1.30)
Gender × Understanding of privacy security policy	.04(.65)
Gender × Privacy protection behaviors	.13(2.13)*
Incremental R^2 change	.032*
Total incremental R^2	.183***

Note. Cell entries for interactivity are standardized regression coefficients. All entries in parentheses are *t* values.
*p ≤ .05. **p ≤ .01. ***p ≤ .001.

Privacy concerns are significantly related to eWOM behavior in Models 3 and 4. Facebook users who have higher levels of privacy concerns are less likely to engage in eWOM. Thus, H2 is confirmed. About the relationship between privacy policies and eWOM, no significant relationship was found between privacy rights and security policies and eWOM in Models 3 and 4. Therefore, both H3a and H3b are rejected. Privacy protection behaviors were positively related to eWOM behavior in Models 3 and 4. In other words, Facebook users who experience more privacy protecting behaviors are more likely to create eWOM.

To answer Research Question 1, the interaction effects of gender and other independent variables (Facebook friends, actual friends, privacy concerns, privacy rights and security policies, and privacy protection behaviors) on eWOM were tested in regression models (see Table 1). As shown in Figure 1, gender significantly moderated the relationship between the number of actual friends and eWOM behavior ($\beta = -.27$, $p < .01$), whereas no significant moderating effect of gender and Facebook friends was found on eWOM behavior. This finding indicates that women are more likely than men to create eWOM when they have more actual friends within Facebook networks.
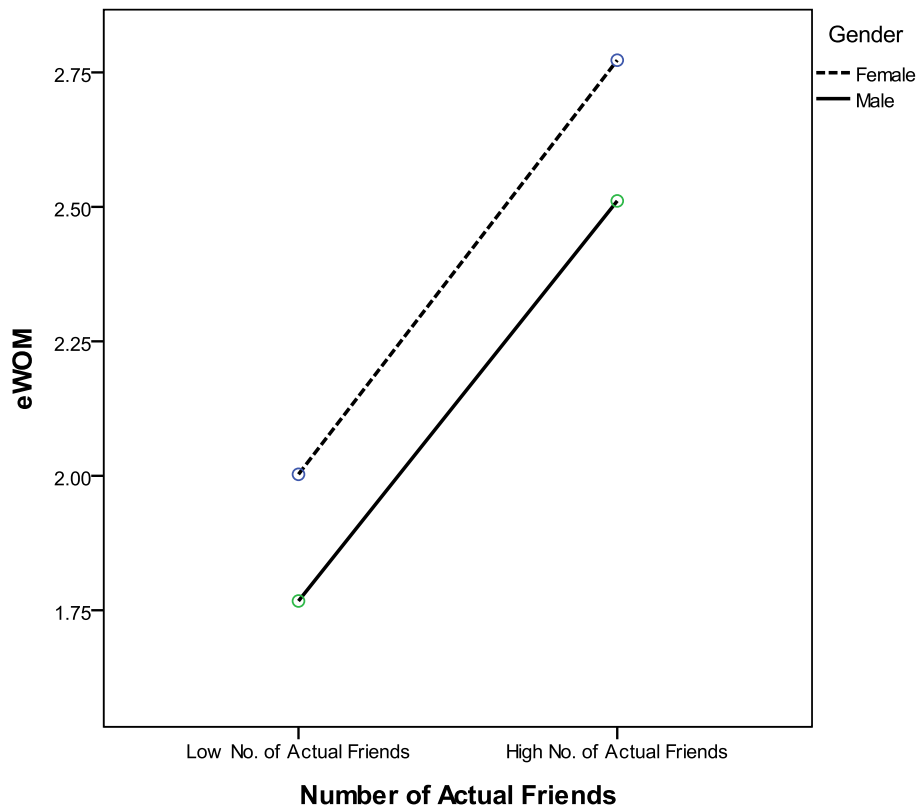
Figure 1. *The moderating effect of gender in the relationship between number of actual friends and eWOM.*

Gender was also a significant moderator of the relationship between privacy protection behaviors and eWOM behavior ($\beta = .13$, $p < .05$; see Figure 2). This finding indicates that when both women and men have greater means to protect privacy, women are more likely to engage in eWOM than are men. There was no interaction effect of gender and privacy concerns, privacy policies, and Facebook friends for eWOM on Facebook.
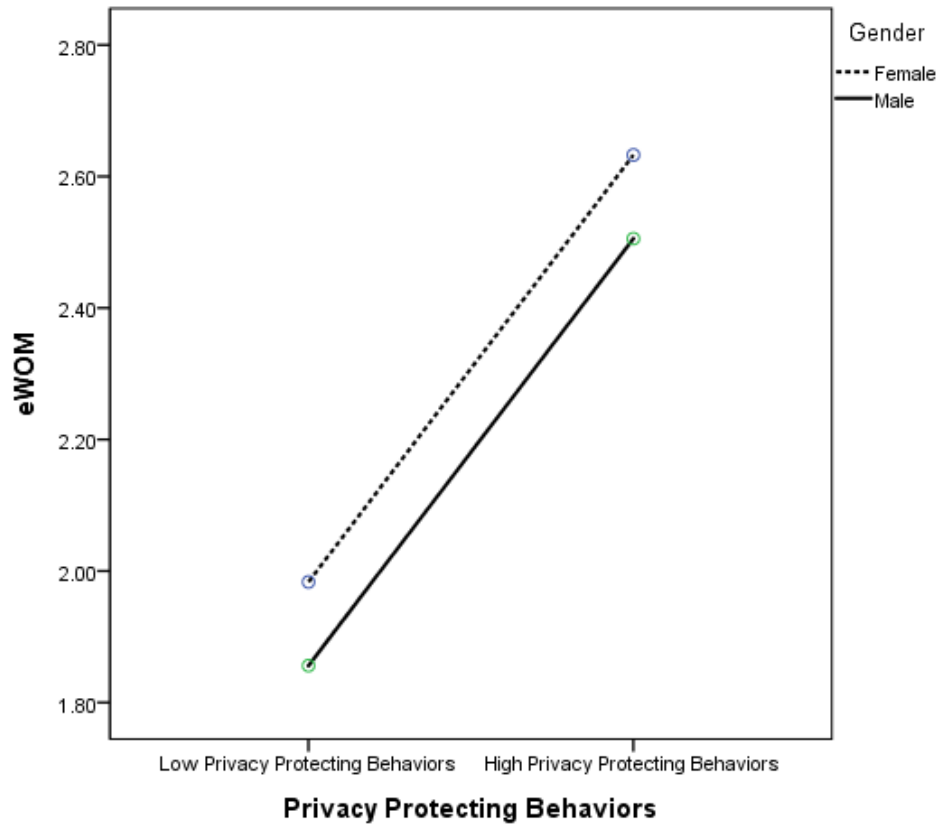
Figure 2. *The moderating effect of gender in the relationship between privacy protection and eWOM.*

Discussion

Although Facebook offers benefits such as helping users maintain social relationships or share information via eWOM, it also poses risks of personal information leaks. Facebook users are concerned about the openness and visibility of Facebook's environment, where information can be potentially shared with many individuals. The open nature of Facebook and consumer privacy concerns appear to affect the willingness of individuals to actively engage in eWOM (Pasternak et al., 2017). Our findings show that privacy concerns inhibit people from creating eWOM on Facebook. Among the benefits of using Facebook, social networks (including Facebook friends and actual friends) and privacy protecting behaviors were related to an increase of eWOM, but understanding of privacy policies had no significant relation to eWOM. In terms of gender, a difference in the influence of actual friends and privacy protecting behaviors on eWOM was found. With more actual friends and a higher level of privacy protection behavior, women tended to show higher levels of eWOM than do men.

The significant implication of this study lies in testing the relationships among the risks and benefits of using Facebook and eWOM based on a privacy calculus perspective. First, the relationships among Facebook friends, actual friends, and eWOM imply that social networks are significant drivers of eWOM on Facebook, highlighting the potential richness of eWOM as a communication process. This result supports a previous study by Chang, Liu, and Shen (2017), which revealed that the influence of social ties such as important friends, colleagues, and other relevant people is more important for users' intention to use Facebook and LinkedIn than are perceived the privacy risks. To date, eWOM research has examined the influence of eWOM messages from anonymous individuals and friends on consumer decisions in digital environments such as online review sites, shopping websites, or social media (Erkan & Evans, 2016). The findings show that an individual's friend networks within Facebook would work as an important benefit to encourage Facebook users' eWOM behaviors.

It is hypothesized that understanding of privacy policies plays a role in perception of benefits, the findings show that users' comprehension of privacy policies does not operate as an enticement for eWOM behavior. The literature shows mixed outcomes about the impact of privacy policy on online privacy concerns. Stutzman et al. (2011) showed that users who read more of a website's privacy policy tend to disclose less personal information. Wu and associates (2012) found a negative impact of privacy policy on Internet users' privacy concerns. Zlatolas et al. (2015) also indicated that privacy policy may have a negative impact on self-disclosure, privacy value, and privacy concerns. In other words, the more the user reads the privacy policy, the higher the control over self-disclosure users will want. In these previous studies, the research model tested the direct effect of privacy policy on self-disclosure or privacy concerns based on the path analysis. Thus, we conjecture that the reason why the understanding of privacy policy is not a significant predictor of eWOM is because the impact of privacy concerns and privacy protection behavior included in the same block of the hierarchical regression model reduced the power of the privacy policy variables to induce eWOM behaviors among the respondents. Although it is difficult to measure the inherent influence of each variable in a hierarchical regression model, it would be valuable in that it shows the relative influence of the construct of privacy variables.

In addition, users' privacy protective behavior is the most influential determinant to reduce the perceived risks of privacy among the various aspects of privacy management. Privacy protection is operated through privacy settings that enable SNS users to share specific personal data and activities with selected parts of their network of contacts (Deuker, 2012). For example, Facebook users can grant access rights to a particular group of friends by defining their own lists of friends. Facebook's current privacy settings and tools allow users to limit the audience of personal information on their profile and for posts that they share with their friends or the public (Facebook, 2019). Thus, this finding provides practical implications for the site providers or eWOM marketers in that a site's privacy tools could alleviate the perceived risks and promote perceived benefits that lead to an increase in eWOM behavior in SNSs.

With the growth of SNSs and other online services, privacy protection has become an important issue. The autonomous character of the SNS has made it impossible for an individual actor to control the entire network; instead, different public or private actors need to play roles to protect privacy in different sectors (Take, 2012). In most democratic societies, governments are required to enact laws, follow their implications, and monitor changes and activities of different actors that go against their citizens' desires.

Many countries have enacted laws to facilitate the implementation of privacy rights to regulate the collection and processing of personal information (e.g., data protection acts; Borena, Belanger, & Ejigu, 2015). Thus, most companies create privacy statements to regulate the collection, storage, processing, use, and exchange of personal information by consumers.

The results of gender difference demonstrate that the roles of actual friends and privacy protection behaviors are more influential on women to promote eWOM compared with men. This result is consistent with other studies on gender predispositions with respect to social networks and privacy in SNS use (Lin & Lu, 2011; Mazman & Usluel, 2011; Tifferet, 2019; Tufekci, 2008). For women, peer networks are important factors in determining the continued use of SNSs, but this is not the case for men (Lin & Lu, 2011). Focusing on the type of social connection within SNSs between female and male users, women use SNSs mostly to find their old friends and keep in touch with them, whereas men use the sites mostly to make new friends and create relationships (Mazman & Usluel, 2011; Thelwall, 2008; Tufekci, 2008). Thus, for women, the number of actual friends within Facebook networks is a more significant motivation for eWOM than it is for men.

It is interesting to note that women are more likely than men to create eWOM when they have more profile-pruning behaviors on Facebook. The propensity by females to take fewer risks leads to higher privacy tendencies in SNSs (Fogel & Nehmad, 2009). One explanation of female users' higher privacy tendencies is that they are more susceptible to privacy threats online, causing them to be more cautious about their privacy than males are (Malik, Hiekkanen, & Nieminen, 2016). Another explanation is that women tend to be greatly cautious in their privacy protection behaviors because they detect risks that men may not necessarily notice (Tifferet, 2019). The results from this study support the discussion from prior research and articulate that women's eWOM behavior is more profoundly affected by their privacy protection behaviors than is men's.

Before this study, it was unclear what the risks and benefits of eWOM are and whether different factors influence eWOM among men and women differently. The biggest contribution of this study was to apply the privacy calculus perspective to eWOM, thus combining various aspects of variables to determine eWOM behaviors on Facebook. In particular, the understanding of gender difference in choices concerning eWOM provides managerial implications for marketing practitioners. First, the strength of social networks within Facebook plays an important role in promoting female consumers' eWOM. Second, brands may consider introducing more effective privacy settings to respond to potential privacy concerns of their target audiences, particularly female consumers. Women are likely to engage in eWOM behaviors when they are more confident of securing guarantees from the site. Users have confidence in the site's privacy security when the site provides the most updated technological system to protect privacy (Shin, 2010). This insight should be employed as part of social media marketing strategy to promote eWOM.

Although this study theoretically and practically develops the eWOM literature, it has some limitations that call for future research. First, the sample used in this study was not chosen using random selection, which makes it impossible to generalize the results into the whole population of Facebook users. We supposed that perceptions of social networks and privacy would be subject to gender biases, and for this reason the subjects of the study were recruited through panels owned by the research company to evenly distribute the ratio of men and women. Given the advantages of having representative data to

generalize the results across all Facebook users, it would be required to collect samples that reflect the gender ratio of the actual Facebook users by using a stratified random sampling.

Second, the questionnaires did not include Internet skills and identification of self-assessment, which do not directly show the relationship between an understanding of privacy policies and the above measurements. Thus, future studies should investigate the effect of skill variables, such as Internet skills, self-efficacy, and privacy literacy, as well as the interaction effect of gender and skill variables on SNS use. By revealing the extent of the effects of a decision-making process on whether users choose benefits despite the risks, future studies could also refine what role skills play in stimulating eWOM.

In addition, the present study focused on social factors such as social networks between Facebook friends and actual friends as an element of the expected motivation of eWOM on Facebook. However, it would be beneficial for future studies to consider additional psychological variables that affect privacy management, such as self-monitoring or self-disclosure. By examining these relationships, future studies could reveal how the psychological decision-making process in the trade-off context of benefits and risks is performed and how meaningful the implications of the results are in the context.

References

Abubakar, A. M., Ilkan, M., & Sahin, P. (2016). eWOM, eReferral and gender in the virtual community. *Marketing Intelligence & Planning, 34*(5), 692–710. doi:10.1108/MIP-05-2015-0090

Altman, I. (1977). Privacy regulation: Culturally universal or culturally specific? *Journal of Social Issues, 33*(3), 66–84. doi:10.1111/j.1540-4560.1977.tb01883.x

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart & Winston.

Bae, S., & Lee, T. (2011). Gender differences in consumers' perception of online consumer reviews. *Electronic Commerce Research, 11*(2), 201–214. doi:10.1007/s10660-010-9072-y

Bandyopadhyay, S. (2012). Consumers' online privacy concerns: Causes and effects. *Innovative Marketing, 8*(3), 32–39.

Baruh, L., Secinti, E., & Cemalcilar, Z. (2017). Online privacy concerns and privacy management: A meta-analytical review. *Journal of Communication, 67*, 26–53. doi:10.1111/jcom.12276

Beer, D. (2008). Social network(ing) sites . . . revisiting the story so far: A response to danah boyd & Nicole Ellison. *Journal of Computer-Mediated Communication, 13*(2), 516–529. doi:10.1111/j.1083-6101.2008.00408.x

Boneva, B., Kraut, R., & Frohlich, D. (2001). Using e-mail for personal relationships: The difference gender makes. *American Behavioral Scientist, 45*(3), 530–549. doi:10.1177/00027640121957204

Borena, B., Belanger, F., & Ejigu, D. (2015). Information privacy protection practices in Africa: A review through the lens of critical social theory. *Proceedings of the 2015 48th Hawaii International Conference on System Sciences* (pp. 3490–3297). doi:10.1109/HICSS.2015.420

boyd, d., & Hargittai, E. (2010). Facebook privacy settings: Who cares? *First Monday, 15*(8). Retrieved from https://firstmonday.org/article/view/3086/2589

boyd, d., & Jenkins, H. (2006, May 26). *MySpace and Deleting Online Predators Act* (DOPA). Retrieved from http://www.danah.org/papers/MySpaceDOPA.html

Buchanan, T., Paine, C., Joinson, A. N., & Reips, U.-D. (2007). Development of measures of online privacy concern and protection for use on the Internet. *Journal of the American Society for Information Science and Technology, 58*(2), 157–165. doi:10.1002/asi.20459

Chang, S. E., Liu, A. Y., & Shen, W. C. (2017). User trust in social networking services: A comparison of Facebook and LinkedIn. *Computers in Human Behavior, 69*, 207–217. doi:10.1016/j.chb.2016.12.013

Chen, H., & Chen, W. (2015). Couldn't or wouldn't? The influence of privacy concerns and self-efficacy in privacy management on privacy protection. *Cyberpsychology, Behavior, and Social Networking, 18*(1), 13–19. doi:10.1089/cyber.2014.0456

Cho, V., & Hung, H. (2011). The effectiveness of short message service for communication with concerns of privacy protection and conflict avoidance. *Journal of Computer-Mediated Communication, 16*(2), 250–270. doi:10.1111/j.1083-6101.2011.01538.x

Chu, S., & Kim, Y. (2011). Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites. *International Journal of Advertising, 30*(1), 47–75. doi:10.2501/IJA-30-1-047-075

Cohen, S. (2016). Privacy risk with social media. *Huffington Post*. Retrieved from https://www.huffpost.com/entry/privacy-risk-with-social-_b_13006700

Daugherty, T., & Hoffman, E. (2014). eWOM and the importance of capturing consumer attention within social media. *Journal of Marketing Communications, 20*(1/2), 82–102. doi:10.1080/13527266.2013.797764

Deuker, A. (2012). Friend-to-friend privacy protection on social networking sites: A grounded theory study. *Proceedings of the 2012 Americas Conference on Information Systems*, *5*. Retrieved from https://aisel.aisnet.org/amcis2012/proceedings/SocialIssues/5/

Dienlin, T., & Metzger, M. J. (2016). An extended privacy calculus model for SNSs: Analyzing self-disclosure and self-withdrawal in a representative U.S. sample. *Journal of Computer-Mediated Communication, 21*, 368–383. doi:10.1111/jcc4.12163

Dwyer, C., Hiltz, S., & Passerini, K. (2007). Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace. *Proceedings of the 2007 Americas Conference on Information Systems.* Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download ?doi=10.1.1.148.9388&rep=rep1&type=pdf

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143–1168. doi:10.1111/j.1083-6101.2007.00367.x

Ellison, N. B., Vitak, J., Steinfield, C., Gray, R., & Lampe, C. (2011). Negotiating privacy concerns and social capital needs in a social media environment. In S. Trepte & L. Reinecke (Eds.), *Privacy online* (pp. 19–32). Berlin, Germany: Springer-Verlag.

Erkan, I., & Evans, C. (2016). Social media or shopping websites? The influence of eWOM on consumers' online purchase intentions. *Journal of Marketing Communications, 24*(6), 617–632. doi:10.1080/13527266.2016.1184706

Facebook (2019). *Privacy settings and tools.* Retrieved from https://www.facebook.com/settings?tab=privacy

Fogel, J., & Nehmad, E. (2009). Internet social network communities: Risk taking, trust, and privacy concerns. *Computers in Human Behavior, 25*(1), 153–160. doi:10.1016/j.chb.2008.08.006

Gangadharbatla, H. (2008). Facebook me: Collective self-esteem, need to belong, and Internet self-efficacy as predictors of the Igeneration's attitudes toward social networking sites. *Journal of Interactive Advertising, 8*(2), 5–15. doi:10.1080/15252019.2008.10722138

Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis* (3rd ed). New York, NY: Macmillan.

Hallam, C., & Zanella, G. (2017). Online self-disclosure: The privacy paradox explained as a temporally discounted balance between concerns and rewards. *Computers in Human Behavior, 68,* 217–227. doi:10.1016/j.chb.2016.11.033

Hargittai, E. (2007). Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication, 13*(1), 276–297. doi:10.1111/j.1083-6101.2007.00396.x

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing, 18*(1), 38–52. doi:10.1002/dir.10073

Hoadley, C. M., Xu, H., Lee, J. J., & Rosson, M. B. (2010). Privacy as information access and illusory control: The case of the Facebook news feed privacy outcry. *Electronic Commerce Research and Applications, 9*(1), 50–60. doi:10.1016/j.elerap.2009.05.001

Hoy, M. G., & Milne, G. (2010). Gender differences in privacy-related measures for young adult Facebook users. *Journal of Interactive Advertising, 10*(2), 28–45. doi:10.1080/15252019.2010.10722168

Hsu, Y., & Tran, T. H. C. (2013). Social relationship factors influence on eWOM behaviors in social networking sites: Empirical study: Taiwan and Vietnam. *International Journal of Business, Humanities and Technology, 3*(3), 22–31.

Jianakoplos, N. A., & Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry, 36*(6), 620–630. doi:10.1111/j.1465-7295.1998.tb01740.x

Kim, A. J., Kim, K., & Johnson, P. (2016). Power of consumers using social media: Examining the influences of brand-related user-generated content on Facebook. *Computers in Human Behavior, 58*, 98–108. doi:10.1016/j.chb.2015.12.047

Kim, S., Kandampully, J., & Bilgihan, A. (2018). The influence of eWOM communications: An application of online social network framework. *Computers in Human Behavior, 80*, 243–254. doi:10.1016/j.chb.2017.11.015

Kim, Y. (2018). *Demographics of SNS (social network service) users and SNS adoption in South Korea*. Retrieved from https://www.kisdi.re.kr/kisdi/common/premium?file=1%7C14357

Kimbrough, A. M., Guadagno, R. E., Muscanell, N. L., & Dill, J. (2013). Gender differences in mediated communication: Women connect more than do men. *Computers in Human Behavior, 29*(3), 896–900. doi:10.1016/j.chb.2012.12

Krasnova, H., Veltri, N. F., & Günther, O. (2012). Self-disclosure and privacy calculus on social networking sites: The role of culture. *Business & Information Systems Engineering, 4*(3), 127–135. doi:10.1007/s12599-012-0216-6

Lee, K. Y., & Choi, H. (2019). Predictors of electronic word-of-mouth behavior on social networking sites in the United States and Korea: Cultural and social relationship variables. *Computers in Human Behavior, 94*, 9–18. doi:10.1016/j.chb.2018.12.025

Lee, S. W., & Lee, J. (2017). A comparative study of KakaoStory and Facebook: Focusing on use patterns and use motives. *Telematics and Informatics, 34*(1), 220–229. doi:10.1016/j.tele.2016.04.013

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). *Social media and mobile Internet use among teens and young adults*. Retrieved from https://www.researchgate.net/publication/286376855 _Social_Media_Mobile_Internet_Use_Among_Teens_and_Young_Adults

Lewis, K., Kaufman, J., & Christakis, N. (2008). The taste for privacy: An analysis of college student privacy settings in an online social network. *Journal of Computer-Mediated Communication, 14*(1), 79–100. doi:10.1111/j.1083-6101.2008.01432.x

Lin, K., & Lu, H. (2011). Why people use social networking sites: An empirical study integrating network externalities and motivation theory. *Computers in Human Behavior, 27*(3), 1152–1161. doi:10.1016/j.chb.2010.12.009

Litt, E. (2013). Understanding social network site users' privacy tool use. *Computers in Human Behavior, 29*(4), 1649–1656. doi:10.1016/j.chb.2013.01.049

Liu, C., Marchewka, J. T., Lu, J., & Yu, C. S. (2005). Beyond concern: A privacy-trust-behavioral intention model of electronic commerce. *Information & Management, 42*(2), 289–304. doi:10.1016/j.im.2004.01.003

Liu, J., Li, C., Ji, Y. G, North, M., & Yang, F. (2017) Like it or not: The *Fortune* 500's Facebook strategies to generate users' electronic word-of-mouth. *Computers in Human Behavior, 73,* 605–613. doi:10.1016/j.chb.2017.03.068

Madden, M. (2012). *Privacy management on social media sites.* Retrieved from http://www.pewinternet.org/2012/02/24/privacy-management-on-social-media-sites/

Malik, A., Hiekkanen, K., & Nieminen, M. (2016). Privacy and trust in Facebook photosharing: Age and gender differences. *Program, 50*(4), 462–480. doi:10.1108/PROG-02-2016-0012

Margulis, S. T. (2003). On the status and contribution of Westin's and Altman's theories of privacy. *Journal of Social Issues, 59*(2), 411–429. doi:10.1111/1540-4560.00071

Mazman, S. G., & Usluel, Y. K. (2011). Gender differences in using social networks. *The Turkish Online Journal of Educational Technology, 10*(2), 133–139. Retrieved from https://files.eric.ed.gov/fulltext/EJ932233.pdf

Milne, G. R., & Culnan, M. J. (2004). Strategies for reducing online privacy risks: Why consumers read (or don't read) online privacy notices. *Journal of Interactive Marketing, 18*(3), 15–29. doi:10.1002/dir.20009

Min, J., & Kim, B. (2015). How are people enticed to disclose personal information despite privacy concerns in social network sites? The calculus between benefit and cost. *Journal of the Association for Information Science and Technology, 66*(4), 839–857. doi:10.1002/asi.23206

Moran, G., & Muzellec, L. (2014). eWOM credibility on social networking sites: A framework. *Journal of Marketing Communications, 23*(2), 149–161. doi:10.1080/13527266.2014.969756

Muscanell, N. L., & Guadagno, R. E. (2012). Make new friends or keep the old: Gender and personality differences in social networking use. *Computers in Human Behavior, 28*(1), 107–112. doi:10.1016/j.chb.2011.08.016

Pasternak, O., Veloutsou, C., & Morgan-Thomas, A. (2017). Self-presentation, privacy and electronic word-of-mouth in social media. *Journal of Product & Brand Management, 26*(4), 415–428. doi:10.1108/JPBM-04-2016-1150

Peluchette, J., & Karl, K. (2008). Social networking profiles: An examination of student attitudes regarding use and appropriateness of content. *CyberPsychology & Behavior, 11*(1), 95–97. doi:10.1089/cpb.2007.9927

Petronio, S. (2002). *Boundaries of privacy: Dialectics of disclosure*. Albany, NY: State University of New York Press.

See-To, E. W. K., & Ho, K. W. H. (2014). Value co-creation and purchase intention in social network sites: The role of electronic Word-of-Mouth and trust—A theoretical analysis. *Computers in Human Behavior, 31*, 182–189. doi:10.1016/j.chb.2013.10.013

Shin, D. H. (2010). The effects of trust, security and privacy in social networking: A security-based approach to understand the pattern of adoption. *Interacting With Computers, 22*(5), 428–438. doi:10.1016/j.intcom.2010.05.001

Steffes, E. M., & Burgee, L. E. (2009). Social ties and online word of mouth. *Internet Research, 19*(1), 42–59. doi:10.1108/10662240910927812

Stromer-Galley, J. (2004). Interactivity-as-product and interactivity-as-process. *The Information Society, 20*(5), 391–394. doi:10/1080/01972240490508081

Stutzman, F., Capra, R., & Thompson, J. (2011). Factors mediating disclosure in social network sites. *Computers in Human Behavior, 27*(1), 590–598. doi:10.1016/j.chb.2010.10.017

Tabbane, R. S., & Hamouda, M. (2013). Exposure to eWOM and consumer behavior: Does gender matter? *Proceedings of the 2013 Annual Conference of Global Business and Technology Association*. Retrieved from

https://www.academia.edu/3793239/Exposure_to_eWOM_and_Consumer_Behavior_Does_gende
r_matter_

Taddei, S., & Contena, B. (2013). Privacy, trust and control: Which relationships with online self-
disclosure? *Computers in Human Behavior, 29*(3), 821–826. doi:10.1016/j.chb.2012.11.022

Taddicken, M. (2013). The "privacy paradox" in the social web: The impact of privacy concerns, individual
characteristics, and the perceived social relevance on different forms of self-disclosure. *Journal of
Computer-Mediated Communication, 19*(2), 248–273. doi:10.1111/jcc4.12052

Take, I. (2012). Regulating the Internet infrastructure: A comparative appraisal of the legitimacy of
ICANN, ITU, and the WSIS. *Regulation & Governance, 6*(4), 499–523. doi:10.1111/j.1748-
5991.2012.01151.x

Thelwall, M. (2008). Social networks, gender, and friending: An analysis of MySpace member profiles.
Journal of the American Society for Information Science and Technology, 59(8), 1321–1330.
doi:10.1002/asi.20835

Tifferet, S. (2019). Gender differences in privacy tendencies on social network sites: A meta-analysis.
Computers in Human Behavior, 93, 1–12. doi:10.1016/j.chb.2018.11.046

Torres, J. A. S., Arroyo-Cañada, F., Solé-Moro, M., & Argila-Irurita, A. (2018). Impact of gender on the
acceptance of electronic word-of-mouth (eWOM) information in Spain. *Contaduría y
Administración, 63*(4), 1–19. doi:10.22201/fca.24488410e.2018.1428

Trepte, S., Reinecke, L., Ellison, N. B., Quiring, O., Yao, M. Z., & Ziegele, M. (2017). A cross-cultural
perspective on the privacy calculus. *Social Media + Society*, 1–13.
doi:10.1177/2056305116688035

Tufekci, Z. (2008). Can you see me now? Audience and disclosure regulation in online social network
sites. *Bulletin of Science, Technology & Society, 28*(20), 20–36. doi:10.1177/0270467607311484

Vollmer, C., & Precourt, G. (2008). *Always on: Advertising, marketing and media in an era of consumer
control*. New York, NY: McGraw-Hill.

Waters, S., & Ackerman, J. (2011). Exploring privacy management on Facebook: Motivations and
perceived consequences of voluntary disclosure. *Journal of Computer-Mediated Communication,
17*(1), 101–115. doi:10.1111/j.1083-6101.2011.01559.x

Wu, K. W., Huang, S. Y., Yen, D. C., & Popova, I. (2012). The effect of online privacy policy on consumer
privacy concern and trust. *Computers in Human Behavior, 28*(3), 889–897.
doi:10.1016/j.chb.2011.12.008

Yang, K., Li, X., Kim, H., & Kim, Y. H. (2015). Social shopping website quality attributes in increasing consumer participation, positive eWOM, and co-shopping: The reciprocating role of participation. *Journal of Retailing and Consumer Services, 24*, 1–9. doi:10.1016/j.jretconser.2015.01.008

Yang, S., Lin, S., Carlson, J. R., & Ross, W. T. (2016). Brand engagement on social media: Will firms' social media efforts influence search engine advertising effectiveness? *Journal of Marketing Management, 32*(5/6) 1–32. doi:10.1080/0267257X.2016.1143863

Young, A. L., & Quan-Haase, A. (2013). Privacy protection strategies on Facebook: The Internet privacy paradox revisited. *Information, Communication & Society, 16*(4), 479–500. doi:10.1080/1369118X.2013.777757

Zlatolas, L. N., Welzer, T., & Heričko, Hölbl. (2015). Privacy antecedents for SNS self-disclosure: The case of Facebook. *Computers in Human Behavior, 45*, 158–167. doi:10.1016/j.chb.2014.12.012