AN EMPIRICAL TEST OF SOCIAL MEDIA EVALUATION AND USAGE:
GENDER AND MOBILE ACCESS METHOD DIFFERENCES

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ABSTRACT
Social media sites are increasingly becoming essential communication channels for the firm. This research study investigates gender and mobile access differences in users’ perceived security, satisfaction, loyalty, and usage for three different types of social media sites. MANOVA analysis results show significant gender differences in satisfaction and loyalty. The findings also show significant mobile access differences in satisfaction and the degree of usage of Twitter and Facebook sites. Managerial implications and future research directions are discussed.

Keywords: Social media marketing, Gender difference, Mobile access method, Social media evaluation, Social media usage

INTRODUCTION
Social media is playing an increasingly essential role in marketing communication and customer relationship management. The use of online social media sites has grown dramatically as firms seek to provide relevant product and brand information to potential users and to reach and engage with existing customers. Social media sites have evolved from being merely a tool to facilitate information access to being an interactive social tool for communication and collaboration as well as for information and knowledge sharing (Bodendorf & Kaiser 2009; Singh, Hansen, & Podolny 2010).

Firms have begun to incorporate a myriad of relevant social media sites as significant components of their marketing strategy. They are actively promoting their social media sites to their current and potential customers as a critical element of their product and brand strategy. Thus, social media sites are evolving into interactive virtual communities where individuals share experiences,
information, opinions, preferences, and product reviews (Trusov, Buchklin, & Pauwels 2009). As a result, the firm’s social media sites are changing marketing communication by providing new opportunities and tools for the firm to engage with potential and existing customers.

Although there has been significant development in the social media marketing field recently, it is still not well understood how different users evaluate and use various types of social media. In developing a targeted social media marketing strategy, it is important for the firm to understand user differences in social media evaluation and usage. Therefore, the purpose of this research is to provide insights into the mechanism affecting the evaluation and usage of social media sites and to examine how the individual’s gender and chosen mobile access method can influence their evaluation and usage of various social media sites. Specifically, this research tests gender and mobile access method differences in the user’s perceived security, satisfaction, loyalty, and usage.

**SOCIAL MEDIA USER BEHAVIOR**

Firms’ various social media sites provide opportunities for customers to participate in online interactions with other customers. During this interaction, users begin to develop their evaluation of the social media sites potentially leading to continued usage of those particular social media sites.

**Gender Difference**

Gender differences in the use of computers and e-commerce sites has been well documented in the literature (Colly & Maltby 2008). This previous research has shown that women are less satisfied than men with their online shopping experience and it indicates that women value the utility of online shopping less than men (Rodgers & Harris 2003). This finding suggests that females would be less satisfied with their experience on social media sites than males. Further, the ability of the firm’s e-retail website to invoke curiosity and interest and then to stimulate further viewing was determined to be the strongest factor influencing females whereas variety was the strongest factor influencing males (Lee & Kozar 2009; Ozdemir & Kilic 2011). Thus, it is believed that males are more prone to information realization and convenience seeking when compared to females who appear to be more prone to uniqueness, assortment seeking, social interaction, and browsing (Noble, Griffith, & Adjei 2006). Given these findings, it is expected that males would have greater satisfaction, loyalty, and usage for social media sites that offer information and convenience, while females would have greater satisfaction, loyalty, and usage for those social media sites offering social interaction and variety.

When studying the use of the internet, Sanchez-Franco, Famos, and Velicia (2009) reported that females tend to exhibit greater risk aversion and less trust. Further, it is reported that males value their ability to post content online whereas females value responsiveness (Awad & Ragowsky 2008). These findings suggest that females place greater importance on the security of social media sites and use social media sites that offer responsiveness more than males. Males consider social media site security less important and use social media sites that permit content posting more frequently. Therefore, based upon these findings, gender differences are expected for the evaluation of social media sites. It is expected that females would be sensitive to the security of
social media sites and less satisfied with social media usage experience leading to lower intention of using the social media sites. Males would be less sensitive to social media site security and more satisfied with social media sites. Thus, it is expected that females are more likely to use social media sites that promote interaction and socialization than males. Extrapolating from these findings, the following hypotheses are presented.

Hypothesis 1: The users’ (a) perceived security, (b) satisfaction, and (c) loyalty of social media sites will be different between males and females.

Hypothesis 2: The usage of (a) Twitter, (b) Facebook, and (c) YouTube social media sites will be different between males and females.

**Mobile Access Method Difference**

Mobile devices are increasingly used by individuals to access the social media sites. The usage of the chosen mobile access method can potentially have an impact on the usage behavior and information sharing of the various social media sites (Wakefield & Whitten 2006). As firms are adapting their applications and tools for mobile access to devices such as the various smartphones (Android, iPhone, Windows Phone, etc.) or tables (iPads, Galaxy, Surface, etc.) the value and use of the mobile access method increases substantially (Wang, Lo, & Fang 2008). These mobile devices are encompassing both pleasurable and practical characteristics ensuring their use as communication devices (Lee, et al. 2010). Social media sites are accommodating mobile applications as these mobile devices have become embedded into how individuals share information and communicate with others (Lipsman 2010). Social media sites are being redesigned and reengineered with the objective of creating a responsive web design to offer the best mobile usage experience for the user. It is expected that those users who access social media sites with mobile devices will have different evaluation and usage of various social media sites when compared to those who access social media sites with non-mobile devices such as desktops or notebooks. Therefore, the following hypotheses are presented.

Hypothesis 3: The users’ (a) perceived security, (b) satisfaction, and (c) loyalty of social media sites will be different between the low and high mobile access method groups.

Hypothesis 4: The usage of (a) Twitter, (b) Facebook, and (c) YouTube social media sites will be different between the low and high mobile access method groups.

**METHODOLOGY**

This study used a self-administered questionnaire method to obtain data for analysis. A total of 154 questionnaires were completed by business school juniors and seniors of a Midwest university. The instrument employed in this study contained question items measuring security, social media satisfaction, loyalty, and social media usage. The respondents were asked to consider social media sites such as Facebook, Twitter, and YouTube. Also, demographics items are included in this study. Security was measured by using a four-item, five-point Likert-type scale adapted from Lim...
et al. (2005). Respondents were asked to indicate their feelings regarding the security of the social media sites. Social media satisfaction was measured by a three-item itemized rating scale capturing the level of satisfaction with the social media usage experience, social media meeting the expectation, and likelihood of recommending social media use to friends and relatives. Social media loyalty is captured by a two-item scale measuring whether to say positive things about the site and encourage others to do business with the site. Social media usage was captured by the frequency of usage of the three social media (Twitter, Facebook, and YouTube). Those respondents indicating no use or rarely use of mobile devices to access social media sites are classified into the low mobile access method group and those indicating frequent to always use of mobile devices are classified into the high mobile access method group.

RESULTS

The measurement properties of users’ perceived security, satisfaction, and loyalty were assessed in a confirmatory factor analysis (CFA). The fit indices showed that the model resulted in a fairly good fit to the data (Chi-Square = 29.59 with 24 d.f., Normed Fit Index (NFI) = 0.97, Comparative Fit Index (CFI) = 0.99, Root Mean Square Residual (RMSR) = 0.033).

All the items loaded significantly on the expected constructs, indicating convergent validity of the measures. Composite reliabilities were calculated for the three constructs. The composite reliabilities were 0.94, 0.81, and 0.79 for the perceived security, satisfaction, and loyalty respectively. The average variance extracted (AVE) were 0.79, 0.59, and 0.65 for the perceived security, satisfaction, and loyalty respectively. The chi-square difference tests were performed for all possible pairs of constructs. The correlations between constructs ranged from 0.18 to 0.44. In all pairs of constructs, the critical value was exceeded indicating discriminant validity.

Table 1 presents the cell means for the social media evaluation and usage measures for the gender and access method usage groups. The mean values for the three evaluation measures ranged from 2.26 to 3.94. The mean values for the three usage measures ranged from 1.10 to 4.41.

<table>
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<tr>
<th>TABLE 1</th>
<th>Cell Means for the Gender and Two Mobile Access Method Groups (MG)</th>
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<tbody>
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<td>Males</td>
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<td></td>
<td>Total (154)</td>
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<tr>
<td>SM Site Evaluation</td>
<td>Perceived Security</td>
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<td>Satisfaction</td>
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<td>Loyalty</td>
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<td>SM Site Usage</td>
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MANOVA Tests

Analysis was performed using the two-way full factorial Multi-variate Analysis of Variance (MANOVA) procedure. MANOVA includes 2 levels for gender, 2 levels for mobile access method, and their interaction effects. Two separate MANOVA analyses were performed for the three evaluation measures and three usage measures. The MANOVA tests were used to evaluate the differences in perceptions between males and females and between the low and high mobile access user groups. For the dimensions of social media site evaluation and usage showing significant MANOVA results, univariate analysis results were evaluated to determine which pair of mean differences contributes to the significant MANOVA results.

MANOVA analysis was performed for the three social media evaluation measures using gender and mobile usage group as the independent factors. Gender main effect and the two-way interaction effect are significant at the 0.05 level. The mobile access main effect is not significant at the 0.05 level. To assess which measures are responsible for the significant main and interaction effects, the univariate analysis results are evaluated. Only perceived security shows a significant gender by mobile access method interaction effect. As the interaction effect is significant, simple main effect tests were performed for the low and high mobile access groups. The gender simple main effect is significant for the low mobile access group (F=10.01, p < .01) but not significant for the high mobile access group (F = 0.65, p > .05) providing partial support for H1a. Satisfaction and loyalty show a significant gender main effect at the .05 level. Females show much higher satisfaction and loyalty than males. These results provide support for H1b and H1c.

Satisfaction shows a significant access method main effect at the .05 level supporting H2b. The high mobile access group reports higher satisfaction than the low mobile access group. Perceived security and loyalty show no significant mobile access method main effect at the 0.05 level. These results provide no support for H2a and H2c.

MANOVA analysis was performed for the three social media usage measures using gender and mobile access method as the independent factors. Gender main effect is not significant while mobile access method main effect is significant at the 0.05 level. The two-way interaction effect is not significant at the 0.05 level. To assess which measures are responsible for the significant main effect, the univariate analysis results are evaluated. All three type of social media usage show a non-significant gender main effect at the 0.05 level. These results do not provide support for H3a, H3b, and H3c. Twitter and Facebook usage shows a significant access method main effect at the 0.05 level while YouTube usage shows a non-significant access method main effect at the 0.05 level. These results provide support for H4a and H4b but no support for H4c.

DISCUSSION

This study explores the effects of gender and the mobile access method on perceived security, satisfaction, loyalty, and usage of the social media sites. The results of the study show significant gender differences in evaluation of social media sites. Females consistently show much higher satisfaction and loyalty of the social media sites than males. For the low mobile usage group, females show significantly higher perceived security than males. For the high mobile usage group,
males show slightly higher perceived security than females but the difference is not statistically significant. These findings are consistent to previous research showing that females tend to be less secure in e-shopping and e-commerce activities. However, for the high mobile usage group, there is no significant difference in perceived security between males and females. These interesting and unexpected findings may be due to the unique aspects of social media that allow non-task oriented interaction and socialization among participants. In addition, regardless of their gender, the high mobile access users would feel more comfortable using social media and understand the level of security involved in accessing social media. These results can have significant managerial implications. Firms need to develop customized social media strategy considering their primary target users of the sites.

This study also found significant difference in satisfaction and usage of the Twitter and Facebook depending on the use of the mobile access method. Interestingly, the high mobile access group reports much higher satisfaction than the low mobile access group. The low mobile access group shows higher usage of Twitter and Facebook than the high mobile access group. For the YouTube usage, there is no significant difference between the low and high mobile access method group. As the mobile devices are being adopted by more users, social media sites should modify the design and layout of their social media sites so that they are easy-to-use and can be displayed properly to users of mobile devices (Moss, Gunn, & Heller 2006). Firms interested in using social media marketing and social media tools should promote and develop strategies to accommodate more mobile device users. Given the expanding power and availability of mobile devices, firms must consider the mobile user foremost in managing social media sites. When developing mobile services of social media, firms should pay attention to all aspects of feeling and enjoyment, especially for experiential services (Nysveen, Pedersen, & Thorbjørnsen 2005). This study examined how individuals assess their experience to create, use, and share information and knowledge using various social media sites through mobile and non-mobile access methods.

In interpreting the findings of this study, care should be given. A potential limitation is that the respondents do not represent a diverse enough audience. The generalizability of the results from this study is limited as to the nature of the sample. Future research should address these limitations by using diverse samples to validate this study’s findings. In addition, future research needs to identify additional personal and behavioral factors and evaluate their influence on social media evaluation and usage. Additional characteristics of the individual, such as their mobile expertise, social media knowledge, goal orientation, and other demographic factors should be investigated. While this study evaluated the usage of the three major types of social media, future research should be conducted to test the influence of personal and behavioral factors on users’ evaluation and usage of other social media types such as game sites. The social media usage measure used in this study was self-reported. Future research should utilize actual measures of social media usage activity and responses obtained from different types of social media sites of a specific firm.

REFERENCES

“References available upon request from Jeen-Su Lim, jlim@utnet.utoledo.edu”