

**Factors Influencing Consumers' Use of Retailers' Facebook Pages:
Application of the Technology Acceptance Model**

by

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ABSTRACT

Most of the top Internet retailers use Facebook to acquire insights about their customers and to communicate their marketing strategies. However, no published work has used the Technology Acceptance Model (TAM) to examine factors influencing consumers' beliefs in the context of retailers' Facebook pages and their intent to use Facebook. The purpose of this study was to investigate factors influencing consumers' beliefs (perceived usefulness and perceived enjoyment) about using retailers' Facebook pages and their continued intention to use retailers' Facebook based on TAM. A total of 239 usable data was collected from college students enrolled in courses at Auburn University using an online survey. The results of stepwise multiple regression analysis showed that perceived usefulness and perceived enjoyment significantly influenced continued intention to use retailers' Facebook pages. In addition, the findings showed that the significant predictors of consumers' perceived usefulness were information quality, interactivity, sense of community, and entertainment, while the significant predictors of consumers' perceived enjoyment were information quality, sense of community, and entertainment. The findings of this study provide retailers with important insights to develop promotional strategies to communicate with their customers through Facebook. However, this study is limited due to the sample used; because this study used college students as a sample, the findings of this study may not be generalizable to other consumer groups.

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CHAPTER 1. INTRODUCTION

There is no doubt that social networking, called the “digital revolution,” has had a significant impact on consumer behavior (Solomon, 2013, p. 18). Social network sites (SNSs) such as Facebook not only allow people to present and share their personal profiles, including demographic information (e.g., educational backgrounds), psychographic information (e.g., interests, philosophies), and daily life events with their friends, but also to voice and share their opinions about products, brands, and services through various “virtual brand communities” (Solomon, 2013, p. 18). Consumers’ ability to generate information on SNSs, called “user-generated content” (p. 19), has become the most important phenomenon in current marketing (Solomon, 2013). SNSs provide retailers with the opportunity to develop a relationship with their customers and speak to them on an individual basis (Teuber, 2012). Most of the top 250 Internet retailers use Facebook (97%), Twitter (96%), or YouTube (90%) as a marketing tool (Erickson, 2012) to acquire insights about their customers and communicate their marketing strategies.

SNSs such as Facebook, Twitter, LinkedIn, and Pinterest have attracted 1.47 billion users in 2012 worldwide. It is estimated that the number of SNS users will rise to 1.73 billion (nearly one in four people worldwide) in 2013 and to 2.55 billion by 2017 (“Social Networking Reaches,” 2013). Facebook is the most popular SNS worldwide with more than one billion active users every month (Fowler, 2012), and is also the most widely used SNS in marketing (Erickson, 2012). About 38% of U.S. SNS users use Facebook to interact with companies or brands, and 48% of them seek companies’ and brands’ information on Facebook (“Cone Consumer,” 2010). Consumers use retailers’ Facebook pages to acquire the latest information on retailers’ products

and to write their own comments and read comments from groups of people with similar interests.

Companies use Facebook pages for various purposes. Victoria's Secret, a retailer that has the most Facebook followers, uses its Facebook page to understand its customers' interests about products and engage them in the brand (e.g., "Decisions, decisions ...Teal or True Blue nails this weekend? What nail color are you feeling?" for its cosmetic lines) (Wakefield, 2012). Through its Facebook, the company provides its users exclusive discount and promotion information to encourage immediate action (e.g., "Last day to get your panties in a bunch! 7/\$26 panties in select stores and online ends today") (Victoria's Secret Facebook, 2013a). Companies also create events in which customers participate to find different ways to use the companies' products, to create their own designs for existing product lines, or to be involved in the brand as a part of the community. For instance, Converse, an American shoe company, launched a web-based campaign to allow its Facebook users to design their own Converse tennis shoes. The brand's Facebook fans shared their designs with other Facebook fans, and Converse rewarded the advocates with a free pair they designed for every five they sell (Chaney, 2011). In addition, companies use their Facebook page to direct traffic to their online stores by adding links to particular products or events featured on their websites and to their other SNSs such as Twitter and Pinterest. Therefore, SNSs, particularly Facebook, are important marketing tools in current retailing and are worth studying to help companies better communicate with their customers.

The Technology Acceptance Model (TAM) developed by Davis (1989) has been widely used to explain user acceptance of information systems such as e-commerce (e.g., O'Cass & Fenech, 2004; Vijayasarathy, 2004) and social network sites (e.g., Lin & Lu, 2011; Kwon & Wen, 2010). TAM suggests that perceived usefulness and perceived ease of use are two key

factors that determine an individual's intention to adopt a technology. Davis, Bagozzi, and Warshaw (1992) later identified perceived enjoyment as another predictor of intent to use computers in the workplace and added the variable to TAM. The researchers found that perceived enjoyment has a significant impact on intention to use computers (Davis et al., 1992). Researchers have applied TAM in the context of SNSs and found that perceived usefulness and enjoyment were significant predictors of intent to use SNSs (Kang & Lee, 2010; Kwon & Wen, 2010; Lin & Lu, 2011; Qin, Kim, Hsu, & Tan, 2011; Sledgianowski & Kulviwat, 2009). Some of these studies even found that perceived enjoyment or playfulness (Lin & Lu, 2011; Sledgianowski & Kulviwat, 2009) was a stronger predictor of intent to use SNSs than was perceived usefulness.

This study identified the factors influencing users' perceived beliefs and continued intentions to use technology, particularly online technologies, based on previous literature (e.g., Cao, Zhang, & Seydel, 2005; Huang, 2011; Jiang & Benbasat, 2007) to examine if the factors also predict user's beliefs and behavioral intention in the SNS context. These factors include information quality, vividness of information, interactivity, sense of community, and entertainment that reflect the consumer's needs for cognition (i.e., information), social connection, and hedonic experiences in using online technologies (Lai & Chen, 2008; Lin & Lu, 2000; Kim & Niehm, 2009). Information quality refers to consumers' overall judgment and evaluation of the quality of information (Kim & Niehm, 2009), which is measured by accuracy (Baullou & Prazer, 1982; Liu & Arnett, 2000; Miller, 1996), relevancy, completeness, format (Liu & Arnett, 2000; Miller, 1996), timeliness, and understandability (Salaün & Flores, 2001). Information quality has been found to be one of the important components in websites including online shopping sites that influences perceived usefulness (Lin & Lu, 2000), information

satisfaction (Park & Kim, 2003), consumers' purchasing behaviors (Ahn, Ryu, & Han, 2004; Cao et. al., 2005), and loyalty intentions (Kim & Niem, 2009).

Vividness is the function of online product presentation which enables individuals to indirectly experience the virtual environment (Coyle & Thorson, 2001). Vivid information is likely to catch people's eyes and stimulate a thorough review because people tend to consider vivid information to be interesting (Nisbett & Ross 1980). Jiang and Benbasat (2007) found that vivid information about products is likely to arouse the interest of a user searching a retailer's website. Interactivity is an important marketing component, which can increase consumers' satisfaction, save their time when searching for products (Cross & Smith, 1996), and attract and retain customers (Kim, Shaw, & Schneider, 2003). Teo, Oh, Liu, (2003) found that a high level of interactivity influenced online users' satisfaction and efficiency in using websites.

Although the Theory of Reasoned Action (TRA), which was the theoretical background of TAM, considered subjective norm to predict intention, Davis et al. (1989) omitted the variable from the original TAM because they found that subjective norm had no significant influence on intent to use technology over and above perceived usefulness and ease of use. However, Davis et al. (1989) suggested that the results might be due to the specific application (word processing) used in the study and that additional research should be done to "investigate the conditions and mechanisms governing the impact of social influences on usage behavior" (p. 999). In addition, Hsu and Lin (2008) tested social norm and community identification as social influences to predict intention in blogging and found that community identification was a significant predictor of intent to blog. Therefore, this study examines the impact of social influence - sense of community - on consumers' intent to use retailers' SNSs. Sense of community indicates a feeling and a shared faith that members belong to a group and that needs of members are met by the

group (McMillan & Chavis, 1986). SNSs are the ideal system for companies to connect with their customers because they create “psychological urge” among users to talk and share with others who have similar desires and interests (Teuber, 2012). Therefore, perceived sense of community may be a driver for users to join retailers’ Facebook pages. Although no studies have tested the influence of sense of community on consumers’ beliefs about using retailers’ SNSs, research has found that sense of community is associated with enjoyment and playfulness in virtual communities (Koh & Kim, 2003). In addition, Hsu, Liu, and Lee (2010) found that sense of community influences users’ behavioral intention toward enterprises’ micro-blogs.

Consumers visit websites not only for information, but also for entertainment (Huang, 2003). Therefore, entertainment has been one of the attributes to measure the quality of e-commerce website (Loiacono, Watson, & Goodhue, 2007). Entertainment values reflect the hedonic aspects of the website experienced from sensory channels such as sight, hearing, smelling, and touching and are represented by the website’s visual appeal and innovativeness (Loiacono et al., 2007). Researchers have found that visual attractiveness of the website influenced perceived usefulness and enjoyment (van der Heijden, 2003). Entertainment (innovativeness, creativeness, and emotional appeal) of the website was also found to affect consumers’ perceptions about the information quality. Although visual components such as images and videos are critical in SNSs to communicate with their fans, no studies examined the relationships between entertainment (innovativeness and creativeness) of retailers’ Facebook pages and consumers’ perceived usefulness and enjoyment of the site.

Problem Statement and Purpose of Study

Researchers examined the factors influencing consumers’ intent to use SNSs. Qin et al. (2011) used TAM to examine the drivers of usage intention toward online social networks (e.g.,

Facebook and MySpace). The study found that subjective norm and critical mass significantly influenced perceived usefulness, which in turn affects usage intention. However, perceived ease of use was not a significant predictor of usage intention in the study. Kang and Lee (2010) used TAM to examine the predictors of intention to continue to use a Korean online social network service (Cyworld.com). They found that perceived usefulness and enjoyment significantly influenced customer satisfaction and users' intent to continue to use the social network service. Sledgianowski and Kulviwat (2009) found that playfulness, critical mass, trust, normative pressure, perceived ease of use, and perceived usefulness had a significant influence on intention to use SNSs (e.g., Facebook, Friendster, or MySpace). Perceived playfulness also had a significant direct effect on actual usage of SNSs. However, these studies focused on consumers' personal use of SNSs, not the use of retailers' SNSs.

Researchers have also investigated consumers' motivations or drivers to use retailers' SNSs. Jia (2013) examined the influence of consumer psychographic characteristics such as fashion innovativeness and fashion product involvement on their beliefs and behavioral intention using fashion retailers' Facebook pages based on TAM. The researcher found that consumers' fashion product involvement influenced perceived usefulness and enjoyment of using fashion retailers' Facebook pages. Those beliefs in turn affected their intent to use the retailers' Facebook pages. Despite the fact that SNSs, including Facebook, are a prevalent phenomenon in retailing and marketing areas and have the potential to offer considerable business opportunities, the factors influencing consumer's beliefs about using retailers' Facebook pages and their continued intention to use those pages have not been widely investigated.

Thus, the purpose of this study is to investigate the predictors of consumers' beliefs (perceived usefulness and perceived enjoyment) about using retailers' Facebook pages and their

continued intention to use retailers' Facebook pages based on TAM. Specifically, this study examines (1) the influence of perceived usefulness and perceived enjoyment of retailers' Facebook pages on continued intention to use the retailers' Facebook pages and (2) the influence of the factors related to cognitive benefits (information quality, vividness of information, and interactivity), social integrative benefits (sense of community), and hedonic benefits (entertainment) on consumers' perceived usefulness and enjoyment of the retailers' Facebook pages. The findings of this study will provide retailers using Facebook valuable insights about what drives customers to use their Facebook pages and how to design their Facebook to attract customers and expand their fan base.

Definition of Terms

The Technology Acceptance Model (TAM): A model to predict and explain technology acceptance among potential users, including such components as perceived enjoyment, perceived ease of use, and perceived usefulness as well as behavioral intention and actual behavior to use a new technology (Davis et al., 1992)

Perceived Usefulness: The degree to which an individual believes that using a specific retailer's Facebook would improve his or her efficiency in obtaining information, sharing information, and connecting and interacting with people who have similar interests

Perceived Enjoyment: The degree to which an individual believes that using a specific retailer's Facebook would provide them with fun and enjoyable experience

Information Quality: The judgment and evaluation that consumers develop in relation to product/service quality (Zeithaml, 1988)

Vividness of Information: "The representational richness of a mediated environment as defined by its formal features; that is, the way in which an environment presents information to the senses" (Steuer, 1992, p. 81)

Interactivity: A direct communication among participants without the constraints of time and distance (Blattberg & Deighton, 1991), including reciprocal communication and control (Liu, 2003)

Sense of Community: "A feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 4)

Entertainment: Hedonic aspects of the website measured by such dimensions as visual appeal, innovativeness, and emotional appeal (Loiacono et al., 2007)

CHAPTER 2. LITERATURE REVIEW

Theoretical Framework

The Technology Acceptance Model (TAM) (Davis, 1989) was used as the theoretical framework in this study to examine the factors influencing consumers' beliefs about using retailers' Facebook pages and the influence of these beliefs on their behavioral intention. TAM was developed based on Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) to predict and explain technology acceptance among potential users. TAM suggests that system usage is a response which can be predicted by users' motivation and is directly influenced by external stimuli, including a system's features and capability (Davis, 1989). Davis (1989) proposed two beliefs, perceived ease of use and perceived usefulness, as the major predictors of behavior in current and future use of computer technologies. Perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320).

Later, Davis et al. (1992) added enjoyment as an intrinsic motivation to TAM and found that the enjoyment that a user gains from using computer technology is also a significant predictor of intent to use the technology. Enjoyment refers to the "extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated" (Davis et al., 1992, p. 1113). Some researchers have found that perceived enjoyment has an even stronger impact than perceived usefulness and ease of use on individuals' intent to use information technology (Childers, Carr, Peck, & Carson, 2001; Koufaris, 2002). Jia (2003) found that perceived enjoyment was a much stronger predictor ($\beta^* = .907$) of intent to use retailers' Facebook pages than was perceived usefulness ($\beta^* = .197$).

TAM is one of the most popular theoretical models to predict the usage of technology, and researchers have successfully applied the model in various contexts of technologies such as computer games (e.g., Hsu & Lu, 2004), portal websites (e.g., van der Heijden, 2003), online shopping (e.g., O’Cass & Fenech, 2003; Vijayasathy, 2004), and social network sites (SNSs) (e.g., Lin & Lu, 2011; Kwon & Wen, 2010). For example, van der Heijden (2003) found that perceived usefulness, ease of use, and enjoyment significantly affected attitude towards use of portal websites, and perceived usefulness and enjoyment significantly influenced intent to use these websites. Childers et al. (2001) found that perceived usefulness, ease of use, and enjoyment significantly affected attitude towards use of online shopping. Koufaris (2002) found that perceived usefulness and enjoyment significantly influenced online customers’ intent to return to a website.

In the SNS context, Sledgianowski and Kulviwat (2009) used TAM to predict users’ intent to use social network sites such as Facebook, Friendster, or Myspace and found that playfulness (used interchangeably with enjoyment), perceived ease of use, and perceived usefulness were significantly associated with intent to use the social network services. Kang and Lee (2010) applied TAM in the context of the Korean social network site Cyworld and found that perceived usefulness and enjoyment were positively related not only to customer satisfaction but also to intent to continue to use the social network service. Kwon and Wen (2010) found that perceived usefulness and perceived ease of use significantly affected the actual use of Korean SNSs. In this study, perceived enjoyment was not included, but perceived encouragement was tested in the model. Lin and Lu (2011) tested TAM in the context of Facebook and found that perceived usefulness and enjoyment significantly influenced intent to use the site. However, Qin et al. (2011) also tested the original TAM, including perceived usefulness and ease of use, in the

context of online social networks and found that only perceived usefulness was a significant predictor of usage intention.

Although TAM has effectively predicted and explained the acceptance of technological innovations, researchers have also found additional factors that influence consumers' acceptance of specialized technology. For example, Hsu and Lu (2004) applied TAM to test consumers' acceptance of online games and found that social norms, attitude, and flow experience significantly affected the consumers' intent to play online games. Kwon and Wen (2010) and Qin et al (2011) added social factors to the original TAM, including social identity, critical mass, and subjective norm, to predict the usage intention of SNSs. These studies found that social factors significantly influenced perceived usefulness.

In the original TAM model, perceived ease of use is one of the predictors of dependent variables. However, some researchers have found no significant relationship between perceived ease of use and dependent variables (e.g., attitude toward using and intention to use technology). Koufaris (2002) found that perceived ease of use of a web store was not significantly related to intention to return to the site. Ha and Stoel (2009) found that perceived ease of use was not significantly related to consumers' attitude toward online shopping. Lu, Zhou, and Wang (2009) found no relationship between perceived ease of use and attitude toward using instant messaging services. Wu and Wang (2005) found that there was no relationship between perceived ease of use and intention to use mobile commerce. In the context of SNSs, Qin et al. (2011) also found that perceived ease of use was not related to usage intention of online social networks. These findings may be due to consumers' increased familiarity with the technologies. Furthermore, on retailers' Facebook pages, users have limited options to use the Facebook functions. Therefore, consumers may not perceive retailers' Facebook as hard to operate. In addition, according to a

research study conducted by the EDUCAUSE Center for Applied Research using a sample of 36,950 students from the U.S. and Canadian universities, about 90% students reported that they use SNSs, and among them 97% reported that they use Facebook (Smith & Caruso, 2010). These findings show that Facebook is an environment with which college students are familiar. Therefore, perceived ease of use was not tested in this study as one of the predictors of continued intention to use retailers' Facebook pages.

Perceived Usefulness and Continued Intention to Use Retailers' Facebook

An individual's decision about whether or not to use a technology depends on the degree to which he or she believes it will help their performance (Davis, 1989). When individuals feel that a system helps them perform their job better, they are likely to think that the technology is useful (Davis, 1989). Retailers' Facebook pages allow their users to acquire information about the brand, products, and promotions, to participate in special events as a member of the community, and to connect with other users who have a similar interest in sharing their opinions. Therefore, perceived usefulness is defined in this study as the degree to which an individual believes that using a specific retailer's Facebook would improve his or her efficiency in obtaining information, sharing information, and connecting and interacting with people who have similar interests. When users believe that the retailer's Facebook improves their efficiency in performing these activities, they may perceive that the Facebook page is useful, a perception which in turn influences their intent to continue to use the retailer's Facebook. Researchers have consistently found that a system's perceived usefulness has a direct influence on intent to use the system in a variety of contexts such as online portal services (e.g., van der Heijden, 2003), online shopping (e.g., Ahn, Ryu, & Han, 2004; Chen, Gillenson, Sherrell, 2002; Gefen, Karahanna, & Straub, 2003; Koufaris, 2002), and SNSs (e.g., Lin & Lu, 2011; Kang & Lee, 2010; Kwon &

Wen, 2010; Qin et al., 2011; Sledgianowski & Kulviwat, 2009). Therefore, based on the previous literature, it is plausible to assume that perceived usefulness positively influences continued intention to use the retailers' Facebook pages.

Hypothesis 1: Perceived usefulness positively predicts continued intention to use retailers' Facebook pages.

Perceived Enjoyment and Continued Intention to Use Retailers' Facebook

Enjoyment refers to a person's subjective feeling of pleasure when he or she performs a specific behavior or carries out a particular activity (Moon & Kim, 2001). Davis et al. (1992) argued that while perceived usefulness plays a major role in predicting intentions to use a computer in the workplace, "enjoyment will explain significant variance in usage intentions beyond that accounted for by usefulness alone" (p. 1113). Researchers have found that perceived enjoyment is a significant predictor of intention to use technology in various contexts such as portal websites (e.g., van der Heijden, 2004) and online shopping (Ahn, Ryu, & Han, 2007; Koufaris, 2002). Compared to traditional communication technologies such as mobile phones or email, SNSs have a more hedonic context to bring enjoyment and pleasure to users (Sledgianowski & Kulviwat, 2009). Retailers' Facebook pages can also be seen as a source of hedonic pleasure for users due to the nature of the visual-oriented communication platform. Researchers have found that perceived enjoyment is significantly related to intent to use SNSs (Sledgianowski & Kulviwat, 2009) and continuance intention (Kang & Lee, 2010; Lin & Lu, 2011). In addition, research has supported the idea that SNSs are pleasure-oriented information systems by finding that perceived enjoyment or playfulness is a stronger predictor of intent to use SNSs than is perceived usefulness (Jia, 2013; Lin & Lu, 2011; Sledgianowski & Kulviwat, 2009). Therefore, it is plausible to assume that when users find that a retailer's Facebook page

provides them enjoyable experiences, such as photos, videos, and other fun features or activities, they are likely to continue to use the page. Accordingly, the following hypothesis is proposed:

Hypothesis 2: Perceived enjoyment positively predicts the continued intention to use retailers' Facebook pages.

Factors Influencing Consumers' Beliefs (Perceived Usefulness and Enjoyment)

Based on Katz, Blumler, and Gurevitch's (1974) "uses and gratifications" approach, which discusses the general benefits that people can derive from the use of media, Nambisan and Baron (2007) identified the four types of benefits that individuals may obtain from their interactions in virtual environments (i.e., online) and that may influence their future participation in the environment. The four benefits include: (1) cognitive benefits, which can be achieved through acquiring information and increasing the understanding of the environment, (2) social integrative benefits, which can be obtained by strengthening the consumers' ties with relevant others, (3) personal integrative benefits, which can be realized by strengthening the credibility, status, and confidence of the person, and (4) hedonic benefits, which can be gained through aesthetic experiences. Katz et al. (1974) indicated that personal integrative benefits were related to "gains in reputation or status and the achievement of the self-efficacy" (p. 45). The use of retailers' Facebook may not involve users' comprehensive reviews about the products or brands, but brief comments about the specific postings. Therefore, users may not necessarily think that retailer's Facebook is a perfect place for them to gain reputation or status by posting their reviews. Therefore, only three types of benefits, cognitive, social integrative, and hedonic benefits, were included in this study to investigate the antecedents of consumers' beliefs about using retailers' Facebook. Factors related to cognitive benefits include information quality,

vividness of information, and interactivity. Social integrative benefits include sense of community. Finally, entertainment represents hedonic (aesthetic) benefits.

Factors Related to Cognitive Benefits

Information Quality. Information is a critical part of websites in general. Information quality has been found to be one of the most important criteria to evaluate websites, including shopping websites (Lin & Lu, 2000), because the ultimate goal of the website is to provide target users with information needed to complete their tasks (Bhatti, Bouch, & Kuchinsky, 2000). In online shopping, information quality is defined as the judgment and evaluation that consumers develop in relation to product/service quality (Zeithaml, 1988). It includes multiple dimensions such as accuracy (e.g., Liu & Arnett, 2000; Miller, 1996), relevancy (Liu & Arnett, 2000; Salaün & Flores, 2001), completeness and format (Liu & Arnett, 2000; Miller, 1996), timeliness (Salaün & Flores, 2001), and understandability (Salaün & Flores, 2001). In this study, information quality is defined as consumers' overall judgment and evaluation of the retailers' Facebook pages as assessed by the degree of relevance and timeliness of their information.

Information presented on retailers' Facebook pages includes new arrivals, ad campaigns, promotions, events, product tutorials, news related to the brand or store, and examples showing different ways to use a product, as well as customers' comments and feedback about the information. Therefore, when customers perceive that the information presented on the retailer's Facebook page is updated and relevant to their needs or wants, they are likely to consider that the page provides them quality information. In this study, perceived usefulness of a retailer's Facebook is measured by the degree to which a user believes that using the retailer's Facebook would improve his/her efficiency in obtaining information. Therefore, when consumers think that the retailer's Facebook provides them quality information, they are likely to perceive that the

Facebook helps them to achieve valued outcomes (e.g., acquisition of new information or discounts) and therefore is useful. Although no previous studies have examined the relationship between perceived information quality of retailers' Facebook pages and perceived usefulness, Lin and Lu (2000) found a positive association between information quality and perceived usefulness using an electronic newspaper site.

Additionally, Liu and Arnett (2000) found that a website with quality information attracts customers, makes them feel that the site is trustworthy, and creates customer satisfaction. Ahn et al. (2007) suggested that quality information (i.e., complete, site-specific, accurate, timely, and reliable information in an appropriate format) is likely to provide users with an enjoyable experience for their task, stimulate their curiosity, and lead to exploration in the online retailing system. Researchers have found that consumers tend to be interested in innovative information in online shopping (Koufaris, 2002). An innovative and pleasing information format was found to be associated with customers' perceived information quality on retailers' websites (Klein, 1998). Retailers' Facebook pages are hedonic in nature because of their use of various types of visual information such as pictures and video clips. When a retailer's Facebook page presents its information using visually pleasing formats, customers may perceive that the page provides them with quality information, which in turn affects their perceived enjoyment of the Facebook. Therefore, although no studies have investigated the relationship between information quality and perceived enjoyment in the context of retailers' Facebook pages, based on previous literature, the following hypotheses are proposed:

Hypothesis 3a: Information quality positively predicts perceived usefulness of retailers' Facebook pages.

Hypothesis 3b: Information quality positively predicts perceived enjoyment of retailers' Facebook pages.

Vividness of Information. Vividness is defined as “the representational richness of a mediated environment as defined by its formal features; that is, the way in which an environment presents information to the senses” (Steuer, 1992, p. 81). According to Nisbett and Ross (1980), vivid information is likely “to attract and hold our attention and to excite the imagination to the extent that is (a) emotionally interesting, (b) concrete and imagery-provoking, and (c) proximate in a sensory, temporal, or spatial way” (p. 45). Because vivid information is more interesting and conveys more information cues, it is more likely to be stored in one’s memory, remaining “in-thought” (p. 55) for a longer time, and therefore is more likely to be available when the person tries to retrieve the information (Nisbett & Ross, 1980). Vividness is one of the functions of online product presentation which helps individuals indirectly experience the virtual environment (i.e., telepresence) and influences attitude toward the website (Coyle & Thorson, 2001). On websites, multimedia such as video, audio, and animation may be considered as mediums that improve the vividness of the website because those mediums increase the richness of individuals’ experience with the environment (Coyle & Thorson, 2001). Jiang and Benbasat (2005) investigated the effect of different levels of information vividness (i.e., static images vs. videos) on perceived diagnosticity and shopping enjoyment in a website product presentation. In the study, perceived diagnosticity was defined as “consumers’ perceptions of the ability of a website to convey relevant product information that can assist them in understanding and evaluating the quality and performance of product sold online” (p. 457). The researchers found that vividness in product presentations significantly influenced perceived diagnosticity and shopping enjoyment. Vivid presentations can depict products in a way that is closer to experiencing the actual product

and communicate more information cues than a less-vivid product presentation (Lim, Benbasat, & Ward, 2000). Therefore, customers can better examine the product when it is presented in a vivid format (Lim et al., 2000). On Facebook pages, retailers focus heavily on visual information and multimedia features such as images and videos, which are considered as vivid information based on the previous literature. When consumers are exposed to vivid information on retailers' Facebook pages, they may pay more attention to the information, scrutinize it more carefully, and engage in more information processing. Through these processes, customers may perceive the retailer's Facebook page to be useful because it provides them with relevant information about the brand or products and improves efficiency in performing their tasks.

Consumers' shopping enjoyment has been found to be one of the critical components in online shopping (Jarvenpaa & Todd, 1996-1997; Koufaris, 2002). More vivid information generally implies more information cues, involves more sensory channels, and therefore is more emotionally attractive (Nisbett & Ross, 1980). Appiah (2006) suggested that online users tend to favor websites with more vivid information (i.e., audio/video testimonials of the product) compared to less vivid information (i.e., text/picture testimonials of the product). Vivid product information tends to arouse users' interest in searching for information about retailers (Jiang & Benbasat, 2007). As discussed earlier, Jiang and Benbasat (2007) found that the vividness of product presentation in websites significantly affected consumers' online shopping enjoyment. Therefore, it is plausible to assume that vivid information on retailers' Facebook pages will attract consumers and provide them with enjoyable experiences. Accordingly, the following hypotheses are proposed:

Hypothesis 4a: Vividness of information positively predicts perceived usefulness of retailers' Facebook pages.

Hypothesis 4b: Vividness of information positively predicts perceived enjoyment of retailers' Facebook pages.

Interactivity. Researchers have examined interactivity in computer-mediated communications (e.g., Hoffman & Novak, 1996; Rafaeli & Sudweeks, 1997) as well as e-commerce sites (e.g., Huang, 2012), and their definitions of interactivity are mainly focused on two aspects, reciprocal communication and control (Liu, 2003). Focusing on the aspect of reciprocal communication, which emphasizes the two-way flow of information, Rafaeli and Sudweeks (1997) defined interactivity as “the extent to which messages in a sequence relate to each other, and especially the extent to which later messages recount the relatedness of earlier messages.” Blattberg and Deighton (1991) also defined interactivity as a direct communication among participants without the constraints of time and distance. On the other hand, Jensen (1998) and Rogers (1995) suggested control as the main aspect of interactivity; the participants in communication, both the sender and receiver of the information, should be able to control the information exchanged in an interactive communication. Later, Liu (2003) argued that both reciprocal communication and control are important components in online interactivity and defined interactive communication as “a communication that offers individuals active control and allows them to communicate both reciprocally and synchronously” (p. 208). However, consumers using retailers' Facebook pages may not have full control over manipulating the Facebook functions because retailers' Facebook pages mainly focus on business-customer and customer-customer communications. Therefore, this study will focus on the reciprocal communications of the interactivity.

Interactivity has been found to be one of the important characteristics of shopping websites to attract and retain customers (Kim, Shaw, & Schneider, 2003) and one of the ways to

facilitate individuals' indirect experiences in online environments, called telepresence (Coyle & Thorson, 2001; Steuer, 1992). Klein (1998) suggested that interactivity of a website offers utilitarian benefits such as saving time or effort by providing consumers with a convenient way to search product information. Cross and Smith (1996) also found that high interactivity is a marketing strategy that increases consumers' satisfaction and saves their time in searching products. Teo, Oh, and Liu (2003) found that interactivity had a positive impact on users' effectiveness and efficiency in using shopping websites. In their study, effectiveness refers to the accuracy and completeness with which consumers complete specific goals and was measured by such items as "the website increased my awareness of the merits or demerits of the products," "the website provided me with relevant information to facilitate my decision," and "the website helped me to meet my decision-making need." Efficiency was measured by how easy it was to search for information, how accessible product information was, how much effort was needed to find the information, and how quickly the website allowed the user to make a decision. Therefore, it is plausible to assume that on retailers' Facebook pages, interactivity (reciprocal communication) is positively related to consumers' perception that the site enables them to obtain more information and improve their efficiency in sharing information, and therefore is useful.

The interactive features of online shopping have been found to influence consumers' hedonic value (enjoyment) (Fiore & Jin 2003; Fiore, Jin, & Kim, 2005). Regarding two-way communication interactivity, Huang (2012) found that reciprocal communication positively influenced affective involvement in the context of Taiwanese consumers using Facebook. In Huang's study, affective involvement was measured by such items as "using virtual goods of Facebook is interesting, exciting, and appealing." Therefore, it is assumed that interactivity

induces enjoyable, fun experiences in using retailers' Facebook pages. Accordingly, the following hypotheses are proposed:

Hypothesis 5a: Interactivity positively predicts perceived usefulness of retailers' Facebook pages.

Hypothesis 5b: Interactivity positively predicts perceived enjoyment of retailers' Facebook pages.

Factor Related to Social Integrative Benefits

Sense of Community. Social group or community largely influences not only individuals' beliefs but also their behaviors. Individuals construct group norms from respected in-group members and in-group behaviors and internalize and enact these norms as a part of their social identity (Turner, 1982). According to social identity theory, a group is formed when three or more individuals construe and evaluate themselves based on shared characteristics that differentiate them collectively from others (Hogg, 2006). Community is created when a group of individuals are socially interdependent, participate in group discussions and decisions, and share particular practices that reflect the community and are developed by it (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985).

Researchers have examined factors related to social influences such as social identity and sense of community in the context of virtual communities (Dholakia, Bagozzi, & Pearo, 2004) and SNSs (Kwon & Wen, 2010; Hwang, 2012). Social identity is defined as "the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (Tajfel, 1972, p. 292). Sense of community refers to "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be

together” (McMillan & Chavis, 1986, p. 4). McMillan and Chavis (1986) proposed four elements of sense of community: membership, influence, integration and fulfillment of needs, and emotional connection. Membership refers to “the feeling of belonging or of sharing a sense of personal relatedness” (p. 4). Influence means “a sense of mattering, of making a difference to a group and of the group mattering to its members” (p. 4). Integration and fulfillment of needs means “the feeling that members’ needs will be met by the resources received through their membership in the group” (p. 4). Finally, emotional connection means “the commitment and belief that members have shared and will share history, common places, time together, and similar experiences” (p. 4).

The concepts of social identity and sense of community appear to be related to each other in that they involve cognitive and affective components that lead individuals to perceive themselves as group members in relation to others (Alegeshemier et al., 2005; Bhattacharya & Sen, 2003). Cognitive components include categorization processes through which individuals realize group distinctiveness and maintain a self-awareness of their group memberships within the community (Muniz & O’Guinn, 2001) while affective components consist of “a sense of emotional involvement with the group” (Algesheimer et al., 2005, p. 20), which is also characterized as an “affective commitment” to the group (Ellemers, Kortekaas, & Ouwerkerk, 1999, p. 372).

One of the most typical characteristics of group and intergroup relation is positive distinctiveness, which is a belief that in-group members are better than out-group members in every possible way; people tend to strive for positive intergroup distinctiveness (Hogg, 2006). Motivations for positive social identity include self-enhancement and self-esteem (Sedikides & Strube, 1997). Therefore, positive distinctiveness may be motivated by self-esteem (e.g., Turner,

1982); low self-esteem motivates group identification and intergroup behavior and identification promotes self-esteem (Abrams & Hogg, 1988). Researchers have also found that people prefer a group that provides them with positive self-image (Clement, Noels, & Doeneault, 2001). Another motivation of social identity is uncertainty reduction (Hogg, 2000). Individuals build group norms or group prototypes from appropriate group members and behaviors. These norms or prototypes recognized by group members become the most reliable source of information about identity-consistent behaviors among group members, and self-concept is validated by conforming these norms (Hogg, 2006). This phenomenon is called “referent informational influence” (Turner, 1982, p. 31).

Social influences are the major factors in determining an individual’s participation in virtual communities (Dholakia, Bagozzi, & Pearo, 2004). In SNSs, social identity is the perception of belonging to the SNS group which motivates people to interact socially with others (Kwon & Wen, 2010). Hwang (2012) found that social identity positively affected cognitive and affective involvement with the virtual goods of Facebook. In Hwang’s study, cognitive involvement was measured by perceived importance and relevance of the products of Facebook, while affective involvement was measured by the degree of interest, excitement, and attractiveness of virtual goods of Facebook. Kwon and Wen (2010) also found social identity to be a determinant of perceived usefulness in Korean commercial SNS services.

A social network site is a virtual community where people can share information and develop relationships and emotional connections with others (Howard, 2000; Solomon, 2013), and therefore it is considered a “relationship-oriented information system” (Kwon & Wen, 2010, p. 261). People with a strong sense of virtual community are likely to communicate with others in the community (Hsu et al., 2010; Lai & Chen, 2008). Research found that consumers are

willing to exchange ideas about products they purchased and these activities greatly influence their attitude toward products and services (Mukhopadhyay & Yeung, 2010). Thus, on retailers' Facebook pages, individuals who perceive greater sense of community are more likely to interact and communicate with other members. Through these activities, they may feel that retailers' Facebook pages are an effective way to gather information and to share it with other members who have similar interests. In addition, sharing information with other members and building group prototypes (i.e., what the group likes or considers good) allows individuals to reduce uncertainty in making product-related decisions because the shared information or group prototypes are considered as reliable source of information (Hogg, 2000). Therefore, consumers may think that the retailer's Facebook increases their efficiency in achieving their goals by helping them make a better decision and therefore is useful.

Koh and Kim (2003) argued that a virtual community has different characteristics from other types of communities in that virtual community members tend to show immersive (or addictive) behavior toward their community through daily on-line communication. The researchers suggested three dimensions of the sense of virtual community: membership, influence, and immersion. Membership refers to feelings of belonging to the virtual community. Influence indicates members' influence on other members in the virtual community. Immersion means the state of flow people feel when they navigate the virtual community. Koh and Kim (2003) found that these three dimensions are related to enjoyment or playfulness experienced in the connection with the virtual community's content and interactions with other members. Researchers found that individuals with a strong sense of virtual community are more willing to interact and develop a comfortable atmosphere for the community (Hsu et al., 2010; Lai & Chen, 2008). Therefore, the sense of belongingness individuals perceive toward a Facebook group may

help them create a positive self-image as a valuable member of the group. These perceptions may induce positive feelings toward a retailer's Facebook and be related to perceived enjoyment.

Thus, based on the previous literature, the following hypotheses were proposed:

Hypothesis 6a: Sense of community positively predicts perceived usefulness of retailers' Facebook pages.

Hypothesis 6b: Sense of community positively predicts perceived enjoyment of retailers' Facebook pages.

Factor Related to Hedonic Benefits

Entertainment. Consumers visit websites not only for information, but also for entertainment (Huang, 2003). One of the functions of a website is to provide users with opportunities to fulfill their hedonic needs. According to Loiacono et al. (2007), entertainment reflects hedonic aspects of the website and is measured by such dimensions as visual appeal, innovativeness, and emotional appeal. Researchers have found that a positive website interface or entertaining components of a website are somewhat associated with consumers' perceptions about information provided by the website. For example, Klein (1998) found that when information was presented in an innovative format, people tended to perceive it as quality information. Isen (1987) found that consumers tended to handle more information and predicted more positive outcomes in positive online environments. Kim and Niehm (2009) found that entertainment (innovativeness, creativeness, and emotional appeal) positively influenced consumers' perceptions of information quality in online shopping. Therefore, when consumers perceive that a retailer's Facebook is innovative, creative, and entertaining, they may feel that the site allows them to obtain quality information, acquire more information, and improve their efficiency in sharing information with others. In addition, van der Heijden (2003) found that the

visual attractiveness of a website positively affected perceived usefulness and enjoyment of the website. Thus, the creative use of visual images, videos, and other types of multimedia will provide users with an enjoyable experience of a Facebook page. Accordingly, the following hypotheses are proposed:

Hypothesis 7a: Entertainment positively predicts perceived usefulness of retailers’ Facebook pages.

Hypothesis 7b: Entertainment positively predicts perceived enjoyment of retailers’ Facebook pages.

Figure 2.1 shows the conceptual model designed to test the hypothesized relationships in this study.

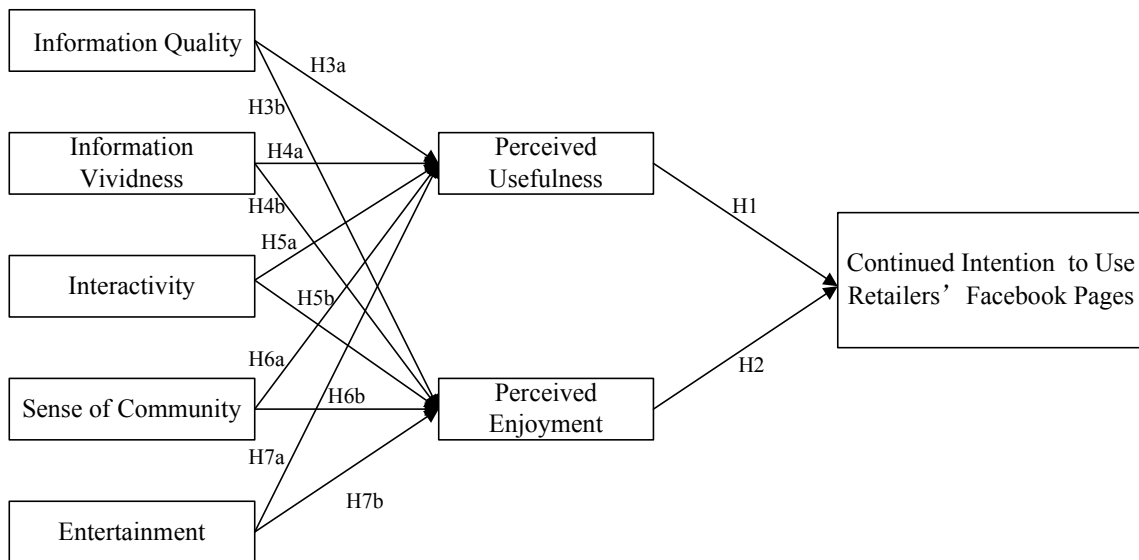


Figure 2.1. The theoretical model of the relationships among Information quality, vividness of information, interactivity, sense of community, entertainment, perceived usefulness, perceived enjoyment, and continued intention to use retailers’ Facebook pages

CHAPTER 3. METHODOLOGY

Sampling and data collection procedure

An online survey was utilized to collect data to test the hypothesized relationships (see Figure 2.1). A convenience sample was used to collect data using male and female college students enrolled in various courses at Auburn University (e.g., courses in the Department of Consumer and Design Sciences, Human Development Family Studies, Psychology, Marketing, etc.). College students were an appropriate sample for this study because Justin (2010) indicated that a significant number of Facebook users (52%) are between 18 and 34 years old. As the first step of the data collection process, we obtained an approval from the Institutional Review Board (IRB) of Auburn University for research involving human subjects to ensure the ethical performance of this study and protect the rights and welfare of human subjects. Then, the principal investigator contacted the course instructors from various departments on campus to obtain permission to collect data in the courses. With the permission of the instructor, a recruitment email including a survey website link was sent to students by the instructor or the principal investigator. After reading the recruitment email, subjects were able to access the survey website by clicking on the link included in the email if they agreed to participate in the study. The first page of the survey included the information letter that presented information regarding the purpose of the study, time required to complete the survey, protection of confidentiality, voluntary nature of the research, risks and benefits, and contact information of the researchers. A reminder email was sent to students a week after the first email was sent out. With the agreement of the instructors, extra credit was offered to participants in 11 courses out of 36 courses to which the recruitment occurred.

Retailers' Facebook pages were used as the context of the study because Facebook is the most-visited SNS in the U.S. with 150 million U.S. users ("Social Media Report," 2012) and is therefore the most effective online tool for retailers to communicate with their customers. In the beginning of the questionnaire, respondents were asked to recall their experience with a retailer's Facebook that they have recently visited and answer the questions based on their experience with the specific retailer's Facebook page. In addition, a screening question asked whether they have visited retailers' Facebook pages. Responses from respondents who have not visited retailers' Facebook pages were removed from the data set because respondents without such experience may not be able to provide meaningful responses. Finally, at the end of the survey, respondents were directed to a page where they were asked to leave their names and course numbers if they would like to obtain extra credit for participating in the survey. However, the respondents' identification information (i.e., name and course number) was saved in a different website to ensure that it was not associated with their responses to the survey questions.

Instruments

A questionnaire was developed for this study (see Appendix E). To measure information quality, seven items developed by Cao, Zhang, and Seydel (2005) and Kim and Niehm (2009) were used. Kim and Niehm (2009) included three additional items to the original scale to examine the variable in the online shopping context: "The website provides timely information," "The information on the website is relevant to me," and "I can find what I need in the website." The original items were modified in this study to test the information quality of the retailers' Facebook pages (e.g., "The retailer's Facebook is informative"). The reliability of the scale reported by Cao et al. (2005) was .94 and by Kim and Niehm (2009) was .96.

Vividness of information was measured using four items developed by Jiang and Benbasat (2007). The researchers tested the scale in the context of online product presentation. Therefore, the original items were modified to test the vividness of information in the context of retailers' Facebook pages (for example, "I can acquire product information on the retailer's Facebook from different sensory channels [e.g., sight or hearing]"). The reliability of the scale reported by Jiang and Benbasat (2007) was .81.

Interactivity was measured by five items borrowed from Lee and Cho (2011) and Huang (2012). One item ("Facebook facilitates two-way communication") was used in both studies. Two interactivity items ("Facebook gives me the opportunity to talk with other users" and "Facebook is effective in gathering feedback from others") were from Lee and Cho (2011). These three items were originally developed by Liu (2003) in the context of online shopping websites, but Lee and Cho (2011) used the items to measure two way-communication in SNSs. Two other items were from Huang (2011): "Facebook makes me feel like it wants to listen to its members" and "Facebook enables conversation among members." In the context of SNSs, Lee and Cho (2003) and Huang (2012) reported the reliability of the scales as .88 and .91, respectively. The items were further modified for this study to use in the context of retailers' Facebook pages (e.g., "The retailer's Facebook facilitates two-way communication among users").

Sense of community was measured using eight items. Four items were from the membership dimension of the sense of virtual community scale developed by Koh and Kim (2004). The researchers reported the reliability of the dimension as .93. Two items were from Wade, Cameron, Morgan, and Williams (2011): "I feel connected to the retailer's Facebook and its members" and "The retailer's Facebook members exhibit a spirit of community." Two items

were borrowed from Hsu et al. (2010): “I care about the opinion of other members of the retailer’s Facebook” and “I think it is worthwhile to spend time on the retailer’s Facebook.”

Entertainment was measured by four items. Three items were developed by Loiacono et al. (2007) to measure the innovativeness and creativeness of the website. The reliability of the three items reported by Loiacono et al. (2007) was .87. One entertainment item (“The retailer’s Facebook is entertaining”) was developed for this study.

Perceived usefulness was measured using five items developed by Kwon and Wen (2010) based on Davis’s (1989) study to be used in the context of social network services. However, one of the items was a double-barreled question (e.g., “Using the SNS would improve my efficiency in sharing information and connecting with others”). Therefore, the questions were modified and separated into two different items (e.g., “Using the retailer’s Facebook improves my efficiency in sharing information” and “Using the retailer’s Facebook improves my efficiency in connecting with others that have same interest with me”). The reliability reported by Kwon and Wen (2010) was .89. One item (“Using the retailer's Facebook enables me to acquire information more effectively”) was additionally developed for this study. Therefore, a total of six items were used to measure perceived usefulness.

Perceived enjoyment was measured by five items borrowed which Lin and Lu (2011) developed based on the studies of Agarwal and Karahanna (2000) and Kim, Chan, and Gupta (2007). The reliability of the scale reported by Lin and Lu (2011) was .91.

Continued intention to use the retailer’s Facebook page was measured using four items. Two items were from Kim, Park, and Oh (2008) and the reliability of the scale reported by Kim et al. (2008) was .86. One item was borrowed from Qin et al. (2011). One item (“I intend to share the retailer’s Facebook with other friends”) was developed for this study. All Items were

measured using a 7-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (7).

The survey included demographic questions, such as the respondents’ gender, age, ethnicity, and school year, in addition to questions about respondents’ use of retailers’ Facebook pages. Respondents were asked to identify the retailer’s Facebook on which they based their answers (open-ended question). Questions included “How frequently do you visit the retailer’s Facebook?” (a 7-point Likert-type scale) and “Have you ever purchased from the retailer?” (yes or no).

CHAPTER 4. DATA ANALYSIS AND RESULTS

Sample

The recruitment email was sent to 36 courses and 2,326 students at Auburn University. A total of 364 responses were collected for a response rate of 15.65%. Eleven incomplete responses and 114 responses from respondents who had not visited retailers' Facebook pages were deleted from the data set. Therefore, a total of 239 usable responses were used for further analysis.

Demographic Characteristics of Participants

Table 4.1 shows the characteristics of respondents in terms of age, ethnic background, class standing, frequency of visiting retailers' Facebook, and purchase experience with the retailers. The mean age of the respondents ($n = 239$) was 22 years, with a range of 18 to 47 years. About 60% of respondents (143) were female, while 40% (96) of them were male. About 84% of respondents were Caucasian Americans. Others were African American (5.9%), Hispanic American (2.5%), Native American (1.3%), Asian (2.9%), Asian American (0.8%), and other (2.1%). A majority of the respondents were undergraduate students (89.54%); about 72.8% of them were seniors (40.13%) or juniors (32.65%). The retailers' Facebook pages that the respondents had visited (i.e., retailers' Facebook pages that the respondents' responses were based on) were classified into several categories: apparel stores (29.3%), boutiques (23.4%), department stores (1.7%), supermarkets (5.5%), category specialists (20.1%), restaurants (7.5%), cafés & bars (3.3%), and other (9.2%) (See Table 4.2). About 61.8% of respondents indicated that they very infrequently, infrequently, or somewhat infrequently visited retailers' Facebook, while about 21.4% of respondents indicated that they very frequently, frequently, or somewhat frequently visited retailers' Facebook. About 77 % of respondents reported that they had purchased from the retailers they visited.

Table 4.1

Descriptive Statistics of Demographics of Respondents

Demographics	Frequency	Percent
<i>Age (n = 239; Mean age = 22.18)</i>		
Under 20	28	11.72%
20-24	177	74.05%
25-30	25	10.46%
Over 30	9	3.77%
Total	239	100%
<i>Gender (n = 239)</i>		
Male	96	40.17%
Female	143	59.83%
Total	239	100%
<i>Ethnic Background (n = 239)</i>		
Caucasian Americans	202	84.52%
African American	14	5.86%
Asian	7	2.93%
Hispanic American	6	2.50%
Native American	3	1.25%
Asian America	2	0.84%
Others	5	2.10%
Total	239	100%
<i>Class Standing (n = 239)</i>		
Freshman	6	2.52%
Sophomore	34	14.24%
Junior	78	32.65%
Senior	96	40.13%
Graduate Student	25	10.46%
Total	239	100.00%
<i>Frequency of last time visiting Facebook (n = 239)</i>		
1 Very Infrequently	95	39.7%
2 Infrequently	29	12.1%
3 Somehow Infrequently	24	10.0%
4 Neutral	40	16.7%
5 Somehow Frequently	30	12.6%
6 Frequently	9	3.8%
7 Very Frequently	12	5.0%
Total	239	100.0%

<i>Purchased from retailers (n = 239)</i>		
Yes	183	76.60%
No	56	23.40%
Total	239	100.00%

Table 4.2

Types of Retailers Respondents Visited

Retailer Format	Frequency	Percent
Apparel specialty stores (e.g., Nike, Ann Taylor, and Gap.)	70	29.3%
Local apparel retailers (e.g., U&I boutique, Ellie boutique, and The Pink Room boutique)	56	23.4%
Department stores (e.g., Kohls and Macy's)	4	1.7%
Supermarket (e.g., Wal-Mart and Target)	13	5.5%
Category Specialists (e.g., BestBuy, Gamestop)	48	20.1%
Restaurants (e.g., Zaaau Gasro Pub)	18	7.5%
Café & Bars (e.g., Overall Company)	8	3.3%
Others	22	9.2%
Total	239	100.0%

Note: Respondents indicated the retailer (retailer's Facebook) their answers are based on (i.e., the retailer's Facebook they have more recently visited).

Factor Analysis and Reliability

The reliability and validity of the scales were assessed using exploratory factor analysis and Cronbach's *alpha*. The goal of factor analysis was to understand underlying structure of the variables (Tabachnick & Fidell, 2007) such as information quality, vividness of information, interactivity, sense of community, entertainment, perceived usefulness, perceived enjoyment, and continued intention to use retailers' Facebook. Principal components analysis with Varimax rotation was used; "principal components analysis uses the correlations among the variables to develop a small set of components that empirically summarizes the correlations among the variables" (Tabachnick & Fidell, 2007, p. 25). The reliability of each dimension was calculated

using Cronbach's *alpha*. Cronbach's *alpha* is the measure of internal consistency which helps us understand how closely related a set of items are as a group (Cronbach & Shavelson, 2004). A Cronbach *alpha* value of .70 or higher is considered to indicate sufficient reliability of the multi-item scores (Nunnally & Bernstein, 1994).

Table 4.3 shows the results of factor analysis and reliability test for the variables. As shown in the table, factor analysis confirmed that each construct is uni-dimensional. The factor loadings of each item loaded under each factor were higher than .5 in all variables, showing that all items are under the factor (Kline, 1998). The Cronbach's *alpha* of each construct was higher than .70, indicating the internal consistency of the measurement scales (Cronbach & Shavelson, 2004).

As a result of exploratory factor analysis, the seven information quality items confirmed the uni-dimensionality of the scale with an eigenvalue of 5.49. The seven items explained 78.4% of the variance in information quality. Cronbach's *alpha* of the information quality scale was .95. As a result of factor analysis for vividness of information items, one factor with four items was confirmed with an eigenvalue of 2.44 and Cronbach's *alpha* of .78. The items explained 61.1% of the variance in vividness of information.

The result of exploratory factor analysis using five interactivity items revealed the uni-dimensionality of the scale. The eigenvalue was 3.67 and Cronbach's *alpha* was .91. The items explained 73.3% of the variance in interactivity. In addition, one dimension was yielded as a result of the factor analysis of sense of community items. The eigenvalue was 5.65, and Cronbach's *alpha* was .94. The items accounted for 70.7% of the variance in sense of community. As a result of factor analysis of four entertainment items, one-dimensionality was confirmed with an eigenvalue of 3.36 and Cronbach's *alpha* of .94. The four items explained

84.1% of the variance in entertainment.

A series of factor analysis was performed to test the dimensionality of perceived usefulness, perceived enjoyment, and continued intention to use the retailer's Facebook and one-dimensionality was confirmed for the scales. The factor analysis of six perceived usefulness items showed an eigenvalue of 4.26 and Cronbach's *alpha* of .92. The items accounted for 71.1% of the variance in perceived usefulness. The eigenvalue of five perceived enjoyment items was 4.38 and Cronbach's *alpha* was .97. The items explained 87.7% of the variance in perceived enjoyment. As a result of the factor analysis of four items on the continued intention to use the retailer's Facebook scale, the items showed an eigenvalue of 3.60 and Cronbach's *alpha* of .96, explaining 90.0% of the variance in the scale.

Because one factor was confirmed for all scales, the item scores of each variable were summed and averaged to calculate the overall variable score. For instance, scores from the information quality items were summed and averaged to calculate the composite score of information quality. Higher scores indicated greater or more positive variable scores. For instance, higher scores for continued intention to use retailer's Facebook mean greater intent to use the retailer's Facebook. Table 4.4 shows the mean score, observed range, and standard deviation of each scale. In addition, Table 4.5 presents correlations among all variables; correlations were significant at the 0.01 level.

Table 4.3

Exploratory Factor Analysis Results for Variables (n = 239)

Measurement Item	Factor Loading
<i>Information Quality</i>	
The retailer's Facebook is informative.	.894
The retailer's Facebook provides updated information.	.894
The retailer's Facebook provide high quality information.	.897
The retailer's Facebook provides timely information.	.890
The information on the retailer's Facebook is relevant to me.	.835
I can find what I need in the retailer's Facebook.	.850
The retailer's Facebook provides relevant information.	.934
Eigenvalue	5.49
Variance Explained	78.4%
Cronbach's <i>alpha</i>	.95
<i>Vividness of Information</i>	
The information presentation on the retailer's Facebook is lively.	.730
The information presentation on the retailer's Facebook is animated.	.732
I can acquire product information on the retailer's Facebook from different sensory channels (e.g., sight or hearing).	.798
The retailer's Facebook presents information in a way that is exciting to sense (e.g., sight or hearing).	.860
Eigenvalue	2.44
Variance Explained	61.1%
Cronbach's <i>alpha</i>	.78
<i>Interactivity</i>	
The retailer's Facebook facilitates two-way communication among users.	.842
The retailer's Facebook gives me the opportunity to talk with other users.	.864
Using the retailer's Facebook is effective in gathering feedback from others.	.860
The retailer's Facebook makes me feel like it wants to listen to its members.	.840
The retailer's Facebook enables conversation among members.	.873
Eigenvalue	3.66
Variance Explained	73.3%
Cronbach's <i>alpha</i>	.91
<i>Sense of Community</i>	
I feel as if I belong to the retailer's Facebook community.	.882
I feel membership in the retailer's Facebook community.	.879
I feel as if the retailer's Facebook community members are my close friends.	.793
I like the retailer's Facebook community members.	.836
I feel connected to the retailer's Facebook and its members.	.916
The retailer's Facebook members exhibit a spirit of community.	.844
I care about the opinions of other members of the retailer's Facebook.	.794

I think it is worthy to spend time on the retailer's Facebook.	.770
Eigenvalue	5.65
Variance Explained	70.7%
Cronbach's <i>alpha</i>	.94
<i>Entertainment</i>	
The retailer's Facebook is innovative.	.936
The retailer's Facebook is creative.	.924
The retailer's Facebook has innovative features.	.922
The retailer's Facebook is entertaining.	.884
Eigenvalue	3.36
Variance Explained	84.1%
Cronbach's <i>alpha</i>	.94
<i>Perceived Usefulness</i>	
Using the retailer's Facebook enables me to acquire more information.	.809
Using the retailer's Facebook improves my efficiency in sharing information.	.858
Using the retailer's Facebook improves my efficiency in connecting with others that have same interests with me.	.851
Using the retailer's Facebook is useful for interacting with people who have similar interest with me.	.800
Using the retailer's Facebook enables me to acquire information more effectively.	.884
Overall, I find the retailer's Facebook to be useful.	.853
Eigenvalue	4.26
Variance Explained	71.1%
Cronbach's <i>alpha</i>	.92
<i>Perceived Enjoyment</i>	
Using the retailer's Facebook provides me with a lot of enjoyment.	.936
I have fun using the retailer's Facebook.	.953
I enjoy using the retailer's Facebook.	.959
I have fun when interacting with the retailer's Facebook.	.933
Using the retailer's Facebook doesn't bore me.	.899
Eigenvalue	4.38
Variance Explained	87.7%
Cronbach's <i>alpha</i>	.97
<i>Continued Intention to Use Retailer's Facebook Pages</i>	
I intend to keep using the retailer's Facebook in the future.	.947
I intend to recommend my friends to use the retailer's Facebook in the future.	.954
I intend to continue using the retailer's Facebook in the future.	.954
I intend to share the retailer's Facebook with other friends.	.941
Eigenvalue	3.60
Variance Explained	90.0%
Cronbach's <i>alpha</i>	.96

Table 4.4

Participants' Overall Ratings for Each Scale.

Variable	<i>n</i>	Min.	Max.	<i>M</i>	<i>S.D.</i>
Information quality	239	1	7	5.1	1.5
Vividness of information	239	1	7	4.5	1.4
Interactivity	239	1	7	5.0	1.4
Sense of community	239	1	7	3.7	1.5
Entertainment	239	1	7	4.8	1.4
Perceived enjoyment	239	1	7	4.3	1.6
Perceived usefulness	239	1	7	4.8	1.4
Continued intention to use retailer's Facebook	239	1	7	4.9	1.6

Table 4.5

Bivariate Correlations Among Variables

	1	2	3	4	5	6	7	8
1. Information Quality	1							
2. Vividness of Information	.429**	1						
3. Interactivity	.601**	.522**	1					
4. Sense of Community	.403**	.440**	.551**	1				
5. Entertainment	.533**	.695**	.609**	.554**	1			
6. Perceived Usefulness	.525**	.531**	.546**	.706**	.668**	1		
7. Perceived Enjoyment	.552**	.490**	.645**	.684**	.637**	.714**	1	
8. Continued Intention to Use Retailer's Facebook	.501**	.381**	.537**	.573**	.505**	.667**	.641**	1

Note. ** Correlation is significant at the 0.01 level (2-tailed)

Hypotheses Testing

To test the hypotheses (H1 ~ H7), stepwise multiple regression analyses were used. Stepwise multiple regression was designed “to develop a subset of independent variables that is useful in predicting the dependent variable, and to eliminate those independent variables that do not provide additional prediction to the independent variables already in the equation” (Tabachnick & Fidell, 2007, p. 140). Because the objective of this study was to identify the most significant, parsimonious predictors of the dependent variable, the use of stepwise multiple regression was considered to be proper. Figure 4.1 shows hypotheses testing results in this study.

Hypotheses 1 and 2 were developed to test if perceived usefulness and perceived enjoyment were the significant predictors of continued intention to use retailers’ Facebook pages.

H1: Perceived usefulness positively predicts the continued intention to use retailers’ Facebook pages.

H2: Perceived enjoyment positively predicts the continued intention to use retailers’ Facebook pages.

Stepwise multiple regression analysis was performed with perceived usefulness and perceived enjoyment as independent variables and continued intention to use retailer’s Facebook page as a dependent variable. As a result, perceived usefulness (Std. $\beta^* = .336$) and perceived enjoyment (Std. $\beta^* = .427$) were the significant predictors of intent to continue to use retailers’ Facebook page ($F(2,237) = 118.73, p = .000, \text{adj } R^2 = .496$) and the nature of the relationships were positive (see Table 4.6). Thus, Hypothesis 1 and 2 were supported. Based on the standardized *beta* coefficient, it was found perceived enjoyment (Std. $\beta^* = .427$) was a stronger predictor of continued intention to use retailers’ Facebook pages than perceived usefulness (Std. $\beta^* = .336$).

Table 4.6

Stepwise Multiple Regression Analysis for a Relationship between Perceived Usefulness, Perceived Enjoyment and Continued Intention to Use Retailer's Facebook page

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Regression	311.031	2	155.515	118.73	.000
Residual	310.428	237	1.31		
Total	621.458	239			

Note. SS = sum of square; MS = mean square

Coefficients

	β	<i>SE</i>	Std. β^*	<i>t</i>	<i>p</i>
Perceived enjoyment	.424	.065	.427	6.52	.000
Perceived usefulness	.396	.077	.336	5.12	.000

Note. Std. β^* : Standardized regression coefficient, β : Unstandardized regression coefficient

Hypotheses 3a, 4a, 5a, 6a, and 7a were designed to identify the significant predictors of perceived usefulness among such variables as information quality, vividness of information, interactivity, sense of community, and entertainment.

H3a: Information quality positively predicts perceived usefulness of retailers' Facebook pages.

H4a: Vividness of information positively predicts perceived usefulness of retailers' Facebook pages.

H5a: Interactivity positively predicts perceived usefulness of retailers' Facebook pages.

H6a: Sense of community positively predicts perceived usefulness of retailers' Facebook pages.

H7a: Entertainment positively predicts perceived usefulness of retailers' Facebook pages.

Stepwise multiple regression analysis was performed with information quality, vividness

of information, interactivity, sense of community, and entertainment as independent variables and perceived usefulness as a dependent variable. The results revealed that sense of community (Std.β* = .389), interactivity (Std. β* = .208), entertainment (Std. β* = .210), and information quality (Std.β* = .158) were the significant predictors of perceived usefulness ($F(4,235) = 96.551$, $p = .000$, $\text{adj } R^2 = .615$) (see Table 4.7). However, vividness of information was not significantly related to perceived usefulness. Thus, Hypothesis 3a, 5a, 6a and 7a were supported while Hypothesis 4a was not supported. Based on the standardized *beta* coefficients, sense of community, which showed the highest coefficient (Std. β* = .389), was found to be the strongest predictor of perceived usefulness among the independent variables.

Table 4.7

Stepwise Multiple Regression Analysis for a Relationship between Information Quality, Vividness of Information, Interactivity, Sense of Community, Entertainment and Perceived Usefulness

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Regression	277.935	4	69.484	96.551	.000
Residual	169.120	235	.72		
Total	447.055	239			

Note. SS = sum of square; MS = mean square

Coefficients

	β	<i>SE</i>	Std.β*	<i>t</i>	<i>p</i>
Sense of community	.357	.047	.389	7.634	.000
Interactivity	.197	.055	.208	3.596	.000
Entertainment	.201	.053	.210	3.807	.000
Information Quality	.146	.048	.158	3.037	.003

Note. Std.β*: Standardized regression coefficient, β: Unstandardized regression coefficient

Hypotheses 3b, 4b, 5b, 6b, and 7b were developed to identify the significant predictors of perceived enjoyment among information quality, vividness of information, interactivity, sense of community, and entertainment.

H3b: Information quality positively predicts perceived enjoyment of retailers' Facebook pages.

H4b: Vividness of information positively predicts perceived enjoyment of retailers' Facebook pages.

H5b: Interactivity positively predicts perceived enjoyment of retailers' Facebook pages.

H6b: Sense of community positively predicts perceived enjoyment of retailers' Facebook pages.

H7b: Entertainment positively predicts perceived enjoyment of retailers' Facebook pages.

Stepwise multiple regression analysis was performed with information quality, vividness of information, interactivity, sense of community, and entertainment as independent variables and perceived enjoyment as a dependent variable. The stepwise multiple regression results revealed sense of community (Std. $\beta^* = .458$), entertainment (Std. $\beta^* = .325$), and information quality (Std. $\beta^* = .167$) were the significant predictors of perceived usefulness ($F(3,236) = 132.998, p = .000, \text{adj } R^2 = .624$) (see Table 4.8). However, vividness of information and interactivity were not significantly related to perceived enjoyment. Thus, hypothesis 3b, 6b and 7b were supported, while hypothesis 4b and 5b were not supported. Based on the standardized *beta* coefficients, sense of community, which shows the highest coefficient (Std. $\beta^* = .458$), was found to be the strongest predictor of perceived enjoyment among the independent variables.

Table 4.8

Stepwise Multiple Regression Analysis for a Relationship between Information Quality, Vividness of Information, Interactivity, Sense of Community, Entertainment and Perceived Enjoyment

	SS	df	MS	F	p
Regression	397.287	3	132.429	132.998	.000
Residual	234.990	236	.996		
Total	632.277	239			

Note. SS = sum of square; MS = mean square

Coefficients

	β	SE	Std. β^*	t	p
Sense of community	.500	.053	.458	9.493	.000
Entertainment	.369	.059	.325	6.234	.000
Information Quality	.183	.052	.167	3.522	.001

Note. Std. β^* : Standardized regression coefficient, β : Unstandardized regression coefficient

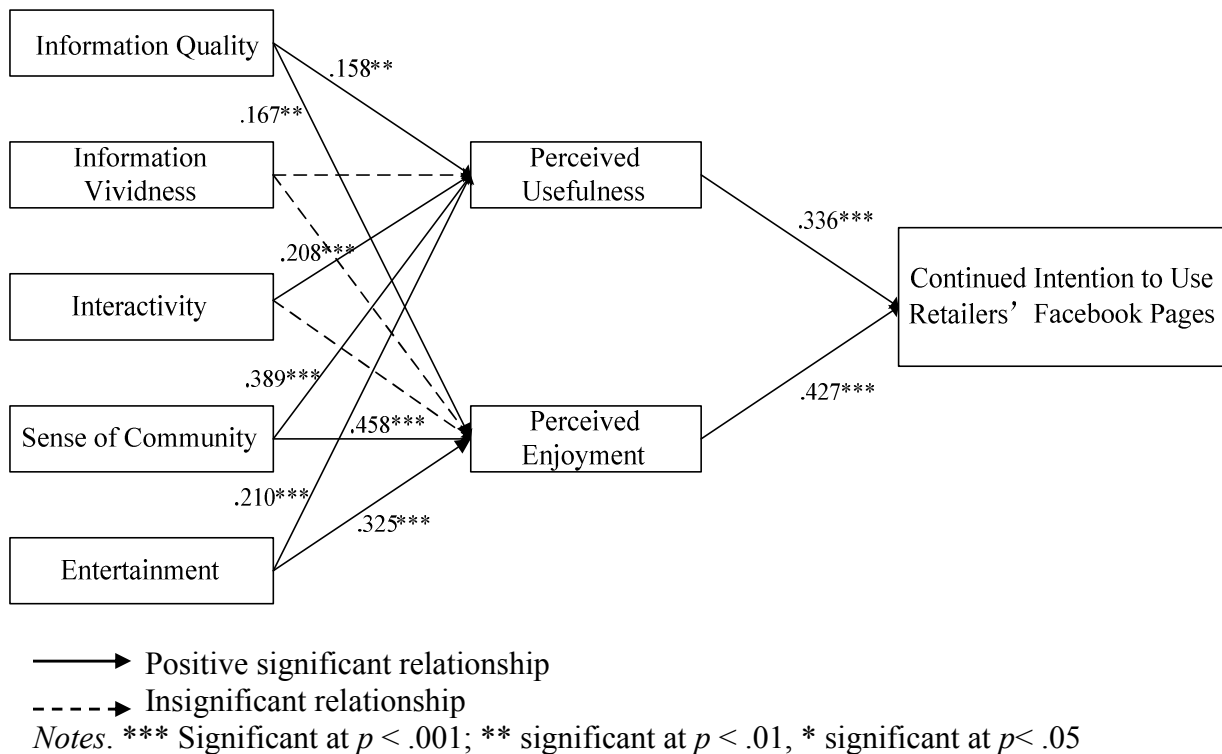


Figure 4.1. Hypotheses testing results

CHAPTER 5. DISCUSSION AND CONCLUSIONS

This chapter summarizes the findings of this study and provides theoretical and managerial implications of the findings. Finally, the limitations of this study are discussed, and suggestions are made for future research.

Discussion

Perceived Usefulness and Perceived Enjoyment as Predictors of Continued Intention to Use Retailer's Facebook

This study demonstrated that perceived usefulness was a significant predictor of continued intention to use retailers' Facebook pages. When consumers perceived that a retailer's Facebook page enabled them to acquire more information and to improve their efficiency in sharing information and interacting with other people in the Facebook community, they were likely to continue to use the page. This finding is consistent with those of previous studies which found that perceived usefulness is a significant predictor of intent to use a system in the context of online portal services (e.g., van der Heijden, 2003), online shopping (e.g., Ahn, Ryu, & Han, 2004; Chen, Gillenson, Sherrell, 2002; Gefen, Karahanna, & Straub, 2003; Koufaris, 2002), and SNSs (e.g., Lin & Lu, 2011; Kang & Lee, 2010; Kwon & Wen, 2010; Qin et al., 2011; Sledgianowski & Kulviwat, 2009).

This study also found that consumers with higher perceived enjoyment tended to show greater continued intention to use a retailer's Facebook page. Consumers were more likely to continue to use the retailer's Facebook page when they found the page to be fun and enjoyable. This finding supports previous studies which found that perceived enjoyment is a significant predictor of intent to use a system in the context of online portal services (e.g., van der Heijden, 2004), online shopping (Ahn, Ryu, & Han, 2007; Koufaris, 2002) and SNSs (Kang & Lee, 2010;

Lin & Lu, 2011; Sledgianowski & Kulviwat, 2009). This study also revealed that perceived enjoyment was a stronger predictor than perceived usefulness of continued intention to use retailers' Facebook pages. This finding is likely due to the nature of Facebook as a pleasure-oriented information system. This finding is consistent with those of previous studies that found a positive relationship between perceived enjoyment or playfulness and intent to use SNSs (Jia, 2013; Lin & Lu, 2011; Sledgianowski & Kulviwat, 2009).

Information Quality, Interactivity, Sense of Community, and Entertainment as Predictors of Perceived Usefulness

This study examined the predictors of perceived usefulness among variables associated with cognitive benefits, social integrative benefits, and hedonic benefits. Among them, we found the significant predictors of perceived usefulness to be information quality, interactivity, sense of community, and entertainment. In this study, consumers tended to think that a retailer's Facebook page allowed them to acquire information more effectively when they perceived the retailer's Facebook page to provide them with quality information (i.e., the retailer's Facebook was informative and provided them with updated, high quality, timely, and relevant information). Consumers also tended to believe that retailers' Facebook pages with quality information improved their efficiency in connecting, interacting, and sharing information with other people who share similar interests. While no previous studies have examined the predictors of perceived usefulness in the context of SNSs, this finding supports a previous study of electronic newspaper sites which found that quality information led customers to perceive that what they were browsing was useful (Lin & Lu, 2000).

The finding of this study revealed that interactivity positively influenced consumers' perception that a retailer's Facebook page enables them to acquire information effective share

information efficiently, and interact with other people within the retailer's Facebook community. In other words, consumers tended to think that a retailer's Facebook page was useful when they perceived that the page facilitated two-way communication among members, gave them an opportunity to talk with other members, and enabled conversation among members. In addition, consumers tended to perceive a higher degree of usefulness when they believed that the retailer's Facebook page was effective in gathering others' feedback about the retailer's products and services and felt that the retailer wanted to listen to its members. Although this study is the first to examine the relationship between interactivity and perceived usefulness in SNSs, this finding supports previous literature which found that interactivity influenced users' perceived effectiveness and efficiency in decision making in online shopping (Cross & Smith, 1996; Teo, Oh, & Liu, 2003).

This study revealed that sense of community not only influenced consumers' perceived usefulness but also was the most powerful predictor of perceived usefulness among the variables examined. Consumers were likely to perceive a retailer's Facebook page to be useful for acquiring information and sharing the information with other members when they felt as if they belonged to, felt a sense of membership in, and felt connected to the retailer's Facebook community. Consumers also reported a higher degree of perceived usefulness of retailers' Facebook pages when they felt that the retailers' Facebook community members were their close friends, they liked the other members, and they cared about the other members' opinions. In addition, a higher perceived usefulness was positively associated with their perception that spending time on the retailer's Facebook page was worthwhile. Although no previous studies have examined the relationship between sense of community and perceived usefulness in SNSs, the findings of this study support previous literature that found a relationship between social

influence, including social identity, and perceived usefulness in Korean commercial SNS services (Kwon & Wen, 2010).

In this study, entertainment was found to be a significant predictor of perceived usefulness (i.e., effectiveness in acquiring information and efficiency in sharing the information with other members of a retailer's Facebook community). Consumers who thought positively about using the retailer's Facebook and perceived it to be innovative, creative, pleasant, and entertaining tended to report a higher degree of perceived usefulness. Although no previous research has examined the relationship between entertainment and perceived usefulness in SNSs, this finding was consistent with those of previous studies which found a relationship between entertainment and information quality (Kim & Niehm, 2009) and between website attractiveness and perceived usefulness in the context of online shopping (van der Heijden, 2004).

Information Quality, Sense of Community, and Entertainment as Predictors of Perceived Enjoyment

The findings showed that the predictors of perceived enjoyment were information quality, sense of community and entertainment. Consumers who perceived that a retailer's Facebook page provided them with quality information were likely to think that using the page was enjoyable and fun. No previous research has empirically tested the relationship between information quality and perceived enjoyment in online shopping or in SNSs. Therefore, the findings of this study fill a gap in the literature by showing that perceived enjoyment of a retailer's Facebook page was positively associated with consumers' perceptions that the page was informative and provided updated, high quality, timely, and relevant information.

The findings of this study also revealed that consumers' sense of belongingness in the retailer's Facebook community stimulated perceived enjoyment; consumers who reported

stronger sense of community tended to perceive that using the retailer's Facebook page was enjoyable and fun. This finding supports the previous study of Koh and Kim (2003), who found that three characteristics of sense of virtual community (membership, influence, and immersion) were positively associated with enjoyment and playfulness experienced in the connection with the virtual community's content and interactions with other members. In addition, this study found that among the variables examined, sense of community was the strongest predictor of perceived enjoyment, showing that consumers' perceived sense of belongingness in the retailer's Facebook community is key to influencing their perceptions of usefulness and enjoyment.

Finally, this study found a positive relationship between entertainment and perceived enjoyment. The higher consumers' perception that a retailer's Facebook page was creative, innovative, pleasant, and entertaining, the greater the perceived enjoyment. Although no previous studies have tested the relationship between entertainment and perceived enjoyment in SNSs, this finding supports the finding of van der Heijin (2003) that visual attractiveness of a website influenced perceived enjoyment in online shopping.

Insignificant Relationships between Vividness of Information and Interactivity and Consumers' Beliefs

Although the correlations between vividness of information and perceived usefulness and perceived enjoyment were significant, based on the results of stepwise multiple regression, vividness of information was a predictor of neither perceived usefulness nor perceived enjoyment. This result differed from the findings of Jiang and Benbasat (2005), who found significant relationships between information vividness and perceived shopping enjoyment and perceived diagnosticity (i.e., consumers' perceptions that the website presents relevant product information to help them understand and evaluate product quality and performance). In Jiang and

Benbasat's study, static images were defined as less vivid information and videos were defined as more vivid information. This study also measured vividness of information by asking users whether they were able to acquire product information on retailers' Facebook pages from different sensory channels (e.g., sight or hearing), whether the information presentation on the retailer's Facebook was animated (e.g., video), and whether the information presentation on the retailer's Facebook was exciting to sense (e.g., sight or hearing). However, retailers use static photo images more frequently than videos on their Facebook pages. This fact might explain the difference in findings. Because retailers' Facebook pages present the information using mainly static images, consumers might rate lower scores on those items, resulting in insignificant relationships between vividness of information and perceived usefulness and perceived enjoyment.

This study also found that interactivity was not a significant predictor of perceived enjoyment even though the correlation between the variables was significant. On retailers' Facebook pages, consumers comment on the postings and read those of other members, but do not have instance reciprocal communication such as can be found with the Facebook chat function. Consumers find that other members' comments are useful because those comments improve their effectiveness in obtaining information and efficiency in sharing it with other members, but they may not necessarily think that those comments are enjoyable or fun due to the lack of real-time conversation.

Theoretical Implications

The present study provides a number of theoretical implications. First, this study sheds additional light on the Technology Acceptance Model (TAM) in the context of social network

sites by showing that information quality, interactivity, sense of community, and entertainment are critical determinants influencing consumers' beliefs about using retailers' Facebook pages. TAM has been more frequently applied to e-commerce (e.g., O'Cass & Fenech, 2003; Vijayasarathy, 2004) than to SNSs. Therefore, this study expended the applicability of the model to the social network context and filled a gap in the literature by incorporating additional external factors of information quality, interactivity, sense of community, and entertainment, which had not previously been tested in the context of SNSs. This study also confirmed that perceived enjoyment has a better predictive power than perceived usefulness in hedonic-oriented information platforms such as Facebook.

As discussed earlier, although TAM was derived from the theory of reasoned action, Davis et al. (1989) excluded social influence (i.e., subjective norm) from the original TAM because they did not find the variable to predict the use of technology systems. However, by finding a significant relationship between sense of community and consumers' perceptions of usefulness and enjoyment, this study confirmed that social influence, including sense of community, is also an important external factor predicting consumers' perceptions, which in turn influence intent to use the system. Therefore, social influence might be a critical factor to increase the predictive power of the model in the context of SNSs.

Managerial Implications

The findings of this study provide retailers who use Facebook as a marketing tool with valuable implications for better communication with their customers through this channel. First, this study found that while consumers' perceived enjoyment and perceived usefulness were both significant predictors of their continued intention to use retailers' Facebook pages, perceived

enjoyment was the stronger predictor. These findings demonstrate that both hedonic and utilitarian values are important in predicting consumers' intent to use the system. The significant relationships between the external factors (i.e., information quality, interactivity, sense of community, and entertainment) and consumers' beliefs (i.e., perceived usefulness and perceived enjoyment) further provide retailers with useful information about how they could improve their Facebook pages to influence customers' perceived usefulness and enjoyment.

In this study, information quality influenced both perceived usefulness and perceived enjoyment. These findings imply that retailers can improve consumers' effectiveness and efficiency in acquiring and sharing information with other members within the community as well as satisfy customers' hedonic needs (i.e., enjoyable and fun experiences) by providing them with updated, timely, and relevant information in their Facebook pages. When customers realize that they can find the information they need from the retailer's Facebook page, they may perceive the retailer's Facebook to be useful and enjoyable. For example, Victoria's Secret, the retailer that has the most Facebook fans, updates its Facebook on daily basis with one or two postings. The information ranges from different ways to try their products (e.g., "We love statement leggings! They're the perfect way to make your look pop") (Victoria's Secret Facebook, 2013b), to new products or trendy colors (e.g., "Lacy little somethings in stunning magenta") (Victoria's Secret Facebook, 2013c) and special promotions (e.g., "Good news: It's almost the weekend! Even better news, right here. Ends Sunday! Free shipping on \$50 + \$20 off \$150") (Victoria's Secret Facebook, 2013d). Therefore, retailers need to ensure that they update their Facebook pages frequently to provide customers with information that fits their current needs and desires.

This study found that interactivity, or two-way communication, significantly influenced

perceived usefulness. This finding emphasizes the importance of postings that provide customers with an opportunity to communicate with other members and encourage them to exchange their ideas. For instance, Victoria's Secret encourages their members to participate in the conversation by postings such as "My perfect weekend needs _____, _____, and _____" (Victoria's Secret Facebook, 2013e). Providing their members with an opportunity to talk and listen to other people will enable retailers to improve consumers' perceived usefulness in using their Facebook pages.

Further, this study found that sense of community influenced both perceived usefulness and perceived enjoyment, and in fact was the most critical predictor of both. Therefore, retailers should find ways to create a sense of membership and increase the spirit of community among their Facebook users. For instance, Victoria's Secret posted a birthday greeting for one of its top models along with her picture asking its Facebook members to join in congratulating her birthday. More than 300 members made comments on the posting similar to those they made their close friends or family members. Such strategies may be effective in helping customers feel connected to the retailer's Facebook and its members who have similar interests and therefore increase the sense of community.

Finally, this study found that entertainment was a predictor of both perceived usefulness and enjoyment. Entertainment was the second most important factor after sense of community in predicting perceived enjoyment. These findings provide retailers an important insight by demonstrating that innovative, creative, and entertaining Facebook pages not only influence users' hedonic value (i.e., enjoyable and fun experiences) but also utilitarian value (i.e., efficiency and effectiveness in obtaining and sharing information with other). Therefore, retailers need to provide their Facebook users with innovative, creative, and entertaining features and

events to improve perceived usefulness and perceived enjoyment.

Limitations and Recommendations

This study has several limitations in its scope. First, this study used a sample consisting of college students drawn from Auburn University. Therefore, the findings of this study may be applicable to only younger consumers and may not be generalizable to other consumer groups. According to a report, 52% of Facebook users are between 18 and 34 years old (Justin, 2010), indicating that younger consumers have more exposure to Facebook and that their technological familiarity with the system might influence their perceived usefulness and perceived enjoyment in using retailers' Facebook pages. Therefore, future research should examine the use of retailers' SNSs using other consumer groups. For instance, eMarketer (2011) reported that seniors ages 65 or older account for approximately 13% of the U.S. population in 2010 and will make up almost 25% of the U.S. population in 2030. Although seniors currently use SNSs mostly to communicate with friends and family, their use of SNSs increased nearly six-fold from 4.7% to 28% between 2008 and 2010 and will rise from 31% of senior Internet users in 2011 to 36% in 2013 ("Seniors Slowly Shift," 2011). The statistics provides retailers and marketers with an important implication in that this cohort is a promising market that they should not ignore in developing their marketing and communication strategies. Therefore, it is important that future research investigates the motivations of senior consumers for using retailers' Facebook pages.

The external factors examined in this study (i.e., information quality, vividness of information, interactivity, sense of community, and entertainment) were identified based on previous literature, mainly in the areas of online shopping and websites. Therefore, the factors examined in this study may not comprehensively cover consumers' motivations for using

retailers' Facebook pages. Therefore, future research should explore consumers' motivations for using retailers' Facebook pages utilizing a quantitative research approach to identify additional factors that may influence consumers' beliefs and intent to use the system and to better understand the phenomenon.

In addition, future research could investigate the impact of the ethnic background and gender on consumers' beliefs about using retailers' Facebook pages and continued intention to use them. For example, compared to female consumers, male consumers may seek more utilitarian features on retailer's Facebook pages rather than hedonic features. In this study, only about 21% of respondents reported that they very frequently, frequently, or somewhat frequently visited retailers' Facebook, while 62% reported that they very infrequently, infrequently, or somewhat infrequently visited retailers' Facebook. Therefore, future research could investigate differences between frequent users and non- frequent users of the retailers' Facebook pages in terms of the hypothesized relationships tested in this study.

References

- Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology, 18*, 317-434.
- Agarwal, R., & Karahanna, E. (2000). Time flies when you're having fun: Cognitive absorption and beliefs about information technology usage. *MIS Quarterly, 24*(4), 665-694.
- Ahn, T., Ryu, S., & Han, I. (2004). The impact of the online and offline features on the user acceptance of Internet shopping malls. *Electronic Commerce Research and Applications, 3*, 405-420.
- Ahn, T., Ryu, S., & Han, I. (2007). The impact of Web quality and playfulness on user acceptance of online retailing. *Information & Management, 44*, 263-275.
- Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of Marketing, 69*, 19-34.
- Appiah, O. (2006). Rich media, poor media: The impact of audio/video vs. text/picture testimonial ads on browsers' evaluations of commercial web sites and online products. *Journal of Current Issues & Research in Advertising, 28*(1), 73-86.
- Arrington, M. (2005). 85% of college students use Facebook. Retrieved from <http://techcrunch.com/2005/09/07/85-of-college-students-use-facebook/>
- Bajaj, A., & Nidumolu, S. (1998). A feedback model to understand information system usage. *Information and Management, 33*(4), 213 –224.
- Baker, R. K., & White, K. M. (2010). Predicting adolescents' use of social networking sites from an extended theory of planned behaviour perspective. *Computers in Human Behavior, 26*, 1591–1597.

- Baullou, D. P., & Pazer, H. L. (1982). The impact of inspector fallibility on the inspection policy serial production system. *Management Science*, 28(4), 387-399.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A. & Tipton, S. M., (1985). *Habits of the heart: Individualism and commitment in American life*. New York, NY: Harper and Row.
- Bentler, P. M. (1989). *EQS Structural Equations Program Manual*. Los Angeles, LA: BMDP Statistical Software.
- Bhattacharya, C. B., Rao, H., & Glynn, M. A. (1995). Understanding the bond of identification: An investigation of its correlates among art museum members. *Journal of Marketing*, 59, 46-57.
- Bhattacharya, C. B., & Sen, S. (2003). Consumer company identification: A framework for understanding consumers' relationships with companies. *Journal of Marketing*, 67, 76-88.
- Bhatti, N., Bouch, A., & Kuchinsky, A. (2000). Integrating user-perceived quality into Web server design. *Computer Networks*, 33, 1-16.
- Blattberg, R. C., & Deighton, J. (1991). Interactive marketing: Exploiting the age of addressability. *Sloan Management Review*, 33(1), 5-14.
- Boyd, D. M., & Ellison, N. B. (2008). Social network sites: definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13, 210–230.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, 21(2), 230-258.
- Cao, M., Zhang, Q., & Seydel, J. (2005). B2C e-commerce web site quality: An empirical examination. *Industrial Management and Data*, 106(5), 645-661.
- Cassidy, J. Me Media. (2006, May 15). *The New Yorker*, p. 50.

- Chaney, P. (2011, December). *Made by Facebook campaign turns Converse fans into retailers*. Retrieved from <http://socialcommercetoday.com/made-by-facebook-campaign-turns-converse-fans-into-retailers/>
- Chen, L-D., Gillenson, M. L., & Sherrell, D. L. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information & Management*, 39, 705-719.
- Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77, 511-535.
- Clement, R., Noels, K., & Doeneault, B. (2001). Interethnic contact, identity, and psychological adjustments in the mediating and moderating roles of communication. *Journal of Social Issues*, 57, 559-578.
- Cone consumer new media study. (2010). *Conecomm.com*. Retrieved from http://www.conecomm.com/stuff/contentmgr/files/0/61d7fb20ef6d001b5b77a4308eeb986b/files/consumer_new_media_fact_sheet_final.pdf
- Coyle, J. R., & Thorson, E. (2001). The effects of progressive levels of interactivity and vividness in web marketing sites. *The Journal of Advertising*, 30(3), 65-77.
- Cronbach, L. J., & Shavelson, R. J. (2004). My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement*, 64(3), 391-418.
- Cross, R., & Smith, J., 1996. Consumer-focused strategies and tactics. In E. Forrest, E & R. Mizerski (Eds.), *Interactive Marketing: The Future Present* (pp. 5–27).. IL: NTC Business Books.
- Crowley, A. E., Spangenberg, E. R., & Hughes, K. R. (1992). Measuring the hedonic and utilitarian dimensions of attitudes toward product categories. *Marketing Letters*, 3(3), 239-249.

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, F.D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the Technology Acceptance Model: Three experiments. *International Journal of Human Computer Studies*, 45, 19-45.
- Davis, F. (1985). *A technology acceptance model for empirically testing new end-user information systems: theory and results*. (Unpublished doctoral dissertation). MIT Sloan School of Management, Cambridge, MA.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22, 1111–1132.
- Deci, E. L. (1975). *Intrinsic motivation*. New York, NY: Plenum Press.
- Dholakia, U., Bagozzi, R. P. & Pearo, K. L. (2004). A social influence model of consumer participation in network and small-group-based virtual communities. *International Journal of Research in Marketing*, 21(3), 241-263.
- Dillion, W. R., & Goldstein, M. (1984). *Multivariate Analysis: Methods and Applications*. New York, NY: Wiley.
- Duncan, T. & Moriarty, S.E. (1998). A communication-based marketing models for managing Relationships. *Journal of Marketing*, 62(2), 1-13.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorization, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29, 371-389.

- 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*, 1143–1168.
- Erickson, C. (2012, May). Who are the top retailers on social media? Retrieved from <http://mashable.com/2012/05/11/retailers-social-media/>
- Fiore, A. M., & Jin, H-J. (2003). Influence of image interactivity on approach responses toward an online retailer. *Internet Research: Electronic Networking Applications and Policy, 13*(1), 38-48.
- Fiore, A. M., Jin, H-J., & Kim, J. (2005). For fun and profit: Hedonic value from image interactivity and responses toward an online store. *Psychology & Marketing, 22*(8), 669-694.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Fornell, C., & Larcker D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.
- Fowler, C. A. (2012). Facebook: One billion and counting, *The Wall Street Journal*. Retrieved from <http://online.wsj.com/article/SB10000872396390443635404578036164027386112.html>
- Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly, 27*(1), 51-90.
- Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research, 62*, 565-571.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analysis (7th ed)*. Upper Saddle River, NJ: Prentice Hall.

- Hoffman, D. L., & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing*, 60, 50-68.
- Hogg, M. A. (1992). *The social psychology of group cohesiveness: From attraction to social identity*. New York, NY: New York University Press.
- Hogg, M. A. (2000). Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *European Review of Social Psychology*, 11, 223-255.
- Hogg, M. A. (2006). Social identity theory. In P. J. Burke (Ed.), *Contemporary social psychological theories* (pp. 111-128). Stanford, CA: Stanford University Press.
- Hogg, M. A., & Turner, J. C. (1987). Social identity and conformity: A theory of referent informational influence. In W. Doise, & S. Moscovici, S. (Eds.), *Current issues in European Social Psychology* (pp. 139-182). Cambridge, UK: Cambridge University Press.
- Howard, R. (2000). *The virtual community: Homesteading on the electronic frontier*. Cambridge, Mass: MIT Press.
- Hsu, C-L., & Lin, C-C. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Information & Management*, 45, 65-74.
- Hsu, C-L., Liu, C-C., & Lee, Y-D. (2010). Effect of commitment and trust towards micro-blogs on consumer behavioral intention: A relationship marketing perspective. *International Journal of Electronic Business Management*, 8(4), 292-303.
- Hsu, C-L., & Lu, H-P. (2004). Why do people play online games? An extended TAM with social influences and flow experience. *Information & Management*, 41, 853-868.

- Hu, L. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternative. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Huang, E. (2012). Online experiences and virtual goods purchase intention. *Internet Research*, 22(3), 252-274.
- Huang, M-H. (2003). Designing website attributes to induce experiential encounters. *Computer in Human Behavior*, 19, 425-442.
- Huizingh, E. (2000). The content and design of web sites: An empirical study. *Information and Management*, 37(3), 123-134.
- Hwang, Y. (2008). A preliminary examination of the factors for knowledge sharing in technology mediated learning. *Journal of Information System Education*, 19(4), 419-429.
- Igbaria, M., Schiffman, S.J., & Wieckowski, T.J. (1994). The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology. *Behavior & Information Technology*, 13(6), 349-361.
- Isen, A. M. (1987). Positive Affect, Cognitive Processes and Social Behavior. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (pp. 203-253). New York: Academic Press.
- Jarvenpaa, S.L., & Todd, P.A. (1996-97, Winter). Consumer reactions to electronic shopping on the World Wide Web. *Journal of Electronic Commerce*, 1(2), 59-88.
- Jensen, J. F. (1998). Interactivity: Tracing a new concept in media and communication studies. *Nordicom Review*, 19(1), 185-204.
- Jia, Z. (2013). *Why people use fashion companies' Facebook pages* (Unpublished master's thesis). Auburn University, AL.

- Jiang, Z., & Benbasat, I. (2007). Investigating the influence of the functional mechanisms of online product presentations. *Information Systems Research, 18*(4), 454-470.
- Jiang, Z., Chan, J., Tan, B.C.Y. & Chua, W.S. (2010). Effects of interactivity on web site involvement and purchase intention. *Journal of the Association for Information Systems, 11*(1), 34-59
- Johnson, G.J., Bruner, G.C., & Kumar, A. (2006). Interactivity and its facets revisited. *Journal of Advertising, 35*(4), 35-52.
- Justin, S. (2010). December data on Facebook's US growth by age and gender: Beyond 100 million. *Inside Facebook*. Retrieved from <http://www.insidefacebook.com/2010/01/04/december-data-on-facebook%E2%80%99s-us-growth-by-age-and-gender-beyond-100-million/>
- Kane, G. C., Fichman, R. G., Gallagher, J., & Glaser, J. (2009). Community relations 2.0. *Harvard Business Review, 87*, 45–50.
- Kang, Y. S., & Lee, H. (2010). Understanding the role of an IT artifact in online service continuance: An extended perspective of user satisfaction. *Computers in Human Behavior, 26*, 353-364.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19-32). Beverly Hills, CA: Sage.
- Kaplan, A. M., & Haenlein, M. (2010). User of world, unite! The challenges and opportunities of Social Media. *Business Horizons, 53*, 59-68.
- Khakimdjanova, L., & Park, J. (2005). Online visual merchandising practice of apparel e-merchants. *Journal of Retailing & Consumer Services, 12*, 307-318.

- Kim, H-W., Chan, H. C., & Gupta, S. (2007). Value-based adoption of mobile internet: An empirical investigation. *Decision Support System, 43*, 111-126.
- Kim, J., Fiore, A. M., & Lee, H-H. (2007). Influences of online store perception, shopping enjoyment, and shopping involvement on consumer patronage behavior towards an online retailer. *Journal of Retailing & Consumer Services, 14*, 95-107.
- Kim, G. S., Park, S-B., & Oh, J. (2008). An examination of factors influencing consumer adoption of short message service. *Psychology & Marketing, 25*(8), 769-786.
- Kim, H., & Niehm, L. S. (2009). The impact of Website quality on information quality, value, and loyalty intentions in apparel retailing. *Journal of Interactive Marketing, 23*, 221-233.
- Kim, S-E., Shaw, T., & Schneider, H. (2003). Web site design benchmarking within industry groups. *Internet Research: Electronic Networking Applications and Policy, 13*(1), 17-26.
- Kisielius, J., & Sternthal, B. (1984). Detecting and explaining vividness effects in attitudinal judgments. *Journal of Marketing Research, 21*, 54-64.
- Kisielius, J., & Sternthal, B. (1986). Examining the vividness controversy: An availability-valence interpretation. *Journal of Consumer Research, 12*(4), 418-431.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.
- Klein, L. R. (1998). Evaluating the potential of interactive media through a new lens: Search versus experience goods. *Journal of Business Research, 41*(3), 195–203.
- Koh, J., & Kim, Y-G. (2004). Sense of virtual community: A conceptual framework and empirical validation. *International Journal of Electronic Commerce, 8*(2), 75-93.
- Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior, *Information System Research, 13*(2), 205-223.

- Krause, D. R., Scannell, T. V., & Calantone, R. J. (2000). A structural analysis of the effectiveness of buying firms' strategies to improve supplier performance. *Decision Sciences, 31*(1), 22-55.
- Kwon, O., & Wen, Y. (2010). An empirical study of the factors affecting social network service use. *Computers in Human Behavior, 26*, 253-263.
- Lai, T. J., & Chen, C. Y. (2008). Virtual community and customer participations in user centric internet service ventures. *Proceedings of the PICMET, Cape Town, South Africa, 27-3*. Retrieved from <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4599711>.
- Lange, P. G. (2008). Publicly private and privately public: Social networking on YouTube. *Journal of Computer-Mediated Communication, 13*, 361-380.
- Lee, S., & Cho, M. (2011). Social media use in a mobile broadband environment: Examination of determinants of twitter and Facebook use. *Mobile Marketing Association, 6*(2), 71-87.
- Li, C., & Bernoff, J. (2008). *Groundswell: Winning in a world transformed by social technologies*. Boston, MA: Harvard Business School Press.
- Lim, K. H., Benbasat, I., & Ward, L. M. (2000). The role of multimedia in changing first impression bias. *Information Systems Research, 22*(2), 449-471.
- Lin, J., & Lu, H. (2000). Toward an understanding of the behavioral intention to use a web site, *International Journal of Information Management, 20*, 197-208.
- Lin, K-Y., & Lu, H-P. (2011). Why people use social networking sites: An empirical study integrating. *Computers in Human Behavior, 27*, 1152-116
- Liu, Y. (2003). Developing a scale to measure the interactivity of websites. *Journal of Advertising Research, 207-216*.

- Liu, J. C., & Arnett, K. P. (2000). Exploring the factor associated with Web site success in the context of electronic commerce. *Information & Management*, 38(1), 23-33.
- Loiacono, E.T., (2002). WebQualTM: a website quality instrument. Unpublished Doctoral Dissertation, University of Georgia, Athens.
- Loiacono, E. T., Watson, R. T., & Goodhue, D. L. (2007). WebQual: An instrument for consumer evaluation of Web sites. *International Journal of Electronic Commerce*, 11(3), 51-87.
- Lu, Y., Zhou, T., & Wang, B. (2009). Exploring Chinese users' acceptance of instant messaging using the theory of planned behavior, the technology acceptance model, and the flow theory. *Computers in Human Behavior*, 25, 29–39.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.
- Mayfield, A. (2008). What is social media? iCrossing. Retrieved from http://www.icrossing.co.uk/fileadmin/uploads/eBooks/What_is_Social_Media_iCrossing_ebook.pdf
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.
- Miller, H. (1996). The multiple dimensions of information quality. *Information Systems Management*, 13(2), 79-82.
- Moon, J., & Kim, Y. (2001). Extending the TAM for a world-wide-web context, *Information and Management*, 38(4), 217-230.

- Mukhopadhyay, A., & Catherine, W. M. (2010). Building character: Effects of lay theories of self-control on the selection of products for children. *Journal of Marketing Research*, 47(2), 240-250.
- Muniz, A. M. Jr., & O'Guinn, T. C. (2001). Brand community. *Journal of Consumer Research*, 27, 412-432.
- Nambisan, S., & Baron, R. A. (2007). Interactions in virtual customer environments: Implications for product support and customer relationship management. *Journal of Interactive Marketing*, 21(2), 42-62.
- Nguyen, J. (2012). Social networking: No longer a niche market in Asia-Pac. Retrieved from http://www.comscore.com/Insights/Blog/Social_Networking_No_Longer_a_Niche_Market_in_Asia-Pac
- Nisbett, R., & Lee, R. (1980). Assigning weights to data: The "vividness criterion." In Nisbett, R. & Ross, L. (Eds.), *Human Inference: Strategies and Shortcomings of Social Judgment*. Engle-wood Cliffs, NJ: Prentice-Hall, Inc.
- Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience online environments: A structural modeling approach. *Marketing Science*, 19(1), 22-42.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill, Inc.
- O'Cass, A., & Fenech, T. (2004). Web retailing adoption: Exploring the nature of internet users Web retailing behavior. *Journal of Retailing and Consumer Services*, 10, 81-94.
- Park, H-C., & Kim, Y-G. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management*, 31(1), 16-29.

- Perkowitz, M. and Etzioni, O. (1999). Toward adaptive web sites: Conceptual framework and case study. *Computer Network*, 31, 1245-1258.
- Pfeil, U., Arjan, R., & Zaphiris, P. (2009). Age differences in online social networking: A study of user profiles and the social capital divide among teenagers and older users in MySpace. *Computers in Human Behavior*, 25, 643–654.
- Pontiggia, A., & Virili, F. (2010). Network effects in technology acceptance: Laboratory experimental evidence. *International Journal of Information Management*, 30, 68–77.
- Qin, L., Kim, Y., Hsu, J., & Tan, X. (2011). The effects of social influence on user acceptance of online social networks. *International Journal of Human-Computer Interaction*, 27(9), 885-899.
- Rafaeli, S., & Sudweeks, F. (1997). Networked interactivity. *Journal of Computer-Mediated Communication*, 2(4). Retrieved from [http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.1997.tb00201.x](http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.1997.tb00201.x/abstract) doi: 10.1111/j.1083-6101.1997.tb00201.x
- Rau, P. P., Gao, Q., & Ding, Y. (2008). Relationship between the level of intimacy and lurking in online social network services. *Computers in Human Behavior*, 24(6), 2757–2770.
- Razorfish. (2009). Fluent: The Razorfish Social Influence Marketing Report. Retrieved from http://www.researchsurveys.co.za/research-papers/pdf/SAMRA2010_S_Macdonald_Influentials_or_Accidentals.pdf
- Rice, J. (1995). *Mathematical Statistics and Data Analysis* (2nd ed). Belmont, CA: Duxbury Press.
- Rogers, E. M. (1995). *Diffusion of Innovations* (4th ed.) New York, NY: The Free Press.
- Salaün, Y., & Flores, K. (2001). Information quality: Meeting the needs of the consumer. *International Journal of Information Management*, 21(1), 21-37.

- Sarason, S.B. (1974). *The Psychological Sense of Community: Prospects for a Community Psychology*. San Francisco, CA: Jossey-Bass.
- Schlosser, A. E. (2003). Experiencing products in the virtual world: The role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of Consumer Research*, 30, 184-198.
- Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 29, pp. 209-196). New York, NY: Wiley.
- Seniors slowly shift to digital. (2011, February 16). *eMarketer*. Retrieved from <http://www.emarketer.com/Article/Seniors-Slowly-Shift-Digital/1008237>
- Singh, R. (2009). Does my structural model represent the real phenomenon? : A review of the appropriate use of Structural Equation Modeling (SEM) model fit indices. *Marketing review*, 9(3), 199-212.
- Sledgianowski, D., & Kulviwat, S. (2009). Using social network sites: The effects of playfulness, critical mass and trust in a hedonic context. *Journal of Computer Information Systems*, 49, 74-83.
- Smith, S. D., & Caruso, J. B. (2010). The ECAR study of undergraduate students and information technology, 2010 (Vol. 6). Boulder, CO: EDUCAUSE Center for Applied Research. Retrieved from <http://www.educause.edu/Resources/ECARStudyofUndergraduateStuden/217333>
- Social media report 2012: Social media comes of age. (2012, December 12). *ACNielsen*. Retrieved from

<http://blog.nielsen.com/nielsenwire/global/social-media-report-2012-social-media-comes-of-age/>

Social networking reaches nearly one in four around the world. (2013, June 18). *eMarketer*.

Retrieved from <http://www.emarketer.com/Article/Social-Networking-Reaches-Nearly-One-Four-Around-World/1009976>

Sohn, D. & Lee, B.K. (2005). Dimensions of interactivity: differential effects of social and psychological factors. *Journal of Computer-Mediated Communication*, 10(3).

Solomon, M. R. (2013). *Consumer Behavior* (10thed.). Upper Saddle River, NJ: Person Education, Inc.

Song, J., & Kim, Y. J. (2006). Social influence process in the acceptance of a virtual community service. *Information Systems Frontiers*, 8, 241-252.

Stelzner, M. A. (2010). Social media marketing industry report: How marketers are using social media to grow their businesses. Retrieved from <http://marketingwhitepapers.s3.amazonaws.com/SocialMediaMarketingReport2010.pdf>.

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication*, 42(4), 73-93.

Szajna, B. (1994). Software evaluation and choice: predictive validation of the technology acceptance instrument, *MIS Quarterly*, 18(3), 319-324.

Tabachnick, B. G., & Fidell L. S. (2007). *Using multivariate statistics* (p. 26). New York, NY: Pearson.

Tajfel, H. (1972). Social categorization. English manuscript of "La catégorization sociale." *Introduction à la Psychologie Sociale, et. S. Moscovici*, (Vol. 1, pp. 272-302). Paris: Larousse.

- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.
- Tapscott, D. (2009). *Grown up digital: How the next generation is changing your world*. New York, NY: McGraw-Hill.
- Terry, D., Carey, C., & Callan, V. (1997). Employee responses to an organizational merger: Group status, group permeability and identification. *Australian Journal of Psychology, 49*.
- Teo, H-H., Oh, L-B., & Liu, C. (2003). An empirical study of the effects of interactivity on web user attitude. *International Journal of Human Computer Studies, 58*, 281-305.
- Teuber, B. (2012). The rise of social media in retail. *Media Network*. Retrieved from <http://www.guardian.co.uk/media-network/media-network-blog/2012/jul/25/social-retailing>
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel, (Ed.), *Social Identity and Intergroup Relations*, (pp. 15-40). Cambridge, UK: Cambridge University Press.
- van der Heijden, H. (2004). User acceptance of hedonic information systems. *MIS Quarterly, 28*, 695-704.
- Venkatesh, V., Speier, C., & Morris, M. (2002). User acceptance enablers in individual decision making about technology: Toward an integrated model, *Decision Sciences, 33*(2), 297-315.
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the Technology Acceptance Model. *Information Systems Research, 11*, 342-365.
- Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*, 425-478.

- Victoria's Secret Facebook. (2013a, March 25). Retrieved from
<https://www.facebook.com/79775744089/posts/10151543301764090>
- Victoria's Secret Facebook. (2013b, October 10). Retrieved from
<https://www.facebook.com/photo.php?fbid=10151952128144090&set=a.102351319089.87426.79775744089&type=1&theater>
- Victoria's Secret Facebook. (2013c, October 10). Retrieved from
<https://www.facebook.com/photo.php?fbid=10151949895209090&set=a.102351319089.87426.79775744089&type=1&theater>
- Victoria's Secret Facebook. (2013d, October 4). Retrieved from
<https://www.facebook.com/photo.php?fbid=10151937497164090&set=a.102351319089.87426.79775744089&type=1&theater>
- Victoria's Secret Facebook. (2013e, Oct 6). Retrieved from
<https://www.facebook.com/victoriasecret/posts/10151937534249090>
- Vijayasahy, L. R. (2004). Predicting consumer intentions to use online shopping: The case for an augmented technology acceptance model. *Information & Management, 41*, 747-763.
- Wade, C. E., Cameron, B. A., Morgan, K., & Williams, K. C. (2011). Are interpersonal relationships necessary for developing trust in online projects? *Distance Education, 32*(3), 383-396.
- Wakefiled, K. J. (2012, May). Victoria's Secret gets it right on Facebook. Retrieved from
<http://contently.com/blog/2012/05/21/victorias-secret/>
- Ward, S. (1974). Consumer socialization. *Journal of Consumer Research, 1*(2), 1-14.

- Wang, X., Yu, C., & Wei, Y. (2012). Social media peer communication and impacts on purchase intentions: A consumer socialization framework. *Journal of Interactive Marketing, 26*, 198-208.
- Wu, J. H., Chen, Y. C., & Lin, L. M. (2007). Empirical evaluation of the revised end user computing acceptance model. *Computers in Human Behavior, 23*, 162-174.
- Wu, J-H., & Wang, S-C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management, 42*, 719-729.
- Xu, H., & Koronios, A. (2004-2005). Understanding information quality in e-business. *Journal of Computer Information Systems, 45*, 73-82.
- Yen, D. C., Wu, C. S., Cheng, F. F., & Huang, Y. W. (2010). Determinants of users' intention to adopt wireless technology: An empirical study by integrating TTF with TAM. *Computers in Human Behavior, 26*, 906-915.
- Yuan, K.-H. (2005). Fit indices versus test statistics. *Multivariate Behavioral Research, 40*(1), 115-148.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing, 52*, 2-22.

APPENDIX A

IRB Approval for Protocol #13-145 EX 1304

AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS RESEARCH PROTOCOL REVIEW FORM

For Information or help contact THE OFFICE OF RESEARCH COMPLIANCE, 115 Ramsay Hall, Auburn University
Phone: 334-844-5966 e-mail: hsubject@auburn.edu Web Address: <http://www.auburn.edu/research/vpr/ohs/>

Revised 03.26.11 – DO NOT STAPLE, CLIP TOGETHER ONLY.

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1. PROPOSED START DATE of STUDY: MAY 1, 2013

PROPOSED REVIEW CATEGORY (Check one): FULL BOARD EXPEDITED EXEMPT

2. PROJECT TITLE: Factors influencing consumers' use of retailer's Facebook: Application of TAM

3. SIMING GU GRADUATE STUDENT CAHS 334-332-1113 SZG0030@auburn.edu
PRINCIPAL INVESTIGATOR TITLE DEPT PHONE AU E-MAIL

308 Spidle Hall, Auburn University, AL, 36830
MAILING ADDRESS

FAX ALTERNATE E-MAIL

4. SOURCE OF FUNDING SUPPORT: Not Applicable Internal External Agency Pending Received

5. LIST ANY CONTRACTORS, SUB-CONTRACTORS, OTHER ENTITIES OR IRBs ASSOCIATED WITH THIS PROJECT:

6. GENERAL RESEARCH PROJECT CHARACTERISTICS

6A. Mandatory CITI Training	6B. Research Methodology
<p>Names of key personnel who have completed CITI: Siming Gu Hye Jeona Kim</p> <hr/> <p>CITI group completed for this study: <input checked="" type="checkbox"/> Social/Behavioral <input type="checkbox"/> Biomedical</p> <p style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;">PLEASE ATTACH TO HARD COPY ALL CITI CERTIFICATES FOR EACH KEY PERSONNEL</p>	<p>Please check all descriptors that best apply to the research methodology.</p> <p>Data Source(s): <input checked="" type="checkbox"/> New Data <input type="checkbox"/> Existing Data</p> <p>Will recorded data directly or indirectly identify participants? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Data collection will involve the use of:</p> <p><input type="checkbox"/> Educational Tests (cognitive diagnostic, aptitude, etc.)</p> <p><input type="checkbox"/> Interview / Observation</p> <p><input type="checkbox"/> Physical / Physiological Measures or Specimens (see Section 6B)</p> <p><input checked="" type="checkbox"/> Surveys / Questionnaires</p> <p><input checked="" type="checkbox"/> Internet / Electronic</p> <p><input type="checkbox"/> Audio / Video / Photos</p> <p><input type="checkbox"/> Private records or files</p>

The Auburn University Institutional Review Board has approved this document for use from 4/14/13 to 4/13/14
Protocol # 13-145 EX 1304

6C. Participant Information	6D. Risks to Participants
<p>Please check all descriptors that apply to the participant population.</p> <p><input checked="" type="checkbox"/> Males <input checked="" type="checkbox"/> Females <input checked="" type="checkbox"/> AU students</p> <p>Vulnerable Populations</p> <p><input type="checkbox"/> Pregnant Women/Fetuses <input type="checkbox"/> Prisoners</p> <p><input type="checkbox"/> Children and/or Adolescents (under age 19 in AL)</p> <p>Persons with:</p> <p><input type="checkbox"/> Economic Disadvantages <input type="checkbox"/> Physical Disabilities</p> <p><input type="checkbox"/> Educational Disadvantages <input type="checkbox"/> Intellectual Disabilities</p> <p>Do you plan to compensate your participants? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Please identify all risks that participants might encounter in this research.</p> <p><input checked="" type="checkbox"/> Breach of Confidentiality* <input type="checkbox"/> Coercion</p> <p><input type="checkbox"/> Deception <input type="checkbox"/> Physical</p> <p><input type="checkbox"/> Psychological <input type="checkbox"/> Social</p> <p><input type="checkbox"/> None <input type="checkbox"/> Other:</p> <p style="font-size: 0.8em;">*Note that if the Investigator is using or accessing confidential or identifiable data, a breach of confidentiality is always a risk.</p>

Received
APR 03 2013
Research Compliance

Do you need IBC Approval for this study? No Yes - BUA # _____ Expiration date _____

FOR OHSR OFFICE USE ONLY

<p>DATE RECEIVED IN OHSR: 4.3.13 by CPB</p> <p>DATE OF IRB REVIEW: 4-14-13 by CE</p> <p>DATE OF IRB APPROVAL: _____ by _____</p> <p>COMMENTS:</p>	<p>PROTOCOL # 13-145 EX 1304</p> <p>APPROVAL CATEGORY: 45CFR 46.101 (b)(2)</p> <p>INTERVAL FOR CONTINUING REVIEW: 3 years</p>
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7. PROJECT ASSURANCES

PROJECT TITLE: Factors influencing consumers' use of retailer's Facebook: Application of TAM

A. PRINCIPAL INVESTIGATOR'S ASSURANCES

1. I certify that all information provided in this application is complete and correct.
2. I understand that, as Principal investigator, I have ultimate responsibility for the conduct of this study, the ethical performance this project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the Auburn University IRB.
3. I certify that all individuals involved with the conduct of this project are qualified to carry out their specified roles and responsibilities and are in compliance with Auburn University policies regarding the collection and analysis of the research data.
4. I agree to comply with all Auburn policies and procedures, as well as with all applicable federal, state, and local laws regarding the protection of human subjects, including, but not limited to the following:
 - a. Conducting the project by qualified personnel according to the approved protocol
 - b. Implementing no changes in the approved protocol or consent form without prior approval from the Office of Human Subjects Research
 - c. Obtaining the legally effective informed consent from each participant or their legally responsible representative prior to their participation in this project using only the currently approved, stamped consent form
 - d. Promptly reporting significant adverse events and/or effects to the Office of Human Subjects Research in writing within 5 working days of the occurrence.
5. If I will be unavailable to direct this research personally, I will arrange for a co-investigator to assume direct responsibility in my absence. This person has been named as co-investigator in this application, or I will advise OHSR, by letter, in advance of such arrangements.
6. I agree to conduct this study only during the period approved by the Auburn University IRB.
7. I will prepare and submit a renewal request and supply all supporting documents to the Office of Human Subjects Research before the approval period has expired if it is necessary to continue the research project beyond the time period approved by the Auburn University IRB.
8. I will prepare and submit a final report upon completion of this research project.

My signature indicates that I have read, understand and agree to conduct this research project in accordance with the assurances listed above.

SIMING GU

Printed name of Principal Investigator

Siming Gu

Principal Investigator's Signature
(SIGN IN BLUE INK ONLY)

03/19/2013

Date

B. FACULTY ADVISOR / SPONSOR'S ASSURANCES

1. By my signature as faculty advisor/sponsor on this research application, I certify that the student or guest investigator is knowledgeable about the regulations and policies governing research with human subjects and has sufficient training and experience to conduct this particular study in accord with the approved protocol.
2. I certify that the project will be performed by qualified personnel according to the approved protocol using conventional or experimental methodology.
3. I agree to meet with the investigator on a regular basis to monitor study progress.
4. Should problems arise during the course of the study, I agree to be available, personally, to supervise the investigator in solving them.
5. I assure that the investigator will promptly report significant adverse events and/or effects to the OHSR in writing within 5 working days of the occurrence.
6. If I will be unavailable, I will arrange for an alternate faculty sponsor to assume responsibility during my absence, and I will advise the OHSR by letter of such arrangements. If the investigator is unable to fulfill requirements for submission of renewals, modifications or the final report, I will assume that responsibility.
7. I have read the protocol submitted for this project for content, clarity, and methodology.

Dr. Hye Jeong Kim

Printed name of Faculty Advisor / Sponsor

Hyejeong Kim

Signature (SIGN IN BLUE INK ONLY)

3/21/2013

Date

C. DEPARTMENT HEAD'S ASSURANCE

By my signature as department head, I certify that I will cooperate with the administration in the application and enforcement of all Auburn University policies and procedures, as well as all applicable federal, state, and local laws regarding the protection and ethical treatment of human participants by researchers in my department.

Dr. Carol Warfield

Printed name of Department Head

Carol Warfield

Signature (SIGN IN BLUE INK ONLY)

4/1/13

Date

8. PROJECT OVERVIEW: Prepare an abstract that includes:
(400 word maximum, in language understandable to someone who is not familiar with your area of study):

I.) A summary of relevant research findings leading to this research proposal:

(Cite sources; include a "Reference List" as Appendix A.)

II.) A brief description of the methodology,

III.) Expected and/or possible outcomes, and,

IV.) A statement regarding the potential significance of this research project.

Social networking has had a significant impact on consumer behavior these days (Solomon, 2013). Social network sites (SNSs) not only allow people to present and share their personal profiles such as demographic (e.g., educational backgrounds), psychographic (e.g., interests, philosophies), and daily life events with their friends, but also voice and share their opinions about products, brands, and services through various "virtual brand communities" (p. 18) such as Facebook (Solomon, 2013). Retailers have utilized SNSs as a tool to acquire insights about consumers and communicate their marketing strategies with their customers. Among SNSs Facebook has been the most popular marketing tool for fashion retailers. Among fashion retailers, Converse (35 million fans), Victoria's Secret (21 million fans), ZARA (16 million fans), Burberry (14 million fans) are the top brands in Facebook (Socialbakers, 2013). Victoria's Secret often posts questions to understand what their customers want and provide special offers and promotional information on its Facebook to encourage customers to participate in the events (Wakefield, 2012). Although some researchers (Lin and Lu, 2012; Kwon and Wen, 2009) have studied why consumers use retailers' Facebook, no studies have comprehensively examined factors influencing consumer's beliefs about retailer's Facebook and the influence of consumer's beliefs on their behavioral intention. Therefore, this study examines how informational, social, and entertaining factors of the retailer's Facebook affect consumer's beliefs such as perceived usefulness and enjoyment and how these beliefs influence their intent to continue to use the retailer's Facebook.

9. PURPOSE.

a. Clearly state all of the objectives, goals, or aims of this project.

The objectives of this study are to examine:

- (1) the influence of informational factors (information quality, vividness of information, and interactivity), social factors (self-identification, identification with the peer group, and sense of community), and entertainment on consumer's perceived usefulness and enjoyment
- (2) the influence of consumer's perceived usefulness and enjoyment on their intent to continue to use the retailer's Facebook.

b. How will the results of this project be used? (e.g., Presentation? Publication? Thesis? Dissertation?)

The results of this study will be presented at national or international conferences and published in peer-reviewed journals.

10a. **KEY PERSONNEL.** Describe responsibilities. Include information on research training or certifications related to this project. **CITI is required.** Be as specific as possible. (Attach extra page if needed.) All non AU-affiliated key personnel must attach CITI certificates of completion.

Principle Investigator Siming Gu Title: Graduate student E-mail address szg0030@auburn.edu
Dept / Affiliation: Consumer and Design Sciences, Auburn University

Roles / Responsibilities:
Data collection, data analysis, preparation of manuscript, presentation

Individual: Dr. Hye Jeong Kim Title: Assistant Professor E-mail address hzk0014@auburn.edu
Dept / Affiliation: Consumer and Design Sciences, Auburn University

Roles / Responsibilities:
Supervision of data collection and data analysis, preparation of manuscript, presentation

Individual: _____ Title: _____ E-mail address _____
Dept / Affiliation: _____

Roles / Responsibilities:

Individual: _____ Title: _____ E-mail address _____
Dept / Affiliation: _____

Roles / Responsibilities:

Individual: _____ Title: _____ E-mail address _____
Dept / Affiliation: _____

Roles / Responsibilities:

Individual: _____ Title: _____ E-mail address _____
Dept / Affiliation: _____

Roles / Responsibilities:

11. **LOCATION OF RESEARCH.** List all locations where data collection will take place. (School systems, organizations, businesses, buildings and room numbers, servers for web surveys, etc.) Be as specific as possible. **Attach permission letters in Appendix E.**

(See sample letters at <http://www.auburn.edu/research/vpr/ohs/sample.htm>)

Data will be collected using online survey and participants will be recruited through courses in Auburn University (e.g., courses in the department of psychology; human development and family studies; nutrition, dietetics and hospitality management; and consumer and design sciences).

12. PARTICIPANTS.

a. Describe the participant population you have chosen for this project.

Check here if there is existing data; describe the population from whom data was collected & include the # of data files.
Male and female college students older than 19

b. Describe why is this participant population is appropriate for inclusion in this research project. (Include criteria for selection.)

This study will use college students as a sample because students are a major user group for social network sites and most Facebook users are students (ACNielsen, 2012).

c. Describe, step-by-step, all procedures you will use to recruit participants. Include in Appendix B a copy of all e-mails, flyers, advertisements, recruiting scripts, invitations, etc., that will be used to invite people to participate.

(See sample documents at <http://www.auburn.edu/research/vpr/ohs/sample.htm>.)

Upon the permission of the instructors, the principle investigator will send classes email to inform the subjects (students) of the opportunity to participate in the research survey.

The email will include information regarding the purpose of the survey, time required to fill out the questionnaire, protection of confidentiality, voluntary participation, and contact information of the researchers as well as the survey link.

The participants in this study will acquire three extra credit points for the course in which they participated in the study.

Students who do not choose to participate within the class will be given the option to earn the same credits through alternative means as determined by the instructor

To acquire the extra credits, students will be asked to provide their name and class number in the last page of the survey. However, the information will be saved in a separate file in the survey website and therefore participants' responses will not be linked to their identification information (i.e., name and course number).

What is the minimum number of participants you need to validate the study? ³⁰⁰ _____

Is there a limit on the number of participants you will recruit? No Yes – the number is _____

Is there a limit on the number of participants you will include in the study? No Yes – the number is _____

d. Describe the type, amount and method of compensation and/or incentives for participants.

(If no compensation will be given, check here .)

Select the type of compensation: Monetary Incentives
 Raffle or Drawing incentive (Include the chances of winning.)
 Extra Credit (State the value)
 Other

Description:

Student participants will receive extra credit points for the course in which they participated in the study

13. PROJECT DESIGN & METHODS.

a. Describe, step-by-step, all procedures and methods that will be used to consent participants.

(Check here if this is "not applicable"; you are using existing data.)

An information letter will appear on the first page of the survey website.

The information letter will provide information about the study and state that having read the information provided, the respondents must decide if they want to participate in this research project or not.

If they decide to participate, the data they provide will serve as their agreement to do.

b. Describe the procedures you will use in order to address your purpose. Provide a step-by-step description of how you will carry out this research project. Include specific information about the participants' time and effort commitment. (NOTE: Use language that would be understandable to someone who is not familiar with your area of study. Without a complete description of all procedures, the Auburn University IRB will not be able to review this protocol. If additional space is needed for this section, save the information as a .PDF file and insert after page 6 of this form.)

Prospective participants will receive an email from the principle investigator for this study outlining the purpose of the research, time required to fill out the questionnaire, protection of confidentiality, voluntary participation, contact information of the researchers, and a link to the online survey.

The purpose of this study is to investigate factors influencing consumer perceptions about retailers' Facebook.

It will take approximately 15 minute to fill out the survey.

Participants volunteering to participate in the survey will complete the survey.

Participants will submit their responses by clicking on the "submit button" at the end of the survey.

Participants who want to receive three points extra credit will provide their name and course number in the last page of the survey. The identification information (i.e., name and course number) will be saved in a separate file in the website and will not be linked to participants' survey responses.

Data will be collected over several weeks, depending on when the desired sample size is obtained. A maximum of two email reminders will be sent to each class.

Once the sample size is achieved, the link of the web address to the survey will be removed.

The instructor of each course, where data were collected, will receive the list of the participants from the course to give them extra credits.

13c. List all data collection instruments used in this project, in the order they appear in Appendix C.

(e.g., surveys and questionnaires in the format that will be presented to participants, educational tests, data collection sheets, interview questions, audio/video taping methods etc.)

The data collection instrument used in this study is an online survey. Typical measures that will be used in this study are included in Appendix C.

d. Data analysis: Explain how the data will be analyzed.

Descriptive statistics, using SPSS will be used to analyze demographic information. Structural Equation Modeling will be performed to test the hypothesized relationships.

14. RISKS & DISCOMFORTS: List and describe all of the risks that participants might encounter in this research. *If you are using deception in this study, please justify the use of deception and be sure to attach a copy of the debriefing form you plan to use in Appendix D.* (Examples of possible risks are in section #6D on page 1.)

There will be no risk or discomfort. We will not use any type of deception.

15. **PRECAUTIONS.** Identify and describe all precautions you have taken to eliminate or reduce risks as listed in #14. If the participants can be classified as a "vulnerable" population, please describe additional safeguards that you will use to assure the ethical treatment of these individuals. Provide a copy of any emergency plans/procedures and medical referral lists in Appendix D.
Not applicable as all respondents are anonymous.

If using the Internet to collect data, what confidentiality or security precautions are in place to protect (or not collect) identifiable data? Include protections used during both the collection and transfer of data.

(These are likely listed on the server's website.)

Breach of confidentiality will not be a risk because the online questionnaire will be set such that it does not collect IP or email addresses from research participants. While IP information is logged by the online survey system, this information will not be stored and will be immediately purged by configuring the survey to not save the IP addresses. Since the data will not be linked in any way (neither email nor IP) to participants identity, there is no risk during transfer of data either.

16. **BENEFITS.**

- a. **List all realistic direct benefits participants can expect by participating in this specific study.**

(Do not include "compensation" listed in #12d.) Check here if there are no direct benefits to participants.

No realistic personal benefit.

- b. **List all realistic benefits for the general population that may be generated from this study.**

The findings of this study will provide retailers valuable information to understand how to effectively use social network sites to enhance communication between customers and themselves.

17. PROTECTION OF DATA.

- a. Will data be collected as anonymous? Yes No *If "YES", skip to part "g".*
(*"Anonymous" means that you will not collect any identifiable data.*)
- b. Will data be collected as confidential? Yes No
(*"Confidential" means that you will collect and protect identifiable data.*)
- c. If data are collected as confidential, will the participants' data be coded or linked to identifying information?
 Yes (If so, describe how linked.) No

d. Justify your need to code participants' data or link the data with identifying information.

e. Where will code lists be stored? (Building, room number?)
N/A

f. Will data collected as "confidential" be recorded and analyzed as "anonymous"? Yes No
(If you will maintain identifiable data, protections should have been described in #15.)

g. Describe how and where the data will be stored (e.g., hard copy, audio cassette, electronic data, etc.), and how the location where data is stored will be secured in your absence. For electronic data, describe security. If applicable, state specifically where any IRB-approved and participant-signed consent documents will be kept on campus for 3 years after the study ends.
The data will be stored as an electronic Microsoft Excel file and an electronic SPSS file. Data will be anonymous and will include no identifying information about respondents. The electronic file will be saved on the principal investigator's desktop and laptop, both of which can only be accessed through the personal investigator's unique login.

h. Who will have access to participants' data?
(The faculty advisor should have full access and be able to produce the data in the case of a federal or institutional audit.)
Siming Gu and Hye Jeong Kim

i. When is the latest date that confidential data will be retained? (Check here if only anonymous data will be retained. _____)
Because the data are recorded and analyzed as "anonymous," it will be retained indefinitely.

j. How will the confidential data be destroyed? (NOTE: Data recorded and analyzed as "anonymous" may be retained indefinitely.)
Data will not be destroyed.

APPENDIX B

IRB Approval for Protocol Modification

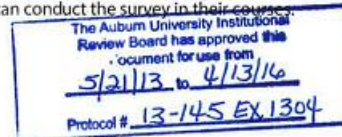
AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS REQUEST for PROTOCOL MODIFICATION

For information or help contact THE OFFICE OF HUMAN SUBJECTS RESEARCH, 115 Ramsay Hall, Auburn University
Phone: 334-844-5966 e-mail: hsubject@auburn.edu Web Address: <http://www.auburn.edu/research/vpr/ohs/index.htm>

Complete this form using Adobe Acrobat Writer (versions 5.0 and greater). Hand written copies are not accepted.

1. Protocol Number: 13-145 EX 1304 2. IRB Approval Dates: From: 4/14/13 To: 4/13/16
3. Project Title: Factors influencing consumers' use of retailer's Facebook: Application of TAM
4. SIMING GU graduate student CAHS (334) 3321113 szg0030@auburn.edu
Principal Investigator Title Department Phone AU E-Mail
Siming Gu 308 Spidle Hall, Auburn University, AL, 36830
PI Signature Mailing Address Alternate E-Mail
Hye Jeong Kim Hyejeong Kim CAHS () hzk0014@auburn.edu
Faculty Advisor FA Signature Department Phone AU E-Mail
Name of Current Department Head: Carol Warfield AU E-Mail: warfield@auburn.edu
5. Current External Funding Agency: _____
6. List any contractors, sub-contractors, other entities or IRBs associated with this project: _____
7. Briefly list (numbered or bulleted) the activities that occurred up to this point, particularly those that involved participants.

We have contacted some course instructors in various classes on campus to ask if we can conduct the survey in their courses.



8. Describe the requested changes to your research protocol, with an explanation and/or rationale for each.
(Additional pages may be attached if needed to provide a complete response.)

In the original information letter, we indicated that "Will you receive compensation for participating? You will receive three extra credit points for participating in this study." However, as we contact course instructors, we found that some instructors did not agree to provide students extra credit points. So, we would like to change the statement to "Will you receive compensation for participating? You will receive extra credit points for participating in this study only if your instructor indicated the opportunity." We also would like to make the same change in the email message.

In addition, we would like to add additional questions in the questionnaire and the additional items have been highlighted in yellow.



1 of 2

9. Are there any changes in the "key research personnel" that have access to participants or data? NO YES
(If "YES", identify each individual and explain the reason(s) for each change.) Attach CITI proof of completion for all new key personnel

10. Identify any changes in the anticipated risks and / or benefits to the participants.
No change

11. Identify any changes in the safeguards or precautions that will be used to address anticipated risks.
No change

12. Attach any additional supporting documentation to assist the IRB in evaluating your request for protocol modifications, including other agency or IRB approvals or renewals.

13. If research is being conducted at sites other than Auburn University or in cooperation with other entities, a letter from the site or program director must be included acknowledging their acceptance of the proposed changes.
(See OHSR website for guidance: <http://www.auburn.edu/research/vpr/ohs/sample.htm>.)

14. Attach a copy of any and all "stamped" IRB-approved forms you are currently using (information letters, consents, etc.)

15. Attach a new copy of your consent document(s), including updated information regarding the requested changes.
(Be sure to review the OHSR website for current consent document guidelines and updated contact information.)

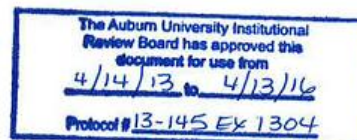
When complete, submit hard copy with signatures to the Office of Human Subjects Research,
115 Ramsay Hall, Auburn University, AL 36849

2 of 2

APPENDIX C

Information Letter

Type this information at the end of this letter ←



INFORMATION LETTER For a Research Study Entitled

“Factors influencing consumers' use of retailer's Facebook: Application of TAM”

You are invited to participate in a research study to investigate factors influencing consumer perceptions about retailers' Facebook. This study is being conducted by Siming Gu, a master's student, and Dr. Hye Jeong Kim, Ph.D., Assistant Professor, in the Auburn University Department of Consumer and Design Sciences. You were selected as a possible participant because you are a college student in the U.S. and are at least 19 years old.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to answer the questions related to your use of and perceptions toward a retailers' Facebook. Your total time commitment will be approximately 15 minutes.

Are there any risks or discomforts? There are no known risks or discomforts associated with participating in this study.

Are there any benefits to yourself or others? If you participate in this study, you can expect to receive no direct benefits. Your participation, however, will provide retailers useful information to understand consumers' perceptions toward retailers' Facebook and to help them provide consumers better social network services.

Will you receive compensation for participating? You will receive three extra credit points for participating in this study.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data will be withdrawn. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Consumer and Design Sciences.

Any data obtained in connection with this study will remain anonymous. Your individual responses will be kept in strict confidence. No personal information such as IP address and email address will be collected or recorded in any way. In the last page of the survey, you will be asked to provide your name and course number if you would like to receive three point extra credits for the course in which you participated in this study. However, the information will be saved in a separate file in the website and will not be linked to your survey responses. The principal researcher will use a protected password to access data from the web-based survey. Results will be published in summary form only. Information obtained through your participation may be published in a professional journal and/or presented at a professional meeting.

If you have questions about this study, please ask them now or contact Siming Gu (szg0030@auburn.edu) or Hye Jeong Kim (hzk0014@auburn.edu).

If you have questions about your rights as a research participant, you may contact **the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at** hsubjec@auburn.edu or IRBChair@auburn.edu.

APPENDIX D

Email Invitation

Dear Participant:

This is a research study to investigate factors influencing consumer perceptions about retailers' Facebook. You are invited to participate in this study because you are a college student and are at least 19 years old. Please take your time in deciding if you would like to participate. If you agree to participate in this study, you will be asked questions related to your use of and perceptions toward a retailers' Facebook. Your participation will last no longer than 15 minutes.

The survey website will be opened between June xx and xx, 2013. You will be given three extra credits for the participation in this study. Please DO NOT participate in this survey more than ONCE; you will still receive the extra points from the classes in which you receive this survey even though you only complete the survey once.

To receive extra credit, please provide your NAME and COURSE # in the last page of the survey. Your identification information will be saved in a separate website and will not be associated with your responses to the survey questions.

For further information about the study please contact Siming Gu (szg0030@auburn.edu) or Hye Jeong Kim (hzk0014@auburn.edu). If you have any questions about the rights of research subjects or research-related injury, please contact the office of Human Subjects Research, 307 Samford Hall, Auburn University, AL 36849, (334) 844-5966, hsubjec@auburn.edu.

Investigators:

Siming Gu, master student, Auburn University Department of Consumer and Design Sciences, 308 Spidle Hall Auburn AI, 36849

Dr. Hye Jeong Kim, Ph.D., Assistant Professor, Auburn University Department of Consumer and Design Sciences, 308 Spidle Hall Auburn AI, 36849

We thank you for your willingness to participate and attention.

If you have decided to participate in this survey, please click the link below.

(Website link)

Appendix E

Survey Questionnaire

Please recall a retailer’s Facebook that you have most recently visited and answer the questions based on your experience with the retailer’s Facebook.

Have you ever visited any retailer’s Facebook?

- Yes
 No

Please indicate the retailer (retailer’s Facebook) your answers are based on (i.e., the retailer’s Facebook you have most recently visited):

How frequently do you visit the retailer’s Facebook?						
Very Infrequently 1	2	3	4	5	6	Very Frequently 7

Have you ever purchased from the retailer?

- Yes
 No

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Again, please answer the questions based on your experience with the retailer’s Facebook you have most recently visited.

Strongly Disagree 1	Disagree 3	Neutral 4	Agree 5	Strongly Agree 7			
The retailer's Facebook is informative.	1	2	3	4	5	6	7
The retailer's Facebook provides updated information.	1	2	3	4	5	6	7
The retailer's Facebook provide high quality information.	1	2	3	4	5	6	7
The retailer's Facebook provides timely information.	1	2	3	4	5	6	7
The information on the retailer’s Facebook is relevant to me.	1	2	3	4	5	6	7
I can find what I need in the retailer’s Facebook.	1	2	3	4	5	6	7
The retailer’s Facebook provides relevant information.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Please answer the questions based on your experience with the retailer's Facebook you have most recently visited.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	3	4	5	7

	Level of Agreement						
	1	2	3	4	5	6	7
The information presentation on the retailer's Facebook is lively (e.g., interesting pictures and graphics).	1	2	3	4	5	6	7
The information presentation on the retailer's Facebook is animated (e.g., video).	1	2	3	4	5	6	7
I can acquire product information on the retailer's Facebook from different sensory channels (e.g., sight or hearing).	1	2	3	4	5	6	7
The information presentation on the retailer's Facebook is exciting to sense (e.g., sight or hearing).	1	2	3	4	5	6	7

	Level of Agreement						
	1	2	3	4	5	6	7
The retailer's Facebook facilitates two-way communication among members.	1	2	3	4	5	6	7
The retailer's Facebook gives me the opportunity to talk with other members.	1	2	3	4	5	6	7
Using the retailer's Facebook is effective in gathering others' feedback about the retailer's products and services.	1	2	3	4	5	6	7
The retailer's Facebook makes me feel like the retailer wants to listen to its members.	1	2	3	4	5	6	7
The retailer's Facebook enables conversation among members.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Please answer the questions based on your experience with the retailer's Facebook you have most recently visited.

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Strongly Disagree	Disagree		Neutral		Agree		Strongly Agree
1	3		4		5		7
I feel as if I belong to the retailer's Facebook community.	1	2	3	4	5	6	7
I feel a sense of membership in the retailer's Facebook community.	1	2	3	4	5	6	7
I feel as if the retailer's Facebook community members are my close friends.	1	2	3	4	5	6	7
I like the retailer's Facebook members.	1	2	3	4	5	6	7
I feel connected to the retailer's Facebook and its members.	1	2	3	4	5	6	7
The retailer's Facebook members exhibit a spirit of community.	1	2	3	4	5	6	7
I care about the opinions of other members of the retailer's Facebook.	1	2	3	4	5	6	7
I think it is worthwhile to spend time on the retailer's Facebook.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Strongly Disagree	Disagree		Neutral		Agree		Strongly Agree
1	3		4		5		7
The retailer's Facebook is innovative.	1	2	3	4	5	6	7
The retailer's Facebook is creative.	1	2	3	4	5	6	7
The retailer's Facebook has innovative features.	1	2	3	4	5	6	7
The retailer's Facebook is entertaining.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
1	3	4	5	7			
Using the retailer's Facebook enables me to acquire more information.	1	2	3	4	5	6	7
Using the retailer's Facebook improves my efficiency in sharing information.	1	2	3	4	5	6	7
Using the retailer's Facebook improves my efficiency in connecting with others who have the same interests that I do.	1	2	3	4	5	6	7
Using the retailer's Facebook is useful for interacting with people who have similar interests similar to mine.	1	2	3	4	5	6	7
Using the retailer's Facebook enables me to acquire information more effectively.	1	2	3	4	5	6	7
Overall, I find the retailer's Facebook to be useful.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
1	3	4	5	7			
Using the retailer's Facebook provides me with a lot of enjoyment.	1	2	3	4	5	6	7
I have fun using the retailer's Facebook.	1	2	3	4	5	6	7
I enjoy using the retailer's Facebook.	1	2	3	4	5	6	7
I have fun when interacting with the retailer's Facebook.	1	2	3	4	5	6	7
Using the retailer's Facebook doesn't bore me.	1	2	3	4	5	6	7

Please indicate the extent to which you agree or disagree with each of the following statements using the scale.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
1	3	4	5	7			
I intend to keep using the retailer's Facebook in the future.	1	2	3	4	5	6	7

I intend to recommend that my friends use the retailer's Facebook in the future.	1	2	3	4	5	6	7
I intend to continue using the retailer's Facebook in the future.	1	2	3	4	5	6	7
I intend to share the retailer's Facebook with other friends.	1	2	3	4	5	6	7

Please answer the following questions.

What is your gender? Male Female

What is your age?

What is your ethnic background?

- African American
- Caucasian American
- Hispanic American
- Native American
- Asian American
- Asian
- Other or two or more races
Please indicate _____

What is your class standing?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate student