

Impacts of Information Source and E-service Quality on Mobile Shopping Behavior in KakaoTalk

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Abstract

KakaoTalk has become a reputed mobile social network and an inseparable part of people's lives by leading the mobile industry in South Korea. However, there is a lack of studies in academia regarding perception of the consumers and assessment toward the mobile marketing and services by KakaoTalk. Based on the theoretical orientation of Elaboration Likelihood Model (ELM: Petty & Cacioppo, 1986) and electronic service quality (E-S-QUAL: Parasuraman, Zeithaml, & Malhotra, 2005), this study investigates the effects of information sources (Charles & Richard, 1988), and examines the consumer perception toward the service quality of KakaoTalk. A total of 209 responses were collected, using a self-administered survey in Seoul and Gyeonggi province, South Korea from March 2015 to June 2015. A seven-point Likert scale survey was developed to measure the information sources (i.e., argument quality, post popularity, and post attractiveness), electronic service quality (i.e., efficiency, fulfillment, privacy, and system availability), attitude (i.e., usefulness, preference, and overall attitude), and behavioral intention (i.e., like intention, share intention, and purchase intention). This study reveals a consensus that an online environment is different from the traditional retail context in terms of information source and service quality. Specifically, the results indicate that argument quality greatly impacts the attitudes of the individuals and their behavioral intention toward mobile shopping via social media channel. The most powerful factor among E-S-QUAL is "efficiency." This dimension of service quality influences the customer perception of usefulness and preference as well as share and like intention toward mobile shopping on KakaoTalk.

Keywords : ELM, E-S-QUAL, KakaoTalk, Mobile, Social Media

1. Introduction

People can communicate and interact with

firms, brands, and other individuals in the wireless, widespread, and multi-directional channel via their mobile devices (Bernhardt, Mays,

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& Hall, 2012). Mobile devices can be an effective marketing tool for a company to form consistent interactions with its customers because mobile devices themselves are an integral part of the customers' daily lives. The development of mobile telecommunication technologies coupled with the rapid growth in the mobile phone subscriber base has contributed to the ongoing popularization of mobile telecommunication services (Steimle, 2015).

The mobile shopping channel has become an important research and purchase tool for shoppers. According to eMarketer (2016), retail sales using smartphones in the U.S are nearly doubled, driven by larger screens, smoother buying experiences, better mobile search and context-driven discovery. In addition, eMarketer expects U.S. retail mobile shopping sales will reach \$123.13 billion in 2016, a 39.1% increase over 2015 and more than double the amount in 2014. As a result of this rapid growth, mobile shopping will account for just under one-third of retail online sales and 2.6% of total retail in 2016.

High levels of social media usage and growth have been observed in Japan, Korea, and other Asian countries. More specifically, mobile marketing has flourished for the last decade in South Korea, and as a result, mobile social media platforms and applications have grown rapidly. According to the analysis of Statista (2015), as of the fourth quarter 2015, 76 percent of the population in South Korea had an active account with any social network. The most popular social platform was KakaoTalk with a 41 percent penetration rate.

KakaoTalk is a ubiquitous mobile social media platform in South Korea launched in 2010 (Lee, 2015). With an engaging, user friendly operating

system for millions of smartphone owners (Steimle, 2015), KakaoTalk has offered the multilateral functions of a messaging platform, game, free calls, shopping, event scheduling, marketing e-commerce and more (Han, 2014; Steimle, 2015). The recent addition of the "Plus Friend" advertising platform connects users with celebrities, media companies, and their favorite products or brands. KakaoTalk has become an inseparable part of people's lives by leading the mobile industry in South Korea. With more than 50 million active users each month and 30 million gaming app users (Lee, 2015; Takahashi, 2013), KakaoTalk has received much attention from other similar businesses of other countries. For example, Line in Japan, WhatsApp and Snapchat in the U.S., WeChat in China, and Viber in Israel are of interest in how KakaoTalk builds a competitive business model (Hurts, 2015) in order to increase their brand awareness, sell their products, and retain their loyal customers in mobile social media (Fallon, 2014). KakaoTalk is not only an extension of e-commerce, but also an independent channel that delivers unique value to consumers and companies. KakaoTalk has also served customers as a very effective and prolific innovator of crowd-culture (Holt, 2016). Mobile shopping through KakaoTalk has become increasingly prevalent amongst customers. However, there is still a lack of academic studies about customers' perceptions and assessment of the mobile marketing and services by KakaoTalk.

The incompleteness of our understanding of mobile shopping behavior in KakaoTalk implies a limit to our knowledge of the service factors driving and hindering the diffusion of mobile shopping. To identify the barriers that are keeping customers away from engaging in social

mobile shopping and to find ways to bring down those barriers, research on information and service quality in conjunction with business accountability should be conducted (Wang, Malthouse, & Krishnamurthi, 2015). Based on the theoretical orientation of Elaboration Likelihood Model (ELM: Petty & Cacioppo, 1986) and electronic service quality (E-S-QUAL: Parasuraman, Zeithaml, & Malhotra, 2005), this study investigates the effects of information sources (Charles & Richard, 1988), and examines the consumer perception toward the service quality of KakaoTalk. Although Wang (2015) in his recent study has deepened our understanding of mobile value-added service, the knowledge and understanding of the social shopping behavior coupled with the availability of mobile service are still relatively new in academia.

As mobile social media has become a primary method of interaction between people, organization, and resources over the Internet, the importance of information sources has emerged on this new venue to build networks with customers. Researchers have found that information sources from the Internet positively affect consumers' attitudes and increase purchase intentions (Lee & Jin, 2012; van den Bos, Kerkhof, & Utz, 2010). Specifically, consumer reviews have become one of the major information sources for digital consumers (Hsu, Lin, & Chiang, 2013; van den Bos et al., 2010) who often trust other consumers' recommendation and word-of-mouth (WOM) referral in social media as informational sources in making purchase decisions (Cho & Park, 2012; Hsu et al., 2013). In addition, a brand's social media page has become another powerful information source for digital consumers (Breneman & Karimov, 2012) who tend to

engage in brand's social media to learn more about brands and their products, to compare prices of products on different digital retailers. Thus, this trend demands substantial research on how the mobile social media information source influences consumers' mobile shopping behavior.

Service quality has been considered a key factor in retailing because it determines consumers' satisfaction and directly influences on consumers' purchase intentions (Ha & Stoel, 2001; Parasuraman et al., 2005). Specifically, evaluating the service quality in social media is ample to understand how relevant and effective a firm is to help users access resources. In addition, the measurement of service quality on mobile social media requires a different approach than other traditional communication channels do. Much of the knowledge on online service quality has been advanced through the validation of a number of measurement scales such as WebQual (Loiacono, Weston, & Goodhue, 2000), SITE-QUAL (Yoo & Donthu, 2001), and eTailQ (Wolfinger & Gilly, 2003). However, there are pitfalls in applying these scales to the mobile social platform. E-S-QUAL (Parasuraman et al., 2005) considers not only services that marketers provide, but also the technological effects on service quality using the four dimensions of efficiency, fulfillment, system availability, and privacy.

KakaoTalk subscribers play pivotal roles as both technology users and service recipient. Reaching out to core mobile shoppers, especially younger consumers, drives mobile commerce efforts to mobile social media. Drawn from the theoretical orientations of ELM and E-S-QUAL perspective, this study aims to examine how information sources and electronic service quality influence positive attitude, and

customer's intention to share, like, and purchase on KakaoTalk. Staying abreast of the mobile revolution in response to the unprecedented shift in consumer behavior will be useful in both academia and industry as technology changes.

II. Literature Review

1. Effects of Information Source

Firms assess the impact of their marketing messages in order to understand when, why, and how messages are compelling to customers. The Elaboration Likelihood Model (Petty & Cacioppo, 1986) has been widely used to investigate the effects of information sources precisely both in high and low involvement conditions. The ELM postulates two distinct forms of processing information: central route and peripheral route. Within the central route, individuals make cognitive efforts based primarily on systematic and analytical thinking, then evaluate the relative arguments and judge the persuasive messages. Otherwise, individuals tend to use emotional cues and become heavily involved in heuristics or low involvement processing within the peripheral route (Charles & Richard, 1988). With the emergence of social media over the past decade, researchers have continually employed ELM for their studies to understand how information source, message content, and context affect the attitude and perception of customers (Teng, Khong, & Goh, 2014). ELM is also one of the best ways to observe strategies for influencing factor of human behavior and confidence, and is exposed to view social influence mechanisms to shape, information delivery, and change norms of society (Lee & Xia, 2011). The information

source features of argument quality, post popularity, and post attractiveness are grounded upon the ELM orientation.

Argument Quality: Argument quality refers to the audience's subjective perception of the arguments in the persuasive message as strong and cogent versus weak and specious (Petty & Cacioppo, 1986). Argument quality plays an important role in the persuasion process and is effective when the individual is engaged in the central route (i.e., high elaboration) of information processing. Social media allows users to create, find, and evaluate information sources (Chua & Banerjee, 2013). The information source is a better communicative method, as it can affect consumer's responses (Lee, Keller, & Sternthal, 2010). Essentially, consumer involvement with information sources is the most critical effect on the perfunctory nature of the process. Fishbein and Ajzen (1975) found that a message consists of a set of discussions concerning beliefs that associate the object with positive or negative evidence and consequences. They also discovered that the significance of the information source is increased when beliefs in the audience's support beliefs are formed, and a well-constructed information source can affect benefits from the communication with audiences (Lee et al., 2010).

In social media, argument quality stands for the information source of arguments in the post content (Bhattacharjee & Sanford, 2006), which is a vital element in perception and attention from receivers (Coulter & Punj, 2004). In this context, other people's opinions and comments can represent as influencers on purchasing, and they are also significant in the context of social media in which individuals are easily influenced by others (Pee, 2012). For example, high quality

arguments can generate or create favorable cognitive responses toward people's posts and comments. High-quality arguments are also more likely to be trusted because they can help consumers make optimal decisions (O'Reilly, 1982). However, if individuals see a post with wrong content, broken link, any irrelevant extraneous information on the topic, or ads, the consumers might have a negative perception from the post. Information receivers' analysis on the quality of arguments has direct effects on usefulness (Zhou, 2012). Therefore, we can assume that high quality posting content would have a positive effect on usefulness toward mobile shopping via social media channels. Based on the above discussion the following hypotheses are developed:

H1: Argument quality of posts positively affects mobile consumers' perception of usefulness (H1a), preference (H1b), overall attitude (H1c), like intention (H1d), share intention (H1e), and purchase intention (H1f) toward mobile shopping via social media channels.

Post Popularity: Post popularity is often associated with the frequencies of likes, comments, sharing, and response comments on the posts (De Vriesa, Gensler, & Leeftang, 2012). In the past, knowledge sharing was used as a commercial transaction process in the markets, with both consumers and retailers needing to have reciprocal benefit from the exchange. However, consumers now provide and share knowledge with other consumers, and many expect other users' feedback, in order to obtain mutual benefits (Hsu & Lin, 2008; Murray & Häubl, 2011). Post popularity has a direct effect on usefulness, and it has an indirect impact on receivers' behavioral intention to select peripheral routes (Sinclair, Moore, Mark, Soldat, & Lavis,

2010). Findings from Cheung and Lee' study (2010) proposed that receivers could quickly respond to external influences such as social norms which consequently have an effect on receivers' behavior. Before making purchase decisions, many consumers like to read feedbacks or comments on a brand, product, or service that provided by other customers who have experience and knowledge in information sources for buying products or services (Utz, Kerkhof, & van den Bos, 2012). For a reason, reviews or comments from other customers have become one of the powerful information sources for consumers. According to Chaiken and Maheswaran (1994), post popularity can affect users' trust of information and usefulness on social media because it can generate expectancies and inferences about the validity of information. For example, it has been verified that consumers prefer to use information from the sources with post popularity after reading them (Zhao & Rosson, 2009). Given these reasons, post popularity can affect usefulness and preferences toward mobile shopping via social media channels. Based on the above discussion, the following hypotheses are developed:

H2: Post popularity positively affects mobile consumers' perception of usefulness (H2a), preference (H2b), overall attitude (H2c), like intention (H2d), share intention (H2e), and purchase intention (H2f) toward mobile shopping via social media channels.

Post Attractiveness: The post attractiveness is defined as "to the extent to which recipients perceive posts as outstanding and charming" (Ahearne, Gruen, & Jarvis, 1999). According to Lee and Choi (2005), post attractiveness is another dimension of information sources which has relevance to the source's perceived social

value such as physical appearance, social class, personality, or similarity to the receiver (McCroskey & McCain, 1974). Attractive posts are more likely to be preferred by people, and have more positive effects on product evaluations and attitude changes (DeSarbo & Harshman, 1985). In addition, post attractiveness possesses aesthetic value, which can emphasize their products (Cant & Hefer, 2012). Elements of post attractiveness would enhance customer's curiosity, knowledge, and attention, in addition to affecting individual preferences toward products or services (Chebat, Hedhli, & Sirgy, 2009; Verhagen, Hooff, Meents, & Merikivi, 2012). Based on the above discussion the following hypothesis are developed:

H3: Post Attractiveness positively affects mobile consumers' perception of usefulness (H3a), preference (H3b), overall attitude (H3c), like intention (H3d), share intention (H3e), and purchase intention (H3f) toward mobile shopping via social media channels.

2. Electronic Service Quality in Mobile Social Media

Electronic service quality refers to the quality of an interactive, content-centered, and Internet-based customer service driven by customers and integrated with the support of technologies and systems offered by service providers (Liu, 2012; Parasuraman et al., 2005). With the rise of online shopping, there has been increased attention to electronic service quality in recent years. Loiacono et al. (2000) developed the electronic service quality scale, WebQual, after interviewing consumers and website designers. WebQual consists of 12 dimensions with 36 items. These dimensions measure customers' intentions to purchase and revisit:

informational fit to task, interaction, trust, loading time, ease of use, system operations, visual appeal, the innovative, flow appeal, consistent image, the business process and substitutability. SITEQUAL was also developed to measure the perceived quality of Internet shopping sites with four dimensions: ease of use, website design, processing speed, and security (Yoo & Donthu, 2001). However, this scale focuses on measuring the interface of websites rather than the quality of service delivery. eTailQ measures customers' experience with online shopping (Wolfenbarger & Gilly, 2003) using four dimensions: web site design (attributes helping consumers experience at web sites; search capability, order processing, and personalization), security/privacy (feeling safe and trusting of the site when giving personal information), fulfillment/reliability (on-time delivery and product availability), and customer services (ability to solve customer problems and to answer customer questions).

The existing measurement scales are widely used to evaluate electronic service quality; however, they are not sufficient and relevant in the context of mobile shopping via social media channels. For example, WebQual (2002) only focused on evaluating the technical dimension and excluded a critical aspect of customer services (Parasuraman et al., 2005). SITEQUAL (2001) did not capture all aspects of the buying process, and thus did not provide an overall evaluation of electronic service quality towards the website (Parasuraman et al., 2005).

Although mobile commerce is usually considered an extension of e-commerce, it is also defined as an independent channel that delivers unique value to consumers. When selecting a scale to measure service quality in the mobile channel, the unique characteristics of

the channel must be considered. This study employs the multiple-items scale, E-S-QUAL, developed by Parasuraman et al. (2005) as one of the theoretical foundations. Through the iterative process of scale development, E-S-QUAL evolved to include 22 items on four dimensions: efficiency, fulfillment, privacy and system availability. The four dimensions of E-S-QUAL provide representative information about electronic service quality (Kim, Kim, & Lenon, 2006) and measure electronic service quality when customers shop online. Compared with other scales, E-S-QUAL considers not only the services that marketers provide but also the effect of technology on service quality. This study empirically tests four dimensions of E-S-QUAL to assess user perception of information services offered in KakaoTalk.

Efficiency: According to Parasuraman et al. (2005, p. 220), efficiency is defined as “the ease and speed of accessing and using website.” The efficiency dimension of service quality in mobile shopping is important to mobile consumers whose main reasons for shopping through the digital channel are conveniences and time saving (Ranganathan & Ganapathy, 2002). In other words, consumers usually have no patience to handle inefficient mobile-based websites and want to have hassle free services over mobile shopping. Therefore, the following hypotheses are developed:

H4: Efficiency positively affects mobile consumers’ perception of usefulness (H4a), preference (H4b), overall attitude (H4c), like intention (H4d), share intention (H4e), and purchase intention (H4f) toward mobile shopping via social media channels.

Fulfillment: Fulfillment refers to online service providers’ promise on delivery speed and item availability of order, and is identified as the

strongest service dimension which influences customers’ satisfaction (Parasuraman et al., 2005; Wolfinbarger & Gilly, 2003). Previous study also proposed that fulfillment is the first service dimension influencing consumers’ satisfaction toward retailers (Yang & Fang, 2004). For example, mobile consumers state that even though more than half mobile retailers claimed high product availability on their website, they were not notified by retailers about out of items until the checkout processes are nearly completed. This situation leads consumers to exhibit stronger dissatisfaction and lower purchase intention. Furthermore, fast delivery speed increases mobile consumers’ preference toward retailers while slow delivery speed decreases their preferences (Kim et al., 2006). The assessment of services attributes to delivery speed and product availability in the fulfillment dimension can impact on their attitude and behavioral intentions. Therefore, we hypothesize the following relationships:

H5a: Fulfillment positivity affects mobile consumers’ perception of usefulness (H5a), preference (H5b), overall attitude (H5c), like intention (H5d), share intention (H5e), and purchase intention (H5f) toward mobile shopping via social media channels.

Privacy: The privacy dimension is defined as “the degree to which the site is safe and customer information is protected” (Parasuraman et al., 2005). In previous studies, privacy was considered inconsequential in the digital channel (Berresheim, Turk, & Scholz, 2012). However, most consumers consider privacy an essential factor that determines the service quality in mobile social media. For example, in today’s marketing environment, marketers have lost their customers because information related to credit card and other personal information was stolen.

From this standpoint, many consumers are unwilling to shop through mobile channels without hesitating to give their personal information. In this case, a website's security and privacy, which assures customer information will be one of the critical factors for assessment when consumers evaluate digital retailers (Szymanski & Hise, 2000). Therefore, the following hypotheses are developed:

H6: Privacy positively affects mobile consumers' perception of usefulness (H6a), preference (H6b), overall attitude (H6c), like intention (H6d), share intention (H6e), and purchase intention (H6f) toward mobile shopping via social media channels.

System Availability: System availability refers to the correct technical functioning of the retail website (Parasuraman et al., 2005). In mobile shopping, the application's system availability such as no conflict with other application on the devices and system compatibility for other portable mobile devices have significant influences on mobile consumers' overall service quality satisfaction. Therefore, this study hypothesizes the following relationships:

H7: System availability positively affects mobile consumers' perception of usefulness (H7a), preference (H7b), overall attitude (H7c), like intention (H7d), share intention (H7e), and purchase intention (H7f) toward mobile shopping via social media channels.

3. Attitude and Behavioral Intention to Mobile Shopping

Mobile shopping has changed from the traditional business model to customer digital engagement model with greater connectivity and interactivity in social media. Specifically, mobile shopping in social media channels provides

digital space where customers engage in various forms of interaction such as sharing and liking. For example, customers can communicate with firms, brands, or other customers by sharing opinions, reviews and writing information. All of the consumer social engagement has been found to positively influence customers' attitude and purchase behaviors towards the firms and products and generate more responses such as likes and share comments (Han, 2014).

The attitude approach is beneficial in providing the socio-psychological account of KakaoTalk subscribers' mobile shopping behavior in conjunction with their perception of service quality. While an attitude is an evaluation of an attitude object, contemporary perspectives on attitudes also permit an individual to hold multiple attitudes toward the same object (Wood, 2000). Much of research suggests that attitude fulfills psychological and functional needs for individual consumers (Olson & Zanna, 1993). Attitude addresses the motivational bases of individual's attitudes changes, or the functional underpinnings of their behavioral intention (Wood, 2000). For example, if we know that consumers favor a clothing product because they feel that it is the best quality product available, persuasive efforts could focus on the utilitarian function of product in the development of product. However, if consumers prefer the same clothing product because it satisfies their need for social acceptance, persuasive efforts will need to shift toward a product image appeal that allows them to look good. For these individuals, attitudes towards a product may be based on a perception of others' attitudes toward them and the extent to which a product promises to satisfy the need for power and affluence. To comprehend KakaoTalk subscriber's attitude, usefulness, preference, and

overall attitude are examined further.

Usefulness: Perceived usefulness is defined as the extent to which individuals believe that using new technology would enhance their task performance (Davis, 1989). Individuals would make their choice of behavior based on the desirability of perceived usefulness (Davis, 1989). Therefore, we expect perceived usefulness would influence individuals' intention to accept and adopt mobile shopping either directly or indirectly. Previous studies proposed that perceived usefulness significantly influences attitude toward a retailer and had a significant impact on intentions to use the retailer in the online context (Chen & Tan, 2004; O'Cass & Fenech, 2003). In addition, Rogers's Innovation Diffusion Theory (1995) proposed that individuals' decisions are heavily dependent on other people's reviews, opinion, or posts and perception of usefulness can be affected by the WOM intention. For this reason, usefulness may have a positive relevance to share and like intention (Cheung & Thadani, 2012). As mobile commerce is an extension of e-commerce, it is necessary to examine how customers' attitudes affect their behavioral intentions in mobile social media. Based on the literature review, the following hypotheses are posited:

H8: Usefulness positively affects mobile consumers' like intention (H8a), share intention (H8b), and purchase intention (H8c) toward mobile shopping .

Preference: Preference refers to an individual's attitude towards a set of objects in one's decision-making process (Zajonc, & Markus, 1982), and can be altered by decision-making processes, such as choices (Sharot, De Martino, & Dolan, 2009). Preference means evaluative judgment in the sense of liking or disliking an object (Scherer, 2005), but it is not necessarily

stable over time. Preference can be affected by a person's internal or external environments such as cultural background, religious beliefs, and education in which their repeated exposure to a certain idea or concept associates with a positive preference (Zajonc, & Markus, 1982). For this reason, preference can positively affect WOM intention (Hsu & Lin, 2008; Murray & Häubl, 2011). When people receive interesting information or posts which are consistent with their personal preferences and expectations, they respond more quickly in liking and sharing the posts. Despite the importance of understanding consumer preferences, there has been little prior research on consumer attitudes towards mobile marketing communication. Therefore, the following hypotheses are developed:

H9: Preference positively affects mobile consumers' like intention (H9a), share intention (H9b), and purchase intention (H9c) toward mobile shopping .

Overall Attitude: Attitude refers to a composite of the consumer's beliefs, feelings, or behavioral intentions toward some object (Cao & Che, 2014). Overall attitude represents a summary evaluation of a psychological object captured in such attribute dimensions such as good-bad, harmful-beneficial, pleasant-unpleasant, and likable-dislikable (Ajzen, 2001). Much of research empirically have supported the direct and indirect impacts on predicting behavioral intention. Thus the overall attitude can predict the intention to like, share, and purchase on mobile shopping.

H10: Overall Attitude positively affects mobile consumers' like intention (H10a), share intention (H10b), and purchase intention (H10c) toward mobile shopping .

Behavioral Intention: This study operationalized behavioral intention such as like, share, and

purchase in mobile shopping context on social media. Like intention refers to the intention to press the like button while share intention refers to the intention to press the share button (De Vriesa et al., 2012). Purchase intention is one of the components of consumer cognitive behavior on how an individual intends to purchase a specific product or brand (Kim & Ko, 2010). Previous studies found that mobile convenience leads to purchase intention and behavioral loyalty (Okazaki & Mendez, 2013; Yang & Kim, 2012). Customers who interact with a firm via mobile channel integrate a firm’s products and services into their routines; such recurring and habitual mobile activities increase customers’ purchase intention. This means that the more adept customers are with interacting with a firm, the more likely they will continue to purchase. In the context of mobile shopping, customers’ habitual interactions can be beneficial for firms in a competitive business environment. Figure 1 illustrates the conceptual framework including all variables and hypotheses.

III. Methods

1. Data Collection

A total of 209 responses were collected using a self-administered survey in Seoul and Gyeonggi province, South Korea from March 2015 to June 2015. A seven-point Likert scale survey with answer choices ranging from “strongly agree” to “strongly disagree” was developed to measure the information sources (i.e., argument quality, post popularity, and post attractiveness), electronic service quality (i.e., efficiency, fulfillment, privacy, and system availability), attitude (i.e., usefulness, preference, and overall attitude), and behavioral intention (i.e., like intention, share intention, and purchase intention). Respondents were college students between 18–29 years old. Two-third of respondents did not have previous purchase experience in mobile shopping via social media (“Yes”=29%, “No”=71%). Due to an early stage of consumer acceptance of mobile shopping, only

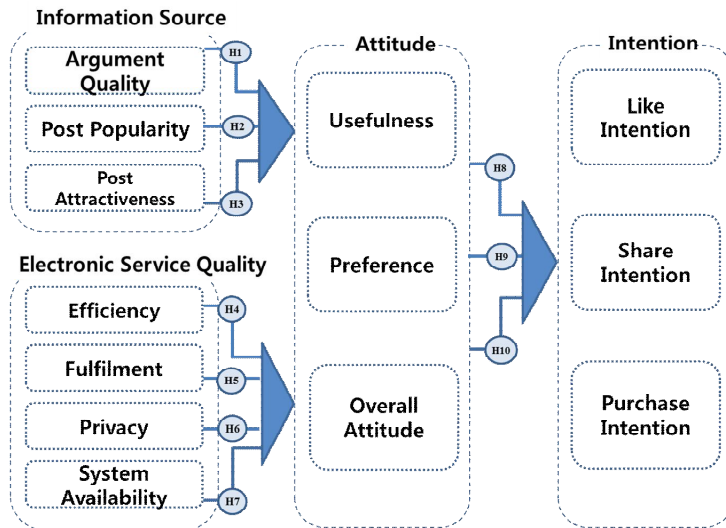


Figure 1. The Conceptual Framework

one-third respondents have recently purchased products through KakaoTalk. However, respondents were probable mobile shoppers. They have participated in mobile social media activities at least once a month averaging 162 minutes a day on social media. It was revealed that 83.3% of 209 respondents have used Kakaotalk, 72.2% of the respondents have used Facebook and 50.3% has used Instagram. According to the survey, KakaoTalk is the most dominant mobile social media platform in Korea. In addition, 73% of participants (n=153) have signed up for subscriptions for shopping information from certain brands or retailers. Thus this study includes 209 usable respondents in the data analysis because they are capable of prospecting their mobile shopping experience.

2. Measurement Scale and Data Analysis

The scale items for all constructs were adapted from previous literature: argument quality (3 items, Bhattacharjee & Sanford, 2006; Coulter & Punj, 2004), post popularity (3 items, Hsu & Lin, 2008), post attractiveness (3 items, Ahearne et al., 1999; Verhagen et al., 2012), usefulness (3 items, Lu, Chang, & Chan, 2008:), preference (3 items, Hsu & Lin, 2008; Murray et al., 2011), overall attitude (3 items, Luet al., 2014), like intention (2 items, De Vriesa et al., 2012), share intention (3 items, De Vriesa et al., 2012; Lee et al., 2012), and purchase intention (3 items, Kim et al, 2010; Lu et al., 2014). In order to measure E-S-QUAL, efficiency (7 items), fulfillment (6 items), privacy (3 items) and system availability (3 items) were adopted from Parasuraman et al. (2005). All reliability was verified because the items were addressing uni-dimension, and Cronbach's alpha value of information source (0.891). Electronic

service quality (0.930) exceeds the threshold of 0.70. All hypothesized relationships in figure 1 were tested by employing multiple regression of enter methods.

IV. Results

1. Identifying the underlying dimensions of information source and e-service quality

In order to investigate the factor structure and validity of the measurement items of information source and e-service quality, principal component analysis was performed. All factor items and factor loadings are summarized in Tables 1, 2, and 3.

A principal component factor analysis revealed the underlying dimensions of information source as Post Popularity, Argument Quality and Post Attractiveness. These three factors were revealed with a 90.14 % total cumulative variance. Scale reliabilities were acceptable in that the scores ranged from .92 to .95. The respondents regarded Post Attractiveness (M=4.79) as the most positive dimension, followed by Argument Quality (M = 4.28) and Post Popularity (M = 4.13).

The factor analysis for ESQUAL distinguished four dimensions including Efficiency, System Availability, Privacy, and Fulfillment. Four factors accounted for 72.96 % of the total variance. Cronbach's alphas were acceptable with ranges from .75 to .86, suggesting the internal consistency of items within each factor. The respondents regarded System Availability (M = 4.90) as the most positive dimension followed by Efficiency (M = 4.85), Fulfillment (M = 4.36), and "Privacy (M = 4.13).

The factor analysis for Attitude revealed two

dimensions classified as Preference and Usefulness along with 74.62 % of cumulative explained variance. Scale reliabilities for the two factors were acceptable with scores from .82 to .89. The respondents answered positively to Preference (M=4.23), Usefulness (M = 4.12), and Overall Attitude (M = 4.70).

2. Hypotheses Testing

This study reveals a consensus that an online environment is different from the traditional retail context in terms of information source and service quality. This study delineates that argument quality of information sources is positively related to usefulness ($\beta=.542, p<.001$),

preference ($\beta=.454, p<.001$), overall attitude ($\beta=.353, p<.001$), like intention ($\beta=.262, p<.01$), share intention ($\beta=.260, p<.01$), and purchase intention ($\beta=.328, p<.001$). These findings support for H1a, H1b, H1c, H1d, H1e, and H1f. This shows that high argument quality makes an impacts on individuals' attitudes and behavioral intention toward mobile shopping via social media channel.

All influences of post popularity on each dependent variable for mobile shopping are insignificant excluding share intention ($\beta=.211, p<.01$); meaning H2e is only supported. This finding shows that Korean customers depend more on personal experience than other's opinions or reviews.

Table 1. Factor Analysis for Information Source

Factor/Variables	Loading	Cronbach's α
Factor 1: Post Popularity		
The information I got from the brand/retailer that I subscribe on KakaoTalk is informative for my daily shopping	.947	.959
The information I got from the brand/retailer that I subscribe on KakaoTalk is helpful for my daily shopping	.936	
I think that information with more people viewing, pressing like, sharing, and responding positively are trustworthy.	.933	
Eigen Value: 4.781 Cumulative Variance(%): 53.122 Mean: 4.135		
Factor 2: Argument quality		
I think that information with more people viewing, pressing like, sharing, and responding positively are believable	.944	.948
I think that information with more people viewing, pressing like, sharing, and responding positively are reliable	.915	
I think that information with more people viewing, pressing like, sharing, and responding positively are trustworthy	.875	
Eigen Value: 1.931 Cumulative Variance(%): 21.459 Mean: 4.471		
Factor 3: Post attractiveness		
Product photos displayed in the information I got from the brand/ retailer that I subscribe on KakaoTalk are aesthetically appealing.	.933	.922
Product photos displayed in the information I got from the brand/ retailer that I subscribe on KakaoTalk look attractive.	.910	
Product photos displayed in the information I got from the brand/ retailer that I subscribe on KakaoTalk are attractive.	.830	
Eigen Value: 1.400 Cumulative Variance(%): 15.560 Mean: 4.789		

Table 2. Factor Analysis for E-Service Quality

Factor 1: Efficiency		
KakaoTalk is well organized	.826	.832
Information on KakaoTalk is well organized	.808	
KakaoTalk load information quickly	.740	
I think KakaoTalk is easy to use.	.472	
Eigen Value: 5.747 Cumulative Variance(%): 44.204 Mean: 4.851		
Factor 2: System availability		
KakaoTalk is always available for businesses	.854	.819
KakaoTalk launches and runs right way	.838	
KakaoTalk does not crash	.663	
Eigen Value: 1.451 Cumulative Variance(%): 11.160 Mean: 4.895		
Factor 3: Privacy		
Brands/retailers engage in KakaoTalk do not share my personal information with others	.871	.862
KakaoTalk protects my private information related to my mobile shopping behavior	.832	
KakaoTalk payment system protected information about my credit cards	.749	
Eigen Value: 1.293 Cumulative Variance(%): 9.947 Mean: 4.128		
Factor 4: Fulfillment		
KakaoTalk helps me to make transaction quickly	.821	.751
I think KakaoTalk helps me find information I need	.742	
KakaoTalk helps me communicate to other users/retailers/ brands easier	.716	
Eigen Value: .994 Cumulative Variance(%): 7.649 Mean: 4.355		

Table 3. Factor Analysis for Attitude

Factor/Variables	Loading	Cronbach's α
Factor 1: Preference		
I feel good when receiving new information/news from the brand/ retailer that I subscribe on KakaoTalk	.885	.894
I like reading information/news from the brand/retailer that I subscribe on KakaoTalk	.865	
I feel pleasant when reading the information/news I got form the brand/retailer that I subscribe on KakaoTalk	.818	
Eigen Value: 4.833 Cumulative Variance(%): 48.355 Mean: 4.233		
Factor 2: Usefulness		
Referring to information I got form the brand/retailer that I subscribe on KakaoTalk can help me increase the effective of shopping	.896	.819
Referring to information I got form the brand/retailer that I subscribe on KakaoTalk can help me reduce the shopping time	.857	
Overall, the information I got form the brand/retailer that I subscribe on KakaoTalk are useful for my shopping	.657	
Kakaoalk which is mainly provided brand or seller's products is reliable.	.522	
Eigen Value: 1.491 Cumulative Variance(%): 14.906 Mean: 4.124		
Factor 3: Overall Attitude		
I have a positive attitude toward KakaoTalk	.863	.827
I feel comfortable in using KakaoTalk	.824	
I like using KakaoTalk as a communication tool	.797	
Eigen Value: 1.135 Cumulative Variance(%): 11.355 Mean: 4.707		

It is found that post attractiveness is significantly related to preference ($\beta=.294$, $p<.001$) and attitude ($\beta=.286$, $p<.001$) which supports H3b and H3c. Otherwise, there is no relationship between post attractiveness and usefulness; H3a is rejected. This means that Korean customers do not associate post attractiveness with a website's usefulness and do not believe post attractiveness reduces mobile shopping time and increases effective mobile shopping. Korean customers are more likely to read, believe, and share the postings which possessing attractive attributes.

This study proposes that efficiency of E-S-QUAL is significantly related to usefulness ($\beta=.411$, $p<.001$) and preference ($\beta=.547$, $p<.001$). Therefore, H4a and H4b are supported. However, there is no significant relationship between efficiency and attitude. In details, the findings propose that the efficiency dimension of E-S-QUAL does not affect overall attitude, but helps Korean customers reduce their shopping time and believe they are shopping with efficiency and convenience.

The second dimension of E-S-QUAL, fulfillment, is not a significant factor for mobile shopping. The findings show fulfillment is not positively related to usefulness, preference, and attitude. Therefore, H5a, H5b, and H5c are all rejected. From the results, it is concluded that Korean customers believe fulfillment is a fundamental requirement for mobile retailers to satisfy customers' wants, needs, and expectations. Korean customers will not use the mobile shopping channel when a mobile retailer does not respond quickly to customers with prompt services.

The privacy dimension of E-S-QUAL is also not significantly related to usefulness and preference. However, it is found that there is a

positive relationship between privacy and overall attitude ($\beta=.295$, $p<.001$). Therefore, H5c only is supported. The results show that Korean customers believe privacy is an indispensable component when consumers are shopping via social media channels. With the fact that privacy is closely connected with reliability and comfort, this study concludes that overall attitude toward mobile shopping is affected by privacy.

The last dimension of E-S-QUAL, system availability, is significantly related to usefulness ($\beta=.189$, $p<.05$) and attitude ($\beta=.330$, $p<.001$) while not significantly related to preference. Therefore, H7a and H7c are supported. The findings propose Korean customers use more than one portable mobile device, so they are more likely to feel comfortable and enjoy mobile shopping time with the excellent system availability.

The positive influence of usefulness on like intention, share intention, and purchase intention is not significant. Therefore, H8a, H8b, and H8c are rejected. With the finding, this study recognizes that usefulness does not make any impacts on Korean customers' behavioral intention on mobile shopping. In addition, results show that preference is positively related to like intention ($\beta=.299$, $p<.001$) and share intention ($\beta=.250$, $p<.01$). However, there is no significant relationship between preference and purchase intention. Therefore, H8a, H8b are supported while H8c is rejected. Korean customers tend to click a like button or write social media tag to share information with their friends when they read new posting which is consistent with their preference and expectation.

Finally, the findings support that the positive influences of overall attitude on like intention and share intention are not significant. Purchase intention ($\beta=.256$, $p<.01$) is significantly related

to overall attitude. Therefore, H8c is only supported. This shows that Korean customers do not buy when they feel uncomfortable with a difficult or insecure payment system.

All results of multiple regression analysis are reported in Table 4.

V. Conclusions and Implications

To provide the available socio-psychological account of KakaoTalk subscribers and best availability of KakaoTalk platform, understanding of the relationships between information source effects, service quality perception, and mobile shopping behavior are beneficial. There is limited

evidence in how customers process the information sources and evaluate the service quality within the mobile shopping channel, and hence this study offers some useful insights which could inform both marketing practitioners and researchers. This study aims to show how information sources and service quality affect customers' attitude and behavioral intention to use mobile shopping on KakaoTalk in South Korea. This study reaffirms that both ELM and E-S-QUAL are explicit theoretical orientations in functioning consumers' social mobile shopping experience on KakaoTalk.

This study guides marketers with direction and advice in mobile marketing strategies. For example, creating effective persuasive message

Table 4. Result of Multiple Regression Analysis

Independent \ Dependent		Usefulness (a)	Preferences (b)	Overall Attitude(c)	Like Intention(d)	Share Intention(e)	Purchase Intention(f)
Information	Argument quality (H1)	.542***	.454***	.353***	.262**	.260**	.328***
	Post popularity (H2)	n/s	n/s	n/s	n/s	.211**	n/s
	Post attractiveness (H3)	n/s	.294***	.286***	n/s	n/s	n/s
	R ²	.385	.403	.304	.142	.124	.168
Source	Adjusted R ²	.375	.393	.292	.128	.110	.150
	F	37.789	40.685	25.943	9.923	8.517	9.090
Electronic service quality	Efficiency(H4)	.411***	.547***	n/s	.294**	.384***	n/s
	Fulfillment (H5)	n/s	n/s	n/s	n/s	n/s	.548***
	Privacy (H6)	n/s	n/s	.295**	n/s	n/s	n/s
	System Availability (H7)	.189*	n/s	.330***	n/s	-.248*	n/s
	R ²	.313	.371	.495	.059	.145	.469
	Adjusted R ²	.292	.352	.480	.030	.119	.453
	F	15.037	19.470	32.333	2.058	5.599	29.123
Attitude					Like (a) Share	(b) Purchase	(c) Intention
	Usefulness (H8)	-	-	-	n/s	n/s	n/s
	Preference (H9)	-	-	-	.299***	.250**	n/s
	Overall attitude (H10)	-	-	-	n/s	n/s	.256**
	R ²	-	-	-	.149	.081	.188
	Adjusted R ²	-	-	-	.135	.066	.170
	F	-	-	-	10.410	5.236	10.434

*P<.05, **P<.01, ***P<.001, n/s: not significant

involves applying criteria such as argument quality, post popularity, and post attractiveness. Specifically, the results show that argument quality greatly impacts individuals' attitudes and behavioral intention toward mobile shopping via social media channel. Korean college students are robustly motivated by "argument quality" of information when processing messages and information on KakaoTalk. This motivational component is explained in the central route of ELM which is involved in individuals' cognitive efforts and judgment, serving the meaningful relevance in the application of ELM in mobile shopping through KakaoTalk. This can be interpreted that as a central cue, argument quality in information yields more favorable responses. Thus determining one's positive attitude towards information in mobile shopping leading to purchase intention. This result is in line with the finding in the previous study which concluded that the central route used in advertising messages tends to be more stable and predictable resulting in higher purchase intentions (Kar & Ho, 2005). Although previous literature has stated that post attractiveness and post popularity are significant factors for shaping attitudes and leading to behavioral intention, unexpectedly, in this study it was found that they were not significantly related to purchase intention in mobile shopping channel. According to Katz (1960, p. 175), attitudes serve as a knowledge function because they supply a standard "frame of reference for organizing and simplifying people's perceptions of an often complex or ambiguous informational environment." Fazio (1989) notes this function is used to serve all attitudes to some extent. In order to help Korean customers get highly involved with mobile shopping on KakaoTalk, providing reliable information should precede the

hedonic side of information such as post attractiveness and post popularity.

This study sheds light on the importance of employing E-S-QUAL in mobile shopping and provides a roadmap for future study endeavors. The findings of this study show that Korean customers are motivated by electronic service quality when they shop via social media channels. In addition, they tend to take a shorter information route to decide their attitudinal behaviors. As discussed, the most powerful factor among E-S-QUAL is "efficiency." This dimension of service quality influences the customer perception of usefulness and preference as well as share and like intention toward mobile shopping on KakaoTalk. Furthermore, one key issue raised by the results of this study is the importance of fulfillment in purchase intention within mobile shopping channel. In the practical sense, if the KakaoTalk provider can provide great service to fulfill individual service need and expectation, they can generate more sales in mobile commerce. At the psychological level, favorable and positive attitudes might not be the conditions necessary to arouse purchase intention. According to the motivational basis of the attitude, it may involve generalization of attitude; for example, in politics voting for an opposing candidate does not have much effect upon party identification (Katz, 1960).

Although the present study has provided important implications for both marketers and researchers, some considerations of its limitations are in order. The limitations of this study provide a springboard for future research. First, a generalization of the results should be cautioned against since the study focused on only one social media channel (KakaoTalk). This fact presents opportunities for future research to

see if other social mobile platforms and product category factors might moderate some of the relationships that are presented. Second, the student sample was geographically and selectively collected from the part of South Korea and was younger than the average population. In addition, only one-third respondents have had purchased via KakaoTalk recently. These limitations pose generalizability questions, and a larger sample would be more appropriate for future research. Third, this study tested the direct relationship between information source, e-service quality, attitude and intention to buy behavior. The several significant findings insights the future study which can examine the mediating role of attitude by implementing Structural Equation Modeling analysis. Finally, the four dimensions capturing electronic service quality (E-S-QUAL) may not be an exhaustive set of the service quality assessed by a firm in a mobile shopping channel. Other factors of E-S-QUAL such as trust, personalization, and/or assurance could be included in future studies.

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