A mixed methods approach to electronic word-of-mouth in the open-market context∗

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ABSTRACT

Electronic word-of-mouth (eWOM) has been identified as a key factor affecting online sales. However, the factors leading to eWOM in the open-market context are not fully understood. Since many Internet vendors have adopted the open-market business model, it is essential to understand the factors for eWOM leading to the success of open-market business. This study investigates factors affecting eWOM in the open-market context based on a sequential combination of qualitative and quantitative research methods. The exploratory findings in the qualitative study form the basis for the quantitative study survey research. The findings from this mixed methods study indicate the significance of three new factors (information-sharing desire, self-presentation desire, and open-market reward) and two established factors (open-market satisfaction and open-market loyalty) affecting eWOM directly and indirectly. This study makes a useful contribution to the broader literature on eWOM. These findings also inform open-market providers as to how to promote and manage eWOM for online business success.

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1. Introduction

Various factors affect consumers’ purchasing behaviors and decision-making processes. These include social information based on other people’s input and viral marketing that exploits social networks by encouraging customers to share product information with their friends (Leskovec, Adamic, & Huberman, 2007). People can easily share their purchasing experiences with others because social network services are readily available for consumers in the online context. Many people incorporate information from other consumers (e.g., opinions, comments, and experiences) into their purchasing decisions. Social network services have the important implication that information can spread quickly and widely throughout the network (Rodrigues, Benevenuto, Cha, Gummadi, & Almeida, 2011). For instance, the phenomenon of users’ recommending favorites to friends and followers plays an important role in shaping other users’ behaviors and purchases (Huang, Cheng, Shen, Zhou, & Jin, 2012). This social networking trend, called word-of-mouth (WOM), is highly influential on potential customers’ purchasing behaviors and decision-making (Richins & Root-Shaffer, 1988). WOM refers to interpersonal communication concerning the evaluation of products or service of interest (Ardt, 1967). Today, social networking sites are known to be a major driver of traffic to many websites. For certain websites, Facebook and Twitter drive, respectively, 44 percent and 29 percent of the traffic (Schonfeld, 2010). These online social networks share tens of millions of web links every day (Rao, 2010), and we expect that the amount of information exchanged by word-of-mouth in online social networks will continue to grow over time (Rodrigues et al., 2011).

WOM is an online feedback mechanism that has been identified in previous research as a key factor affecting trust and online sales (Chevalier & Mayzlin, 2006; Dellarocas, 2003; Pavlou & Dimoka, 2006; Zhu & Zhang, 2010). WOM regarding target products or services reduces purchaser’s uncertainties about these targets and the attendant risks in their purchase and use. This form of reassurance can then affect development of customer trust in the target item, which can help customers decide to purchase the target item. For this reason, previous research on WOM has regarded the WOM-based marketing approach as being effective in the promotion of sales (Chevalier & Mayzlin, 2006), much more so than advertising or individual sales activities (Katz & Lazarsfeld, 1965).

Clearly, WOM is one of the most influential sources of marketplace information for customers (Dellarocas, 2003). WOM is created, spread through online WOM platforms such as product...
review websites, retailer websites, brand websites, personal blogs, message boards, social networking sites (Lee & Yoon, 2009). However, most previous studies have examined the roles, effects of electronic WOM (eWOM) in the context of a single online vendor, such as Amazon.com (Brown et al., 2005; Chen et al., 2011; Chevalier & Mayzlin, 2006; Forman, Ghose, & Wisenfeld, 2008; Gruen et al., 2006; Lee, Lee, & Shi, 2011; Mudambi & Schuff, 2010). That is, a single market manages the whole online business without any other online vendor in the single marketplace. In recent research, Chu and Kim (2011) examined how social relationship factors relate to eWOM transmitted via social websites. Their study confirmed that tie strength, trust, normative, and information influences are positively associated with eWOM. Although it is meaningful to determine the role, effects of eWOM in such a context, there are limitations to applying the findings to other contexts, such as the open market context.

The open market is a fast-growing market in the online shopping context. Open market means a marketplace where many parties (individuals and businesses) can sell their products for a negligible fee. Customer-to-customer (C2C) is the main business format in an open market (Jung, 2006). Sellers participating in an open market try to provide something unique regarding their products or services to differentiate themselves from others (Jean et al., 2008). There are several cases of open market, such as eBay and App-Store. In an open market, the market provider (e.g., eBay Inc. and Apple Inc.) provides the platform through which the many vendors participate and sell their products or services to customers. For example, eBay manages its entire online market by allowing vendors to conduct business on its online market platform. Open markets have brokerage fees as their main revenue sources, and they have evolved into various forms, like B2C (Business to Consumer), B2B (Business to Business) and C2B (Consumer to Business), from their initial form of C2C (Consumer to Consumer) (Choi & Lee, 2012).

Customers may share their experiences and information about vendors as well as the products and services they have received in the open market context. Potential customers consider it important to research the vendors as well as the products and services offered. However, the factors affecting eWOM in the open market context have not been well-researched. To better understand eWOM in the open market context, customer perceptions and open market characteristics should be examined.

Therefore, this study aims to investigate factors affecting eWOM in the open market context, conceptualizing eWOM as individuals’ information sharing and communication activities with others in a particular online context. To develop a better understanding of the phenomena related to eWOM in the open market context, we use a sequential combination of qualitative and quantitative research methods (i.e., mixed methods) in which findings from the qualitative study provide empirically based insight that informs the subsequent quantitative study.

We collected qualitative data by conducting interviews with 31 customers who experienced eWOM in the open market to explore what motivated them to communicate via eWOM. The qualitative study results informed the subsequent quantitative survey study and development of our model. The qualitative interviews also aided the interpretation of specific survey results for the 260 respondents, as will be discussed later. We collected quantitative data through online surveys to empirically test the research model. This study contributes to research by adding to the broader literature on eWOM. Moreover, the study can inform Internet vendors and open market providers on how to promote and manage eWOM activities for their online businesses.

2. Literature review

eWOM is a WOM system that exists in virtual space in which messages are sent or received related to products or services, and which users experience through chatting or online boards. In a recent study, eWOM was defined as interpersonal communication among consumers regarding a company, product, or service through Internet-based technology (Noh, Lee, Sohn, & Kim, 2013).

There have been several studies on eWOM (see Table 1). Based on the conceptual development of eWOM (Dellarocas, 2003), previous studies have examined the roles and effects of eWOM in online shopping contexts, such as in sales (Brown et al., 2005; Chevalier & Mayzlin, 2006; Lee et al., 2011; Zhu & Zhang, 2010) and business performance (Duan et al., 2008). In particular, previous research has identified several motivators related to eWOM activities, such as commitment (Brown et al., 2005), customer perceptions of product value (Gruen et al., 2006), and identity (Forman et al., 2008). However, the role and effects of eWOM have been examined only in the context of a single online vendor (Brown et al., 2005; Chen et al., 2011; Chevalier & Mayzlin, 2006; Forman et al., 2008; Gruen et al., 2006; Lee et al., 2011; Mudambi & Schuff, 2010) or a single industry (Duan et al., 2008; Zhu & Zhang, 2010).

In contrast, there has been little research on eWOM in the context of an open market, which is the focal context in the current study. eWOM is expected to play a key role in the open market because many customers share their transaction experiences and information with others. The characteristics and customer perceptions of the open market should be considered in examining eWOM.

WOM is a widely accepted notion in the field of consumer studies in marketing. It plays an important role in explaining consumer attitude and behavior toward specific products and services. Previous research has found that positive WOM encourages consumers to purchase more (Li & Hitt, 2008). This is applied to eWOM in the present study, and factors effecting eWOM in the open market are analyzed. With the fierce competition in the open market, consumers can deliver information related to products or services that they have experienced, through online boards or chatting.

This study adopts a mixed methods approach for this examination: a sequential combination of a qualitative study and a quantitative study. The qualitative study based on the interview approach is helpful in exploring customer perceptions and open market characteristics. The quantitative study based on the survey approach is helpful in confirming the exploratory findings.

3. Qualitative study

3.1. Research method

We adopted an interview approach with experienced eWOM customers as a qualitative research method to explore potential factors affecting eWOM in the open market context. Although the interview approach has weaknesses, such as response bias, subjective interpretation, and reflexivity, it has several strengths, such as the capability to focus directly on the research topic and to deliver perceived causal inferences (Yin, 2003). We used a convenience sample for the exploratory and qualitative data collections. The coauthors used their personal networks to recruit interviewees who had experienced eWOM in the open market context. We structured interviews with 31 randomly selected experienced eWOM customers (see Table 2). The interviewed participants were 18 males and 13 females. Their average age was 28.6 years, with 61

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1 Amazon started as a single-market business and included open-market business later, so the Amazon Marketplace now has the form of an open-market business. Most previous researches, however, considered single-market business of Amazon.com in their studies.
percent between the ages of 20 and 29. They were 2 adult school
students, 13 university or graduate school students, and 16 employees.
Of these participants, 87 percent participated in eWOM activities
one to 10 times in a month, and overall they participated in WOM
activities an average of 5.35 times in a month.

The format of the interviews was one-on-one, conducted in an
informal environment, and they were about 10–20 min in duration. The
interviewees were mainly asked about factors that affected
their decision to conduct eWOM activities in the open market
context. As an incentive to participate, we offered a gift voucher worth
$5 to each interviewee. The in-depth interview responses were
transcribed instantly, providing data for the qualitative study. After
conducting the interview, responses were summarized, and cate-
gorizations were made by matching similar factors.

### 3.2. Data analysis and research

Interview transcripts were analyzed using open, axial, and selec-
tive coding (Strauss and Corbin, 1998). Coding was done by three
researchers. To avoid potential bias, we selected one coder unin-
olved in the data. During open coding, each investigator examined
the interview transcripts line-by-line to find concepts represented
within the textual data that could explain the antecedents of using
eWOM. The coders discussed each concept identified and labeled
them on a consensus basis. We then used axial coding to group
these concepts into broad categories that reflected commonalities
among codes from the initial open coding, which helped reduce
the large number of concepts, and these evolved into theoretical
constructs. We used constructs from the existing literature,
where possible, to name the categories. During this axial coding, we
employed a coding scheme to classify categories into causes (i.e.,
eWOM antecedents) and effects (i.e., eWOM). Hypotheses began
to emerge to describe antecedents of eWOM. Next, during select-
ive coding, we integrated the categories and relationships we had
identified into a holistic theory. This theory was then tested in the
following quantitative study.

Compared to a single market (e.g., traditional Amazon.com), an
open market (e.g., eBay) is characterized by its open platform, sell-
ers participating in the open market, customer transactions with
the sellers rather than with the platform provider, and service man-
agement by the platform provider. In line with the characteristics
of open-market, we identified factors (i.e., categories) and grouped
them into domains.

This study classified factors leading to eWOM in an open-market
into five categories (see Table 3): information-sharing desire, self-
presentation desire, open-market reward, open-market satisfaction,
and open-market loyalty. Categories were then grouped into three domains: open-market transactions, consumer-self, and open-market providers. The domain of open-market transactions addresses people's desire to use WOM activities for information sharing about open-market transactions with sellers and related levels of satisfaction. The domain of consumer-self reflects people's desire to use WOM activities for self-presentation. The domain of open-market provider reflects people's desire to use WOM activities to get rewards from the open-market provider and to indicate their loyalty toward the open-market provider. The analytical results based on the interview data showed 131 responses regarding reasons to conduct WOM activities. The most commonly reported reason was a desire to share information related to the target open market with others, accounting for 71 responses (54 percent).

The second most common category of reported reasons for WOM activities was related to the self-presentation desire, accounting for 28 responses (21 percent). According to respondents, the self-presentation desire was mainly caused by high expectancies to enhance their value through WOM and gain recognition from others.

There were 15 responses related to open-market rewards, accounting for 11 percent. Consumers reported conducting WOM activities to earn points or mileage credits after purchase, because some open markets provide such awards according to their policies of site operation. There were 10 responses related to customer satisfaction with the target open market (i.e., open-market satisfaction), accounting for 8 percent. There were 6 responses related to customer loyalty toward the target open market (i.e., open-market loyalty), accounting for 5 percent.

Although these exploratory findings have implications for identifying potential factors affecting customer eWOM decisions and behaviors and showing their relative impacts on eWOM, these findings must be tested further. Because the interview approach has limitations, such as reflexivity, i.e., an interviewee may say what that individual thinks the interviewer wants to hear (Yin, 1994), quantitative research was used to confirm our qualitative results.

4. Quantitative study

The exploratory study identified five factors that affect eWOM in the open market context. The exploratory findings became the basis for the research model development in the quantitative study.

4.1. Research model and hypotheses

Based on the exploratory results in the preceding qualitative study, we propose the research model presented in Fig. 1. Although the five identified factors might directly affect eWOM, there might also be relationships among them.

We define information sharing desire as the extent to which an individual wants to communicate with others and provide his or her information to them by modifying the definition of online self-presentation desire from Kim, Chan, and Kankanhalli (2012). In the online context, information-sharing desire takes on an important role in forming an individual's attitude (Chen, Clifford, & Wells, 2002). Information sharing refers to an activity intended to spread information to other people when it is obtained. Brown and Duguid (2002) explain that the greater is an individual's ability to utilize information, the more active that person is in sharing information. This implies that people agree to willingly supply information to others, with an emphasis on sharing valuable information. The interview results in the preceding qualitative study show that a large number of people want to share information on products or services with others in the open-market context. Any motivated behavior must be understood as being a channel through which human desire is satisfied (Maslow, 2001). Using eWOM can thus be understood as a way to satisfy an individual's desire to share information with others. Therefore, information-sharing desire should have a positive effect on the amount of eWOM activities in the open market context.

Hypothesis 1 (H1). Information-sharing desire has a positive effect on eWOM activities.

We also propose that an individual's open-market satisfaction is another antecedent of eWOM. We define open-market satisfaction

<table>
<thead>
<tr>
<th>Domain</th>
<th>Category</th>
<th>Examples</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-market transaction</td>
<td>Information sharing desire</td>
<td>To share information about products or services of a certain seller</td>
<td>71</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td>Open-market satisfaction</td>
<td>To express my gratitude to sellers in the open market</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Open market reward</td>
<td>To get points or mileage after purchase from the open-market provider</td>
<td>15</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Open market loyalty</td>
<td>To express my loyalty to the open market</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>People enjoy spreading rumors</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>131</td>
<td>100%</td>
</tr>
</tbody>
</table>

Fig. 1. Research model.
as an affective state of a customer based on his or her total transaction experience in the open-market context, which is a modification of that from Spreng, MacKenzie, and Olshavsky (1996). Customers satisfied with Internet shopping malls tend to engage in positive WOM activities, while those who are unsatisfied conduct negative WOM activities and express complaints (Lee & Youn, 2009). Likewise, customers tend to share their reviews on transaction experiences in the target context. According to the interviews in our qualitative study, both satisfaction and dissatisfaction with transactions are factors of eWOM activities in the open-market context. Customers who are satisfied with transactions conduct positive WOM activities toward transaction companies (Bitner, 1990; Bloch, Sherrell, & Ridgway, 1986; Oliver, 1980). This WOM is expressed as behaviors such as recommending the transaction to others. Therefore, open-market satisfaction by an individual customer is likely to affect that person’s eWOM in the open-market context.

Hypothesis 2 (H2). Open-market satisfaction has a positive effect on eWOM activities.

We propose self-presentation desire as another antecedent of eWOM. Following previous research (Kim et al., 2012), we define self-presentation desire as the extent to which an individual wants to present his or her preferred image in an open market of interest. Regarding self-presentation desire, Tajfel and Turner (1979) described an individual’s desire for expression in combination with social identity theory, explaining that individuals desire for self-presentation motivates them to show how innovative they are in accepting and trying innovative items like new products or services (Hirschman, 1980). Also, self-presentation theory (Goffman, 1959; Leary, 1996) explains that people as social actors desire to present their identities to others in social settings. Self-presentation is a key means of impression management that aims to control how one is perceived by other people (Leary, 1996). People try to influence other’s perceptions of them through self-presentation.

One means of self-presentation is textual presentation, which can be synchronous, such as chatting, or asynchronous, such as in message boards. Eric (1988) suggested that individuals could enhance their position by frequently supplying appropriate and useful answers in external online knowledge networks. In other words, self-presentation is a behavior that entails making a positive social impression of oneself on others and optimizing the probability of avoidance of an undesirable impression. This leads to selective expression, such as prominently drawing attention to one's strengths and omitting negative information pertaining to oneself (Leary & Kowalski, 1990; Leary, 1996). Therefore, self-presentation desire should have a positive effect on eWOM in the open-market context.

Hypothesis 3 (H3). Self-presentation desire in the open market has a positive effect on eWOM activities.

Open-market reward refers to the compensation related to products or services for any information sharing with others in an open market of interest. Reward includes all types of positive or attractive compensation given to a performer for a specific behavior (i.e., eWOM) by the open-market provider in this study context. Similar to the frequent flier programs of airline companies, there are various incentive systems using mileage or another form of compensation (e.g., Gmarket coupons) to encourage participation by consumers and improve the quality of information reward in the open-market context. When an individual perceives that rewards exceed costs in conducting a behavior of interest, the behavior tends to actively occur (Kelley & Thibaut, 1978). When an open market provides compensation to customers who share their ideas and experiences (i.e., eWOM) with others in the same context, those customers may conduct more eWOM activities, especially when the rewards exceed costs (e.g., time and effort). An individual is expected to conduct eWOM activities to obtain the reward from the open market of interest. The exploratory findings in the qualitative study indicate that people want to receive economic or psychological rewards related to their eWOM activities. Therefore, open-market reward should have a positive effect on eWOM in the open-market context.

Hypothesis 4 (H4). Open-market reward has a positive effect on eWOM activities.

Loyalty refers to a commitment to repeatedly purchase a preferred product or service or to become a regular customer of a particular seller (Oliver, 1999). In the case of online shopping malls suffering from extreme customer flux, loyalty is regarded as an important concept (Oliver, 1980) and is a factor for continuous retention of customers and the maintenance of long-term relationships. Open-market loyalty indicates an individual’s psychological attachment to an open market of interest (i.e., open-market provider). There are several consequences of loyalty toward a vendor, such as repeated purchases and recommendations of the vendor to others (i.e., WOM). If an individual has a psychological attachment toward an open market (i.e., open market loyalty), the person is likely to be willing to share his or her experiences with others. Therefore, open-market loyalty should have a positive effect on the amount of eWOM activities in the open-market context.

Hypothesis 5 (H5). Open-market loyalty has a positive effect on eWOM activities.

Customer satisfaction exerts a strong influence on trust and commitment, and trust and commitment in turn exert significant effects on a customer’s loyalty behavior (Park, 2003). Previous research has found that customer satisfaction influences customer loyalty (Heskett, Jones, Loveman, Sasser, & Schlesinger, 1994). While open-market satisfaction represents an emotional reaction to the open market of interest, open-market loyalty represents psychological attachment to the open market. Therefore, open-market satisfaction should have a positive effect on open market loyalty.

Hypothesis 6 (H6). Open-market satisfaction has a positive effect on open-market loyalty.

In addition to the direct effect of self-presentation desire on eWOM, there may be an indirect effect through information-sharing desire. If an individual has a strong desire for self-presentation, the person is likely to have a strong desire to share information and experiences with others, such as by taking the textual self-presentation approach. That is, an individual can build a desire before conducting a behavior of interest to satisfy that desire. Therefore, self-presentation desire should have a positive effect on information-sharing desire in the open market context.

Hypothesis 7 (H7). Self-presentation desire has a positive effect on information-sharing desire.

In addition to the direct effect of open market reward on eWOM, there may be an indirect effect through information-sharing desire. When the target open market provides rewards for eWOM activities, customers in the target market are likely to have a strong desire to share information and experiences with others. That is, an individual can build a desire before engaging in behavior of interest to satisfy that desire. Therefore, open-market reward should have a positive effect on information-sharing desire.

Hypothesis 8 (H8). Open-market reward has a positive effect on information-sharing desire.
Table 4
Measurement instrument.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Wording</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information-sharing desire</td>
<td>ISD1</td>
<td>I want to share information that enables transactions in the open market to be sensible.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD2</td>
<td>I hope to share product information about a product that I bought in the open market.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD3</td>
<td>I wish to share service information that I obtained in the open market.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD4</td>
<td>I want to share information about a seller in the open market.</td>
<td></td>
</tr>
<tr>
<td>Open-market satisfaction</td>
<td>SAT1</td>
<td>Unsatisfied . . . Satisfied</td>
<td>Spreng et al. (1996)</td>
</tr>
<tr>
<td></td>
<td>SAT2</td>
<td>Frustrated . . . Contented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT3</td>
<td>Annoyed . . . Pleased</td>
<td></td>
</tr>
<tr>
<td>Self-presentation desire</td>
<td>SPD1</td>
<td>I hope to leave a good impression in the open market.</td>
<td>Kim et al. (2012)</td>
</tr>
<tr>
<td></td>
<td>SPD2</td>
<td>I want to present a good image in the open market.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPD3</td>
<td>I wish to make a good image in the open market.</td>
<td></td>
</tr>
<tr>
<td>Open-market reward</td>
<td>RWD1</td>
<td>There are rewards for sharing information with others in the open market.</td>
<td>Malhotra and Galletta (1999)</td>
</tr>
<tr>
<td></td>
<td>RWD2</td>
<td>In the open market, sharing information produces many benefits.</td>
<td></td>
</tr>
<tr>
<td>Open-market loyalty</td>
<td>LYT1</td>
<td>I am a regular customer in this open market.</td>
<td>Garbarino and Johnson (1999)</td>
</tr>
<tr>
<td></td>
<td>LYT2</td>
<td>I have a strong attachment to this open market.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LYT3</td>
<td>I hope that this open market will succeed in Internet business.</td>
<td></td>
</tr>
<tr>
<td>eWOM</td>
<td>WOM1</td>
<td>I often share transaction opinions in the open market.</td>
<td>Thomas, Talai, and Andrew (2006)</td>
</tr>
<tr>
<td></td>
<td>WOM2</td>
<td>I often introduce experience of previous dealings in the open market.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM3</td>
<td>I often discuss the features of products or services in the open market.</td>
<td></td>
</tr>
</tbody>
</table>

4.2. Research methods

4.2.1. Data collection and instrument development

For survey instrument development, we adopted existing, validated scales wherever possible. We used the double-back translation approach, following previous research protocols (Gupta & Kim, 2007; Heijden, 2002), for the quantitative study. The English survey questions were translated into Korean by three PhD research scholars and IS researcher, independently. Because this could introduce a risk of language bias (Heijden, 2002), a double-back translation of the measures was conducted. The best translation was chosen from these three Korean versions. This version was then back-translated into English by another person and compared with the original English instrument to ensure consistency (Gupta & Kim, 2007). Two information systems (IS) researchers and one marketing researcher reviewed the survey instrument and verified its face construct validity. The measurement instrument was then reviewed in a focus group of 5 online customers who had experienced open market and eWOM activities. The scales are shown in Table 4.

We conducted an online survey with customers in five major open markets in Korea (e.g., Gmarket, Auction, 11th Street, and Interpark) who were experienced in using them. These five major markets each have a business enabling everyone (or online sellers) to register product sales information when opening their stores in the open market, which is an Internet-based service that plays a role of mediating between purchasers and sellers (Yean & Lee, 2012). A database from a market research firm was used to create a sample of panel members who were at least 19 years of age. This age-filter was applied because only those 19 years old and above were eligible for credit card issuance. The market research firm randomly selected members from the panel pool and invited them by email to participate in the survey. The email included a link to a Web-based survey questionnaire.

At the beginning of the online survey, we asked survey participants to select an open market that they had experienced. We then asked them to answer the survey questions by considering the selected open market. There were 260 respondents (see Table 5). Seventy-seven percent of the respondents were males, and those in their 20s and 30s accounted for 80 percent of total respondents. The average age was 25.03 years, and about 73 percent of the respondents were office workers.

4.2.2. Data analysis and results

Data analysis for this study was performed in accordance with a two-stage methodology using PLS-Graph version 3.00. Convergent validity is the degree to which the items of a given construct are measuring the same underlying latent variable and it is assessed using three criteria. First, standardized path loadings, which are indicators of the degree of association between the underlying latent factor and each item, should be greater than 0.7 and statistically significant. Second, the composite reliabilities and the Cronbach’s alphas should each be larger than 0.7. Third, the average variance extracted (AVE) for each factor should exceed 50 percent. As shown in Table 6, the standardized path loadings were all significant and greater than 0.7. The average variance extracted (AVE) for each construct was greater than 0.5. The composite reliability (CR) and the Cronbach’s α for all constructs exceeded 0.7. The convergent validity of the constructs was therefore supported.

Discriminant validity is the degree to which the measures of two constructs are empirically distinct. We assessed the discriminant validity of the measurement model by comparing the square root of the AVE for each construct with the correlations between the construct and other constructs. If the square root of the AVE is greater than the correlations between the construct and other constructs, discriminant validity is indicated. As shown in Table 7, the square root of the AVE for each construct (diagonal term) exceeded the correlations between the construct and other constructs. Hence, discriminant validity of the instruments was supported.

Table 5
Descriptive statistics of respondents in the quantitative study.

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>200</td>
<td>76.9%</td>
</tr>
<tr>
<td>Female</td>
<td>60</td>
<td>23.1%</td>
</tr>
<tr>
<td>Age (average: 25 yrs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10s</td>
<td>25</td>
<td>9.6%</td>
</tr>
<tr>
<td>20s</td>
<td>106</td>
<td>40.8%</td>
</tr>
<tr>
<td>30s</td>
<td>103</td>
<td>39.6%</td>
</tr>
<tr>
<td>40s</td>
<td>23</td>
<td>8.8%</td>
</tr>
<tr>
<td>50s</td>
<td>3</td>
<td>1.2%</td>
</tr>
<tr>
<td>Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school student</td>
<td>25</td>
<td>9.6%</td>
</tr>
<tr>
<td>University student</td>
<td>46</td>
<td>17.7%</td>
</tr>
<tr>
<td>Worker</td>
<td>189</td>
<td>72.7%</td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Table 6
Results of the convergent validity test.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Std. loading</th>
<th>AVE</th>
<th>CR</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-market satisfaction (SAT)</td>
<td>SAT1</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT2</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAT3</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information-sharing desire (ISD)</td>
<td>ISD1</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD2</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD3</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISD4</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-market loyalty (LYT)</td>
<td>LYT1</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LYT2</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LYT3</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open-market reward (RWD)</td>
<td>RWD1</td>
<td>0.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RWD2</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RWD3</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-presentation desire (SPD)</td>
<td>SPD1</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPD2</td>
<td>0.98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPD3</td>
<td>0.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eWOM</td>
<td>WOM1</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM2</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WOM3</td>
<td>0.94</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7
Correlations between latent constructs.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. dev.</th>
<th>ISD</th>
<th>SAT</th>
<th>SPD</th>
<th>RWD</th>
<th>LYT</th>
<th>WOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISD</td>
<td>4.71</td>
<td>1.27</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAT</td>
<td>4.87</td>
<td>1.09</td>
<td>**</td>
<td>0.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPD</td>
<td>4.17</td>
<td>1.46</td>
<td></td>
<td>0.34</td>
<td>0.34</td>
<td>0.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWD</td>
<td>3.60</td>
<td>1.42</td>
<td></td>
<td>0.25</td>
<td>0.27</td>
<td>0.28</td>
<td>0.94</td>
<td></td>
</tr>
<tr>
<td>LYT</td>
<td>4.09</td>
<td>1.32</td>
<td></td>
<td>0.35</td>
<td>0.45</td>
<td>0.41</td>
<td>0.37</td>
<td>0.85</td>
</tr>
<tr>
<td>WOM</td>
<td>3.84</td>
<td>1.46</td>
<td></td>
<td>0.32</td>
<td>0.22</td>
<td>0.35</td>
<td>0.37</td>
<td>0.34</td>
</tr>
</tbody>
</table>

ISD: information-sharing desire; SAT: open-market satisfaction; SPD: self-presentation desire; RWD: open-market reward; LYT: open-market loyalty; WOM: electronic word-of-mouth.
Note: Leading diagonal shows the squared root of AVE of each construct.

After establishing the validity of the measurement instrument, we examined the structural model by applying a bootstrapping resampling technique (see Fig. 2). The results indicate that information-sharing desire (H1), self-presentation desire (H3), open-market reward (H4), and open-market loyalty (H5) have significant effects on the eWOM, explaining 36 percent of its variance. Open-market satisfaction (H6) had a significant effect on the open-market loyalty, explaining 23 percent of its variance. Self-presentation desire (H7) and open-market reward (H8) had significant effects on information-sharing desire, explaining 15 percent of its variance. However, we did not find a significant direct effect of open-market satisfaction (H2) on the eWOM.

5. Discussion and implications

5.1. Discussion of findings

This research, consisting of an exploratory study and a main confirmatory study, has several important findings. First, information-sharing desire in the open market has a positive effect on eWOM activity such that people willingly give information to others, with the goal of sharing valuable information. Respondent interviews were shown to want to share information, ranging from contents of transactions, such as products, services, or prices, to secondary information obtained through transactions, such as impressions gained during the use of products, improvement plans, and measures for products or services. Because the open market is a space where various sellers can compete with one another regarding the same products or services, more traces of information sharing (e.g., purchase postscripts) make it easier to effectively lead other customers to select a seller and conduct transactions. Accordingly, more valuable information pertaining to products or services, obtained due to proper use of consumer information-sharing desire, can contribute to improvement of sales performance.

Second, self-presentation desire in the open market has a positive effect on eWOM activity. People want to share information about their purchases of products or services with others in the open market. By doing so, they express their identities. That is, the desire for presenting a preferred image or impression to the group can motivate the purchase and use of objects for self-presentation (Schau & Gilly, 2003). People also try to influence others’ perceptions through their self-presentation. The exploratory findings in the qualitative study showed that some customers who had bought expensive and limited-availability products seemed to feel proud and envious by others, based on their eWOM activity. Self-presentation is thus a process in which a person tries to control his or her image as it is perceived by others, which can lead to eWOM activities in the open-market context.

Third, open-market reward has a positive effect on eWOM activity. Most open markets selected in this study support monetary benefits or rewards, such as points or mileage, to consumers who write their purchase postscripts, in order to encourage eWOM activities in their open-market context. For example, Gmarket held events providing gifts or gift vouchers for users who left comments after signing up in the Gmarket club and purchasing products. Other open markets operate similar events. The exploratory findings indicate that many people frequently obtained monetary benefits as rewards for their purchase postscripts and were motivated to engage in eWOM activities. Additionally, some people responded that they conducted eWOM activities, regardless of monetary benefits, as a token of gratitude for good transactions or because they wanted to enhance self-achievement by helping others.

Fourth, open-market loyalty has a positive effect on eWOM activity. Previous research on marketing has demonstrated that customer loyalty toward a vendor leads to the customer’s increased WOM activities about the vendor (e.g., Bloemer, Ruyter, & Pascal, 1998). In fact, customer loyalty has been used as a tool for measuring the success of marketing strategies (Knox & Walker, 2001). Similarly, an individual’s loyalty toward an open market is likely to lead to the person’s engaging in WOM activities in the open-market context. However, in contrast to the significant effect of open-market loyalty on eWOM, we did not find a significant effect of open-market satisfaction on eWOM.

One explanation for open-market satisfaction’s lack of significant effect may be related to previous findings regarding transaction satisfaction. According to Richins (1983) and Anderson (1998), both satisfaction and dissatisfaction with transactions have an effect on WOM, but dissatisfaction has a greater effect. In other
words, it seems that customers engage in more active WOM activity in a moment of dissatisfaction with a transaction than in satisfaction, and such bad moments may remain in their memories longer.

Therefore, it is likely that respondents remembered unsatisfying experiences more strongly than satisfying ones, and their responses might have been based less on experiences of satisfaction than dissatisfaction. The other potential reason for the lack of significant direct effect of open-market satisfaction on eWOM is that open-market loyalty appears to mediate the relationship between open-market satisfaction and eWOM. That is, as the survey results show, open-market satisfaction has a significant effect on eWOM indirectly through open-market loyalty.

Next, this study found that information-sharing desire is influenced both by self-presentation desire and open-market reward. That is, open-market reward has a significant effect on eWOM directly and also indirectly through information-sharing desire. Self-presentation desire also has a significant direct effect on eWOM and an indirect effect on eWOM through information-sharing desire.

5.2. Limitations and future research

These findings must be interpreted in the context of this study’s limitations. First, the data were collected from open-market customers in Korea. The open-market providers in Korea employed several unique operations policies, such as frequency programs (e.g., points accumulation), to encourage the eWOM activities of their customers. Since many other open market providers encourage their customers’ voluntary eWOM activities, it would be useful to replicate this study with a number of open markets in different regions to demonstrate the robustness of these results.

Second, in this study we conceptualized eWOM in the open-market context as the amount of eWOM activity, regardless of the positive or negative nature of the content. Brister (1991) defined the positive and negative characteristics of WOM information as the directional nature of WOM and categorized it into positive, neutral, and negative contents. Positive WOM complements objects; neutral WOM provides factual information on objects; and negative WOM gives bad reviews on objects. Customers can conduct eWOM in different ways depending on the valence of the contents (i.e., positive or negative). Customers may conduct eWOM more actively when they are dissatisfied than when they are satisfied. Also, some contents may be false reviews for promoting or criticizing certain products. Therefore, future research should focus on negative or positive valences of eWOM and examine their antecedents and classify opinion spam.

Additionally, it is known that emotions have implications for actions and goal attainment (Bagozzi, Copinath, & Nyer, 1999). When an individual experiences a negative emotion, that person is in disequilibrium and wishes to return to his or her normal state. According to Lazarus (1991), the person may use one or both of two coping processes: problem-focused coping, where the person attempts to alleviate the sources of distress, or emotion-focused coping, where the person changes the meaning of the sources of distress or avoids thinking about them. When an individual experiences dissatisfaction with dealings in an open market, that person may conduct eWOM activities with negative content by using either problem-focused coping or emotion-focused coping. In particular, negative emotion may have stronger effects on action than positive emotion. Therefore, future research should examine the relationship of open-market dissatisfaction (i.e., negative emotional responses) with eWOM.

Finally, demographics were not reported for the open-market customers, since the convenience samples we used in our study did not include that information. Future research should include the demographics of the open market customers. Future studies should also examine and control the effect of product type on eWOM. In the current study, the open-market transaction domain was composed of product, service, seller, platform, and provider. The qualitative findings suggest that customers’ eWOM is not sensitive to product type, but instead to the whole open-market transaction. Future research should examine in greater detail the impact of product type on eWOM.

5.3. Implications for research and practice

This study has several implications for further research. It is valuable in that it identifies and examines the factors affecting eWOM in the open-market context. Most previous studies on eWOM (e.g., Chevalier & Mayzlin, 2006; Pavlou & Dimoka, 2006; Zhu & Zhang, 2010) have examined the role and consequences of WOM, and many studies on eWOM (e.g., Lee et al., 2011) have focused on a typical online shopping context with a vendor (e.g., Amazon.com as a single market provider). While many electronic commerce businesses have adopted the open-market approach in their online businesses, the open-market context has not been well-considered. Furthermore, little research has been conducted on the factors affecting eWOM in the open-market context, making the current study one of a limited number of studies to address this topic.

The findings in this study contribute to the current research literature on WOM and eWOM, as follows. Previous research has identified several antecedents of WOM in the online shopping context. In particular, customer loyalty and satisfaction have been suggested as key antecedents of WOM in marketing research (e.g., Bitner, 1990; Bloch et al., 1986; Oliver, 1980). The present study identifies several antecedents of eWOM in the open-market context, including the roles and effects of three new factors (information-sharing desire, self-presentation desire, and open-market reward) related to eWOM that have not been well-addressed in the literature. Self-presentation desire has been examined to help explain why people are motivated to purchase digital items on virtual community websites (Kim et al., 2012). Our study relates a self-presentation desire leads to increased eWOM activities in the open-market context. It also demonstrates the role and effect of information-sharing desire.

Previous research has explained knowledge contribution or knowledge sharing in terms of altruism and reciprocity (e.g., Adler, 2001), which are related to information-sharing desire. Altruism explains people’s desire to share information and knowledge with others without expecting a reward or future reciprocation, whereas reciprocity explains such sharing behavior based on the expectation of future reciprocation. This study relates to these concepts by showing the role and effect of open-market reward. Whereas reward has a negative effect on knowledge-sharing attitude in an organizational context (Bock, Zmud, Kim, & Lee, 2005), this study shows that it has a positive effect on eWOM in the open-market context.

This study also has implications in terms of the mixed methods approach consisting of a sequential implementation of qualitative and quantitative research methods. Qualitative research using the interview approach is useful for exploring the factors affecting eWOM in the selected context. Quantitative research using the survey approach is effective for testing and validating these explored or identified factors. In this way, the mixed method approach is helpful in developing a deeper understanding of target phenomenon (Venkatesh, Brown, & Bala, 2012). This study thus broadens the literature regarding the application of the mixed methods research methodology.

This research also has several implications with respect to practice, as the findings provide guidance for tapping the motivators of eWOM in the open-market context. Specifically, they explain
the key roles and direct effects of four factors – information-sharing desire, self-presentation desire, open-market reward, and open-market loyalty – on eWOM. Based on our results, open-market providers can consider promoting self-presentation in the open-market context. For this purpose, they might consider developing a norm (i.e., how members or customers should present themselves) in the open market. Further, the open-market providers might consider promoting their members’ virtual community participation and activities in their open-market.

Open-market providers should also consider providing rewards for their members’ eWOM activities, based on our finding of the significant effect of open-market reward on eWOM. For example, they might consider adopting an approach like the frequent flier programs of airline companies. Currently, the reward systems of open markets generally employ monetary benefits to encourage participation in WOM activity. However, psychological rewards can also be influential in increasing eWOM activities in the open-market context. This result suggests the benefits of extending areas of reward in the open market.

Open-market providers might additionally consider promoting information-sharing desire via social network services. As an example, the travel information website Tripadvisor obtains relevant information through a visitor’s Facebook profile by enabling personalized integration with Facebook and sharing travel history among users, which influences eWOM activities. Open-market providers can vitalize eWOM activities through combinations of open-market platforms and social media through which consumers can interact and share information with each other without time and space limits.

Open-market providers also need to consider developing their members’ loyalty toward the open market, based on our study’s finding of the significance of open-market loyalty. Our results show it is necessary to first satisfy open-market customers to gain their loyalty. The findings also indicate that information-sharing desire can be increased by both self-presentation desire and open-market reward.

6. Conclusion

WOM has been identified as a key factor affecting trust and online sales (Dellarocas, 2003). Based on WOM’s key role and its significant effects on sales, previous research has examined WOM in several contexts, such as typical offline marketing contexts and online shopping contexts. However, while the open-market approach has been adopted by many online vendors, understanding has been limited about the context-specific factors affecting online WOM (i.e., eWOM) activities in the open-market context.

This study adds to the small number of previous studies examining eWOM and its antecedents in the open-market context. We adopted a mixed methods approach that sequentially implemented qualitative and quantitative research methods. The qualitative research method was useful in exploring the open-market-related factors. Adding to previous research on WOM, this study extends our understanding of eWOM and its antecedents in the open-market context. In particular, this study has found three new factors (information-sharing desire, self-presentation desire, and open-market reward) affecting eWOM directly as well as two other factors (open-market satisfaction and open-market loyalty) affecting eWOM both directly and indirectly. This report of research also provides suggestions for taking advantage of the identified motivators of eWOM in the open-market context.

References
