

A Comprehensive Understanding of the Purchasing and Visiting Behaviors of Customers on Social Commerce Sites

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ABSTRACT

Social commerce is a new type of e-commerce that is based on social networking technologies and aggressive marketing strategies, such as one-deal-a-day. However, although social commerce has become very popular, little is known of customers' substantive purchasing behaviors when using social commerce sites. These behaviors, namely visiting and purchasing behaviors, are the focus of this study. Hence, this study aims to provide comprehensive understanding of the visiting and purchasing behaviors of customers in relation to social commerce sites. A research model based on the utilitarian and hedonic values of shopping, social influence, and convenience, which represent social commerce features, was developed and empirically analyzed using data from social commerce site users. The results revealed that purchasing behaviors of consumers when they use social commerce sites are affected directly by the utilitarian value (perceived usefulness) of the site as well as their purchase intention. Purchase intention is affected by perceived usefulness, subjective norm, and visiting behaviors. The visiting behaviors of consumers in relation to social commerce sites are also affected directly by the hedonic value (playfulness) of the site as well as their intention to visit the site. The findings of this study have implications for practitioners with regard to understanding and promoting the use of social commerce sites.

Keywords: Social Commerce Sites, Visiting Behavior, Purchasing Behavior, Impulse Buying, Playfulness, Social Influence

I . Introduction

Social commerce using social networking sites (SNSs) and online media to support social interaction in the online buying and selling of products and

services (Sharma and Crossler, 2014) is an emerging e-commerce type with a business model that differs from those of existing open market companies. Due to its various benefits, such as advertising and social marketing linked with SNSs, exceptional discount

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sales based on group purchases, a variety of community-based products and services, such as restaurants, massage shops, and photo studios, and providing convenient mobile shopping functions, social commerce has recently attracted great interest from both companies and consumers. As a result, since social commerce took off in 2011, it has shown rapid growth and formed a large market worth approximately 30 billion U.S. dollars in 2015 (The Statistics Portal, 2015).

Social commerce has attracted the attention of researchers because it is a new research topic that combines the latest technologies in business, and it appeals to businesses and consumers because it represents a new distribution channel (Zhou et al., 2013). Consequently, over the last one-to-two years, the study of social commerce has grown rapidly in a variety of areas, such as e-commerce and information systems, as well as traditional management. Although the increase in the number of such studies has helped enhance the importance of social commerce in the e-commerce research area, most of these studies have focused on topics relating to consumers' planned behaviors in relation to social commerce sites, such as behavioral intention to engage in social commerce (Sharma and Crossler, 2014), intention to use (Liang et al., 2012; Zhang et al., 2014), and purchase intention (Hajli, 2015; Kim and Park, 2013; Ng, 2013); thus, they have been somewhat lacking with regard to the practical application of social commerce sites, where consumers' unplanned behavior, such as impulse buying, frequently occurs. Furthermore, previous studies have used a single dependent variable, such as intention to use or purchase intention, although customers exhibit two substantive behaviors (visiting and purchasing) when they make a purchase.

The purpose of this study was twofold. First, it

aimed to provide an understanding of customers' purchasing process on social commerce sites by analyzing the purchasing and visiting behaviors of the customers separately. As in offline shopping, if the results of consumers' purchase and visiting behaviors are clearly different, and the association between two behaviors is inferred, it is desirable to set two constructs separately as the dependent variables and examine the relationships between them in order to achieve a comprehensive understanding of the customers' behaviors on social commerce sites. Second, this study tested behavior, rather than intention, as a dependent variable. Although the main theories of the social sciences have suggested that intention is the most influential and powerful factor in relation to behavior, it is likely that consumers' visiting behaviors with respect to social commerce sites or their purchasing behaviors can be not only planned behaviors but automatic or impulsive behaviors.

In conclusion the research questions for the purposes above were unitarily defined as:

1. What factors influence customers' purchasing behaviors and visiting behaviors in social commerce context?

II. Theoretical Background and Hypothesis Development

2.1. Social Commerce

Social commerce refers to e-commerce, which is based on SNS and online media, such as Twitter and Facebook (Sharma and Crossler, 2014). In general, social commerce is divided into four types: (1) the SNS-linked type is social commerce that SNSs

link to an existing e-commerce site for advertising and social marketing, (2) the SNS web type is social commerce using the plug-in features of SNS, (3) the offline-linked type is social commerce that exploits location-based services, and (4) the group buying type is social commerce that provides products and services at significantly reduced prices on the condition that a certain number of customers will purchase a specific product and service (Kim et al., 2014). However, such classification does not have great significance today. Recently, social commerce companies have developed new business models mixing the four types of social commerce and providing new services for their customers.

The main features of the current major social commerce companies are as follows. The first one is substantial discount (typically 50% or more) sales for various products and services (Kim and Park, 2013). A company will sell a product or service at a significantly discounted price by using techniques such as assurance contract or, in the case of group buying, one-deal-a-day. The second feature is the active use of SNSs. Most social commerce sites link directly to major SNSs, such as Twitter and Facebook, and provide features for evaluating and exchanging information about products and services. The third one is selling a variety of products and services. Social commerce firms deal with a diverse range of products and services, including restaurants, massage shops, and photo studios (Kim and Park, 2013). Consequently, social commerce can be defined as a new e-commerce business model that allows for performing the advertising and marketing to take advantage of the SNS, the discounted selling of various products and services, including community service, such as restaurants and tickets for performances, and actively utilizing mobile.

To purchase products and services on an e-com-

merce site, including social commerce sites, consumers perform two types of decision-making—namely, visiting and purchasing (Sato and Asahi, 2012). Although the two types of decision-making are clearly different in terms of the action, directly influencing sales that is the ultimate goal for social commerce sites, they are closely related. According to Van den Poel and Buckinx (2005), the number of days since the last visit has a strong effect on purchasing. Specifically, a portion of the visit to the site leads to purchasing behaviors; thus, the visiting behavior of the consumer to a social commerce site can be regarded as a sign of the intention to make a purchase on the site. Therefore, we posit the following hypothesis.

H1: The visiting behavior to a social commerce site will positively affect the Purchase Intention in relation to the social commerce site.

According to the behavioral change theories, such as the theory of reasoned action (TRA) and the theory of planned behavior (TPB) (Ajzen, 1991), behavioral intention is the most influential factor of behavior. Thus, we postulate that a customer's intention to visit and to make a purchase positively affects the customer's behaviors.

H2: The intention to visit a social commerce site will positively affect the visiting behavior in relation to the social commerce site.

H3: The purchase intention in relation to a social commerce site positively affects the purchasing behavior on the social commerce site.

2.2. Utilitarian Value in Purchasing Decision-Making

Utilitarian value has been proposed as the most typical factor for explaining the motivation for consumers to shop in the traditional shopping literature. According to Hirschman and Holbrook (1982), the consumer should be regarded as a logical thinker to maximize utility by focusing on the tangible benefits of conventional goods and services (Sarkar, 2011). In the field of e-commerce, the utilitarian value perspective has also been suggested as an important factor of online shopping. Ahn et al. (2007) found that perceived usefulness as the utilitarian value of a shopping website significantly influenced the customer's intention to use the online retailing website. In the e-commerce environment, perceived usefulness is defined as the degree to which a consumer believes that using an e-commerce site will enhance his or her shopping performance (Sharma and Crossler, 2014). In the case of a social commerce site, this would be perceived as very useful (high utilitarian value) because customers can buy goods very comfortably at the best price. This perceived usefulness may lead to the customers' intentions to visit the social commerce site and make a purchase. Thus, we posit the following hypotheses.

H4: The perceived usefulness of a social commerce site will positively affect the intention to visit the social commerce site.

H5: The perceived usefulness of a social commerce site will positively affect the purchase intention in relation to the social commerce site.

Many customers in the online environment frequently purchase goods or services impulsively, as

they are overcoming time and space constraints and exposure to various stimulation conditions, rather than making planned purchases of goods or services (LaRose, 2001). Impulse buying is making a sudden, immediate purchase with no pre-shopping intentions, either to buy the specific product category or to fulfill a specific buying task (Beatty and Ferrell 1998). According to Applebaum (1951), exposure to a stimulus is the core concept of impulse buying. He defined impulse buying as "buying that presumably was not planned by the customer before entering a store, but which resulted from a stimulus created by a sales promotional device in the store" (Applebaum, 1951). Studies have argued that many consumers on social commerce sites purchase goods or services on impulse (Kim et al., 2012). It is inferred that when consumers find significantly discounted goods on a social commerce site, they will perceive or feel the usefulness of the goods and immediately buy them. Thus, we propose the following hypothesis.

H6: The perceived usefulness of a social commerce site will positively affect purchasing behaviors.

The most recent social commerce sites provide a ubiquitous environment for making mobile-based purchases, making it easier for customers to visit the social commerce sites with little more effort than they would need to exert for offline or Internet-based shopping visits. With a single click of the application on a mobile phone, customers can visit social commerce sites anytime, anywhere. It is reasoned that the social commerce site's convenient environment can cause customers who have a high perception of the usefulness of social commerce sites to make spontaneous visits without conscious behavioral intentions. Therefore, we posit the following hypothesis.

H7: Perceived usefulness will positively affect visiting behaviors.

H8: Playfulness on a social commerce site will positively affect the intention to visit the social commerce site.

2.3. The Role of Playfulness in Social Commerce

Another perspective that has been noted in the shopping research is hedonic value. Hedonic value in shopping reflects shopping's potential entertainment value and emotional worth (Bellenger et al., 1976). According to Bridges and Florsheim (2008), when shopping online, consumers seek hedonic value, which provides enjoyment of the online experience as well as utilitarian value, such as a satisfactory shopping outcome (Ozen and Kodaz, 2012). Playfulness can be regarded as a marketing strategy for providing hedonic value to consumers, which is frequently performed on social commerce sites.

It gets closer to midnight; consumers are getting busy, since it is time for social commerce sites all at once to showcase the new deal. Exceptional quantity is limited in the price that is less than only half of the regular price, so quiet time is even luxurious. Soon sales are sold out; consumers who came too late have no choice but to pledge an attractive deal coming up in the next day. The competition like a flurry of wind is repeated daily in the social commerce site. (Suh, 2011)

As described in the above-quoted information technology (IT) magazine article, social commerce sites deploy a variety of marketing strategies that provide fun and entertainment in order to seduce customers to continue visiting their sites. Therefore, it is understood that there are instances when customers visit social commerce sites because they can derive pleasure from those sites. Thus, we propose the following hypothesis.

From the above-cited article, it is inferred that new deals are the tools of play provided by the social commerce companies, and customers often visit the social commerce sites late at night to take part in the play. The repetitive experiences of participating in the play may form a habitual behavior; it will ultimately lead to automatic visiting behavior in relation to the social commerce site. According to Ortiz de Guinea and Markus (2009), the connection between emotion, such as humor or enjoyment, and behavior can be formed unconsciously. Playfulness, as an emotion variable, may directly drive visiting behavior, without contributing to the formation of conscious behavioral intentions. Thus, we posit the following hypothesis.

H9: Playfulness on a social commerce site will positively affect the visiting behavior in relation to the social commerce site.

2.4. The Effects of Social Influence on Social Commerce

The studies on shopping have focused on utilitarian and hedonic values in explaining consumers' shopping intentions. However, in the case of shopping on social commerce sites, it has been inferred that social influence plays an important role in forming the customer's shopping intention in relation to the sites (Huang and Benyoucef, 2013). Social commerce sites actively use SNSs for advertising and social marketing. The most current social commerce sites promote themselves through various SNSs for joint purchasing. The social commerce sites influence consumers to spread information relating to products

or services, and promote the social commerce sites to friends and family members through various SNSs, such as Twitter and Facebook (Kim and Park, 2013). Consumers tend to believe recommendations from people they know and trust—i.e., friends and family members—with regard to online shopping (Kim and Srivastava, 2007). Accordingly, the subjective norm formed by the recommendations of acquaintances (social influence) will impact whether customers visit the site and their purchase intention. Therefore, we propose the following hypotheses.

H10: The subjective norm in relation to a social commerce site will positively affect the intention to visit the social commerce site.

H11: The subjective norm in relation a social commerce site will positively affect the purchase intention in regard to the social commerce site.

2.5. Convenience as a Feature of Social Commerce

Today, social commerce sites are becoming the core of mobile commerce. The social commerce sites are actively leveraging recent mobile commerce because it is suitable for the mobile platform that provides a real-time search on a small screen, due to the social commerce characteristic of allowing consumers to purchase bargains that are recommended by merchandisers every day without having to conduct a separate search. The greatest feature of mobile commerce is the convenience that the use of these websites provide to consumers. Convenience refers to the user's ability to utilize the technology regardless of place and time (Yoon and Kim, 2007). Previous studies in the IT literature have already demonstrated that convenience is a key factor of perceived useful-

ness (Deng et al., 2010; Yoon and Kim, 2007). Therefore, we also posit the following hypothesis.

H12: The convenience of a social commerce site positively affects the perceived usefulness of the social commerce site.

In the IT literature, convenience has not been shown to have a direct effect on behavioral intention. However, as regards the ability of social commerce to offer convenient mobile shopping, convenience is expected to promote consumers' visit to the social commerce site through their interactions with the factors that influence their behavioral intentions. Therefore, we propose the following hypotheses.

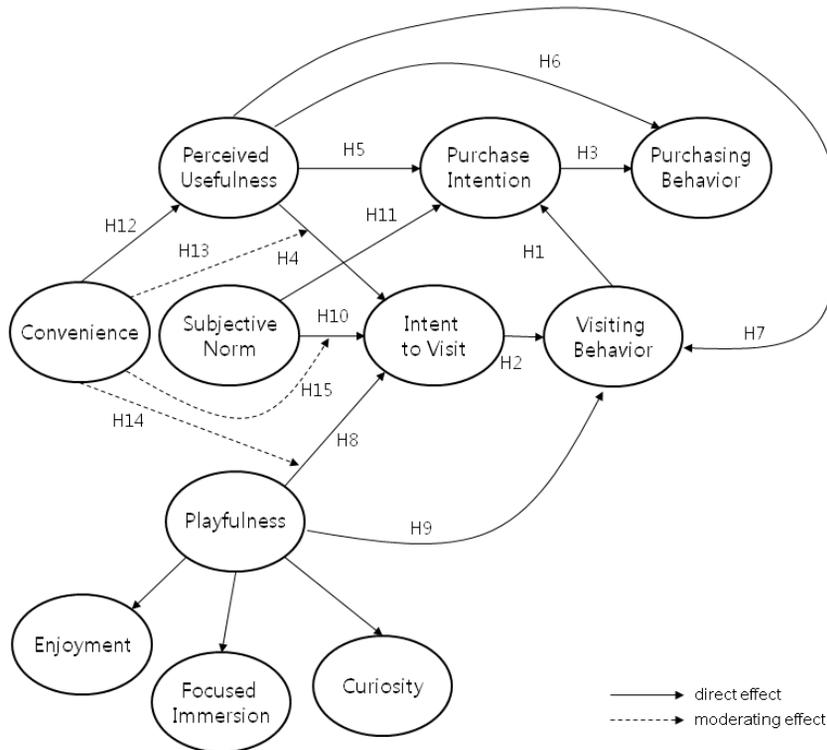
H13: The convenience of a social commerce site positively affects the relationship between the perceived usefulness of the site and the intention to visit the site.

H14: The convenience of a social commerce site positively affects the relationship between the playfulness of the site and the intention to visit the site.

H15: The convenience of a social commerce site positively affects the relationship between the subjective norm relating to the site and the intention to visit the site.

2.6. Research Model

Based on the above, we propose the research model positing that the dependent variable of purchasing behavior is formed by both perceived usefulness and purchase intention. In turn, the purchase intention is influenced by the perceived usefulness, subjective norm, and visiting behavior, while the visiting behavior is influenced by not only the intention to visit



<Figure 1> Research Model

but also playfulness, which comprises enjoyment, focused immersion, and curiosity. In addition, the intention to visit is formed by the perceived usefulness, playfulness, and subjective norms, while convenience has direct effects on the perceived usefulness and also has moderating effects on the relationship between the intention to visit and the factors influencing this intention. <Figure 1> represents this research model.

III. Research Methodology

3.1. Data Collection

This study involved collecting the data from cus-

tomers who are becoming increasingly used to social commerce sites, analyzing the data, and testing the hypotheses. The data were collected through a cloud-based social science research automation site (ssra.or.kr) that supports making web questionnaires, data collection, and statistical analysis. The subjects responded to the online questionnaire, which was hyperlinked to e-mail, an SNS, or web board. In total, 305 usable questionnaires were collected and used in the analysis. The respondents comprised 160 males and 145 females. About 67% of the respondents were under 25 years of age, and 80% of the respondents were students. The detailed descriptive statistics relating to the respondents' characteristics are shown in <Table 1>.

<Table 1> Descriptive Statistics of Respondents' Characteristics

Measure	Value	Frequency (%)
Gender	Male	64(42.7)
	Female	86(57.3)
Age	Younger	3(2.0)
	20 - 29	62(41.3)
	30 - 39	43(28.7)
	40 - 49	38(25.3)
	Older	4(2.7)
Job	None	1(0.7)
	Students	48(32.0)
	Office workers	65(43.3)
	Housewives	14(9.3)
	Experts	9(6.0)
	Others	13(8.7)
Education	High school or below	25(16.7)
	University student	44(29.3)
	Bachelor degree	69(46.0)
	Master degree or over	12(8.0)
Subscription period of the SNS	Less than 1 years	14(9.3)
	1 - 2	50(33.3)
	2 - 3	55(36.7)
	More than 3	31(20.7)

3.2. Measurements

The questionnaire used for the data collection contained scales to measure the various constructs of the research model. The measurements for the visiting and purchasing behaviors and intention constructs were adapted from several studies, including those of Moon and Kim (2001), Limayem et al. (2007), and Yoon and Rolland (2014). The playfulness construct was established as a second-order structure, and the measurements for enjoyment, focused immersion, and curiosity, as the sub-constructs of the second-order construct were adapted from Moon and Kim's (2001) study. The measurements for the

subjective norm construct and the convenience construct were adapted from the studies of Yoon and Rolland (2015) and Yoon and Kim (2007), respectively. The questionnaire items were measured using a seven-point Likert scale, with responses ranging from "strongly disagree" to "strongly agree." All items in the questionnaire are shown in Appendix A.

IV. Results

The SEM (structural equation modeling) approach was used to validate the research model. PLS (partial least squares) approach was employed to perform

the analysis. For PLS approach, we used the *plspm*-package for the open-source software R (Sanchez, 2013). This approach is more appropriate for analyzing complex models with latent variables (Pavlou, et al., 2007) and is more appropriate for performing exploratory-level studies (Chin, 1998). Thus, Partial Least Squares (PLS) was used to accommodate the presence of a large number of latent variables and an exploratory-level study.

4.1. Reliability and Validity of Measurement Items

Partial Least Squares (PLS) can test the convergent and the discriminant validity of the scales. In a Confirmatory Factor Analysis (CFA), by PLS, convergent validity is shown when each of the measurement items loads significantly, with the *p*-value of its *t*-value well within the 0.05 level, on its assigned construct (Gefen and Straub, 2005) and Average Variance Extracted (AVE) of the constructs is higher than 0.50 (Fornell and Larcker, 1981; Hair et al., 2014). <Table 2> shows the factor loadings of the measurement items and *t*-values and <Table 3> shows AVE of the constructs.

All *t*-values in the <Table 2> are above 1.96 and AVE of all constructs in <Table 3> is higher than 0.50. This demonstrates convergent validity of all the measurement items for the constructs.

Discriminant validity is shown when the following two things occur: (1) measurement items load more strongly on their assigned construct than on the other constructs in a CFA, and (2) when the square root of the Average Variance Extracted (AVE) of each construct is larger than its correlations with the other constructs (Gefen and Straub, 2005).

As shown in <Table 2> all the measurement items loaded considerably stronger on their respective fac-

tor than on the other constructs. <Table 3> shows the square root of the AVE and the inter-construct correlations. Comparisons of the correlation with the square root of the AVE show that all correlations between the two constructs are less than the square root of the AVE of both constructs.

To assess the reliability of a measurement item, the study computed a composite construct reliability coefficient, as shown in <Table 3>. Composite reliabilities ranged from 0.85 (for visiting behaviors) to 0.97 (for Purchase Intention), which exceeded the recommended level of 0.70 (Bagozzi and Yi, 1988). Also, as shown in <Table 2>, the factor loadings of all items are higher than 0.70, indicating indicator reliability of the measurement items (Hair et al., 2014). The results, therefore, demonstrate a reasonable reliability level for the measured items.

4.2. Hypothesis Testing Results

Having assessed the structural model, we then examined the coefficients of the causal relationships between constructs, which would validate the hypothesized effects. <Figure 2> illustrates the paths, and their significance, on the structural model. The coefficients, their *t*-value on the structural model, and the coefficients of determination (R^2) for each dependent construct are shown in <Table 4>.

Based on the structural model, we tested the hypotheses. As indicated in <Table 4>, the results of the hypothesis testing based on the relationships between intentions and behaviors showed that all paths were significant. Specifically, visiting behavior had a significant effect on purchase intention, and the intention to visit and the purchase intention had significant effects on the related behaviors—that is, the visiting and purchasing behaviors, respectively, with $\alpha = 0.01$. The hypotheses relating to perceived

<Table 2> Results of Confirmatory Factor Analysis

Construct		Construct loading scores										t-value
		1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	
Convenience	CV1	0.81	0.52	0.47	0.25	0.42	0.41	0.41	0.33	0.37	0.31	28.93
	CV2	0.81	0.51	0.54	0.25	0.51	0.41	0.46	0.33	0.35	0.29	27.70
	CV3	0.91	0.72	0.58	0.18	0.52	0.46	0.60	0.45	0.54	0.47	81.48
	CV4	0.91	0.72	0.60	0.22	0.55	0.45	0.62	0.51	0.55	0.50	86.75
Perceived usefulness	PU1	0.66	0.90	0.56	0.30	0.54	0.45	0.61	0.53	0.53	0.51	62.10
	PU2	0.61	0.88	0.50	0.30	0.48	0.44	0.63	0.53	0.54	0.53	35.78
	PU3	0.63	0.90	0.47	0.28	0.49	0.42	0.53	0.47	0.49	0.40	50.22
	PU4	0.67	0.86	0.50	0.19	0.49	0.51	0.58	0.50	0.54	0.46	40.72
Enjoyment	ENJ1	0.60	0.53	0.93	0.51	0.74	0.50	0.58	0.50	0.51	0.42	32.30
	ENJ2	0.61	0.57	0.96	0.44	0.77	0.55	0.62	0.49	0.54	0.46	25.46
	ENJ3	0.61	0.52	0.95	0.42	0.75	0.52	0.61	0.52	0.55	0.46	21.18
	ENJ4	0.57	0.54	0.93	0.44	0.83	0.53	0.64	0.50	0.53	0.45	43.51
Focused Immersion	FOC1	0.38	0.34	0.49	0.84	0.50	0.31	0.31	0.33	0.32	0.20	6.36
	FOC2	0.14	0.25	0.36	0.88	0.34	0.36	0.29	0.28	0.32	0.22	2.98
	FOC3	0.11	0.17	0.37	0.86	0.38	0.27	0.27	0.26	0.29	0.21	3.29
Curiosity	CUR1	0.52	0.51	0.78	0.44	0.92	0.54	0.61	0.49	0.53	0.43	25.58
	CUR2	0.50	0.48	0.76	0.44	0.94	0.52	0.62	0.50	0.51	0.42	19.81
	CUR4	0.52	0.51	0.64	0.39	0.79	0.53	0.58	0.51	0.55	0.42	14.82
Subjective Norm	SN1	0.44	0.48	0.51	0.33	0.53	0.88	0.62	0.43	0.60	0.40	37.98
	SN2	0.48	0.45	0.49	0.30	0.54	0.89	0.56	0.44	0.57	0.44	56.54
	SN3	0.40	0.42	0.48	0.33	0.52	0.88	0.57	0.42	0.58	0.47	52.09
Visiting Intention	VI1	0.57	0.61	0.60	0.35	0.63	0.62	0.94	0.71	0.73	0.68	106.18
	VI2	0.63	0.64	0.67	0.31	0.68	0.64	0.93	0.66	0.76	0.63	53.89
	VI3	0.52	0.59	0.55	0.28	0.57	0.57	0.91	0.66	0.73	0.65	72.05
Visiting Behaviors	VB1	0.46	0.56	0.52	0.29	0.54	0.51	0.75	0.87	0.66	0.79	81.87
	VB2	0.35	0.44	0.35	0.23	0.35	0.30	0.50	0.80	0.48	0.48	30.42
	VB3	0.31	0.34	0.39	0.30	0.44	0.31	0.43	0.73	0.46	0.46	24.95
Purchasing Intention	PI1	0.51	0.57	0.55	0.34	0.55	0.62	0.75	0.61	0.94	0.56	115.09
	PI2	0.48	0.54	0.50	0.32	0.53	0.61	0.77	0.65	0.93	0.63	49.14
	PI3	0.51	0.56	0.56	0.35	0.58	0.64	0.75	0.63	0.97	0.61	179.11
	PI4	0.54	0.58	0.55	0.35	0.60	0.63	0.76	0.69	0.96	0.63	148.82
Purchasing Behaviors	PB1	0.43	0.49	0.47	0.27	0.49	0.53	0.71	0.72	0.67	0.91	117.88
	PB2	0.40	0.47	0.36	0.15	0.34	0.31	0.51	0.59	0.44	0.85	45.64

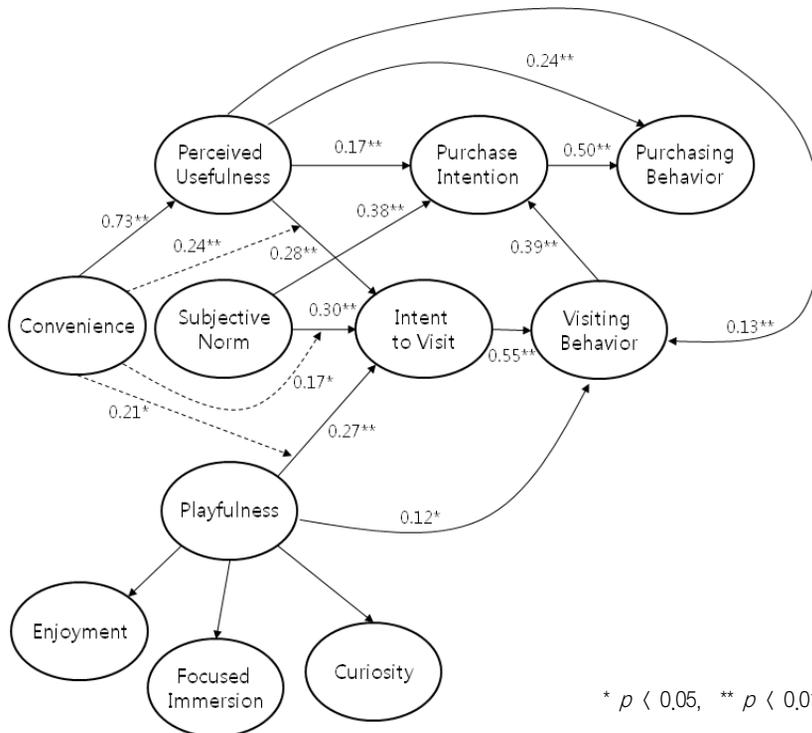
<Table 3> Average Variance Extracted and Correlation Matrix

Construct	Factor									CCR*	AVE**
	1)	2)	3)	4)	5)	6)	7)	8)	9)		
Convenience	(0.86)									0.92	0.74
Perceived Usefulness	0.73	(0.89)								0.94	0.78
Enjoyment	0.64	0.58	(0.94)							0.97	0.88
Focused Immersion	0.26	0.30	0.48	(0.86)						0.90	0.74
Curiosity	0.58	0.56	0.82	0.48	(0.89)					0.92	0.78
Subjective Norm	0.50	0.51	0.56	0.36	0.60	(0.88)				0.91	0.78
Intended to visit	0.62	0.66	0.65	0.34	0.68	0.66	(0.93)			0.95	0.86
Visiting Behaviors	0.48	0.57	0.54	0.34	0.57	0.49	0.73	(0.80)		0.85	0.64
Purchase Intention	0.54	0.59	0.57	0.36	0.60	0.66	0.80	0.68	(0.95)	0.97	0.90
Purchasing Behaviors	0.47	0.54	0.48	0.25	0.48	0.49	0.70	0.75	0.64	(0.88)	0.88

*CCR : Composite Construct Reliability

**AVE: Average Variance Extracted

() : Square root of AVE



<Figure 2> Path Diagram for Research Model

usefulness also showed that all paths were significant. Perceived usefulness had a significant effect on not only the intention to visit and purchase intention but also on the visiting and purchasing behaviors, with $\alpha = 0.01$. The results relating to the hypotheses exploring the role of playfulness showed that playfulness had a significant effect on the intention to visit and visiting behavior, with $\alpha = 0.01$. The results relating to the hypotheses regarding social influence also indicated that the subjective norm had a significant effect on the intention to visit and Purchase Intention, with $\alpha = 0.01$. Lastly, convenience had a significant effect on perceived usefulness, with $\alpha = 0.01$.

To test the moderating effect of convenience, we established the convenience variable as the moderators of the model and employed the product term approach using the interaction effects to analyze the effects of the moderators on the model, because the convenience construct in this study were measured as continuous variables (Henseler and Fassott, 2010). To analyze the interaction effects using PLS, the approach of Chin et al. (2003) was employed, with an interaction construct created by multiplying the indicators of each of the interacting constructs. The moderator analyses of the relationship between the intention to visit and the factors influencing this intention were performed. As indicated in <Table 4>,

<Table 4> Hypothesis Testing Results

Hypothesis	Path	Path coefficient	t-value
H1	Visiting Behaviors -> Purchase Intention	0.39	7.79**
H2	Visiting Intention -> Visiting Behaviors	0.55	11.43**
H3	Purchase Intention -> Purchasing Behavior	0.50	10.73**
H4	Perceived Usefulness -> Intent to Visit	0.28	4.33**
H5	Perceived Usefulness -> Purchase Intention	0.17	3.53**
H6	Perceived Usefulness -> Purchasing Behavior	0.24	4.97**
H7	Perceived Usefulness -> Visiting Behavior	0.13	2.76**
H8	Playfulness -> Intent to Visit	0.27	3.95**
H9	Playfulness -> Visiting Behavior	0.12	2.14*
H10	Subjective Norm -> Intent to Visit	0.30	5.14**
H11	Subjective Norm -> Purchase Intention	0.38	8.36**
H12	Convenience -> Perceived Usefulness	0.73	22.89**
H13	Perceived Usefulness × Convenience -> Intent to Visit	0.24	2.51**
H14	Playfulness × Convenience -> Intent to Visit	0.21	1.81*
H15	Subjective Norm × Convenience -> Intent to Visit	0.17	1.67*

Intent to Visit R^2 : 0.627

Visiting Behaviors R^2 : 0.545

Purchase Intention R^2 : 0.622

Purchasing Behaviors R^2 : 0.453

* Significant at the 0.05 level

** Significant at the 0.01 level

Perceived Usefulness × Convenience Cohen's f^2 : 0.025

Playfulness × Convenience Cohen's f^2 : 0.016

Subjective Norm × Convenience Cohen's f^2 : 0.011

the interaction effect of perceived usefulness and convenience had a significant effect on the intention to visit, with $\alpha = 0.01$, and the interaction effects of playfulness and convenience and subjective norm and convenience also had significant effects on the intention to visit, with $\alpha = 0.05$. Therefore, all hypotheses were supported. To determine the strength of the moderating effects, we calculated the effect size (Cohen, 1988). The effects size of the moderating impact of convenience for perceived usefulness was 0.025, for playfulness was 0.016, and for subjective norm was 0.011. Thus, the moderating effects can be considered weak effect sizes because moderating effects with effect sizes f^2 of 0.02 is regarded as weak, effect sizes from 0.15 as moderate and above 0.35 as strong (Henseler and Fassott, 2010).

In addition, about 55% of the variance of the visiting behavior ($R^2 = 0.545$) was explained by the intention to visit and playfulness; 63% of the variance of the intention to visit ($R^2 = 0.627$) was explained by perceived usefulness, playfulness, and subjective norm; and over 45% of the variance of the purchasing behavior ($R^2 = 0.453$) was explained by the purchase intention and perceived usefulness. <Table 4> shows the results of the hypothesis testing in more detail.

V. Discussion and Conclusions

This research explored the formation process of the purchasing and visiting behaviors of customers on social commerce sites. A research model based on the utilitarian and hedonic values of shopping and social influence and convenience, representing the features of social commerce, was developed and empirically analyzed using data from social commerce site users. The various insightful results obtained from the research model are summarized below.

First, the results of this study reveal that the purchasing behaviors of consumers on social commerce sites are influenced directly by perceived usefulness as well as purchase intention in relation the social commerce sites. This result implies that the usefulness of a social commerce site may trigger both unplanned and planned actions, because it offers consumers a stimulus that evokes a feeling of usefulness, directly driving impulse buying on the social commerce sites (during the survey, a number of respondents replied that they purchase goods on impulse when they find exceptional discounts while surfing a social commerce site). Second, the study showed that consumers' visiting behaviors on social commerce sites are influenced directly by the playfulness of the social commerce site as well as the intention to visit the social commerce site. This result implies that consumers' visiting behaviors in relation to the social commerce sites may be automatic behaviors as well as planned actions, and playfulness directly drives the automatic behaviors. Similar to visiting Facebook frequently (i.e., automatic or habitual behaviors), the automatic behavior of visiting a social commerce site can be directed by the pleasure of the act itself. In particular, a mobile commerce environment that provides convenience with regard to usage would promote the automatic behavior of visiting a social commerce site for pleasure. Third, the study revealed that subjective norm affects the intention to visit a social commerce site and the purchase intention while on the site. Prior studies on e-commerce have revealed a little known relationship between subjective norm and behavioral intention. This result confirms that social influence plays an important role in forming a customer's shopping intention in relation to social commerce sites. Indeed, the customer's decision process is influenced by gaining information from trusted people (i.e., friends and family

members); therefore, the social influence of high quality reviews written by such people can have a direct, positive effect on consumers' decision-making (Kim and Srivastava, 2007). Fourth, the study revealed that convenience has effects on the relationships between the intention to visit a social commerce site and the factors (perceived usefulness, playfulness, subjective norm) influencing this intention. Today, most social commerce sites offer their customers a mobile app allowing customers to visit the social commerce site with a single click anytime, anywhere. The convenient shopping environment provided by this mobile platform may promote consumers' visits to such social commerce sites.

5.1. Contributions and Implications

Social commerce is a new type of e-commerce based on SNS technologies and aggressive marketing strategies, such as one-deal-a-day, and it has become very popular. However, little is known about consumers' two substantive behaviors (visiting and purchasing behaviors) for making purchases in social commerce.

This study has important implications for research. First, the results of this study provide a comprehensive understanding of customers' purchasing on social commerce sites due to the analysis of their purchasing and visiting behaviors. The study established the visiting and purchasing behaviors separately as the dependent variables, and explored the factors influencing the two behaviors. The results revealed that although the two behaviors are closely correlated, they are influenced by different factors. Second, this study explored the direct effect of the perceived usefulness and playfulness of a social commerce site on the visiting and purchasing behaviors in relation to the site. Most studies on social commerce have focused

on intentions instead of actual behaviors. This study extended the research area to actual behaviors as well as intentions and empirically tested the effects of the perceived usefulness and playfulness on the actual related behaviors. Finally, the study revealed that there is a moderating effect of convenience on the relationships between the intention to visit a social commerce site and the factors influencing this intention. This result bolsters the studies on the role of convenience as a moderating variable.

The findings of this study also have important implications for practitioners. First, the results indicate that perceived usefulness plays an important role in stimulating a consumer's impulse purchasing on social commerce sites. This implies that when consumers perceive the usefulness of goods and services while shopping, they feel the temptation to make a purchase, and this finally leads to an impulse purchase. Hence, the marketing managers of the social commerce sites need to provide their consumers with the stimulus to make them feel usefulness while shopping. Second, the results indicate that playfulness is a significant predictor of a consumer's visiting behavior in relation to social commerce sites. Furthermore, the visiting behavior significantly influences a consumer's purchasing behavior. Thus, providing consumers with pleasure when they visit a social commerce site is key to the site's success. Accordingly, in order to make their consumers have an enjoyable experience, the managers of social commerce sites should develop and host hedonic events on their sites. Third, this study shows that subjective norm has a significant effect on the purchase intention in relation to the site as well as the intention to visit the site. The results support that consumers tend to believe recommendations from their friends and family members in regard to social commerce shopping. Therefore, managers must facilitate the

sharing of information on their goods and services, and aggressively manage the information to maximize recommendations or good reviews.

5.2. Limitations and Further Research Issues

Although our findings provide meaningful implications for researchers and practitioners, the study had some limitations. First, this study gathered data from only one county—namely, South Korea. Although South Korea is a leading country in the IT industry and has a vibrant market for social commerce (Kim and Park, 2013), cultural differences can influence consumers' purchasing decision-making processes with regard to social commerce sites. In order to confirm the generalizability of the results, a study should be conducted in various countries. Second, this study did not consider the control vari-

bles such as the social commerce site visitor's income or purchasing power, which may strongly influence the results. Thus, testing these control variables should be considered in future studies. Third, although we were careful to avoid selection bias in the data collection process, it is possible that response bias occurred, including social desirability, acquiescence, and leniency effects. Therefore, further research should be designed in order to conduct a more careful and in-depth experiment.

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<Appendix A>

Convenience: Likert scale ranging from strongly disagree to strongly agree

- CV1. I can shop on the social commerce site at a time that is convenient for me.
- CV2. I can shop on the social commerce site anywhere.
- CV3. The social commerce site is convenient for shopping.
- CV4. I find the social commerce site convenient for shopping.

Perceived usefulness: Likert scale ranging from strongly disagree to strongly agree

- PU1. The social commerce site enhances my shopping performance.
- PU2. The social commerce site increases my shopping productivity.
- PU3. The social commerce site improves my shopping effectiveness.
- PU4. I find the social commerce site useful for shopping.

Enjoyment: Likert scale ranging from strongly disagree to strongly agree

- PE1. Exploring the social commerce site is enjoyable.
- PE2. Using the social commerce site is pleasurable.
- PE3. Shopping on the social commerce site is amusing.
- PE4. I find that the social commerce site is a fun place.

Focused immersion: Likert scale ranging from strongly disagree to strongly agree

- CM1. When shopping on the social commerce site, I do not realize the elapsed time.
- CM2. When shopping on the social commerce site, I do not notice changing around.
- CM3. When shopping on the social commerce site, I often forget the work I must do.

Curiosity: Likert scale ranging from strongly disagree to strongly agree

- CI1. The social commerce site stimulates my curiosity.
- CI2. The social commerce site leads to exploration.
- CI3. I try to find something to buy on the social commerce site.

Subjective norm: Likert scale ranging from strongly disagree to strongly agree

- SN1. People who are important to me think it is a good idea to use the social commerce site.
- SN2. People who are important to me would use the social commerce site.
- SN3. People who are important to me think I should use the social commerce site

<Appendix A> Cont.

Intention to visit: Likert scale ranging from strongly disagree to strongly agree

- VI1. I will frequently visit the social commerce site.
- VI2. I will continue to visit the social commerce site.
- VI3. I will visit the social commerce site on a regular basis.

Visiting behavior

- VB1. How frequently do you visit the social commerce site?
Extremely infrequently/Extremely frequently (Seven-point Likert scale)
- VB2. How many times do you use the social commerce site within a week?
- VB3. How many hours do you spend on the social commerce site per day?

Purchase Intention: Likert scale ranging from strongly disagree to strongly agree

- PI1. I will definitely purchase goods or services on the social commerce site soon.
- PI2. I intend to buy goods or services on the social commerce site in the near future.
- PI3. It is likely that I will purchase goods or services on the social commerce site soon.
- PI4. I expect to purchase goods or services on the social commerce site in the near future.

Purchasing behaviors

- PB1. How frequently do you purchase on the social commerce site?
Extremely infrequently/Extremely frequently (Seven-point Likert scale)
- PB2. How many times do you purchase on the social commerce site during a period of three months?

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