

## **The Effect of Mobile Social Commerce Site (MSCS) Characteristics on Purchase Intention-Focused on Mediating Effect of Cognitive Emotional Trust**

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**Abstract:** Recently with the proliferation of smartphones and social commerce, consumers are increasingly using mobile social commerce sites. The purpose of this study is to investigate the effect of mobile social commerce characteristics on the purchase intention and trust of mobile social commerce site users. A total of 914 samples were collected through the questionnaire and path analysis was conducted to analyze the relationship between the factors. First, the characteristics of mobile social commerce such as information quality, network externality, comment quality, media richness, social capital provide positive effects on positive trust and emotional trust. It was determined that perceived trust has a significant effect on emotional trust but not cognitive trust. Second, cognitive trust has a positive effect on purchase intention. Finally, emotional trust has no significant effect on the purchase intention of mobile social commerce. The results of this study will provide practical implications for future mobile social commerce providers to establish marketing strategies for product sales.

**Key words:** Mobile social commerce, cognitive trust, affective trust, purchase intention, positive, practical

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### **INTRODUCTION**

Recently, social network-based internet companies are providing various and innovative social media services. With the rapid growth of smartphone subscribers, the distribution network of mobile, along with the internet has emerged as a new communication medium to replace traditional communication media such as TV, radio, newspapers and magazines (Baek and Han, 2015). Especially, as the mobile commerce market is rapidly growing due to popularization of smartphones and wireless internet, the size of the social commerce market is increasing every year as the number of Social Networking Services (SNS) increases. Social commerce refers to the evolution of e-Commerce which provides commodity recommendation, repurchase, network effect as well as providing low-priced products and services to consumers and suppliers. Social commerce is achieved by utilizing social networks and word of mouth based on social networks (Bae, 2013). Social commerce has characteristics of real-time spreading by combining SNS characteristics in e-Commerce. In other words, the space

where e-Commerce is performed is not limited to the site but shares the information with acquaintances through SNS. Therefore, social commerce started with the aim of personal interaction and network building however, now it is attracting attention as an important marketing tool and a new commerce paradigm.

In this context, this study focuses on Mobile Social Commerce (MSC) which combines SNS with the high penetration rate of smartphone. Also, as trust is important in e-Commerce, trust is an important variable in SNS based MSC.

The purpose of this study is to analyze the relationship between mobile intention and purchase intention through perceived trust and emotional trust on mobile social commerce sites (MSCSs) and to provide the implications of it. First, we analyze the influence of MSC characteristics on trust. Then, the relationship between trust and purchase intention is examined.

### **Literature review**

**Research on mobile social commerce:** Recently with the proliferation of smartphones, customers are increasingly

purchasing goods through MSCSs. MSC means that transactions are made through monetary non-monetary exchange online using mobile devices and wireless internet. In Korea, studies of social commerce are active. First, Kim *et al.* (2011) found that social commerce trust and word-of-mouth has a significant effect on purchasing intention. It was suggested that the effect of social commerce on authenticity, prestige and promptness is influenced by trust. Kwang *et al.* suggested that trust and satisfaction of social commerce operators are essential factors for relationship with consumers and improvement of loyalty. Wang and Kwon (2012) suggested the factors affecting the purchase intention of the social commerce repurchase intention include collectivism, relationship, convenience, information usefulness, cheaper price, site reputation, rapidity of social commerce satisfaction and repurchase intention. In the study of factors affecting repurchase intentions of social commerce services based on a technology acceptance model and flow theory, the right to discretion (Bae, 2013) was examined in terms of interactivity, social reality, self-efficacy, perceived usefulness and ease of use. In addition, Oliver (1999) examined the effect of existing service quality and social commerce characteristics on the purchasing attitudes of customers using social commerce. As a result of the analysis, it was found that contents and technology influence the purchase attitude of customers in service quality. In a study on the relationship between trust and loyalty for the success of a hotel company's social commerce, Choi showed that reputation, economics, service quality and transaction safety are driving factors. In addition, Kim *et al.* (2015) examined the effect of motivational factors on trust, satisfaction and behavioral intentions of social commerce. Meanwhile, Baek and Han (2015) showed that functional, playful and economic motivations had significant effects on attitude and re-use intention through empirical analysis between usage motivation, attitude and re-use intention of MSCS.

**Cognitive trust and affective trust:** Trust has been defined in a variety of ways such as trust and positive expectancy, perceived trust and precedence of opponents in order to achieve desirable results. It is a concept which has been studied and received attention in various fields. Trust involves two exchanges, trustworthy consumers and trustworthy service providers. There are many studies on trust between firms and transactions between firms and individuals. Ganesan (1994) argues that trust is a major factor in the long-term relationship between a seller and a buyer. Two beliefs are trustworthiness that represents belief in a seller's competence and trustworthiness that shows mutual benefit in the face of

environmental uncertainty. We define trust as an element. In previous studies, the definition and measurement of trust have been defined to include various attributes such as cognitive aspects and subjective feelings. However, recently, trust has been divided into two dimensions: cognitive trust and emotional trust. The level of trust in a service or organization between individuals, between organizations and between individuals and organizations can be seen to be based on both cognitive trust and emotional trust (Hansen *et al.*, 2002). Cognitive trust is a cognitive process in which trust in the subject of social relations is rationalized by knowledge (Moorman *et al.*, 1993) which is the willingness to believe in the competencies, abilities, skills and professional experience of service providers. On the other hand, emotional trust refers to subjective beliefs based on feelings of a partner's care. In other words, emotional trust comes from emotional bonding or stability among individuals (McAllister, 1995; Hansen *et al.*, 2002; Johnson and Grayson, 2005). According to Edell and Burke (1987), cognitive trust refers to a willingness to rely on service providers based on cognitive attributes of attitude formation but emotional trust responds based on subjective feelings and on emotions experienced while working. In particular, MSC on-line is characterized by mutual dependence or trust, between consumers and social commerce. As a result, customer's trust in social commerce is an important factor in their continued purchase intentions.

In this study, we focus on two dimensions of trust: cognitive trust and emotional trust and discuss the importance of trust for continuous purchase intention in an online environment called social commerce.

### **Factors affecting trust**

**Information quality:** Information quality refers to the quality of information provided by the website to the customer due to the comprehensibility, accuracy, timeliness and completeness of the information. In this study, we propose a new methodology for social commerce in Korea which is based on SNS. Even with MSC, providing accurate, easy-to-understand and complete information will give consumers a high level of trust and build trust in their customers and sellers.

Mckinny and Yoon (2002) found that information quality is composed of validity, comprehensibility, reliability, appropriateness, scope and usability in a study measuring web customer satisfaction. In addition, Eschenfelder *et al.* presented content quality, delivery, service, accuracy and privacy for the information quality of a website. Liu and Arnet gave a complete description of products and services and the perception of the quality of products and services.

**Perceived accreditation:** In online transactions, authentication can be defined as a belief that successfully builds trust. This authentication has a significant impact on trust formation because of insufficient information about the trustee when the relationship is initially formed (McKnight *et al.*, 2002). Therefore, in the online transaction through the MSCS, it is necessary for the company to certify the seller in order to lower the customer's awareness of uncertainty because the consumer can avoid the transaction by recognizing high uncertainty. Especially, scholars studying trust in companies on the internet say that such authentication is very important because unexpected events may occur in internet transactions. As a result, by pre-empting the authentication process for the merchants in the social commerce site, consumers are giving certainty to transactions on the web which in turn affects trust.

**Comment quality:** Product reviews are a typical example of consumer-led online oral communication and are defined as communication activities or processes that informally exchange information about personal direct and indirect experiences between consumers on a particular subject. Consumers are not limited to the use of information provided by the company in order to minimize risk factors but to the one-to-many, two-way communication, rather than the one-way communication in online shopping (Peterson and Merino, 2003). Therefore, this review affects the customer's confidence in MCSC.

**Network externalization:** Network externality is called "network effect" and has been attracting attention in the field of economics. Katz and Shapiro (1994) define network externality as "the greater the utility that a consumer gets from a service or product, the larger the size of the network to which the service or product belongs". In other words when the number of people in the network is large, it is a phenomenon that increases with participant's utility (Dickinger *et al.*, 2008; Economides, 1996). Network externality is a variable that has been identified as an important factor influencing consumer's use of the technology in many existing studies related to information technology (Gupta and Mela, 2008; Schmitz and Latzer, 2002). Other early research on the effect of network externality have been mainly on the acceptance and use of information technology such as SMS, multimedia message services (Wang *et al.*, 2012), 3G phone service and the effect of network size on the usefulness and convenience of information

technology. In this regard, Kauffman and Wang (2001) also showed that network externality increases the willingness to pay the price of a product (Zhou and Lu, 2011) suggesting a positive effect.

**Media richness:** Media richness refers to the transmission of media that can provide rich clues in the context of mediated communication (Daft and Lengel, 1986). According to media richness theory, face-to-face contact is the most abundant medium, followed by telephone, e-mail, personal document, official document and official quantity data in that order. Daft and Lengel (1986) suggested four factors that influence media richness theory. First, immediate feedback. Second, it is a diverse medium of information transmission. Third, the degree of concentration on personalization. In other words when personal feelings and feelings can be conveyed together, personalization level is high. Fourth, the ability to convey information by using different languages to improve understanding through diversity of language which means a wide range of meanings and ranges conveyed through language.

**Social capital:** Social capital is an invisible asset produced by the social relations created as a result of social networking which is inherent in the structure of people's social networks and relationships (Nahapiet and Ghoshal, 2000). Social capital is understood as a diverse concept but generally refers to social assets such as trust, norm and network that facilitate cooperation between people and people and social transactions. However, Putnam (2000) defines social capital as "formed by social participation." Porters (1998) defines social capital as the ability to capture the benefits that can be gained by being a member of a social network or other social structure. Recently, online studies on the importance of social capital have been actively conducted because online social capital reduces the cost of social relations and positively changes the lives of people due to convenience. In addition, the online space has been argued to increase exchanges with other people and increase the individual social involvement through new human relations. In recent years, studies on social networking and social capital have been conducted (Boase *et al.*, 2006). In comparison, there is a strong link online which suggests that the role of cohesive social capital is stronger. This is because it is based on a profile that includes personal information, forms a relationship between individuals and provides a function to exchange their opinions with users; thereby facilitating social interaction among participants.

**Performance of trust in the online environment:** Loyalty can be measured by repurchase intention, re-entry inquiry and so on. Oliver (1999) explained that consumers will continue to buy back their favorite products in the future and that this makes them repeat purchases of the same brand despite the situational influences or marketing activities that cause conversion behavior. Jones and Sasser (1995) refer to customer loyalty as a feeling of attachment or affection for a person, product or service. It may be seen as a willingness to purchase and to continue to recommend. The purpose of purchase is to recognize the service or product needed by motivation such as personal desire or environmental factors. To evaluate the product through the process of information search is to measure whether the consumer is aware of the importance and whether they are willing to purchase. Hansei *et al.* examined the effects of domestic social commerce characteristics such as cost reduction, impulse purchase, social influence, decision support and word of mouth effects on purchase intention. Empirical analysis confirms that trust plays a role in increasing the purchase intention of MSC.

**MATERIALS AND METHODS**

**Research model:** This study investigates the effect of MSC characteristics on MSC purchase intention through the experience of using MSC on current customers. In this study, independent variables influencing trust are divided into product related, comment related and communication related variables based on previous studies. Product related variables include information quality and perceived accreditation. Related variables were set as comment quality and network externality. Media-related variables such as media richness and social capital were set as communication-related variables. These variables are set as a dependent variable by purchasing intention through cognitive trust and affective trust. The research model of this study is shown in Fig. 1.

**Setting the hypothesis**

**Product-related hypothesis:** As customers using internet shopping experience only limited information, they are highly dependent on information provided by shopping malls (Kim *et al.*, 2008). In addition, customers tend to

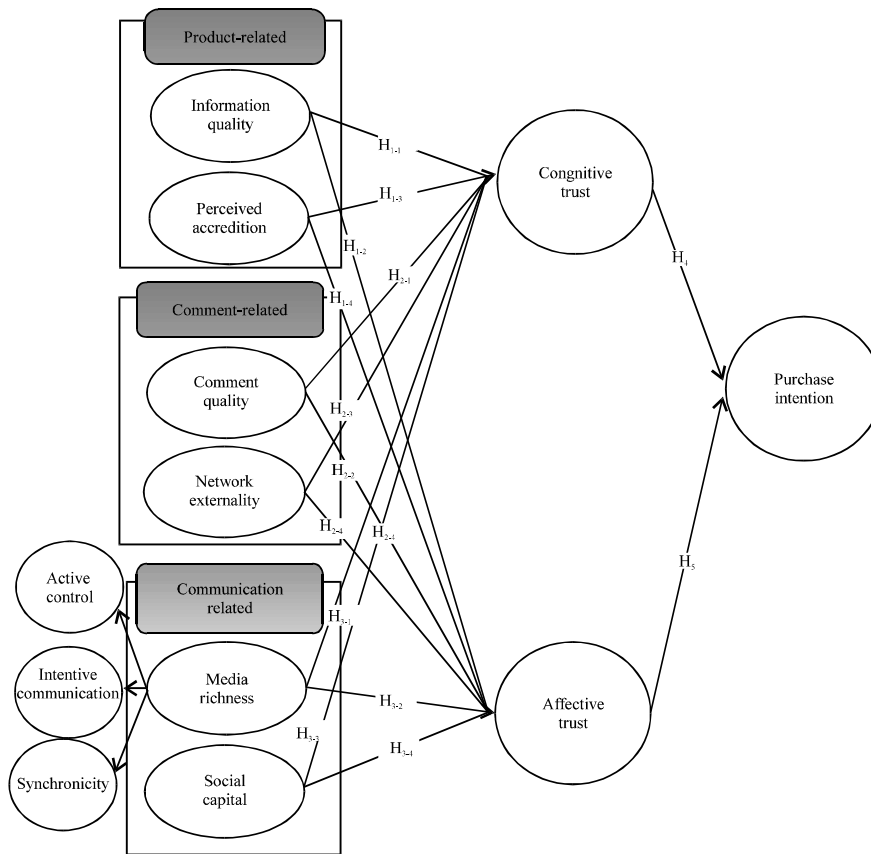


Fig. 1: Research model

trust websites that contain accurate, complete and timely information; the quality of information on the site directly affects corporate trust. MSC likewise drives the purchase of the customer through information provided via. mobile and decides whether to purchase through the information. Social commerce which is accurate, easy to understand and fully informed has high cognitive confidence in consumers. When providing information that meets customer needs, customers build trust in the social commerce site. On the other hand, online transactions are an important factor in the formation of trust in security and certification in an uncertain world. Cheskin Research showed that certification affects customer trust positively. Therefore, based on this theoretical background, the following research hypothesis was set up in this study:

- H<sub>1,1</sub>: information quality will have a positive impact on cognitive trust
- H<sub>1,2</sub>: information quality will have a positive impact on affective trust
- H<sub>1,3</sub>: perceived accreditation will have a positive (+) impact on perceived confidence
- H<sub>1,4</sub>: perceived certification will have a positive (+) impact on emotional trust

**Comments related hypothesis:** Dayal *et al.* (1999) found that consumers are most trustworthy in evaluating other users in purchasing a particular product. Online purchasing depends on the product reviews of others because there is a limit to experience of actual products. As a result, there is a limit to the direct experience of people in shopping through media such as the internet, so, the role of recommendation and oral presentation is very large (Haubl and Trifts, 2000). Particularly, online word of mouth is an effect that persuades more easily because the explanation and questions can be solved immediately; it is interactive information transmission rather than general information communication unlike existing advertisement. Seung-Woon Kim and Hee-Taek Kang demonstrated empirically that using the perceived effectiveness of product review boards affect the intention to use through trust and satisfaction in the online shopping process. In a study by Kook-Yong Lee, it was confirmed that the informativeness and usability of the product perceived on the online product search site had a significant effect on the trust and satisfaction of the site. In particular, online is much more vulnerable to purchasing products because of the specificity that cannot be directly seen and touched, unlike existing offline transactions. As a result, other customer's reviews on-line satisfy this requirement. As such MSC is likely to have a significant impact on the trust of social commerce as is the case with online commerce. On the other hand, network-related products provided by social commerce

sites have positive network externality (Katz and Shapriom 1994). As the number of users increases and the value and utility of the products increase. Oshanghyeon and Sanghyun Kim argue that the externality of the network is important in the e-Marketplace. In other words because the e-Marketplace is formed by the transaction network relationship, based on inter-firm transaction relation by participation of many companies, the key factor of forming and maintaining inter-firm relationships and forming networks is interactions based on trust. Therefore, the study suggests that the e-Marketplace effectively plays a role when the participating transaction network is large it was perceived that the network is highly effective. Therefore, the following research hypotheses were established based on the preceding studies:

- H<sub>2,1</sub>: comment quality will have a positive effect on perceived confidence
- H<sub>2,2</sub>: comment quality will have a positive effect on emotional trust
- H<sub>2,3</sub>: network externality will have a positive (+) impact on perceived confidence
- H<sub>2,4</sub>: Network externality will have a positive (+) effect on emotional trust

**Communication-related hypotheses:** In media richness theory, concurrency refers to the degree of concurrency that each individual gets through the medium of communication. In other words when people with common interests show the same pattern at the same time, we can say that there is a synchronicity between individuals. MSCs also have a higher level of trust as the number of buyers for products of common interest in the same time zone increases.

On the other hand, online social capital accumulated by individuals through persistent network relationships helps customers who purchase on MSCs to build higher trust. The results of this study suggest that online social capital is an important factor in the interdependence of netizens MSCs are likely to influence trust formation. Based on the above theoretical background, the following research hypothesis was set:

- H<sub>3,1</sub>: media richness will have a positive effect on perceived confidence
- H<sub>3,2</sub>: media richness will have a positive effect on emotional trust
- H<sub>3,3</sub>: social capital will have a positive effect on perceived confidence
- H<sub>3,4</sub>: social capital will have a positive impact on emotional trust

**Hypotheses related to trust and purchase intent:** The importance of trust in the online environment is widely

recognized because it is impossible to predict the existence of uncertainty and dependence in the online environment such as the research result that the higher the trust in the website, the better the purchase intention of the website (Gefen, 2000; Doney and Cannon, 1997). Johnson and Grayson (2005) demonstrated empirically that cognitive trust has a positive effect on sales and future interaction expectations. Gegen (2000), point out that trust on the internet affects purchasing including loyalty and influences purchase intentions Jarvenpaa *et al.* (2000). suggested that trust in the internet shopping mall reduces the perceived risk and increases the purchase intention as a result found that trust in social commerce has a significant effect on purchase intention. In addition, trust is an important success factor in promoting the purchase intention of social commerce

(Jarvenpaa *et al.*, 2000). It was assumed that the cognitive and emotional trust of users of the social commerce site through mobile affects the purchase intention positively:

- H<sub>4</sub>: cognitive trust will have a positive effect on purchase intention
- H<sub>5</sub>: emotional trust will have a positive effect on purchase intention

**Operational definition of research variables:** The variables used in this study were modified and supplemented as shown in Table 1, according to the purpose of this study by applying the measured or used items in previous research presented in the theoretical background and according to the set research hypothesis.

Table 1: Items and conceptualizations

Factors	Items	Operational definition	Researcher
<b>Product</b>			
Information quality	I think the MSCS provides reliable information The MSCS provides sufficient information when I try to make a transaction I am satisfied with the information provided by the MSCS	Individual degree of satisfaction	Pavlou <i>et al.</i> (2005) Kim <i>et al.</i> (2005)
Perceived accreditation	Assessing the competencies of new sellers is an important part of this MSCS many process I believe that this MSCS undertakes a thorough screening process be allowed to transact in its marketplace) I believe this MSCS makes a substantial effort to assess the seller's	Degree of committed to evaluating vendor performance	McKnight <i>et al.</i> (1988)
<b>Comment</b>			
Comment quality	I think the social networking sites netizens provides reliable comment information on products The social networking sites netizens provides sufficient comment information when I try to make a transaction I am satisfied with the information provides by the social networking sites netizens	The importance of reliable comment of goods being perceived by consumers when using MCSC	Dayal <i>et al.</i> (2000)
Network externality	Most people are using MSCS The number of people using MSCS will create the utility of MSCS Many people will use MSCS in the future	The higher the number of consumers using MCSC, the higher the number of words they use	Zhao and Lu (2012)
<b>Communication media richness</b>			
Active control	If I felt that I had a lot of control over my viewing experiences via. MSCS If I can choose freely what I want to see via MSCS If my actions decided the kind of experiences I get when viewing the post via. MSCS	Degree of using various methods of MSCS	Johnson <i>et al.</i> (2006)
Interactive communication	If MSCS provide an opportunity for me to give my feedback If MSCS can create a conversation between the participant sides) If MSCS gives me the opportunity to respond in more than one way	Degree of free use of speech and feedback through multiple pathways when using MCSC	
Synchronicity	If I can get and give response without any delay via. MSCS If I can get desired answer fast when I request for further information via. MSCS If I can get instantaneous information when I respond to the MSCS)	Degree of response of quick information via. MCSC	

Table 1: Continue

Factor	Items	Operational definition	Researcher
Social capital	The MSCS netizens are active in interacting with others) The MSCS netizens and I have good interaction and communication) The MSCS netizens has a good image and is respected by others	The sum of virtual or actual resources accumulated by an individual or group through a continuous network relationship	Boase <i>et al.</i> (2006)
Cognitive trust	MSCS can be counted on MSCS has my confidence MSCS has high integrity	Willingness to believe in the capabilities, abilities, skills and professional experience of an MCSC service provider	Johnson and Grayson (2005) Zur <i>et al.</i> (2012)
Affective trust	I feel that MCSE responds appropriately to my personal loss I Sharing problem with social commerce sites from MCSC I feel warm and caring attitude from MSCS I talking freely with customer service center	The degree of subjective belief in MSCS	Johnson and Grayson (2005), Zur <i>et al.</i> (2012)
Purchase Intention	Degree of opportunity to buy products through MCSC Degree of how to buy a product via. MSCS Degree of willingness to purchase products via. MSCS	Degree of how to buy a product via. MCSC	Jarvenpa <i>et al.</i> (2000) Premkumar <i>et al.</i> (2008)

## RESULTS AND DISCUSSION

### Hypothesis verification

**Characteristics and analysis methods of the sample:** In this study, we surveyed 9,134 people who had experience using social commerce on a smartphone. The results of this study are based on Smart PLS (Partial Least Squares) 2.0. PLS has the advantage that it is possible to analyze a high-dimensional factor model with a mixture of reflection index and formation index (Chin, 1998). In this study, PLS was used for empirical analysis because exogenous variables are composed of secondary factors.

We collected data through the final survey between January-February 2016. The number of male and female respondents were 459 and 454, respectively accounting for 45.9 and 45.4%, respectively. In addition, individuals in their 30s were the largest with 411 (41.1%) and 654 (65.4%) were the most educated. Respondents included 480 employees (48%), followed by housewives (13.6%) and 74 were self-employed (7.4%). The respondent's income was 276 (27.6%) between 30 and 50 million won and 247 (24.7%) were between 15 and 30 million won. The residents of Seoul, Incheon, Gyeonggi, Province were the most frequent residents with 565 (56.5%). Busan, Ulsan, Gyeongnam, Province had 104 (10.4%) and Daegu and Gyeongbuk with 92 (9.2%). On the other hand, when looking at the characteristics of using social commerce, the number of MSCS visits was the largest with 315 (34.5%) of the users which visited once a day, 248 (27.2%) every 2 or 3 days and 184 (20.2%) less often. In addition, MSC usage costs were the largest with 431 (47.2%) between 1,000 and 50,000 won and 267 (29.2%) between 60,000 and 100,000 won. The most common MSC was

Kookyang (691) (40.7%), followed by Timon with 386 (22.7%) and Wimep with 356 (21%). In addition, Shocking Deal and G9 were 78 (4.6%). The satisfaction rate of MSC companies was the highest with 656 (33.6%) of the respondents. As for the frequency of MSC usage, 629 respondents (68.9%) used the service more than once a day and 145 people (15.9%) used the server every 2-3 days. About 459 people (17.9%) were the most purchasers, restaurants and cafes and 525 (20.5%) were in products, fashion clothes, shoes and 271 (10.6%) of education, books and stationery. Direct access to the site accounted for 716 people (39.4%). About 274 (15%) and 281 (15.4%) responded via. e-mail and text notifications, respectively. Also, 244 people (13.5%) accessed through portal sites. About 193 (19.3%) of the restaurants that want to trade in the future were the most dominant.

**Measuring items:** This developed item used the 7-point Likert scale with 1 being "Strong negative" and 7 being "Strong positive". Then, the accuracy verification of each items is increased by professors and graduate students who verify the accuracy and content validity.

### Reliability and validity analysis of the measurement model

**Measurement model test:** The results of this study are summarized as follows. The relationship between the variables of the research model proposed in this study was verified. As the analysis tool of this study, we conducted two tests of fitness and validity of the measurement model using SmartPLS. In order to analyze the PLS in general, it is necessary to verify the centralized validity, internal consistency and validity of the used

configuration concept and measurement items. The internal consistency was analyzed using the Mean Variance Extraction (AVE) proposed by Fornell and Larcker (1981). It was judged that the discrimination validity exists if the square root of AVE of each latent variable exceeds the correlation value between the constituent concepts. The validity of the measurement model was verified through this method. The media richness variables included positive control and mutual communication. The second factor of media richness which is an upper concept was also analyzed based on the results of the second factor analysis, the whole measurement model was verified.

**Primary factor analysis:** According to Wilson *et al.* (2007), there are three methods for reflective second factor analysis in PLS: a two-step approach, a hierarchical component approach and a hybrid approach. In this study, first factor analysis and second factor analysis were performed using the hierarchical approach. In the hierarchical approach, the entire measurement model is analyzed with only the first factor and then the internal consistency, central validity and discriminant validity are verified based on the analysis results. If there is no problem with this result, the second factor analysis is performed by converting the measures of the indicators used in the secondary factors into a single measurement value for the second factor analysis. For this purpose, we use the latent variable scores based on the results of SmartPLS analysis presented by Wilson *et al.* (2007). After performing the first factor analysis, latent variable values for all the samples are generated. These values can be input into the existing data set to perform the second factor analysis. As a result, Composite Reliability (CR) was found to be 0.7 or more which is the standard value of Nunnally (1987) and AVE was also calculated by Fornell and Larcker (1981) which is a standard value of 0.5 or more. In addition, the factor loadings of all the items except for one of the perceived certification (QK2-2) were 0.7 or higher (Fornell and Larcker, 1981) and Cronbach's alpha was 0.6 or higher. The AVE square root of each construct is 0.8 or more which is larger than correlation coefficient between the other constructs, thus ensuring intensified validity and discriminant validity. However, the QK2-2 item among the perceived authentication variables that detracted from the validity was removed from the second factor. The results of the first factor analysis are shown in Table 2 and 3. Therefore, the results of the first factor analysis show that the internal consistency, intrinsic validity and discriminant validity of the sub-factors are all satisfactory.

Table 2: Convergent validity and reliability tests of first factors

Variables/Items	Factor loading	t-values	CR	AVE	Cronbach's $\alpha$
<b>Information quality</b>					
QK1-1	0.805	31.078	0.876	0.702	0.787
QK2-2	0.838	38.633			
QK3-3	0.870	36.576			
<b>Perceived accreditation</b>					
QK2-1	0.814	29.093	0.772	0.540	0.610
QK2-2	0.508	6.346			
QK2-3	0.837	23.123			
<b>Comment quality</b>					
QK3-1	0.848	40.746	0.898	0.745	0.829
QK3-2	0.872	42.817			
QK3-3	0.869	40.604			
<b>Network externality</b>					
QK4-1	0.765	16.707	0.823	0.607	0.681
QK4-2	0.793	24.492			
QK4-3	0.782	19.680			
<b>Media richness active control</b>					
QL1-1	0.806	29.256	0.876	0.542	0.831
QL1-2	0.813	33.261			
QL1-3	0.842	32.673			
<b>Inter communication</b>					
QL2-1	0.838	39.176	0.886	0.721	0.806
QL2-2	0.854	36.921			
QL2-3	0.855	41.762			
<b>Synchronicity</b>					
QL3-1	0.811	38.215	0.884	0.718	0.803
QL3-2	0.874	41.664			
QL3-3	0.856	43.681			
<b>Social capital</b>					
QM1-1	0.849	42.659	0.895	0.739	0.824
QM1-2	0.883	53.292			
QM1-3	0.847	42.552			
<b>Cognitive trust</b>					
QN1-1	0.871	58.582	0.901	0.752	0.835
QN1-2	0.890	57.455			
QN1-3	0.839	53.194			
<b>Affective trust</b>					
QO1-1	0.802	40.399	0.891	0.671	0.836
QO1-2	0.822	45.905			
QO1-3	0.859	44.952			
QO1-4	0.791	42.145			
<b>Purchase intention</b>					
QP1-1	0.885	43.886	0.914	0.779	0.858
QP1-2	0.886	48.281			
QP1-3	0.877	42.247			

**Secondary factor analysis:** Second factor analysis was performed after first factor analysis on variables. In the second factor analysis, the intensiveness, internal consistency and discriminant validity of the second factor were analyzed in the same manner as the first factor. As a result, the composite reliability value for measuring the internal consistency is 0.7 or more and Cronbach's  $\alpha$  value is 0.6 or more. In addition, the factor that tests the convergent validity is also 0.7 or more which is the reference value in all items. Finally, analysis of the discriminant validity showed that the square root of AVE was also higher than the correlation coefficient, confirming the validity of discrimination. Therefore, all the indices used in the fit test were above the recommended values, indicating that there was no problem with the fit. The second factor analysis results of this study are shown in Table 4 and 5.



Table 3: Discriminant validity of first factors

Variables	Average	SE	IQ	PA	CQ	NE	AC	IC	SY	SC	CT	AT	PI
IQ	3.240	0.630	0.838										
PA	3.560	0.556	0.598	0.735									
CQ	3.230	0.675	0.672	0.569	0.863								
NE	3.526	0.583	0.475	0.598	0.471	0.779							
AC	3.516	0.572	0.541	0.588	0.515	0.635	0.736						
IC	3.290	0.660	0.582	0.524	0.553	0.458	0.677	0.849					
SY	3.277	0.639	0.599	0.512	0.558	0.450	0.540	0.677	0.847				
SC	3.258	0.667	0.562	0.494	0.589	0.459	0.529	0.688	0.679	0.860			
CT	3.337	0.613	0.663	0.580	0.611	0.558	0.609	0.588	0.627	0.627	0.867		
AT	3.129	0.665	0.641	0.549	0.634	0.446	0.537	0.680	0.689	0.678	0.682	0.819	
PI	3.514	0.621	0.507	0.544	0.499	0.626	0.616	0.443	0.460	0.472	0.660	0.481	0.883

++The square root of AVE is shown on the diagonal line

Table 4: Convergent validity and reliability tests of second factors

Variables/Items	Factor loading	t-values	CR	AVE	Cronbach's $\alpha$
<b>Information quality</b>					
QK1-1	0.805	30.384			
QK2-2	0.837	36.555			
QK3-3	0.869	37.331	0.876	0.702	0.787
<b>Perceived accreditation</b>					
QK2-1	0.794	28.983			
QK2-3	0.873	32.637	0.821	0.697	0.609
<b>Comment quality</b>					
QK3-1	0.848	42.602			
QK3-2	0.872	44.609			
QK3-3	0.868	41.613	0.901	0.745	0.829
<b>Network externality</b>					
QK4-1	0.763	16.046			
QK4-2	0.792	24.287			
QK4-3	0.781	19.121	0.823	0.607	0.681
<b>Media richness</b>					
QL123	0.776	33.891			
QL231	0.845	39.822			
QL321	0.857	41.130	0.866	0.684	0.769
<b>Social capital</b>					
QM1-1	0.848	41.528			
QM1-2	0.883	50.312			
QM1-3	0.847	42.178	0.895	0.739	0.824
<b>Cognitive trust</b>					
QN1-1	0.871	55.670			
QN1-2	0.890	59.065			
QN1-3	0.840	54.123	0.901	0.752	0.835
<b>Affective trust</b>					
QO1-1	0.803	41.066			
QO1-2	0.822	40.377			
QO1-3	0.859	41.929			
QO1-4	0.791	40.834	0.891	0.671	0.836
<b>Purchase intention</b>					
QP1-1	0.884	45.651			
QP1-2	0.885	45.984			
QP1-3	0.877	42.918	0.914	0.779	0.858

Table 5: Discriminant validity of second factors

Variables	Mean	SD	IQ	PA	CQ	NE	MR	SC	CT	AT	PI
IQ	3.241	0.630	0.838								
PA	3.560	0.557	0.621	0.850							
CQ	3.230	0.676	0.672	0.592	0.863						
NE	3.526	0.583	0.474	0.571	0.471	0.779					
MR	3.359	0.555	0.645	0.607	0.603	0.561	0.827				
SC	3.258	0.667	0.562	0.516	0.589	0.459	0.671	0.860			
CT	3.337	0.614	0.663	0.582	0.611	0.558	0.683	0.627	0.867		
AT	3.129	0.665	0.641	0.583	0.634	0.446	0.609	0.657	0.682	0.819	
PI	3.514	0.621	0.507	0.517	0.493	0.626	0.558	0.472	0.660	0.481	0.883

++The square root of AVE is shown on the diagonal line

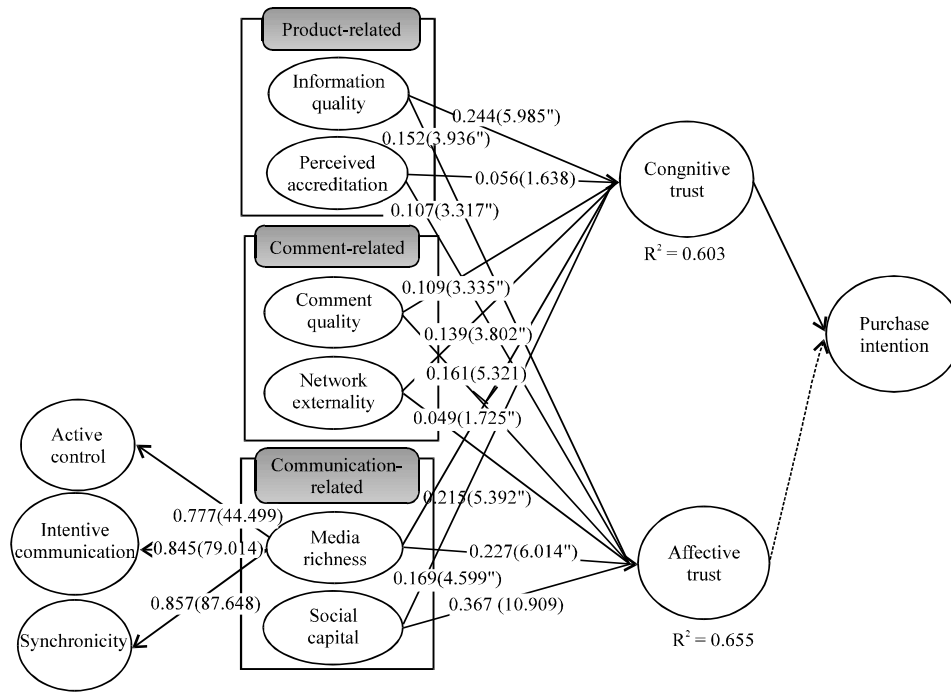


Fig. 2: Research model with results

Table 6: Summary of hypothesis test

Hypothesis	Path	Std. coefficient	t-values	Results
<b>H<sub>1</sub></b>				
H <sub>1-1</sub>	IQ-> CT	0.244	5.985 <sup>***</sup>	Support
H <sub>1-2</sub>	IQ-> AT	0.152	3.936 <sup>***</sup>	Support
H <sub>1-3</sub>	PA-> CT	0.056	1.638	Reject
H <sub>1-4</sub>	PA-> AT	0.107	3.317 <sup>***</sup>	Support
<b>H<sub>2</sub></b>				
H <sub>2-1</sub>	CQ-> CT	0.109	3.335 <sup>***</sup>	Support
H <sub>2-2</sub>	CQ-> AT	0.139	3.802 <sup>***</sup>	Support
H <sub>2-3</sub>	NE-> CT	0.161	5.321 <sup>***</sup>	Support
H <sub>2-4</sub>	NE-> AT	0.049	1.725 <sup>**</sup>	Support
<b>H<sub>3</sub></b>				
H <sub>3-1</sub>	MR-> CT	0.215	5.392 <sup>***</sup>	Support
H <sub>3-2</sub>	MR-> AT	0.227	6.014 <sup>***</sup>	Support
H <sub>3-3</sub>	SC-> CT	0.169	4.599 <sup>***</sup>	Support
H <sub>3-4</sub>	SC-> AT	0.368	10.909 <sup>***</sup>	Support
H <sub>4</sub>	CT-> PI	0.621	18.488 <sup>***</sup>	Support
H <sub>5</sub>	AT-> PI	0.058	1.403	Reject

\*\*p<0.05, \*\*\*p<0.01

**Hypothesis test results of the structural model:** The results of the path analysis for the proposed model are shown in Fig. 2 and Table 6. As shown in Fig. 2, information quality, comment quality, network externality, media richness and social capital among MSC characteristics are cognitive. H<sub>1-1, 1-2, 3-1, 3-2, 3-3, 3-4</sub> were adopted, indicating that cognitive trust and affective trust were significant. However, perceived accreditation has a significant effect on the affective trust, suggesting that H<sub>2-2</sub> was adopted; but not significant on cognitive trust. H<sub>2-1</sub> was rejected. In addition, H<sub>4</sub> was adopted but emotional trust had no significant effect on purchase intention and H<sub>5</sub> was rejected.

## CONCLUSION

**Summary of research results:** With the spread of mobile devices such as smartphones and the rise of SNS, the number of customers purchasing goods using MSCSs is rapidly increasing. The purpose of this study was to investigate the effect of the characteristics of MSCSs on the purchase intention through the trust of experienced users using MSCSs. The results of this study are summarized as follows.

First, the quality of information had a positive effect on cognitive and emotional trust. This shows that if the information such as goods and delivery to the MSCS is reliable and sufficient, it will have a significant effect on enhancing trust in the seller. Therefore, in order to reduce the anxiety of customers using MSCSs, dealers should focus on increasing their cognitive and emotional trust by providing reliable information.

Second, perceived authentication has a positive effect on emotional trust but not on cognitive trust. These results indicate that customers using MSCSs have more influence on subjective emotional trust such as the reputation of the people who communicate through SNS; rather than the professional experience such as the seller's capabilities, abilities and skills. Therefore, MSCS vendors will need to pay more attention to subjective evaluations such as reputation in addition to basic competencies and skills.

Third, comment quality and network externality have positive effects on cognitive trust and emotional

trust. This means that if other customers feel that a product review is reliable and sufficient, then MSCS vendors will be more likely to offer reliable product reviews by offering a variety of benefits to their customers. In addition, the more people who use MSCSs, the higher the confidence in MSCSs, so, the emphasis should be on increasing customer share for many customers.

Fourth, media richness and social capital have positive effects on cognitive trust and emotional trust. The MSCS has interactive features such as interactive communication with other people in real time, feedback through various channels and quick access to desired information.

On the other hand, it was found that customers using the same MSCSs play an important role in enhancing the trust of MSCSs as the communication is smooth and the mutual exchange is actively carried out. Therefore, it will be necessary to provide a space where customers using MSCSs can establish a community and establish a bond that enables them to have sufficient communication with other customers in real time online.

Fifth, cognitive trust has a positive effect on purchase intention. This is consistent with the results of other studies (Jarvenpaa *et al.*, 2000) that the skills and competencies of these sites have a positive effect on purchase intention such as websites and online shopping malls. But also the purchase of companies with high technology and competence.

Finally, emotional trust has no positive effect on purchase intention. In the online environment, customers can easily feel anxiety about the transaction because of the disadvantage that the transaction is not performed directly face to face. Therefore, customer's subjective feelings about MSCSs do not directly lead to purchasing but rather the skills and competence of MSCSs seem to have a greater influence on purchasing.

### **LIMITATIONS**

Despite the above findings, this study has the following limitations. First, this study suggests six factors that influence trust but in the future, it will be necessary to extract and verify various factors for the preceding factors based on cognitive trust and emotional trust. Second, this study conducted a cross-sectional study that did not consider the flow of time. In the future; however, it will be possible to draw meaningful research results by conducting a longitudinal study and identifying at what point the preceding factors affect trust and purchase intention.

### **IMPLICATIONS**

The implications of this study are as follows. First, the recent MSCS firms have presented the leading

factors in how consumers buy products through mobile in the form of trust and analyze them empirically.

Second, the one-dimensional concept of trust used in social commerce has been defined as a two-dimensional concept composed of cognitive trust and emotional trust. In the future, MSCSs are expected to increase the demand for customers because of the advantage of being able to purchase any type of product, anytime, anywhere. Therefore, based on the results of this study, it should be noted that MSCS vendors recognize the leading factors of trust and these factors lead to the purchase of trust through mediation. Therefore, companies that want to sell products through MSCSs will provide the necessary implications for marketing strategy.

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