



Journal of Applied Sciences

ISSN 1812-5654

science
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Effects of Antecedents of Collectivism on Consumers' Intention to Use Social Commerce

Sanghyun Kim, Mi-Jin Noh and Kyung-Tag Lee
School of Business Administration, Kyungpook National University,
701-702 Sankyuk-Dong, Puk-Ku, Daegu, South Korea

Abstract: Social commerce (s-commerce), a subset of electronic commerce (e-commerce), involves social interactions and user contributions and facilitates the online buying and selling of a wide range products and services. Given that s-commerce encourages consumers to share product- and service-related information, it reflects collectivism, not individualism. Using the Technology Acceptance Model (TAM), this study employs the Structural Equation Modeling (SEM) method to investigate a research model incorporating consumers' preferences, reliance, concern and norm acceptance as antecedents of collectivism. The results of a survey of 365 s-commerce users indicate that preferences, reliance and norm acceptance had significant effects on the perceived usefulness of s-commerce. In addition, the goodness-of-fit results indicate that collectivism and perceived ease of use accounted for 65.7% of the variance in the perceived usefulness of s-commerce. This study contributed to the literature by providing useful insights into the factors influencing consumers' decision to adopt s-commerce.

Key words: Social commerce, collectivism, technology acceptance model

INTRODUCTION

The explosive growth of social media, particularly Social Networking Sites (SNSs), has provided electronic commerce (e-commerce) with a new paradigm called social commerce (s-commerce). s-commerce, a new business model based on e-commerce, combines social media with e-commerce and enables the buying and selling of a wide range of products and services over the Internet (Marsden, 2011). In other words, s-commerce makes use of social networks formed through e-commerce transactions. s-commerce users collaborate with one another for their online shopping activity by sharing product- and service-related information and exchanging opinions, among others.

S-commerce has attracted increasing attention from vast numbers of online communities. Furthermore, s-commerce has become one of the major forms of online commerce and is an integral part of the social phenomenon involving social media. In particular, s-commerce has enjoyed explosive growth in South Korea (hereinafter "Korea") because many consumers are interested in acquiring discount coupons and sharing information on products and services by using social media for their online buying and selling activities. Such characteristics of s-commerce reflect collectivism. Pookulangara and Koesler (2011) claimed that collectivism

highlights a sense of interdependence; interactions among individuals belonging to a collective group and the prioritization of group goals. Thus, collectivism is often understood as a cultural phenomenon reflecting individuals' personal tendencies (Pookulangara and Koesler, 2011). In addition, Brandtzaeg (2010) claimed that cultural differences can influence the interaction between new social media technologies (e.g., s-commerce) and users.

S-commerce suggests an interesting paradox for many researchers and practitioners because it is an emerging e-commerce phenomenon. Although a number of studies have examined diverse aspects of e-commerce and m-commerce, including their adoption and diffusion, few have considered the nature of s-commerce to explain consumers' adoption of it because it is difficult to explain the adoption of a new commerce mechanism (Kim, 2006; Kim and Garrison, 2009). Therefore, there is a need for a better understanding of consumers' behavior toward s-commerce because s-commerce is a new phenomenon. In addition, given the importance of s-commerce, there is an urgent need for identifying the factors influencing consumers' intention to adopt s-commerce in the context of collectivism.

However, few studies have examined the effects of collectivism on consumers' behavior toward s-commerce. In this regard, the main purpose of this study is to

understand consumers' acceptance of s-commerce by using the well-known Technology Acceptance Model (TAM). This study provides an empirical analysis and addresses the following research question: "How does collectivism influence the behavior of s-commerce users?"

For this, this study employs the Technology Acceptance Model (TAM) as a theoretical framework to suggest the research model because previous studies (Massimo *et al.*, 2002; Veiga *et al.*, 2001) have claimed that cultural characteristics, including individualism, collectivism, uncertainty avoidance and power distance, can induce beliefs such as perceived usefulness and perceived ease of use. The s-commerce users are likely to show collectivism because s-commerce represents an online space in which product- and service-related information is widely shared among users, which can encourage them to develop favorable attitudes toward group purchases (or collectivism). This indicates that collectivism, particularly with respect to the consumer's preferences, reliance, concern and norm acceptance, may influence s-commerce users' beliefs.

RELATED WORKS

Collectivism: Collectivism has been defined as an individual's or a group's orientation toward relationships with other individuals or groups. Individualists place greater emphasis on personal interests than on group needs, looking after themselves and ignoring group interests when they conflict with their personal desires. According to this commonly accepted view, collectivism is the opposite of individualism (Hui, 1988; Oyserman *et al.*, 2002) claimed that collectivism has the opposite of individualism. In fact, collectivism prioritizes group goals over personal ones; stresses conformity and in-group harmony; and defines the self in relation to the group (Triandis, 1989). Collectivists place greater emphasis on group interests than on individual needs and desires and tend to focus on the well-being of their group (Wagner and Moch, 1986).

Hofstede (1980) suggested collectivism entails four major cultural variables: power distance, uncertainty avoidance, individualism and masculinity. In addition, Triandis *et al.* (1988, 1990) introduced several variables for the nature of collectivism, including the concern for the group, interdependence, family integrity, self-reliance and the distance from the group. Wagner and Moch (1986) introduced three dimensions of collectivism: collective beliefs, values and norms. In addition, Jackson *et al.* (2006) examined the effects of various constructs (e.g., preference, reliance, concern and goal priority) of collectivism on the performance of group members. These

characteristics of collectivism can play crucial roles in individuals' within-group behaviors, particularly in their technology adoption decisions or intentions.

In-group goals take priority over personal goals for collectivists, whereas the opposite tendencies are typically observed for individualists. For collectivists, subjective boundaries of in-groups are clear in distinguishing between in-and out-group members (Chen *et al.*, 1997). Collectivists are concerned about the importance of group harmony and stability (Triandis *et al.*, 1990). Similarly, collectivism reflects collectivistic cultures, which are characterized by homogeneous, interdependent and long-term relationships and common interests. The s-commerce is based mainly on social media, which are online services, platforms or sites that focus on facilitating social networks or relationships among users. This conclusion indicates that the nature of s-commerce reflects the characteristics of collectivism.

s-commerce: s-commerce is a new e-commerce phenomenon and has grown more rapidly than any other form of online commerce. Few could have predicted how pervasive s-commerce would become not only in online environments but also in people's daily lives. In fact, s-commerce itself is not new. However, what is new is its use of social media (e.g., SNSs) and innovative e-commerce technologies (e.g., social media stores and portable social graphs). This new phenomenon has introduced a wide range of new opportunities for the monetization of social media through e-commerce.

Because the use of social media in online commerce is a new phenomenon, few studies have examined s-commerce adoption. In addition, most of the previous s-commerce studies have provided descriptive analyses of various aspects of s-commerce. For example, Marsden (2011) claimed that s-commerce can deliver important business advantages such as the monetization of social media, the optimization of e-commerce sales and the innovation of business models. In addition, Stephen and Toubia (2010) claimed that firms developing social strategies should take into account the extent to which the socialness of such strategies may influence their business. Some firms are hesitant to use Twitter or Facebook because of the possibility of having to address negative comments or bad publicity. However, many have recognized the benefits associated with forming relationships with their customers through social networks (3dcart, 2010). For consumers, s-commerce can enhance the purchase experience, offering trust, utility and fun in key areas such as the discovery, selection and referral of products (Marsden, 2011). For example,

Ticketmaster benefits from Facebook’s focus on friends because people tend to go to concerts with others.

Kim *et al.* (2011) investigated the effects of various characteristics of s-commerce and s-commerce users that can induce trust in s-commerce and found that variables such as reputation, economic feasibility, information quality, transaction safety and interactions have positive effects on trust and that consumers’ purchase experience and word-of-mouth communication have considerable influence on trust in s-commerce, which in turn has a positive effect on trust performance.

Technology acceptance model (TAM): Several studies have demonstrated that the two beliefs of the TAM (perceived usefulness and perceived ease of use) are significant predictors of an individual’s acceptance in terms of his or her use intentions and actual behaviors toward new technologies such as websites (Fenech, 1998; Lee *et al.*, 2008), e-commerce (Khatibi *et al.*, 2006; Liu and Wei, 2003; Sek *et al.*, 2010; Yoon, 2009), online games (Hsu and Lu, 2004; Wu *et al.*, 2010) and SNSs (Pookulangara and Koesler, 2011). However, these constructs do not fully reflect the specific effects of usage-context factors that may influence an individual’s technology acceptance (Moon and Kim, 2001; Srivastava, 2012). Thus, it is difficult to conclude that these two variables can fully explain consumers’ behavioral intentions and actual behaviors toward new information systems, including social networking and s-commerce.

Based on these limitations of the TAM, previous studies have considered some exogenous variables for national and individual cultures to extend the TAM (Srite and Karahanna, 2006; McCoy *et al.*, 2007). Such exogenous variables (e.g., the national culture) can have considerable influence on individuals’ acceptance of new technologies because their adoption decisions depend mainly on these variables. In fact, many studies have examined the effects of such usage-context variables

within the TAM in various technology adoption contexts. For example, Turel and Connelly (2011) provided an empirical analysis of the relationship between perceived usefulness and collectivism to examine individuals’ acceptance of e-collaboration tools, focusing on collectivistic cultures. In addition, some studies have claimed that a collectivistic culture is a typical type in culture in which individuals follow group norms (Srite and Karahanna, 2006). In this regard, the present study employs the TAM as a research framework to propose a research model for investigating the effects of collectivism on perceived usefulness and the relationships between the TAM variables in the context of s-commerce.

RESEARCH MODEL AND HYPOTHESES

Figure 1 shows the research model, which introduces the strategic rationale for including collectivism in the analysis of consumers’ intention to use s-commerce. Based on the TAM, the research model introduces four variables (the consumer’s preferences, reliance, concern and norm acceptance) to explain collectivism. These variables are expected to directly influence perceived usefulness. In addition, the research model includes the TAM’s two beliefs to verify the relationships between the TAM variables in the context of s-commerce.

Hypothesis development: Previous studies (Srite and Karahanna, 2006; McCoy *et al.*, 2007) have defined collectivism as a type of national or individual culture and claimed that collectivism is a key determinant of IT adoption (Folorunso *et al.*, 2006; Veiga *et al.*, 2001; Zeng *et al.*, 2009). Jackson *et al.* (2006) considered many cultural variables and emphasized that the variables such as consumers’ preferences, reliance, concern, norm acceptance and goal priority are the key dimensions of collectivism in the context of group performance.

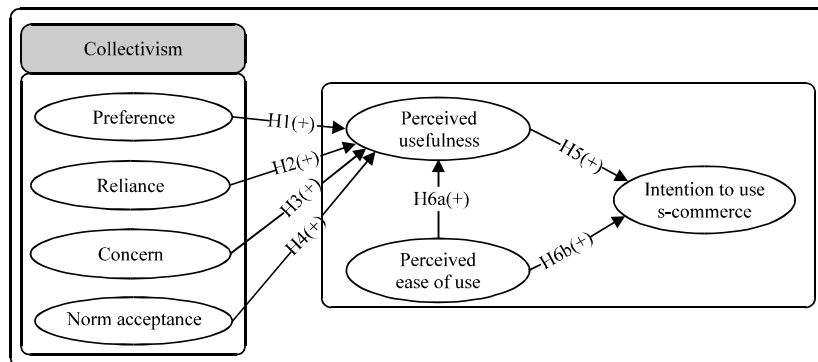


Fig. 1: The proposed research model and hypotheses

In addition, Turel and Connelly (2011) focused on psychological collectivism (e.g., consumers' preferences, reliance, concern and norm acceptance) to explain the use of e-collaboration tools. Following previous research, the present study proposes a research model and develops some theoretical hypotheses about the four dimensions of collectivism and the perceived usefulness of s-commerce.

The first antecedent factor of collectivism is the preference, which this study defines as an individual's belief that collective efforts are superior to individual efforts (Turel and Connelly, 2011). Because s-commerce can provide consumers with social or collective shopping opportunities, consumers who prefer to be part of a group tend to believe that such preferences can strengthen the perceived usefulness of s-commerce. However, no study has provided an empirical analysis of consumers' preferences in the context of their intention to adopt s-commerce. In this regard, the following hypothesis is proposed:

- **Hypothesis 1; H1:** The consumer's preference has a positive effect on the perceived usefulness of s-commerce

The second variable in the proposed research model is reliance, which this study defines as the extent to which a group member relies on other members. Collectivists believe that they have some responsibility for the entire group and this responsibility is shared among all group members. Thus, each group member is comfortable relying on other members (Jackson *et al.*, 2006; Turel and Connelly, 2011). In s-commerce, social groups have extensive relationships and individuals in collectivistic cultures are more likely to show a high level of interdependence than those in individualistic cultures, who tend to show a high level of self-reliance. In this regard, Triandis (1989) strenuously insisted that in collectivistic cultures, social relationships have the tendency to be more persistent and spontaneous and tend to occur within larger groups.

One of the major concerns in individualistic cultures is self-reliance, whereas it is conformity with others in public settings (e.g., s-commerce) (Triandis, 1989). Because consumers who rely on others in s-commerce tend to purchase the same products at discounted prices, they try to acquire a price advantage by relying on others. Such tendencies in s-commerce derive from the nature of s-commerce, that is, collectivism, which can have positive effects on the perceived usefulness of s-commerce. In this regard, hypothesis 2 is proposed:

- **Hypothesis 2; H2:** The consumer's reliance on others has a positive effect on the perceived usefulness of s-commerce

The third variable in the research model is concern defined as something that interests individuals because of the size of the group they belong to. A group member's concern for the well-being of other members often motivates collectivists. Self-interest is not the main motive in collectivistic cultures (Jackson *et al.*, 2006; Turel and Connelly, 2011). In this regard, Triandis (1989) claimed that collectivists tend to be concerned more about what happens to other group members than about what happens to themselves. In addition to subordinating personal goals to collective goals, collectivists tend to be concerned about the impact of their actions on their in-group members and have interdependent relationships with their in-group members (Hui and Triandis, 1986).

In general, interpersonal behavior naturally occurs within in-groups in s-commerce. In addition, s-commerce users are interested in the behavior of other users. This natural collectivistic behavior, particularly toward s-commerce users, may have positive effects on the perceived usefulness of s-commerce. However, no study has examined consumers' concern as a dimension of collectivism in the context of their intention to adopt s-commerce. In this regard, the following hypothesis is proposed:

- **Hypothesis 3; H3:** The consumer's concern has a positive effect on the perceived usefulness of s-commerce

The fourth variable for collectivism is norm acceptance, which is defined as the extent to which individuals are willing to accept a normal social behavior as informal guidelines in a particular social group. Such normal social behaviors reflect what is appropriate or inappropriate. Turel and Connelly (2011) claimed that social norms form the basis for group members' collective expectation and play an important role in social control and order by exerting pressure on others to conform.

In addition, collectivists obey social norms and rules of the in-group to build solid harmony among group members (Jackson *et al.*, 2006; Turel and Connelly, 2011). If there is a conflict between individual and group goals, then it is considered socially desirable to prioritize collective goals over individual ones (Triandis *et al.*, 1990). In addition, social norms are related to transactions in collectivistic cultures. For example, s-commerce is based on group purchase deals, which require users to accept certain social norms. By accepting such social norms, s-commerce users can derive many benefits in terms of prices and service. For collectivists (s-commerce users), their perception of the usefulness of s-commerce may be enhanced by accepting social norms. In this regard, the following hypothesis is proposed:

- **Hypothesis 4; H4:** The consumer’s norm acceptance has a positive effect on the perceived usefulness of s-commerce

Previous studies have employed the TAM to examine individuals’ behavioral intentions and actual behaviors toward the use of new technologies (e.g., e-commerce, m-commerce and SNSs). The TAM considers two major beliefs (perceived usefulness and perceived ease of use) as the key determinants of technology adoption. Perceived usefulness is defined as the extent to which individuals believe that a new technology would improve job performance, whereas perceived ease of use is defined as the extent to which individual believe that using a new technology would require little effort (Davis, 1989).

Many studies based on the TAM have demonstrated that perceived usefulness is a strong determinant of consumers’ acceptance, adoption and use behaviors (e.g., Agrawal *et al.*, 2000; Rigopoulos *et al.*, 2008). In addition, the relationships between the TAM variables have been verified in various technology adoption contexts. Similarly, the present study assumes that the ultimate reason why consumers exploit s-commerce is that this technology can facilitate their online shopping and provide them with many benefits, including efficient and effective online shopping. Because s-commerce is a new e-commerce phenomenon, the TAM should be used for predicting consumers’ intention to use s-commerce. The present study examines the effects of perceived ease of use on perceived usefulness and on the intention to use s-commerce. In this regard, the following hypothesis is proposed:

- **Hypothesis 5; H5:** Perceived usefulness has a positive effect on the intention to use s-commerce
- **Hypothesis 6a; H6a:** Perceived ease of use has a positive effect on perceived usefulness
- **Hypothesis 6b; H6b:** Perceived ease of use has a positive effect on the intention to use s-commerce

RESEARCH METHODOLOGY

Sample and the measurement: A survey was conducted to test the proposed model and hypotheses. A total of 375 responses was obtained by using various survey methods, including online, offline, on-site, telephone, email and fax solicitations but excluded 10 responses because of missing items. As shown in Table 1, the respondents reflected a demographically diverse group and their average age was 34.5. All the respondents were s-commerce users for various reasons (e.g., information sharing and purchasing discount coupons).

Items to measure each variable in the research model were mainly adopted from previous studies (Kim,

2008; Oyserman *et al.*, 2002; Teoh and Cyril, 2008). However, each item was modified to measure the respondent’s psychological feeling with respect to his or her intention to use s-commerce. All items were measured using a seven-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7).

RESULTS AND DISCUSSION

Analysis of the measurement model: Before testing the research model, a measurement model was created and tested through a Confirmatory Factor Analysis (CFA) with AMOS 7.0. To measure the fit of the measurement model, this study employed several fit indices, including the Normed Fit Index (NFI), the Goodness-of-fit Index (GFI), the Adjusted Goodness-of-fit Index (AGFI), the Comparative Fit Index (CFI), relative χ^2 (χ^2/df) and the Root Mean Square Error of Approximation (RMSEA).

A good fit is demonstrated if NFI, GFI and CFI values exceed 0.90 (Bentler, 1990), the AGFI exceeds 0.8 and the RMSEA is less than 0.05 (Browne and Cudeck, 1993). In addition, the χ^2/df value range from less than 3 to as high as 5 (Goodhue, 1995). The results for the measurement model with 23 items measuring the seven variables indicate that the model provided a good fit to the data. Table 2 shows the results.

Table 1: Demographic characteristics

Demographic characteristics	Frequency	Percentage
Age (years)		
under 20	41	11.2
20-29	88	24.1
30-39	112	30.7
40-49	96	26.3
50+	28	7.7
Gender		
Male	138	37.8
Female	227	62.2
Occupation		
Student	48	13.2
Office worker	80	21.9
Technician	29	7.9
Professional	57	15.6
Self-employed	61	16.7
Researcher	42	11.5
Academic	33	9.0
Other	15	4.1
Site used (multiple responses)		
Ticketmonster	174	47.7
Coupang	209	57.3
Wemakeprice	135	37.0
Dailypick	71	19.5
Showkingon	65	17.8
Other (e.g., G-old and Hellodc)	18	4.9

Table 2: Fit indices for the measurement model

Model	NFI	GFI	AGFI	CFI	χ^2/df	RMSEA
Measurement model	0.98	0.96	0.93	0.97	1.65	0.027
Recommended threshold	≥0.90	≥0.90	≥0.80	≥0.90	≤3.00	≤0.050

Table 3: Results for reliability and construct validity

Variable	Item	Mean	Std. dev.	Factor loading	Cronbach's alpha
Preference	PRE1	5.41	0.75	0.75	0.796
	PRE2	4.69	0.53	0.83	
	PRE3	4.85	0.65	0.76	
Reliance	REL1	5.88	0.60	0.80	0.868
	REL2	5.72	0.49	0.79	
	REL3	5.96	0.38	0.75	
Concern	CON1	5.24	0.67	0.81	0.857
	CON2	5.10	0.50	0.85	
	CON3	5.29	0.52	0.74	
Norm acceptance	NA1	5.38	0.69	0.82	0.895
	NA2	6.02	0.71	0.79	
	NA3	5.54	0.78	0.88	
Perceived usefulness	PU1	6.17	0.50	0.90	0.870
	PU2	6.24	0.57	0.84	
	PU3	5.90	0.31	0.88	
	PU4	5.81	0.49	0.91	
Perceived ease of use	PEU1	5.68	0.66	0.86	0.925
	PEU2	6.29	0.83	0.89	
	PEU3	6.32	0.54	0.83	
	PEU4	5.64	0.70	0.92	
Intention to use s-commerce sites	IU1	6.10	0.69	0.89	0.965
	IU2	6.17	0.76	0.95	
	IU3	6.32	0.51	0.94	

Table 4: Results for discriminant validity

Latent variable	1	2	3	4	5	6	7
Preference (1)	0.78						
Reliance (2)	0.21	0.78					
Concern (3)	0.10	0.41	0.80				
Norm acceptance (4)	0.33	0.31	0.46	0.83			
Perceived usefulness (5)	0.27	0.29	0.38	0.30	0.88		
Perceived ease of use (6)	0.28	0.42	0.37	0.24	0.40	0.88	
Intention to use s-commerce (7)	0.35	0.19	0.23	0.35	0.38	0.35	0.93

Square root of the AVE is indicated along the bold diagonal

Reliability and construct validity: After purifying the overall fit of the measurement model, construct validity was examined by testing item reliability, internal consistency and discriminant validity. Individual item loadings for item reliability were assessed. Satisfactory item reliability is generally demonstrated if the loading for an item exceeds 0.7 for the proposed factor and is less than 0.4 for other factors (Chin, 1998). The results indicate that all items exceeded the threshold, implying that the items were sufficient for assessing each construct individually.

To test internal consistency, Cronbach's alpha, which is the most widely used tool in social sciences, was considered. Teo *et al.* (1999) suggested 0.7 as the minimum threshold for Cronbach's alpha in an exploratory study. As shown in Table 3, Cronbach's alpha ranged from 0.796 to 0.965, exceeding the threshold.

Discriminant validity was tested by considering the Average Variance Extracted (AVE) and Pearson's correlation. For sufficient discriminant validity, the square root of each latent variable's AVE should exceed the vertical and horizontal correlations between the variables (Fornell and Larcker, 1981). The results indicate that the square root of each latent variable's AVE exceeded the

correlation for each latent variable, demonstrating sufficient discriminant validity. Table 4 presents the result of discriminant validity.

Structural model assessment: The casual relationships between the variables were examined by using Structural Equation Modeling (SEM) approach with AMOS 7.0. The SEM approach provides two important pieces of information-the standardized path coefficient (β) and the squared multiple correlation (R^2)-which are used as indicators of how well the structural model predicts hypothesized relationships. In particular, the standardized path coefficient shows the strength of the causal relationship between two variables. The results for all fit indices indicate that the structural model provided a good fit to the data (n = 375). The NFI (0.98), the GFI (0.95) and the CFI (0.97) all exceeded the required threshold (0.90) and the AGFT (0.92) exceeded the minimum threshold (0.80). The RMSEA (0.024) was less than 0.05 and the χ^2/df value (1.57) was less than 3. Thus, each hypothesis was tested by using the standardized path coefficient. The results provide support for all hypotheses (Fig. 2).

Among the four antecedents of collectivism, consumers' preferences were hypothesized to have a positive effect on perceived usefulness. Consumers' preferences had a positive effect on perceived usefulness ($\beta = 0.385, t = 5.204$), providing support for H1; their reliance had a positive effect on perceived usefulness ($\beta = 0.299, t = 4.340$), providing support for H2; their concern had a positive effect on perceived usefulness ($\beta = 0.382, t = 4.887$), providing support for H3; and their norm acceptance had a positive effect on perceived usefulness ($\beta = 0.537, t = 6.479$), providing support for H4.

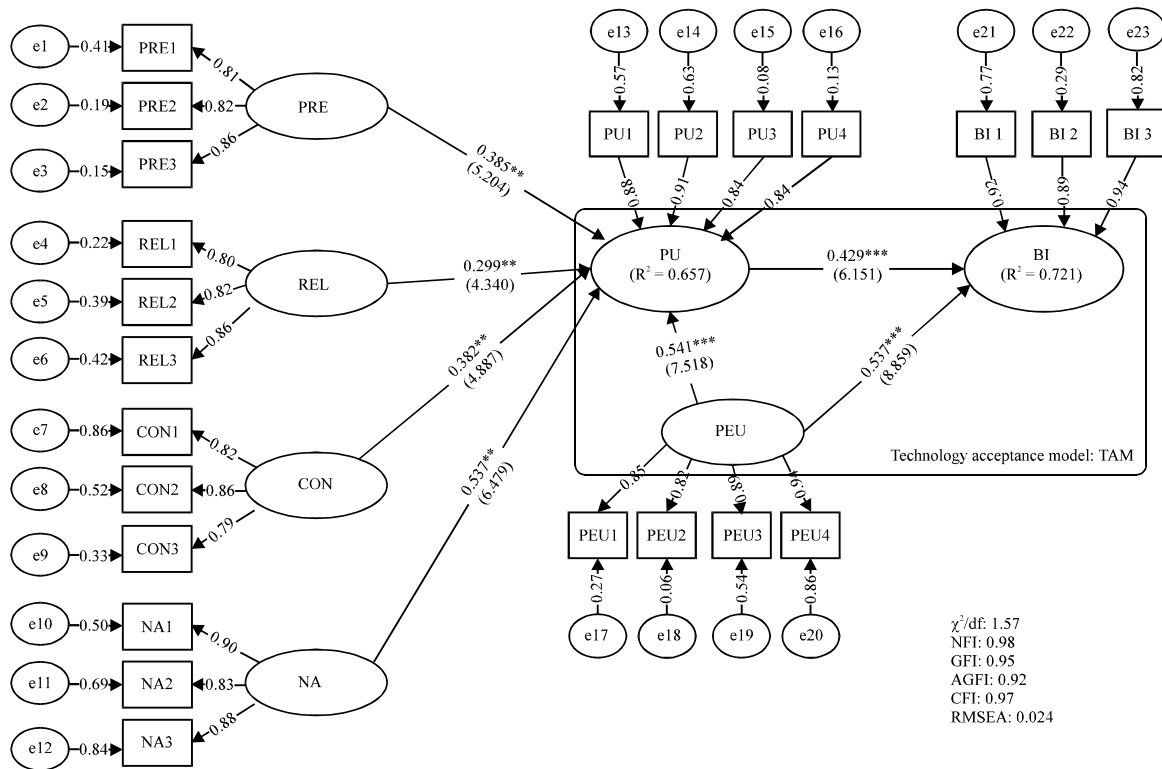


Fig. 2: The results of the structural model analysis. Regular numbers are standard egress weight or factor loadings, Numbers with () are t-value, **p<0.01, ***p<0.001, R² = Squared multiple correlations

Then, the hypotheses about the TAM variables were tested. Perceived usefulness had a significant positive effect on the intention to use s-commerce ($\beta = 0.429$, $t = 6.151$), providing support for H5 and perceived ease of use had a significant positive effect on both perceived usefulness and the intention to use s-commerce ($\beta = 0.541$, $t = 7.518$; $\beta = 0.537$, $t = 8.859$, respectively), providing support for H6a and H6b, respectively.

The second crucial SEM information is the squared multiple correlation (R²) between exogenous and endogenous variables in the research model. The R² value measures the percentage of the variance explained by each construct in the model (Wixom and Watson, 2001). That is, the variance of an exogenous variable can be explained by changes in each endogenous variable. The results indicate that the four antecedents of collectivism and perceived ease of use explained 65.7% of the variance in perceived usefulness. In addition, perceived usefulness and perceived ease of use explained 72.1% of the variance in the intention to use s-commerce. Figure 2 illustrates the SEM test of the proposed model, including the standardized path coefficients as well as their significance levels and variance explained.

CONCLUSIONS

This study proposes a research model theorizing consumers' intention toward s-commerce adoption. The proposed research model was tested by using the SEM method. The results indicate the validity of the research model and provide support for all hypotheses. The results provide new insights into consumers' intention to adopt s-commerce. The four antecedents (consumers' preferences, reliance, concern and norm acceptance) of collectivism had significant effects on the perceived usefulness of s-commerce. In addition, the TAM variables were valid in the context of s-commerce. These variables, together with perceived ease of use, explained 65.7% of the variance in perceived usefulness. In addition, perceived usefulness and perceived ease of use explained 72.1% of the variance in the intention to use s-commerce.

The results have important implications for IS researchers and practitioners. In terms of IS research, this study proposes a unique characteristic (collectivism) of s-commerce to explain consumers' intention to use the technology, providing new insights into technology acceptance and use. In particular, no study has

conceptualized consumers' psychological behaviors in terms of their preferences, reliance, concern and norm acceptance to explain their intention to adopt s-commerce. The results suggest that collectivism has considerable influence on online buyers who prefer to be in-group members and prioritize in-group goals over personal ones. Thus, s-commerce firms should formulate marketing strategies that focus on such consumers.

This study develops and validates an instrument for measuring these new variables. The study contributes to the literature on general technology acceptance and provides additional insights into the effects of new technologies on consumers' attitudes and behaviors. Finally, the study contributes to the literature by extending the well-established technology acceptance model and thus suggesting interesting avenues for future research on s-commerce.

For IS practitioners, the results provide some clues for successful s-commerce implementation, including new factors that may have considerable influence on consumers' intention toward s-commerce. In addition, the results have important implications for researchers exploring other online topics, including ubiquity commerce (u-commerce). That is, this study's results for s-commerce are expected to facilitate future research on u-commerce and other types of online business models.

However, this study has some limitations. As in many studies employing survey methods, self-report bias is a source of concern. In addition, to make the research model parsimonious, this study focused only on the effects of collectivism, demonstrating that perceived usefulness is an important antecedent of collectivism. In this regard, future research should consider other factors that may explain consumers' behaviors in the context of s-commerce.

ACKNOWLEDGMENT

This research was supported by Kyungpook National University Research Fund, 2010.

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