

EFFECTS OF COLLECTIVISM ON ACTUAL S-COMMERCE USE AND THE MODERATING EFFECT OF PRICE CONSCIOUSNESS

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ABSTRACT

Social media has become increasingly popular over the past few years and is continuing to flourish throughout the world. Its rise in popularity and use is propelling user-generated content on commercial websites facilitating the online buying of goods and services referred to as social commerce (s-commerce). This study examines the effects of collectivism and price consciousness on consumers' intention to use s-commerce using the Technology Acceptance Model (TAM) as the theoretical framework. We test and analyze the research model and related hypotheses using structural equation modeling. The results from a survey of 375 s-commerce users indicate that preference, reliance, norm acceptance, and goal priority (dimensions of collectivism) had significant effects on the perceived usefulness of s-commerce and that price consciousness had significant moderating effects on the relationships between perceived usefulness/perceived ease of use and individuals' intention to use s-commerce. A discussion of the research findings and implications for practitioners and researchers is included.

Keywords: Social commerce; Actual use; Collectivism; Price consciousness

1. Introduction

The rise of social media, particularly social networking sites (SNSs), and the popularity of users generating content are creating new opportunities for research within the academic community and new avenues for promoting and selling goods and services in the business community. At the intersection, social commerce (s-commerce) has started to flourish. S-commerce, a subset of e-commerce, combines social media with e-commerce to facilitate the buying and selling of goods and services through the use of internet technologies [Marsden 2011]. Users engage in s-commerce activity by making use of social networks formed through e-commerce transactions. These social networks are formed when s-commerce users collaborate by sharing their online shopping experiences and product-

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and service-related information and are strengthened by their exchange of “trustworthy” opinions for making informed purchases and obtaining the best prices.

S-commerce is starting to receive considerable attention from the business community, as individuals are making greater use of user-generated content to make informed buying decisions. In particular, s-commerce has witnessed explosive growth in South Korea (hereafter “Korea”), because consumers place great emphasis on acquiring and using coupons and sharing information on goods and services, with the later representing a manifestation of collectivism. Collectivism represents a sense of interdependence among members of a group and their prioritization of group goals [Pookulangara & Koesler 2011]. In general, collectivism embodies the manner in which individuals view themselves as members of a group and consider the needs of the group to be more important than their own individual needs. By contrast, individualism represents the prioritization of oneself at the expense of the group as a whole. Business environments have different cultural emphasis. For example, traditional e-commerce models (e.g. B2C, C2C) are characterized as individualistic in nature whereas s-commerce is collectivistic in nature [Bin et al. 2003]. Brandtzæg [2010] noted the importance of cultural differences in the context of s-commerce, claiming that such differences can influence the interaction between new social media technologies (e.g. s-commerce) and users.

Dell is one of the first companies to capitalize on s-commerce. With the launch of “Dell Swarm,” Dell has been able to sell more computers and provide lower prices to consumers by inviting them to join an online “Swarm.” Computers are bought and sold in bulk, facilitating a win-win exchange for both Dell and its customers. S-commerce sites such as “Dell Swarm” typically offer consumers discount deals to entice them to share product- and service-related information on their sites. Consumers can increase their buying power when they use their social networks to recruit fellow buyers for group purchases [Marsden 2011].

S-commerce provides interesting and novel opportunities of study for both practitioners and researchers alike, because it redefines the manner by which individuals and firms can market and sell their products and services. Further, s-commerce opens the door to a new stream of research whereby community, user-generated content, and e-commerce converge. A number of studies have examined e-commerce and m-commerce adoption [Kim & Garrison 2009], but few have considered the implications of social media as a new commerce mechanism. Because s-commerce is a new and growing phenomenon, there is a need for a better understanding of the key variables that impact users’ behavior toward s-commerce. This study’s approach to s-commerce evaluation is unique in that few studies have examined the effects of collectivism on consumers’ behavior toward s-commerce, and in particular, how users perceive the usefulness of s-commerce. Therefore, we address the following research questions: “How does collectivism influence the perceived usefulness of s-commerce?” and “Does price consciousness moderate the relationships between perceived usefulness/perceived ease of use and intentions to engage in s-commerce?”

This study offers both practical and theoretical contributions. On the practical side, this study calls attention to the importance of creating an online environment that promotes a useful platform for social collaboration that allows individuals to become engaged in the process of the buying and selling of goods and services. From a theoretical perspective, this study provides empirical evidence to support the usefulness of TAM to predict individuals’ intention to engage in s-commerce. Further, this study sheds light on the effect of collectivism on how individuals perceive the usefulness of s-commerce, and ultimately the actual use of s-commerce. Finally, the TAM is extended through the inclusion of price consciousness as a moderating variable between individuals’ perceived usefulness/perceived ease of use of s-commerce on their intention to use s-commerce, which have not been examined in prior research.

The rest of this paper is organized as follows. In section 2, we provide a review of previous research regarding s-commerce, collectivism and price consciousness. In section 3, we develop our research model and hypotheses. In section 4, we discuss our research methodology; and analyze the survey responses to test the research model in section 5. Finally, in section 6, we conclude with a discussion of our findings and include implications, limitations, and directions for future research.

2. Literature Review

2.1. S-Commerce

S-commerce, a relatively new concept in e-commerce, is growing rapidly in terms of the number of s-commerce sites and the size of the market [Stephen & Toubia 2010]. S-commerce combines social networking with online shopping and to create new online marketplaces and communities based on SNSs. SNSs are websites that enable the development of web-based relationships through the collection and sharing of information. That is, SNSs allow consumers to participate actively in the marketing and selling of goods and services by using online marketplaces and communities [Stephen & Toubia 2010]. Essentially, SNSs provide users with the ability to network with other

users based on common interests, activities, and relationships and allow them to further develop their relationships through information sharing and collaboration.

Firms engaged in s-commerce are able to sell products and services at lower prices than their competitors, because they are able to offer their products to consumers at bulk prices. If there are enough buyers, then they can gain various benefits provided by sellers, which implies that s-commerce is driven by group purchases. Therefore, consumers voluntarily and actively promote s-commerce products through SNSs. Sellers prefer s-commerce to other online business models (e.g. B2C and C2C) because they can maximize the effect of promotional efforts within a shorter period of time. Although the essential advantage of s-commerce can be weakened by excessive price competition, the s-commerce market has grown rapidly, becoming a topic of special interest for many s-commerce researchers and practitioners.

S-commerce represents an online marketplace of personalized shops driven by consumers and connected through a network of sellers and buyers in which buyers can move from one shop to another through hyperlinks [Stephen & Toubia 2010]. Marsden [2011] claimed that s-commerce can deliver key business benefits such as the monetization of social media, the optimization of e-commerce sales, and the innovation of business models. Firms interested in s-commerce must take into account how their social strategies may impact their business [Stephen & Toubia 2010]. With consumers and firms focusing on monetizing various aspects of social media, the outlook for s-commerce depends not only on consumers' acceptance of this new form of commerce but also on its perceived usefulness and ease of use.

2.2. Collectivism

Previous studies have conceptualized culture as shared symbols, norms, and values within a society such as country as well as shared values and attitudes within a specific organization or within other forms of social groups [Hofstede 1980]. Furthermore, Hofstede [1991] proposed the national culture model, which has been widely used as a framework in IS research focusing on cultural differences. Hofstede's model has identified collectivism and individualism as the opposite ends of a value dimension that differentiates national cultures. Collectivism reflects a culture that prioritizes group goals over individual ones, stresses conformity and in-group harmony, and defines the self in relation to the group [Triandis 1989, 1995]. Collectivists place greater emphasis on group interests than on individual needs and desires [Wagner & Moch 1986].

By contrast, individualism refers to the extent to which individuals act in a self-serving manner instead of in a manner that best serves group members [Hofstede 1980]. In other words, individualism reflects a culture that prioritizes individual goals over in-group ones [Triandis 1989]. Here individualists place greater emphasis on personal interests than on group needs, looking after their own interests and ignoring group interests when they conflict with their personal desires [Triandis 1989, 1995].

The concepts of individualism and collectivism as tools for identifying, examining, and understanding cultural differences have received considerable attention from researchers in social sciences and international commerce [Adler 2002]. In particular, previous studies of cultural differences based on collectivism [e.g., Earley & Erez 1997] can be classified into the following two categories: different countries and the same national culture. Both categories have been adopted in many studies to explain users' behaviors. Individualism and collectivism have been widely studied by cross-cultural researchers who have used them to explain the behavior of individuals, groups, or organizations across various countries and settings, within the context of information systems and technology [Bond 1996; Triandis 1995].

Collectivism has received considerable attention as an individual-level variable reflecting differences between individuals sharing the same national culture [Eby & Dobbins 1997; Gundlach et al. 2006; Schwartz 1992; Sinha & Tripathi 1994; Wagner & Moch 1986]. In a collectivistic culture, individuals' behaviors are shaped by their groups [Triandis 1989]. When there is a conflict between individual and group goals, individuals in a collectivistic culture tend to emphasize group goals at the expense of their personal ones [Hofstede 1980]. In other words, collectivists display higher levels of conformity than individualists, who place greater emphasis on their own needs [Bond & Smith 1996]. Individuals whose collectivistic values are more salient tend to be more compliant with group norms and behaviors [Triandis 1989] and more motivated to promote group goals than their own.

Jackson et al. [2006] examined the effects of collectivism on group member performance by considering the following five dimensions of collectivism: (1) preference, (2) reliance, (3) concern, (4) norm acceptance, and (5) goal priority. Our study hypothesizes that these five facets of collectivism are significant determinants of individuals' behavior in s-commerce. To this point, collectivists and individualists are likely to differ in their use of s-commerce in that collectivists are more likely to use s-commerce and be compliant with the norms to achieve group goals.

S-commerce, by nature, involves a higher level of uncertainty than traditional online commerce models because of its dependence on consumers' broad social networks and user-generated content [Lim et al. 2004]. Because of this uncertainty, consumers are more likely to require structured environments such as formal rules, social norms, trust, and reciprocity if they are to participate in s-commerce. Individuals from collectivist cultures are more likely to reciprocate through cooperative behaviors than are individuals from individualist cultures who tend to focus on behaviors that benefit the individual rather than the group as a whole [Chatman & Barsade 1995]. Further, in collectivist cultures, in-group goals take priority over individual ones, which run counter to the typical behavior of individualists. As such, collectivists emphasize the importance of group harmony and stability, whereas individualists are less likely to be concerned about others' opinions, and thus, focus on their own interests [Triandis et al. 1990]. Therefore, SNSs, which focus on facilitating social networks and developing trust between users, are likely to be more attractive to collectivists and promote collectivistic activities, which would increase the likelihood for s-commerce adoption and use from individuals from collectivist cultures.

2.3. Price Consciousness

Lichtenstein et al. [1993] defined price consciousness as the extent to which consumers focus exclusively on paying lower prices and suggested that individuals' negative perceptions of high prices dictate their intention to search for lower prices. Consumers' perceptions of high versus low prices are subjective and based on the perceived value they receive from the product relative to the price they paid for the product. In addition, consumers' attitudes toward the same product can differ because of their product evaluations, which are based according to the standards each individual applies when making the evaluation [Tellis 1988]. This implies that each consumer is unique in their price sensitivity, which can alter their purchasing behavior. To this point, consumers who place significant importance on price when making purchasing decisions can be sensitive to even small fluctuations in prices, which may alter their purchasing decisions [Tellis 1988].

Previous studies [e.g. Bakos 1997] have explored the effects of consumers' price consciousness on their attitudes and behaviors in online environments. Consumers are more likely to be sensitive to online prices, because online markets can reduce search costs and facilitate the purchase of products at lower prices. Kotler [1993] claimed that the price of a product or service reflects its monetary value perceived by the consumer. Previous studies have suggested that online consumers place the greatest emphasis on price and prefer online shops to traditional brick-and-mortar, because of their belief that online shopping offers lower prices [Bakos 1997]. These findings provide support for the notion that price-conscious consumers are likely to use s-commerce to find the best deals on products and services.

S-commerce offers products and services at low prices on a daily basis, which is likely to increase consumers' purchase intentions. Bakos [1997] suggested that price sensitivity can induce a highly competitive structure for online marketing. Grewal et al. [1996] indicated that consumers' perception of the value of a product is dependent on its price and demonstrated the moderating effect of price perceptions. Lichtenstein et al. [1993] proposed seven psychological variables that may influence consumers' processing of price discounts: price quality and prestige sensitivity; which reflect the perception of a positive role of price; and value consciousness, price mavenism, price consciousness, sale proneness, and coupon proneness; which reflect the perception of a negative role of price. The present study considers only price consciousness, because it is closely related to online consumers' search for low prices [Lichtenstein et al. 1993].

Lichtenstein et al. [1993] used price consciousness to measure consumers' search for lower prices before their actual shopping. Previous studies that evaluated the effects of price consciousness [e.g. Choi & Kim 2007; Palazon & Delgado 2009] have suggested that price-conscious consumers make use of online sites to compare prices [Kukar-Kinney et al. 2007]. Despite the uncertainty and risk, active consumers prefer highly discounted products. In s-commerce, a maximum discount is likely to increase consumers' purchase intentions. In this regard, this study's research question implies that a consumer's inherent level of price consciousness can influence his or her s-commerce use. Intuitively, price-conscious consumers are likely to perceive the usefulness of s-commerce, because it promises lower prices. In this regard, price-conscious consumers may be more inclined to participate in s-commerce.

3. Research Model and Hypothesis Development

3.1. Research Model

As shown in Figure 1, the research model introduces the rationale for including collectivism in the analysis of users' intention to use s-commerce. Previous studies have proposed a wide range of research models by using the technology acceptance model for a better understanding of consumers' acceptance of new technologies [Pookulangara & Koesler 2011]. However, few researchers have examined the effects of the social environment on

behavioral intentions [Srite & Karahanna 2006]. The present study considers s-commerce as a collectivist activity, and therefore, it can be viewed as a social/environmental factor influencing technology acceptance as well as an important variable in technology adoption research [Kim 2011].

Following Jackson et al. [2006], this study measures collectivism by considering the following five dimensions: consumers' preference, reliance, concern, norm acceptance, and goal priority. Further, the proposed research model includes price consciousness as a variable moderating the relationships between perceived usefulness/perceived ease of use and individuals' intention to use s-commerce. The moderating effect of price consciousness is a key variable in this study because of the price sensitive nature of typical s-commerce users.

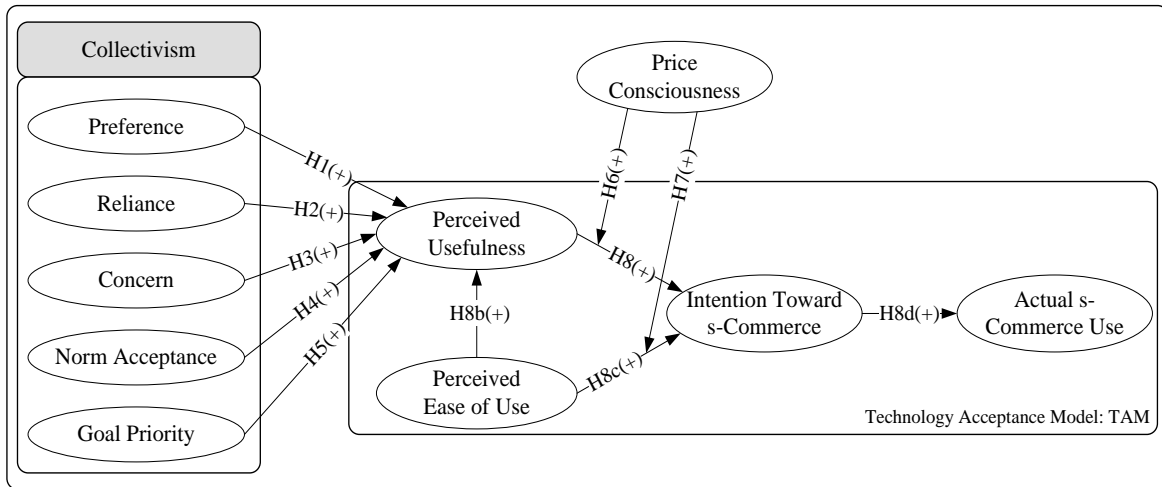


Figure 1: Research Model with Hypotheses

3.2. Hypothesis Development

Collectivism refers to individuals' concerns over the effects of their actions on others; the sharing of nonmaterial resources; the willingness of individuals to accept others' opinions; and the level of involvement in and contributions to others' lives [Hui & Triandis 1986]. Collectivists are more likely to be concerned about and share information on products or services than individualists, who are concerned mainly about their personal interests. In collectivistic cultures, group goals are most likely to influence the behavior of members [Srite & Karahanna 2006]. When a conflict arises between personal and collective goals, it is socially acceptable for group goals to take priority over personal goals in collectivistic cultures.

Previous studies [e.g., McCoy et al. 2007; Pookulangara & Koesler 2011; Srite et al. 2006] have defined collectivism as a type of national or individual culture and proposed it to be a strong predictor of IT adoption [Turel & Connelly 2011; Veiga et al. 2001; Zeng et al. 2009]. Jackson et al. [2006] identified consumers' preference, reliance, concern, norm acceptance, and goal priority as the key dimensions of collectivism in the context of group performance. Similarly, Turel and Connelly [2011] focused on psychological collectivism (e.g., consumers' preference, reliance, concern, and norm acceptance) to explain the use of e-collaboration tools. Veiga et al. [2001] suggested collectivism as a cultural factor influencing beliefs such as perceived usefulness within the TAM framework. Similarly, Turel and Connelly [2011] emphasized collectivism as a cultural value at the national level and examined the relationship between collectivism and perceived usefulness to understand the use of e-collaboration tools. Following previous research, this study proposes a research model and develops hypotheses reflecting the five measures of collectivism [e.g., preference, reliance, concern, norm acceptance and goal priority] and the perceived usefulness of s-commerce.

This study refers to 'preference' as an individual's evaluative judgment [Scherer 2005] or attitude toward a group of objects [Lichtenstien et al. 1993] that is applied when making a decision. Collectivists are less likely to be motivated by their own preferences and tend to give preference to their group's goals; whereas, individualists are more likely to emphasize their uniqueness and distinction from others [Lee & Kacen 2007]. This would suggest that collectivists would be more inclined to find s-commerce useful and would be more likely to participate in s-commerce for the betterment of the group. Since collectivists prefer to work in groups, they are more likely to find s-commerce useful. As previously mentioned, s-commerce promotes an environment that provides consumers with social or collective shopping opportunities. Therefore, it can be inferred that consumers who prefer to be part of

groups would be more likely to perceive the usefulness of s-commerce. In this regard, we propose the following hypothesis:

Hypothesis 1: Consumers' preference for collaboration over individualism is positively related to how useful they perceive s-commerce.

This study refers to 'reliance' as an individual's belief that each member of the group is responsible for the entire group [Jackson et al. 2006]. Group members find comfort in their reliance upon one another, because of the existence of a collective responsibility and general concern for the well-being of the group. In contrast, individualistic cultures emphasize self-reliance and their social behavior is guided primarily by personal goals, whereas the goals of the group are the dominant influence in shaping behavior in collectivist cultures. The same actions may exist within the context of s-commerce, where collectivists are more likely to be compliant with their group, which can be attributed to their reliance upon the group; and are more likely to show a high level of interdependence than individualists. Since s-commerce is dependent upon the social activities of individuals working toward a common goal, collectivists who rely on the input of others when making decisions are more likely to find s-commerce useful. Triandis [1989] claimed that in collectivist cultures, social relationships tend to be more enduring, more involuntary, and occur in larger groups than those in individualistic cultures. Within the context of s-commerce, individuals seek discounted prices and reliable information by relying on the collective action and resources of their group members. Because each member relies on his or her group members to work in the best interests of the group, we propose the following hypothesis:

Hypothesis 2: Consumers' reliance upon others is positively related to the perceived usefulness of s-commerce.

Previous studies have defined an individual's 'concern' as something that interests the individual, because of its importance to the group. This concern can result from the individual's sincere attitudes toward others in the group. Collectivists are more likely to be motivated by their concern for the well-being of others than by their concern for themselves [Jackson et al. 2006; Turel & Connelly 2011]. This motivation is based on the claim that collectivists are highly concerned about what happens to other group members [Triandis 1989]. In this regard, collectivists tend to prioritize their personal goals to be lesser than the group's goals [Hui & Triandis 1986]. Within the context of s-commerce, users can be characterized as being concerned about the welfare of other users and are likely to provide trustworthy information on products and services. This concern for others is a prominent trait of collectivists, who promote group values over individual ones and encourage harmony within their group [Triandis 1989]. In addition, the interpersonal behavior that occurs naturally in s-commerce may heighten users' perception of its usefulness. In this regard, we propose the following hypothesis:

Hypothesis 3: Consumers' concern toward group members has a positive effect on the perceived usefulness of s-commerce.

'Norm acceptance' refers to the extent to which individuals are willing to accept informal guidelines as normal social behavior (i.e., what is appropriate or inappropriate) within a particular social group [Jackson et al. 2006]. Within the context of s-commerce, collectivists are more likely to comply with the group's opinions, which will influence their intended behavior. In contrast, individualists are more inclined to be less concerned about the opinions of others when making decisions; and would likely not perceive the usefulness of s-commerce in the same way as collectivists. To this point, norm acceptance has been found to have a positive link with perceived usefulness in online shopping [Pookulangara & Korsler 2011; Venkatesh 2000]. Turel and Connelly [2011] claimed that social norms form the basis for the collective expectation of each group member and play a key role in maintaining social order and control by exerting group pressure for conformity. In collectivistic cultures, when norms are clear, a member's behavior is governed by in-group norms [Ball 2001]. For s-commerce users, accepting norms can strengthen their perception of the usefulness of s-commerce. In this regard, we propose the following hypothesis:

Hypothesis 4: Consumers' norm acceptance has a positive effect on the perceived usefulness of s-commerce.

'Goal priority' represents the actions taken by group members and is guided by the consideration of the group's interests [Jackson et al., 2006]. For collectivists, group goals take priority over individual ones even when those goals cause individuals to make personal sacrifices on behalf of the group [Triandis et al. 1990; Ramamoorthy et al. 2007]. Within the context of s-commerce, goal priority represents the sharing of trustworthy information and leveraging the power of group size and collaboration to lower the prices of the intended products and services. Individuals who prioritize group goals over personal ones tend to emphasize the importance of achieving s-commerce goals, which can increase the perceived usefulness of s-commerce. In this regard, we propose the following hypothesis:

Hypothesis 5: Consumers' priority toward group goals over personal goals has a positive effect on their perceived usefulness of s-commerce.

Previous studies have defined 'price consciousness' as the extent to which a consumer focuses exclusively on obtaining low-priced products or services [Lichtenstein et al. 1993]. Bakos [1997] claimed that price consciousness, particularly in online shopping, can stimulate a competitive marketing environment. Price-conscious consumers typically search for low-priced products and services before making their purchase [Alford & Biswas 2002]. Researchers have examined the moderating effects of price on consumers' attitudes and behaviors [Kukar-Kinney et al. 2007]. Choi and Kim [2007] suggested a moderating role for price consciousness as an effective promotional tool for improving consumers' price perceptions. Kim [2011] claimed that price-conscious consumers view s-commerce as a useful means of shopping, because it allowed them to pursue lower-priced products and services. If lower-priced products and services can be obtained, then price-conscious consumers are likely to perceive the usefulness of s-commerce; and thus, develop positive use intentions toward s-commerce [e.g., Kim 2011]. In addition, if greater savings can be obtained through increased s-commerce use, then price consciousness may have a strong moderating effect on the relationship between perceived ease of use and individuals' intention to use s-commerce. In this regard, we propose the following hypotheses:

Hypothesis 6: Consumers' price consciousness moderates the relationship between perceived usefulness and individuals' intention to use s-commerce.

Hypothesis 7: Consumers' price consciousness moderates the relationship between perceived ease of use and individuals' intention to use s-commerce.

Previous studies have defined 'perceived usefulness' as the extent to which an individual believes that a new technology would improve performance [Davis 1989]. Perceived usefulness has been shown to have a direct effect on behavioral intentions over and above users' attitudes. The relationship between perceived usefulness and behavioral intentions is based on the idea that individuals form intentions to engage in certain behaviors (e.g. technology use) if they believe that the behavior can enhance their performance. This suggests that individuals may use s-commerce to facilitate their online shopping endeavors and exploit the possibility of attaining lower prices and quality product information.

Previous studies have defined 'perceived ease of use' as the extent to which an individual believes that using a new technology would require little effort [Davis 1989]. Perceived ease of use may be a direct determinant of perceived usefulness [Celik & Yilmaz 2011; Shen 2012], because the less the effort required of an individual to learn a new technology, the more likely he or she is to view it as useful for enhancing his or her job or task performance. A vast number of studies have demonstrated both direct and indirect relationships between perceived ease of use and behavioral intentions [Cha 2010; Venkatesh 1999]. The direct effect suggests that perceived ease of use may increase the likelihood of technology acceptance, whereas the indirect effect implies that, all else being equal, the easier the technology is to use, the more useful it is.

As discussed earlier, s-commerce is a relatively new phenomenon representing a subset of e-commerce. Because s-commerce is dependent on the behavior of individuals, perceived usefulness and ease of use may be useful for predicting individuals' use intentions and actual behaviors toward s-commerce. Previous studies have demonstrated the effects of perceived usefulness and ease of use on consumers' intention to adopt new technologies (e.g., e-commerce, m-Commerce, and SNSs). For example, Kim [2008] suggested that perceived usefulness and ease of use can have considerable influence on use intentions toward smartphones. Pookulangara and Koesler [2011] found that perceived usefulness and ease of use are positively related to use intentions toward SNSs. In this regard, we propose the following hypotheses:

Hypothesis 8a: Perceived usefulness has a positive effect on individuals' intention to use s-commerce.

Hypothesis 8b: Perceived ease of use has a positive effect on the perceived usefulness of s-commerce.

Hypothesis 8c: Perceived ease of use has a positive effect on individuals' intention to use s-commerce.

Hypothesis 8d: Individuals' intention to use s-commerce has a positive effect on actual s-commerce use.

4. Research Methodology

4.1. Development of Measurement Variables

The items were adopted from previous research. However, each item was modified to include s-commerce as the technology to be evaluated. For example, the items for consumer preference and reliance were drawn from Triandis [1995] and Oyserman et al. [2002]; consumer concern and norm acceptance were adapted from Ho and Chiu [1994]; goal priority were adapted from Jackson et al. [2006]; price consciousness were drawn from various sources [e.g. Alford and Biswas 2002; Dickinger and Kleijnen 2008; Lichtenstein et al. 1993]; and items for measuring the TAM variables were developed by adapting and amalgamating measures from several sources [e.g. Kim 2008; Kim and Garrison 2009]. All the items were measured using a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Before sending the questionnaire to the respondents, we examined the instrument for face validity by soliciting input from 3 IS researchers, 1 marketing researcher, and 10 graduate students with s-commerce experience. These specialists provided feedback on the length and clarity of the items. Table 1 lists the measurement items.

Table 1: Measurement Variables

Constructs		Items	References
Preference	PRE1	I prefer working in groups to working alone.	Oyserman et al. [2002], Triandis [1995],
	PRE2	Working in groups is better than working alone.	
	PRE3	I want to work in groups, not alone.	
Reliance	REL1	I feel comfortable counting on group members to do their part.	Oyserman et al. [2002], Triandis [1995],
	REL2	I am not bothered by the need to rely on group members.	
	REL3	I feel comfortable trusting group members to handle their tasks.	
Concern	CON1	The health of my group members is important to me.	Ho and Chiu [1994]
	CON2	I care about the well-being of my group members.	
	CON3	I am concerned about the needs of my group members.	
Norm Acceptance	NA1	I follow group norms.	Ho and Chiu [1994]
	NA2	I follow group procedures.	
	NA3	I accept group rules.	
Goal Priority	GP1	I care more about group goals than about my own goals.	Jackson et al. [2006]
	GP2	I emphasize group goals more than my own goals.	
	GP3	Group goals are more important to me than my own goals.	
Price Consciousness	PC1	I find myself checking prices in stores even for small items.	Alford and Biswas [2002], Dickinger and Kleijnen [2008], Lichtenstein et al. [1993],
	PC2	I value low prices for various products.	
	PC3	A low price is the most importance factor influencing my purchasing decisions.	
	PC4	I try to buy inexpensive products.	
Perceived Usefulness	PU1	Using s-commerce should enable me to accomplish my tasks more quickly.	David [1989], Kim [2008], Kim and Garrison [2009]
	PU2	Using s-commerce should increase my productivity.	
	PU3	I find s-commerce sites useful.	
	PU4	Using s-commerce sites should improve my shopping experience.	
	PU5	Using s-commerce sites should enhance my shopping experience.	
Perceived Ease of Use	PEU1	I find it easy to get s-commerce sites to do what I want them to do.	David [1989], Kim and Garrison [2009]
	PEU2	I find s-commerce sites easy to use.	
	PEU3	Learning to interact with s-commerce sites is easy for me.	
	PEU4	My interaction with s-commerce sites is clear and understandable.	
Use Intentions Toward S-Commerce	IU1	I intend to use s-commerce sites for finding low prices.	Davis [1989], Kim [2008]
	IU2	I intend to use s-commerce sites for shopping.	
Actual S-Commerce Use	AU1	How many times have you used s-commerce sites?	Davis [1989], Kim [2008]
	AU2	How many hours per week do you spend on s-commerce sites?	
	AU3	How frequently do you use s-commerce sites?	

4.2. Data Collection

A survey was conducted to test the proposed model and hypotheses. A total of 390 questionnaires were collected using multidimensional survey methods, including online, offline, on-site, telephone, email, and fax solicitations. Among the 390 questionnaires, 15 were excluded because of missing or inappropriate responses. The respondents represented a diverse range of occupations: students (11.5%); office workers (20.5%); technicians (10.4%); professionals (13.3%); self-employed individuals (16.3%); researchers (11.2%); academicians (8.8%); and those with other occupations (8.0%).

The average age of the respondents was 35.9, and 59.2% were female. The respondents were most likely to use the following s-commerce sites: Ticketmonster (42.4%) and Coupang (38.4%). In addition, 44.5% reported that they used s-commerce sites to purchase movie or concert tickets, and 67.0% and 39.5% used s-commerce for at least six months and a year, respectively. Table 2 shows the demographic characteristics of the respondents.

Table 2: Demographic Characteristics

Demographic Categories		Frequency	Percentage
Age	Under 20	43	11.5%
	20-29	79	21.1%
	30-39	108	28.8%
	40-49	88	23.5%
	50+	57	15.2%
Gender	Male	153	40.8%
	Female	222	59.2%
Educational Level	High School	84	22.4%
	College/University	179	47.7%
	Postgraduate Study	94	25.1%
	Other	18	4.8%
Occupation	Student	43	11.5%
	Office Worker	77	20.5%
	Technician	39	10.4%
	Professional	50	13.3%
	Self-Employed	61	16.3%
	Researcher	42	11.2%
	Academician	33	8.8%
	Other	30	8.0%
S-Commerce Sites in Use [Multiple Responses]	Ticketmonster	159	42.4%
	Coupang	144	38.4%
	Wemakeprice	101	26.9%
	Dailypick	86	22.9%
	Showkingon	76	20.3%
	Others	86	22.9%
Items Purchased Through S-Commerce Sites [Multiple Responses]	Ticket	167	44.5%
	Beauty/Health	107	28.5%
	Travel	82	21.9%
	Fashion	76	20.3%
	Electronic Appliance	34	9.1%
	Other	57	15.2%
Length of S-Commerce Use	< 3 months	35	9.3%
	≥3, <6 month	89	23.7%
	≥6, <1 year	103	27.5%
	≥1 year	148	39.5%
Total Responses		375	100.0%

5. Results and Discussion

5.1. Validation of the Measurement Model

We assessed the convergent and discriminant validity of the measurement model through a confirmatory factor analysis using AMOS 7.0. First, the fitness between the characteristic of the measurement model and that of the dataset was tested to purify the measurement model. The decision for evaluating the overall-fit of the measurement models was based on a number of factors, 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 of approximation (RMSEA). A good fit is indicated when the GFI, the NFI, and the CFI exceed 0.90 [Bentler 1990], the AGFI exceeds 0.8, and the RMSEA is close to 0.05 [Browne & Cudeck 1993]. In addition, the value of χ^2/df should range from less than 3 to 5 [Goodhue 1995].

The results of the fit indices for the measurement model with all items (33 items) – Model 1 – indicate that it provided a poor fit to the data (n=375). That is, the GFI (0.81), and the AGFI (0.75) were below acceptable levels. According to the modification indices, PC4 (an item for price consciousness) had a cross-loading issue. This parameter, representing the possible cross-loading of PC4 on perceived usefulness, was clearly different from the rest and accounted for the significant misspecification of the hypothesized factor loading. This misspecification implies that PC4 measured not only price consciousness but also perceived usefulness. Thus, Model 1 was reevaluated after excluding PC4. In addition, PU1 (an item for perceived usefulness) was excluded because it shared a high degree of residual variance with PU2 and PU3. Based on the methodological procedure [Gefen et al. 2000], the items were discarded one by one, and Model 1 was reevaluated.

After excluding the two items, the measurement model (Model 2) was reevaluated. The results for Model 2 indicate a good fit (NFI: 0.95; GFI: 0.94; AGFI: 0.90; CFI: 0.97; RMSEA: 0.041). Finally, X^2/df was 1.92, which was less than the recommended value of 3.0, indicating that the characteristic of the data set well explained the characteristic of the measurement model. Table 3 shows the results.

Table 3: Summary of Fit Indices for the Measurement Model

Model	NFI	GFI	AGFI	CFI	X^2/df	RMSEA
Model 1	0.92	0.81	0.75	0.93	1.68	0.049
Model 2	0.95	0.94	0.90	0.97	1.92	0.041
Recommended Value	≥ 0.9	≥ 0.9	≥ 0.8	≥ 0.9	≤ 3.0	≤ 0.05

5.2. Psychometric Properties of the Measurement Model

After purifying the measurement model, item reliability, internal consistency, and discriminant validity were used to assess the reliability and validity of the research model [Chin 1998]. Item reliability was assessed using individual item loadings. Satisfactory item reliability is indicated if individual items have loadings exceeding 0.7 in terms of their expected factors and less than 0.4 in terms of others [Chin 1998]. The item reliability results indicate that all the items exceeded the threshold, implying that the survey tool was sufficient for measuring each construct individually. For the assessment of internal consistency, we used Cronbach's alpha. Teo et al. [1999] suggested that Cronbach's alpha should exceed 0.7 for sufficient construct reliability. The results indicate that Cronbach's alpha ranged from 0.76 to 0.94, exceeding this threshold. Table 4 shows the results for item reliability and internal consistency.

Table 4: Results for Construct Validity and Reliability

Construct	Item	Mean	Std. Dev.	Factor Loading	Cronbach's Alpha
Preference	PRE1	5.61	0.49	0.74	0.89
	PRE2	4.89	0.51	0.89	
	PRE3	4.95	0.62	0.79	
Reliance	REL1	5.38	0.68	0.85	0.76
	REL2	5.72	0.50	0.79	
	REL3	4.96	0.48	0.73	
Concern	CON1	5.04	0.65	0.86	0.82
	CON2	5.18	0.54	0.89	
	CON3	5.19	0.58	0.79	
Norm Acceptance	NA1	5.48	0.49	0.79	0.76
	NA2	6.12	0.73	0.78	
	NA3	6.04	0.51	0.87	
Goal Priority	GP1	5.41	0.48	0.87	0.85
	GP2	5.95	0.63	0.89	
	GP3	6.27	0.45	0.79	
Price Consciousness	PC1	5.41	0.59	0.93	0.82
	PC2	5.83	0.70	0.86	
	PC3	6.25	0.76	0.79	
Perceived Usefulness	PU2	6.47	0.59	0.92	0.93
	PU3	6.24	0.68	0.87	
	PU4	5.90	0.33	0.78	
	PU5	6.15	0.54	0.83	
Perceived Ease of Use	PEU1	5.01	0.65	0.85	0.90
	PEU2	6.29	0.82	0.79	
	PEU3	6.12	0.50	0.89	
	PEU4	5.54	0.78	0.88	
Use Intentions Toward S-Commerce	IU1	6.10	0.54	0.85	0.94
	IU2	6.47	0.61	0.90	
Actual S-Commerce Use	AU1	6.58	0.42	0.92	0.92
	AU2	5.69	0.39	0.95	
	AU3	6.22	0.81	0.88	

Note: PC4 and PU1 were excluded after testing the fit of the measurement model.

Finally, discriminant validity was assessed using the average variance extracted (AVE). Discriminant validity demonstrates the lack of a relationship between measures that theoretically should not be related. The square root of each construct's AVE should exceed its correlation with any other construct for sufficient discriminant validity [Fornell & Lacker 1981]. As shown in Table 5, the correlation for each construct did not exceed the square root of its AVE, demonstrating sufficient discriminant validity.

Table 5: Results for Discriminant Validity

Latent Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Preference	0.87									
(2) Reliance	0.44	0.90								
(3) Concern	0.38	0.29	0.88							
(4) Norm Acceptance	0.23	0.27	0.25	0.92						
(5) Goal Priority	0.37	0.32	0.30	0.29	0.87					
(6) Price Consciousness	0.28	0.23	0.26	0.40	0.38	0.82				
(7) Perceived Usefulness	0.47	0.36	0.30	0.41	0.50	0.32	0.88			
(8) Perceived Ease of Use	0.26	0.35	0.29	0.42	0.34	0.25	0.50	0.86		
(9) Use Intentions Toward S-Commerce	0.37	0.26	0.27	0.25	0.32	0.37	0.53	0.44	0.89	
(10) Actual S-Commerce Use	0.40	0.36	0.26	0.29	0.28	0.30	0.21	0.36	0.53	0.94

Note: The square root of the AVE is indicated along the diagonal (in bold type).

5.3. Structural Model Assessment

The hypotheses were tested using structural equation modeling (SEM) with AMOS 7.0. This approach produces two crucial pieces of information: the estimate of standardized path coefficients [β] and the squared multiple correlations (R^2) for each endogenous construct. Both are used to indicate how well the structural model can predict hypothesized relationships. Path coefficients imply the strength of the causal relationship between two constructs, whereas the value of R^2 measures the percentage of the variance explained by each construct in the model [Wixom and Watson 2001].

The results for all indices for the structural model indicate a good fit (relative $\chi^2 = 1.68$, NFI = 0.97, GFI = 0.96, AGFI = 0.93, CFI = 0.98, RMSEA = 0.029). Given the good fit, the proposed hypotheses were tested using standardized path coefficients. As shown in Figure 2, the results provide support for all the hypotheses except for H3. Among the five variables for collectivism: preferences (H1), reliance (H2), norm acceptance (H4), and goal priority (H5) had significant effects on perceived usefulness, but concern [H3] did not. First, preferences had a significant positive effect on perceived usefulness ($\beta = 0.43$, $p < 0.01$), providing support for H1 and verifying the effect of the collectivistic nature of s-commerce on the consumers' perception of the usefulness of the technology. This suggests that consumers who believe that collective efforts are superior to individual efforts are more likely to perceive the usefulness of s-commerce than those who do not. Second, reliance had a significant positive effect on perceived usefulness. The path coefficient between reliance and perceived usefulness was 0.33 ($p < 0.05$), suggesting that consumers who are comfortable relying upon others to make sound purchasing decisions and/or provide accurate feedback on products, are more inclined to find s-commerce useful.

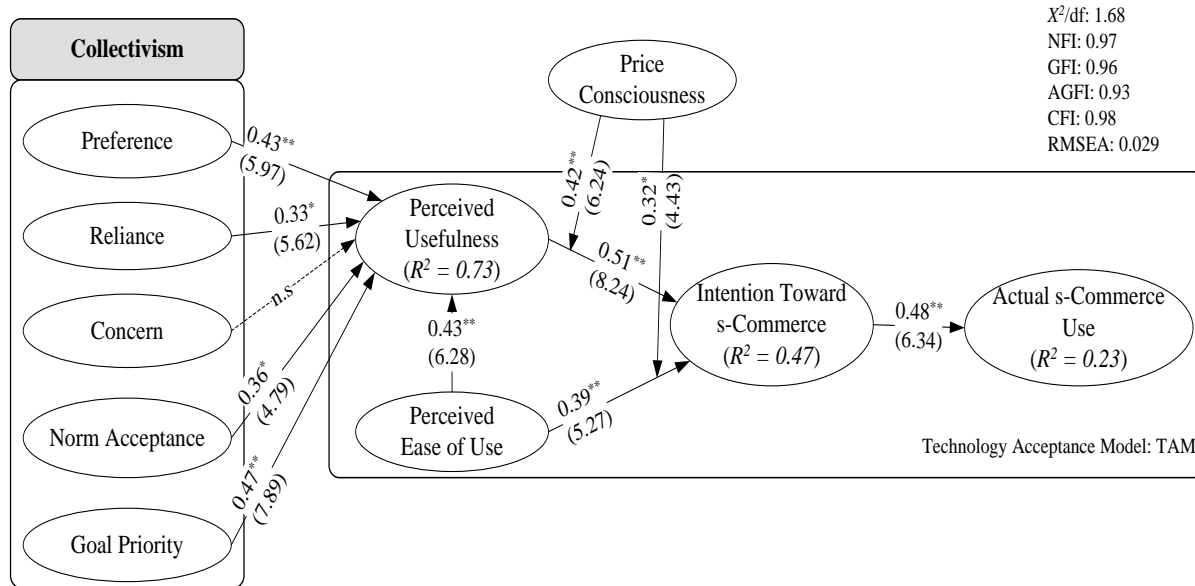
Third, norm acceptance and goal priority had significant positive effects on the perceived usefulness of s-commerce. The standardized path coefficients between these two constructs and perceived usefulness were 0.36 ($p < 0.05$) and 0.47 ($p < 0.01$), respectively, providing support for H4 and H5. The result for H4 suggests that consumers who easily accept the social norms in an s-commerce environment are more likely to perceive s-commerce useful. In addition, consumers who have the same goal priority as their group members are likely to perceive the usefulness of s-commerce, because their actions are guided by what they deem to be in the group's interests. Finally, concern had no significant effect on perceived usefulness ($\beta = 0.023$, $p = 0.975$), providing no support for H3. This finding suggests that, although group members' concern for others is an important dimension of collectivism [Triandis 1995], the other four factors of collectivism do a better job explaining why individuals perceive s-commerce as being useful.

Our analysis shows evidence of price consciousness having a significant moderating effect on the relationships between perceived usefulness/perceived ease of use and use intentions toward s-commerce ($\beta = 0.42$, $p < 0.01$, $\beta =$

0.32, $p < 0.05$), providing support for H6 and H7, respectively. These findings indicate that price consciousness strengthened the relationships between perceived usefulness/perceived ease of use on individuals' intention to use s-commerce. Individuals are more likely to use s-commerce if they can benefit from lower costs in addition to how they perceive s-commerce to be useful and easy to use.

Our analysis also concludes that perceived usefulness had a significant positive effect on individuals' intention to use s-commerce ($\beta = 0.51$, $p < 0.01$). Further, perceived ease of use had significant positive effects on perceived usefulness and individuals' intention to use s-commerce ($\beta = 0.41$, $p < 0.01$, $\beta = 0.39$, $p < 0.01$), respectively. These results provide support for H8a, H8b, and H8c, respectively. Finally, individuals' intention to use s-commerce had a significant positive effect on actual s-commerce use ($\beta = 0.48$, $p < 0.01$), providing support for H8d. This result is consistent with the findings of previous studies examining technology acceptance in various contexts [e.g., Kim, 2008]; and suggests that the acceptance of s-commerce is based on its perceived usefulness and ease of use.

All of the constructs except for concern explained approximately 73.0% of the variance in perceived usefulness. In addition, perceived usefulness and ease of use explained approximately 47.0% of the variance in use intentions toward s-commerce. Finally, use intentions toward s-commerce explained approximately 23.0% of the variance in actual s-commerce use. Figure 2 shows the standardized path coefficients with their respective significance levels and percentage of the variance explained. In addition, Table 6 summarizes the results of the tested hypotheses.



Note: Regular numbers indicate standardized regress weight or factor loadings, and italicized ones, squared multiple correlations/number in parentheses indicate t-values. *: $p < 0.05$; **: $p < 0.01$. n.s: not significant

Figure 2: Structural Model

Table 6: Summary of Hypotheses Test

Hypothesis	Path	Path Coefficient	t-value	Result
H1	Preference → Perceived Usefulness	0.43**	5.97	Support
H2	Reliance → Perceived Usefulness	0.33*	5.62	Support
H3	Concern → Perceived Usefulness	0.04	0.07	Not Support
H4	Norm Acceptance → Perceived Usefulness	0.36*	4.79	Support
H5	Goal Priority → Perceived Usefulness	0.47**	7.89	Support
H6	Perceived Usefulness x Price Consciousness → Intention Toward S-Commerce	0.42**	6.24	Support
H7	Perceived Ease of Use x Price Consciousness → Intention Toward S-Commerce	0.32*	4.43	Support
H8a	Perceived Usefulness → Intention Toward S-Commerce	0.51**	8.24	Support
H8b	Perceived Ease of Use → Perceived Usefulness	0.43**	6.28	Support
H8c	Perceived Ease of Use → Intention Toward S-Commerce	0.39**	5.27	Support
H8d	Intention Toward S-Commerce → Actual S-Commerce Use	0.48**	6.34	Support

6. Conclusions

6.1. Summary of Key Findings

In this study, we examined the relationships between five dimensions of collectivism, namely preferences, reliance, concern, norm acceptance, and goal priority, and actual s-commerce use through perceived usefulness and ease of use. We conducted a survey and employed the SEM method to test the hypotheses. The empirical findings provide support for all but one of the hypotheses. Perceived ease of use had a significant positive effect on perceived usefulness ($\beta = 0.41$, $p < 0.01$), and perceived usefulness ($\beta = 0.51$, $p < 0.01$) and perceived ease of use ($\beta = 0.39$, $p < 0.01$) had significant positive effects on use intentions toward s-commerce. Use intentions toward s-commerce ($\beta = 0.48$, $p < 0.01$) had a significant positive effect on actual s-commerce use. The support of our hypotheses and the strength of our research model suggest that consumers, who embody a collectivist mentality, consider s-commerce as useful and easy to use are more likely to use it. This result is consistent with the findings of previous studies [Davis et al. 1989; Hsu and Lu 2004].

The results provide partial support for the relationships between the variables for collectivism and perceived usefulness. Preferences ($\beta = 0.43$, $p < 0.01$), reliance ($\beta = 0.33$, $p < 0.05$), norm acceptance ($\beta = 0.36$, $p < 0.05$), and goal priority ($\beta = 0.47$, $p < 0.01$) had significant positive effects on perceived usefulness whereas concern was an insignificant factor in this study. Among the five dimensions of collectivism, preferences and goal priority were the most important factors influencing use intentions toward s-commerce. Furthermore, our results provide evidence to support that price consciousness had significant moderating effects on the relationships between perceived usefulness ($\beta = 0.42$, $p < 0.01$)/perceived ease of use ($\beta = 0.32$, $p < 0.05$) and individuals' intention to use s-commerce, providing support for the findings of Dickinger and Kleijnen [2008]. The results suggest that highly price-conscious consumers are likely to use s-commerce sites when they perceive them to be useful or easy to use.

6.2. Contributions and Implications

Although there is an urgent need for analyzing s-commerce users' behavior for a better understanding of the drivers behind the explosive growth of s-commerce markets, few studies have examined s-commerce to explain users' behavior [Rad & Benyoucef 2010]. To fill this research gap, this study provides empirical analysis to help explain the characteristics of individuals who are most likely to engage in s-commerce and presents a framework for future s-commerce research. In addition, considering the fact that s-commerce is one of the fastest-growing e-commerce segments and has become an important model for online business, this study provides useful insights into the relationship between s-commerce users, which can serve as valuable guidelines for firms interested in formulating effective s-commerce strategies. In other words, our results provide both academic and practical implications.

A unique implication to IS adoption study is that this study extends previous research by examining the user's acceptance of s-commerce by including relevant personality traits, namely the five dimensions of collectivism: preferences, reliance, concern, norm acceptance, and goal priority [Srite & Karahanna 2006; Veiga et al. 2001]. The results provide support for the basic premise of TAM and users' attitudes toward s-commerce, demonstrating the validity of TAM as an appropriate framework for understanding s-commerce users' intentions and actual use of this

relatively new form of e-commerce. That is, this study focuses on the relationship between collectivism and perceived usefulness as it pertains to users' intentions toward and actual use of s-commerce. In addition, this study provides an analysis of the moderating effect of price consciousness on the relationship between collectivism and perceived usefulness in s-commerce. Therefore, new research should be conducted to determine if other key variables exist to help explain individuals' intention to use s-commerce beyond those variables found in TAM.

The results have important practical implications for the behavior of s-commerce users as well. First, our results show the effects of the separating psychological collectivism on perceived usefulness of s-commerce. Collective group members tend to be better performing group members. Furthermore, collective members perform their group tasks better, contribute more discretionary citizenship, and are less likely to engage in counterproductive or withdrawal behaviors than individual members. Our results show that each of the facets serves as an active ingredient for at least usefulness dimension, with preference explaining working in groups, reliance facets explaining trusting in group members, norm acceptance explaining acceptance group norms, and goal priority explaining emphasis of group goals than my own goals. This implies that markets should consider different marketing strategies after understanding customers' collectivism when planning to enter s-commerce markets because customers having preference, reliance, norm acceptance, and goal priority propensity tend to perceive a usefulness of s-commerce more quickly.

Second, firms that are strategic in their s-commerce site development should acknowledge that social dimensions like preference, reliance, norm acceptance, and goal priority can contribute to the success of their site. To this point, developers of s-commerce sites can employ several mechanisms to build and facilitate group norms to encourage users' positive attitudes and participatory behavior. That is, firms must encourage users to post information that is truthful and beneficial to the users to help continue the growth of s-commerce. Future research could focus on identifying the factors that help firms build a trusting and loyal s-commerce community, which positively influences individuals' use of s-commerce.

Third, s-commerce firms should acknowledge that social dimensions can contribute to the success of s-commerce. The results are expected to provide s-commerce firms with a better understanding of how they can build trust and positively influence use intentions toward s-commerce. Developers of s-commerce sites can employ several mechanisms to build and facilitate group norms to better encourage users' positive attitudes and participatory behavior. Fourth, the results suggest that belief variables such as perceived usefulness and ease of use to can explain s-commerce users' behavior. S-commerce users are likely to have a good understanding of s-commerce use through their experience with online or mobile commerce. In addition, these users are likely to perceive that usefulness and ease of use are crucial attributes of any successful s-commerce site. Therefore, s-commerce firms should inform their users of their sites' usefulness and convenience. If an s-commerce firm builds and analyzes a database of its users and provide them with valuable information, then they can gain information more efficiently. If an s-commerce firm provides loyal users with timely and relevant information on popular products and services from other users through SNSs, then the firm can attract more users.

Finally, the results highlight the importance of price consciousness in the context of s-commerce. S-commerce firms have a business model that reduces prices by selling a certain quantity within a certain period of time. That is, these firms focus on price-sensitive consumers. For increased benefits, s-commerce firms should establish strategies for attracting price-conscious consumers to s-commerce sites and build a sense of community that promotes an atmosphere for continued use. For example, they can attract new users by employing strategies such as acquaintance recommendations, reward points based on the number of visits and friends who join, and additional discounts when users buy with their friends. Additionally they could build a sense of community by ranking members based on helpful reviews, so individuals would be more likely to engage in s-commerce based on the value they receive from the relationships they develop through the online experience in addition to lower prices they receive.

6.3. Limitations and Future Research

This study is limited in that participants reported their use of s-commerce rather than the researchers viewing participants' actual use. Future research should be conducted on participants' actual behavior within the context of s-commerce. Further, this study represents a snapshot in time and could be strengthened using a longitudinal study to better understand the relationships among variables. Future research might include the exploration of new constructs to better predict the intention and actual use of s-commerce. This research is further limited by the population of study. Since the respondents resided from Korea, our results may not be generalizable to other populations. Therefore, future research needs to be conducted on cultures that are characterized as being individualistic as well as other collectivist cultures outside of Korea. Finally, this study did not quantify how often or how frequent the respondents made use of s-commerce. Therefore, future research should attempt to determine how often users participate in s-commerce and to what extent it drives their purchasing decision.

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