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Charting Consumers' Continued Social Commerce Intention

Abstract

- **Purpose:** This study investigates the factors that influence a consumer's continued social commerce (s-commerce) intention and the underlying mechanism.
- **Design/methodology/approach:** We define continued s-commerce intention as consumers' intention to continually participate in s-commerce activities, namely requesting and sharing of commercial information. Grounded in Motivation Theory, perceived usefulness and perceived enjoyment are identified as motives of consumers' continued s-commerce intention. Moreover, given the indispensable social facet of s-commerce, we include social support as a critical social factor that also motivate continuance intention. Furthermore, users' perceptions are affected by prior s-commerce outcome, which concerns the effectiveness of the commercial information exchange process. Research suggests that in such a context, the result of communication is jointly determined by source credibility and interactive relationships among individuals. While source credibility determines the usefulness of the information been transmitted, social interaction supports this process. Therefore, source credibility and social interaction are crucial to the outcome of s-commerce, which affect consumers' perceived usefulness, perceived enjoyment and social support in s-commerce. Building on these arguments, we propose our research model and then test the hypotheses via a survey.
- **Findings:** We find that consumers' perceived usefulness and informational social support of s-commerce directly affect the continued s-commerce intention. Moreover, perceived enjoyment leads to continued s-commerce intention via the mediation of perceived usefulness; emotional social support influence continued s-commerce intention through the mediator of informational social support. In addition, source credibility is a significant antecedent of consumers' usefulness, enjoyment and social support perceptions; social interaction significantly impacts perceived enjoyment and social support.
- **Originality:** A variety of consumer behaviours in s-commerce has been studied, however, the continuance intention to participate in s-commerce activity remains unknown. This empirical study fills in this research gap. Moreover, we initially reveal s-commerce participants' utilitarian orientation in the post-adopt stage: perceived usefulness and informational social support affect continuance intention more directly than perceived enjoyment and emotional social support. Further, prior IS continuance studies usually focus on technical features. We identified the influence from the social factors, i.e. social support, which extends IS continuance literature.

Key words: social commerce, continued s-commerce intention, social support

1. Introduction

Social commerce (s-commerce) is an evolution of electronic commerce (e-commerce) which combines social media techniques. The nature of s-commerce is to use consumers' online social network (OSN) activities to facilitate commercial information sharing and other social interactions so as to promote transaction of products (Liang & Turban, 2011; Shin, 2013). S-commerce creates an alternative channel for consumers to acquire word of mouth (WOM) information to support purchase decisions (Hu et al., 2016). It also allows firms to obtain competitive advantage via developing and utilizing the customer resource in social media (Lam et al., 2019). Therefore, s-commerce can generate enormous commercial potential for sellers and Internet service providers. As a result, the e-commerce industry has shown great enthusiasm for carrying out s-commerce initiatives. In recent years, s-commerce had experienced explosive growth in China: by 2019, the market size of s-commerce has reached CNY 2060.58 billion, and the number of s-commerce consumers was approaching 512 million (Yu, 2019). It is predicted that s-commerce in China is now ushering in a new spring of robust growth (Xu, 2019).

However, despite the initial success of s-commerce, there are concerns regarding its sustainable development from both academicians and practitioners (Kim, 2013; Shin, 2013). The idea of shopping while socializing has been challenged (Zhu, 2011). Some industrial evidences have emerged that draw our attention to this issue. For example, the formerly influential Chinese s-commerce websites, Mogu.com and Meilishuo.com, are actually deviating from s-commerce practices (Yao, 2012). More recently, Amazon has shut down its s-commerce application "Spark" and officially closed its s-commerce business (Li, 2019). Therefore, we identify the continuance of s-commerce as an urgent issue. Without doubt, the vitality of s-commerce depends on the activeness of the participants, which means that consumers constantly participate in s-commerce activities, such as requesting and sharing commercial information, over a period of time (Liang et al., 2011; Shen et al., 2019; Zhang et al., 2014).

Extant research on s-commerce has examined users' initial intention to take part in s-commerce activities (Liang et al., 2011; Zhang et al., 2014) and users' purchase intention and behaviour (Hu et al., 2019; Hu et al., 2016; Xiang et al., 2016). However, research on consumers' continual s-commerce intention is not sufficient. To the best of our knowledge, Liang et al.'s (2011) study has provided original insights into individuals' continuance intention to use an s-commerce website. In this pioneering study, individuals' continuance intention to use an s-commerce website is influenced by the antecedents that also predict one's initial intention to participate in s-commerce (Liang et al., 2011). Moreover, Shin (2013) has investigated users' intention to use s-commerce, with a specific focus on future use and continual use. Nevertheless, intention to use e-commerce website is not equal to s-commerce intention; the latter underlines individual consumers' level of activeness and engagement in s-commerce activities (Shen et al., 2019). Research on s-commerce intention agrees that users' active participation, such as sharing and obtaining commercial information and direct and

indirect transactions, is critical to the s-commerce business (Shen et al., 2019; Zhang et al., 2014). Building on these prior works, we aim to specifically investigate consumers' continued intentions to participate in s-commerce activities. Hence the following research question is proposed.

RQ: Which factors influence a consumer's intention to continually participate in s-commerce activities, and how?

We examine continued participation intention instead of actual behaviour for three reasons. First, intention is frequently used as a surrogate of behaviour in IS research (Ajzen, 1991). Second, actual behaviour is usually difficult to measure, especially in the online context, so collecting self-reported data of intention from the s-commerce users can ensure both feasibility and rigor of our research (Hassanein & Head, 2006; Koufaris, 2002; Liang et al., 2011; Zhang et al., 2014). Third, unlike conventional e-commerce that is oriented toward direct transactions, s-commerce put more emphasis on encouraging information sharing and socializing among consumers, allowing consumers to be better informed about products or developing social benefits (Wang & Zhang, 2012). Therefore, the result of s-commerce activity is usually indirect, such as the change of intentions toward buying or selling of products (Liang et al., 2011). Hence, users' continued s-commerce intention is a robust indicator of s-commerce sustainability.

To reveal individuals' s-commerce continuance intention, we start by utilizing Motivation Theory to dissect consumers' behavioural motive, and then refer to the s-commerce literature to elicit the particular factors that may play a significant role. Motivation Theory posits that one's behavioural intention is driven by two distinct types of forces: extrinsic motivations and intrinsic motivations (Deci, 1976). Extrinsic motivation (perceived usefulness) concerns the utilitarian outcomes one can obtain from committing an action, such as improved task performance; intrinsic motivation (perceived enjoyment) requires that the action itself is pleasant and fun (Davis et al., 1992). The usefulness-enjoyment dichotomy is commonly applied in studies on online consumers (Childers et al., 2002), and it is also constructive in explaining individuals' continuance intention to participate in social networking sites (Lin & Lu, 2011) and virtual community (Jin et al., 2010). In light of this, we suggest that an individual's intention to continually participate in s-commerce is motivated by his/her perceived usefulness and perceived enjoyment of the past s-commerce experience (Deng et al., 2017).

However, the extent to which intrinsic and extrinsic motivation affect a user's intention is varied over time (Magni et al., 2010; Wen et al., 2011; Xu et al., 2012). That is, in the post-adoption stage, the effect of intrinsic factors on usage intention decreases and the effect of extrinsic factors increases (Magni et al., 2010). This is consistent with research on IT continuance that usually highlights users' utilitarian tendency in the post-adoption stage (Bhattacharjee 2001a; Bhattacharjee & Lin, 2015). The Expectation-Confirmation Model also specifies the role of perceived usefulness in predicting consumers' continuance intention toward e-commerce, while the effect of hedonic factors is inconspicuous (Bhattacharjee 2001a).

Moreover, in e-commerce continuance studies, it's common to treat perceived usefulness as an important mediating variable that mediates the effect of various factors on continuance intention (Fatlawi et al., 2019). Meanwhile, a number of studies have implied the significant influence of perceived enjoyment on perceived usefulness in online shopping context (Chen & Teng, 2013) and in the post-adoption context (Zhou & Lu, 2011; Xu et al., 2012). Hence, in consideration of the causal relationship between perceived enjoyment and perceived usefulness and consumers' utilitarian tendency in the post-adoption stage, we propose that the effect of perceived enjoyment on continued s-commerce intention is mediated by perceived usefulness.

In addition, as informed by literature, s-commerce qualitatively differs from traditional e-commerce practice because of its distinct social media nature (Liang & Turban, 2011). Regarding social media continuance, the social dimension becomes an indispensable facet of users' perceptions, in addition to the usefulness and enjoyment dimensions (Gong et al., 2020; Hsiao et al., 2016). Therefore, when using conventional e-commerce perspectives to solve s-commerce issues, social factors, especially social support, meaning individuals support each other in the form of information and affection, should be included as a critical component of behavioural incentives (Hu et al., 2016; Liang & Turban, 2011). Taking the above-mentioned facts into consideration, we put forward perceived usefulness, perceived enjoyment and social support as predictors of consumers' continued s-commerce intention.

As already noted, consumers' perceptions of enjoyment, usefulness and social support are affected by their evaluation of prior s-commerce experience (Kim & Malhotra, 2005). This study sustains Liang et al.'s (2011) understanding of s-commerce activity with a particular focus on consumers' commercial information exchange. S-commerce allows users to build OSN so that they can share shopping-related information, especially WOM, with peers (Liang et al., 2011). Therefore, the outcome of s-commerce activity is closely related to the result of users' information exchange. In an OSN context, the effectiveness of WOM depends on two important aspects: source credibility and interactive relationship among individuals (Brown et al., 2007). On one hand, source credibility determines the quality and usefulness of the information been transmitted, and hence influences individuals to accept the information (Cheung et al., 2008; Cheung et al., 2009; Cheung & Thadani, 2012; Hu et al., 2019). Moreover, source credibility is a significant predictor of individuals' continuance intention to exchange information in OSN platforms (Jin et al., 2009; Zheng et al., 2013). Hence, we suggest source credibility would significantly impact consumers' evaluation of the s-commerce activity. On the other hand, in s-commerce, social relationships among users are supported by the social interaction mechanism (Zhou, 2019). Social interaction is a core feature of s-commerce that allows for various types of communication and interactivity among users (Liang & Turban, 2011; Huang & Benyoucef, 2013). Research suggests that the level of an individual's social interaction represent the level of his/her participating in s-commerce (Phang et al., 2013). Without doubt, social interaction is crucial to the efficiency of users' information exchange activities, thus it would exert an influence on their perceptions of s-commerce. As a result, we identify source credibility and social interaction as two critical s-commerce factors that particularly affect consumers' perceived usefulness, perceived enjoyment and social support during s-commerce activities.

Afterwards, we propose our research model and conduct an online survey to empirically test the hypothesis.

This research shall make contributions to both literature and practice. First, the ultimate success of s-commerce relies on consumers' continued participation instead of initial adoption. Despite that some studies have shed light on individuals' continued intention to use s-commerce website, their intention to continually participate and engage in s-commerce activities is unclear. This empirical study shall fill in this research gap and therefore extend s-commerce literature. Second, this work can enrich IS continuance literature by revealing the pattern of s-commerce continuance. By incorporating social support as a social facet of users' perceptions, we provide a further reflection on the social and technical features of a social-media-based platform. The work shall enlighten future research on continuance issue since social elements are increasingly involved in technologies of the day. The findings of users' perception associated with the technology-mediated social activity can be extended to interpret technologies alike. Third, we intend to reveal the asymmetric effect of perceived usefulness and perceived enjoyment by proposing usefulness as a mediator between enjoyment and continued s-commerce intention. This can throw a different light on the hedonic-utility nature of s-commerce. We could show that the extent to which the hedonism-utility nature of s-commerce affects a consumer's participating intention might vary during different stages of s-commerce use. Finally, our study can generate managerial implications for s-commerce practitioners by revealing the underlying mechanism of user retention.

2. Research Background

2.1 Social Commerce Activities

S-commerce is a novel business model that applies social media features to conventional e-commerce facilities so as to enable social interactions among consumers and therefore to promote the exchange of products and services (Wang & Zhang, 2012). Being a hybrid of e-commerce and social media, s-commerce can be realized via two approaches. The first is to develop social networking sites (SNS) by adding online shopping functions or to encourage shopping-related information sharing among users, with an effort to influence consumers' purchase decisions (Wigand et al., 2008). Examples in this category include Sina Weibo, Facebook and WeChat shopping. The second is to upgrade traditional e-commerce websites by incorporating social media constructs, including communities, postings and following/follower mechanisms, so that consumers can build online social networks and interact with each other (Curty & Zhang, 2011). For instance, Taobao and Jingdong have extended their websites and applications to embed such modules.

In whatever form it exists, s-commerce has several essential properties, which are social media technology, community interaction, and commercial activity (Liang & Turban, 2011).

Moreover, the s-commerce structure is composed of four levels: individual level, conversation level, community level, and commerce level (Huang & Benyoucef, 2013). Grounded in these prior studies and a review of extant literature on s-commerce constructs (Hajli, 2015; Hu et al., 2016), we summarize the common s-commerce activities, as listed in Table 1.

Despite that s-commerce is a sub-category of e-commerce, they are qualitatively distinct. In a typical e-commerce setting, customers are usually independent and make decisions on their own, relying on sellers' product descriptions. In contrast, an s-commerce platform is basically a virtual community that allows for a diversity of collaborative activities among consumers (Hajli, 2015). Therefore, in a manner of speaking, traditional e-commerce aims to support effective business transactions. However, the first focus of s-commerce is social networking, collaborative shopping and social interaction among consumers, rather than actual transaction (Wang & Zhang, 2012). Through taking part in s-commerce, consumers could exchange shopping information so that they could be better informed by the input of other consumers and therefore make better purchase decisions (Liang & Turban, 2011). Moreover, they could use collaborative shopping methods to explore stores and discover products of interest (Olbrich & Holsing, 2011; Stephen & Toubia, 2010).

Table 1 Social Commerce Activities

Layers	Features	Descriptions/examples
Individual	Personal homepage	Registered users can build personal profiles and homepages, where their postings are collected.
Social media & Community interaction	Follow	Users build their own online social networks through the "follow" or "fan" mechanism.
	Posting	Users can post texts, pictures, videos and links related to product information, shopping experience, discount information, and product ratings and reviews, which are shown to visitors.
	Comment	Users can comment on other's posts and reply to the comment they themselves received.
	Message	Services such as message board, forum and instant chatting that enable free conversation.
	Like	Users can show interests to others' posts via clicking "Like".
Commerce	Collaborative shopping	The chatting plugins support instant communications of rich content during shopping process, which allows consumers to virtually shop together.
	Group buy	Consumers with similar shopping needs can be gathered to get bargain power.
	Click out	Click on a link to switch to the transaction interface.
	Transactions	Consumers can complete transactions directly on the website.

S-commerce satisfies consumers' needs of socializing that have been neglected in the traditional e-commerce context (Hu et al., 2016). Nevertheless, in comparison with general SNS activities, commercial outcomes are essential to s-commerce, for example, promoting transactions or causing consumers' attitude changes toward it (Liang & Turban, 2011). Researchers suggest that the essence of s-commerce is leveraging social media technology to build a virtual community in which consumers can interact with peer consumers to obtain product information and social support (Hajli, 2015). The core of s-commerce activity is consumers' information sharing, including knowledge, opinions and experience about what, where and from whom to buy products (Liang & Turban, 2011; Xu & Liu, 2019).

2.2 Continued S-commerce Intention

Consumers' continued participation is crucial to the success of s-commerce. It requires that consumers are actually involved in s-commerce activities rather than just using the focal website. Shen et al. (2019) identify s-commerce engagement as the level of users' investment, participation, and efforts in s-commerce activities, and distinguish two types of s-commerce engagement: active participation, such as sharing commercial information; passive participation, such as reading online reviews. Moreover, Lin et al., (2018) recognize consumers' engagement in s-commerce as social shopping, adopting shopping suggestions from other consumers, and social sharing, provide information for other consumers. Therefore, the core of continued s-commerce intention is to constantly take part in the sharing and acquiring of commercial information on an s-commerce platform (Liang et al., 2011; Shen et al., 2019; Zhang et al., 2014).

Researchers have devoted much effort to investigating user retention at the individual level. Many studies have shown that a user's continuous intention to use a technology is different from the initial intention (Bhattacharjee, 2001a). In the post-adoption stage, individuals have gradually accumulated usage experience, which may change their behavioural patterns over time (Kim & Malhotra, 2005). Ultimately, individuals' continuance intention toward an action is made based on their evaluations of the outcomes derived from this act in the past and expectations of benefits from this act in the future (Bhattacharjee & Lin, 2015).

For s-commerce users, these evaluations and expectations involve three aspects of concerns: usefulness, enjoyment and social value (Gong et al., 2020; Hsiao et al., 2016). Perceived usefulness is reached if participating in a s-commerce activity could lead to enhanced shopping performance. Researchers have identified perceived usefulness as a significant driver of users' continuance intention in a variety of contexts including e-commerce (Bhattacharjee, 2001a), mobile commerce (June, 2014) and social network sites (Lin & Lu, 2011; Mouakket, 2015). Moreover, s-commerce could be hedonic in its own right, and perceived enjoyment has been identified as a major driver of initial s-commerce intention (Shen 2012; Zhang et al. 2014). In addition, social support, satisfying consumers' social needs in s-commerce, is a critical component of user perception of s-commerce (Hu et al., 2016; Liang & Turban, 2011).

Therefore, perceived usefulness, perceived enjoyment and social support play critical roles in influencing consumers' continued s-commerce participation.

3. Hypothesis Development and Research Model

S-commerce users have double identities of IT users and online consumers (Koufaris, 2002). Generally speaking, consumers are either utilitarian problem solvers or hedonic fun and enjoyment seekers (Childers et al., 2002). In line with this dichotomy, Motivation Theory suggests that individuals' behavioural intention is driven by both extrinsic and intrinsic motivations (Deci, 1976). Intrinsic motivation, or perceived enjoyment, refers to enjoying the experience of the behaviour for its own sake; whereas extrinsic motivation, or perceived usefulness, relates to enhanced task performance as a result of committing such a behaviour (Davis et al., 1992). Therefore, perceived usefulness and perceived enjoyment capture consumers' utilitarian and hedonic goals respectively (Childers et al., 2002). Utilitarian and hedonic motivations are also effective in explaining individual's continual intention toward technology use (Deng et al., 2017; Ozturk et al., 2016).

Meanwhile, Liang et al. (2011) posit that when applying traditional e-commerce theories to the s-commerce context, the social factor, which is unique to s-commerce, is indispensable. As suggested by prior literature, the distinction between s-commerce and ordinary e-commerce lies in the socializing among consumers, in which socializing is described as "discovering products through social networks and developing feelings of warmth and satisfaction" (Shen, 2012). Thus, with the nature being social media, s-commerce additionally brings social values for its users, besides usefulness and enjoyment (Hu et al., 2016). As a result, s-commerce research frequently applies the usefulness-enjoyment-social taxonomy to illustrate the dimensions of consumers' shopping motivation (Kim et al., 2011; Zhong, 2013), and these three aspects were also found to be able to explain individuals' intention to be continually involved in social media activities (Gong et al., 2020; Hsiao et al., 2016).

Furthermore, in s-commerce activities, social support is the particular and representative social value outcome. It refers to the interpersonal support among individuals, which particularly comes in two forms: informational and emotional (Liang et al., 2011). Informational social support means providing recommendations, advices, and knowledge for other consumers; emotional social support refers to expressing affections such as concern, understanding, or compassion (Liang et al., 2011). With the development of social support, consumers would be more reliant on the s-commerce community for information and cares. Thus, social support is a peculiar factor that drives continued s-commerce intention (Liang et al., 2011; Friedrich, 2015). In conclusion, we put forward perceived usefulness, perceived enjoyment and social support as predictors of consumers' continued s-commerce intention.

3.1 Perceived Usefulness

Perceived usefulness means using a particular technology can lead to improved task performance (Davis, 1989), and it is frequently identified as a critical determinant of users' continual IT usage intention (Bhattacharjee, 2001a; Bhattacharjee, 2001b; Xu et al., 2012). Likewise, perceived usefulness of s-commerce reflects that a consumer's shopping performance get improved as a result of participating in s-commerce activities. As mentioned by researchers, s-commerce enables consumers to form online social networks so that they can share shopping information and discover, recommend and rate products with each other (Olbrich & Holsing, 2011). Consumers can benefit from these interactivities before, during and after shopping. For consumers who have not had an idea about what to buy, the product recommendation mechanism matches them with the right product easily (Phang et al., 2013). During the shopping process, collaborative shopping tools enable consumers to discuss with each other in real-time, so that they can generate better insights. Moreover, consumers can aggregate their individual power into group power and gain negotiating advantages. After a purchase has been made, consumers can share their shopping experiences and write product reviews to help subsequent buyers. Therefore, participants can by all means enhance their shopping performance, and they hope to benefit from these activities in the future, so they are willing to continue participating in s-commerce. Hence, we put forward the following hypothesis.

H1 A consumer's perceived usefulness of a social commerce platform is significantly and positively associated with the continued social commerce intention.

3.2 Perceived Enjoyment

Perceived enjoyment means that when individuals participate in s-commerce activities, the experience is intrinsically fun and hedonic (Davis et al., 1992). Enjoyment has been demonstrated to be a key predictor of individuals' initial s-commerce intention (Shen, 2012; Zhang et al., 2014). On the other hand, an individual's continued intention is primarily determined by the utilitarian rewards in the past (Bhattacharjee, 2001b). In the same way, online consumers' repurchase intentions are affected more by utilitarian factors than by hedonic factors (Wen et al., 2011). Furthermore, it is argued that perceived usefulness could be significantly affected by perceived enjoyment for the following reasons: perceived usefulness is the outcome of a variety of intrinsic sensations such as enjoyment (Ha & Stoel, 2009); enjoyment feelings can directly lead to better task performance and hence a higher level of perceived usefulness (Xu et al., 2012); perceived enjoyment could alleviate consumers' cognitive burden associated with exploring the e-commerce website, which makes their shopping process easier and improves their perception of usefulness (Chen & Teng, 2013). Hence, it is not unusual to operationalize perceived enjoyment as a factor that is secondary to usefulness in determining consumers' behavioural intentions (Ha & Stoel, 2009). The interface

of an s-commerce platform is usually graphic and visually appealing, and the socializing process can make consumers' patronage experience delightful (Olbrich & Holsing, 2011; Xiang et al., 2016; Hu et al., 2016). Thus, an enjoyable s-commerce experience is more likely to let participants form positive expectations of its usefulness in the future (Zhou & Lu, 2011). In conclusion, we suggest that

H2 A consumer's perceived enjoyment of a social commerce platform is significantly and positively associated with the perceived usefulness of it.

3.3 Social Support

In general, social support refers to "the resources provided by another person" (Eastin & LaRose, 2005), and it has various dimensions that satisfy an individual's multiple needs including the physical, psychological and cognitive ones (Huang et al., 2019). House (1981) posits that the types of social supports include emotional, instrumental, informational and appraisal. In s-commerce, two types of social support are prominent, namely informational social support and emotional social support (Liang et al., 2011). Informational social support relates to one help another by offering informational resources such as knowledge, experience and advice that could help this person deal with difficulties (Liang et al., 2011). Emotional social support means one shows supportive feelings to another, such as concern, understanding and compassion (Liang et al., 2011).

Prior research has revealed the effect of social support on s-commerce users' continuance intention (Liang et al., 2011; Friedrich, 2015). However, they usually treat informational social support and emotional social support as parallel factors that affect a consumer's initial s-commerce intention (Liang et al., 2011; Zhang et al., 2014). However, when it comes to continuance intention, their influences might vary. Since the core of s-commerce activity is sharing commercial information, informational social support could deliver direct utilitarian outcomes, which serve consumers' extrinsic purpose (Liang et al., 2011). The role of emotional social support is indirect, and it satisfies consumers' intrinsic needs (Liang et al., 2011). Moreover, the literature suggests that in predicting individuals' continuance intention, extrinsic reasons weigh more than intrinsic reasons (Magni et al., 2010). Therefore, we propose that in the post-adopt stage of s-commerce, informational social support is a direct antecedent of continuance intention, while the influence of emotional social support on continuance intention is mediated by informational social support.

The s-commerce mechanism encourages information exchange among consumers. A consumer's perception of informational social support develops if he/she get supported by others in the social group when he/she need certain information to solve a problem (Liang et al., 2011). Therefore, with informational social support being strong, consumers would form a habitual tendency to consult the s-commerce group when they are in need of information. Thus, they are more willing to continue taking part in s-commerce. Moreover, if the exchange of informational social support become frequent in an s-commerce platform, the members would

develop a conversation basis which involves shared norms and therefore reduces information processing effort for them (Hsiao et al., 2016). In this case, there would be sunk cost if they discontinue using the current s-commerce service or switching to another platform. Therefore, we hypothesis

H3 Informational social support is significantly and positively associated with the continued social commerce intention.

Emotional social support caters an individual's psychological needs. Receiving emotional social support could strengthen consumers' positive perceptions and warm feelings toward the s-commerce community. In such an atmosphere, they would be more natural and automatic to exchange commercial information within the community (Crocker & Canevello, 2008). Therefore, the exchange of emotional social support would facilitate the exchange of informational social support, and we hypothesise.

H4 Emotional social support significantly and positively affects informational social support in social commerce.

3.4 Antecedents of Perceived Usefulness, Perceived Enjoyment and Social Support

In this study, s-commerce activities revolve around shopping-related information exchange (Liang et al., 2011; Zhang et al., 2014). Therefore, consumers' perceptions of s-commerce are influenced by the effectiveness of their commercial information sharing process. With reference to literature on OSN-based information sharing, we identify source credibility and social interaction as two significant factors that affect users' s-commerce performance. In s-commerce, information is supplied by peer consumers, instead of an authority provider. Therefore, source credibility determines the quality and usefulness of the information (Hu et al., 2019). Moreover, information can't be exchanged if there is no interaction between two communicators. Thus, social interaction, an indispensable channel via which consumers exchange information in s-commerce, plays a significant role (Liang & Turban, 2011; Huang & Benyoucef, 2013; Xiang et al., 2016). As a result, we propose source credibility and social interaction as two significant influencers of consumers' perceived usefulness, perceived enjoyment and social support in s-commerce.

3.4.1 Source credibility

Source credibility shows an information provider's level of expertise and trustworthiness that can be associated with the quality of the information communicated (Ohanian, 1990). On one hand, expertise shows a person's ability to provide credible information, embodied by rich knowledge, skills and competence (Cheung et al., 2008). Expertness makes an individual influential (Aral, 2011) and credible (Burnkrant & Cousineau, 1975) in a social network, and persuasive in product recommendations (Ohanian, 1990). On the other hand, trustworthiness

pertains to moral traits, meaning the willingness to offer honest information (Sussman & Siegal, 2003). The content generated by peer consumers are usually assumed to be more credible than those provided by sellers because of peers' benevolent intentions (Amblee & Bui, 2011; Benlian et al., 2012). In the communication of subjective information, such as product experience, trustworthiness plays an even more critical role (Ohanian, 1990).

For s-commerce users, information from a credible source can be applied directly in their purchase decisions, with no need for diligent deliberation on the content (Hu et al., 2019). Therefore, source credibility can free consumers from information evaluation and alleviate their effort of information searching, which makes the s-commerce experience easy and delightful. Moreover, since the content served in s-commerce platforms mostly rely on user contributions, the level of users' credibility would directly affect the overall website quality. Researchers have revealed that high-quality content shall add to consumers' enjoyment derived from using a website (Parboteeah et al., 2009). For s-commerce consumers, browsing high quality feed is hedonic in its own right. Therefore, the peers with credibility traits shall lead to better usage experience and increased enjoyment for consumers. Hence we hypothesise:

H5a Source credibility is significantly and positively associated with a consumer's perceived enjoyment of the social commerce platform.

Literature suggests that consumers' intention to join s-commerce is to seek for useful information that can optimize their shopping decisions (Kim, 2013; Liang et al., 2011; Liang & Turban, 2011). Furthermore, the listeners' perceived usefulness of a message is usually decided by the credibility of the information provider (Smith et al. 2005). Hence, a credible information source would significantly influence consumers' usefulness evaluations of the information and therefore the platform.

H5b Source credibility is significantly and positively associated with a consumer's perceived usefulness of a social commerce platform.

In an s-commerce platform, high level of source credibility makes consumers confident about peers' capability and good intention (Ohanian, 1990). Thus, consumers feel comfortable to accept the information from peers without any concerns of the information quality (Chu & Kamal, 2008). Then the information exchange become effortless and easy, so the consumers are more willing to exchange information with one another in the platform. Therefore, the interpersonal informational social support would increase.

H5c Source credibility is significantly and positively associated with informational social support in a social commerce platform.

Emotional social support involves empathy, encouragement and care, and it becomes indirect assistance when individuals need to overcome difficulties (Liang et al., 2011). Expressing emotional concerns usually requires affective bonding. In an s-commerce setting, credibility reflects positive qualities of a consumer including competence, benevolent traits, and good intents. In a socializing occasion, interacting with a reliable party is usually

considered as warm, beneficial and rewarding, so the other party would value more of this connection and tend to form intimacy and affective bonding with him/her. In this atmosphere, consumers care more about each other's feelings and emotional needs, so they tend to express more emotional social support.

H5d Source credibility is significantly and positively associated with emotional social support in a social commerce platform.

3.4.2 Social interaction

Social interaction means a user communicate with other users on a technology-supported platform with easy (Phang et al., 2009). It is a core configuration of social media (Kwahk & Kim, 2016) and a key driver of virtual community participation (Phang et al., 2009; Phang et al., 2013). Social interaction is also an important motivator of online shopping, since many consumers need to socialize and interact with other shoppers (Arnold & Reynolds, 2003). The notion of s-commerce is to leverage social media technologies that support consumers' social interactions and relationship buildings so as to promote the buying and selling of products (Wang & Zhang, 2012). The platforms are constructed with a variety of functions that can support frequent and convenient interactions among consumers before, during, and after purchases, and these methods include instant chatting, topic forum, comment and repost, and likes. It has been said that in contrast to conventional e-commerce that lacks social values, s-commerce highlight the social experience of shopping (Shen & Eder, 2009). Consequently, social interaction is particularly crucial in s-commerce participation (Rad & Benyoucef, 2010).

Socializing is an important part of consumers' hedonic shopping motives (Arnold & Reynolds, 2003). In s-commerce, consumers' hedonism relies heavily on the fun of socializing and interacting with others (Hu et al., 2016). Platform features that appeal to consumer's hedonic motivations will support greater enjoyment and fun for the consumer. Higher social interaction can better satisfy consumers' communication needs and increase the social presence and human warmth, which lead to a pleasurable experience (Zhang et al., 2014). Further, the website functions that support high-level social interactions free consumers from any communication barriers, which makes the interactive process easy and fluent. Therefore, high social interaction can foster enjoyment perceptions.

H6a Social interaction is significantly and positively associated with a consumer's perceived enjoyment of a social commerce platform.

The s-commerce community focuses on commercial information exchange and collaboration. Consumers who participate in s-commerce attach great importance to acquiring useful information and achieving better shopping performance (Kim, 2013; Liang et al., 2011; Liang & Turban, 2011). These demands can only be met if there are effective mutual interactions that allow information to be circulated (Kusumasondjaja, 2017). Frequent social interaction can facilitate the transmission of information from the source to the consumers who

need it to solve problems. Therefore, the level of social interaction in an s-commerce platform is crucial to its performance regarding optimizing users' shopping outcomes.

H6b Social interaction is significantly and positively associated with a consumer's perceived usefulness of a social commerce platform.

Social support is an ongoing interactive process among a group of individuals (Crocker & Canevello, 2008). Thus, mutual interaction is critical for exchanging social support (Eastin & LaRose, 2005). Moreover, the exchange of social support is usually based on a certain social group, and consumers' connections to other group members is gradually formed and reinforced by such mutual interactions. In online community research, it is revealed that social interaction affects individuals' sociability perceptions of the online community and thus affects their information exchange activities (Phang et al., 2009). In s-commerce, the interaction tools allow consumers to build their online social networks and facilitate informational social support inside the network (Zhang et al., 2014). The increased social interactions consistently strength their social ties and facilitate their information-sharing behavior (Lin & Wang, 2020). In conclusion, we propose:

H6c Social interaction is significantly and positively associated with informational social support in a social commerce platform.

Social interaction creates a link between two actors via reciprocity behavior (Wang & Chiang, 2009). It is suggested that in a technological space, social interaction can cultivate an atmosphere of social warm (Hassanein & Head, 2006). A unique characteristic of the s-commerce practice is the provision of opportunities for customers to interact to develop connections (Ng, 2013). Greater support for social interaction offered by the platform means more chances for participants to exchange affective support. Furthermore, a high level of social interaction leads to stronger interpersonal ties (Aral & Walker, 2014). Thus, the consumers are more willing to offer emotional social support to others.

H6d Social interaction is significantly and positively associated with emotional social support in a social commerce platform.

Finally, the research model is proposed, as Figure 1 presents.

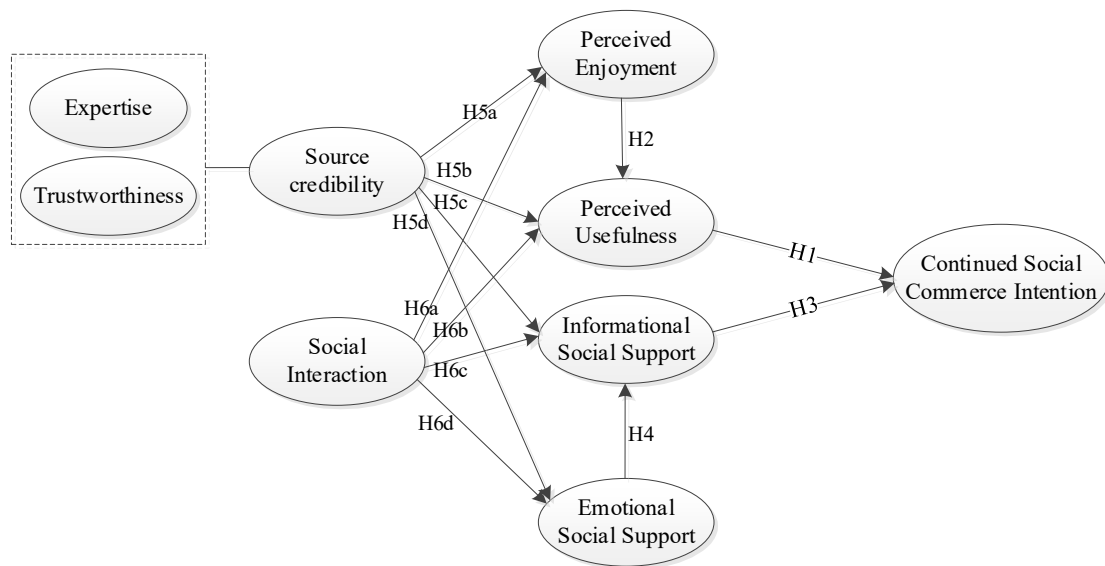


Figure 1 Research Model

4. Methodology

4.1 Measurements

The measurements were acquired from existing items and then adapted to fit the s-commerce context. The modification was made by the authors and an expert panel composed of two Ph.D. students, two IS professors and an s-commerce user. Next, in further ensuring the items' reliability and validity, a card sorting process was performed. The first round was conducted by a panel of ten judges, and the correct hit ratio (referring to the percentage of items which are linked to the right variable) was 87.1%. Since this ratio is unsatisfying, we refer to the judges' feedbacks and revised the poorly-worded items. The second round was conducted by another panel of six judges, and the correct hit ratio is 94.6%, which is higher than the threshold (Moore & Benbasat, 1991). Finally, we obtained all the measurement items (as shown in Appendix A). Furthermore, since the survey is conducted in China, the questionnaire should be translated into Chinese. Therefore, to ensure the equivalence of meaning between the English and Chinese version, we employed a back-translation mechanism.

4.2 Online Survey

Considering that the research targets are s-commerce participants, it would be effective to contact them on an s-commerce platform and invite them to finish an online questionnaire. In specific, we choose Sina Weibo (Weibo) as our research context, and the reasons are as follows. First of all, there are generally two types of platforms that support s-commerce practice: one is social networking sites (SNS) with enhanced commercial activities (Wigand et al., 2008); the other one is e-commerce websites that encourage user interactions and contributions (Curty &

Zhang, 2011). Since our research focus is shopping information exchange rather than direct commercial transactions, it is more appropriate for us to choose the first type: SNS website that permits commercial activities (Liang et al., 2011; Zhang et al., 2014). Second, Weibo is one of the leading and most successful social networking sites (SNS) in China, so it could represent the best practices in this industry. Established in August 2009, Weibo has experienced explosive growth ever since. By the end of 2019, the number of daily and monthly active users has reached 222 million and 516 million respectively (Weibo, 2020). Third, since Weibo has a huge number of registered users with diversified identities, it could most likely provide us a sample with high generalizability. Last but not the least, Weibo supports a wide range of s-commerce activities (Hu et al., 2019; Zhang et al., 2014; Bai, 2014). For example, Weibo users can post commercial information such as product reviews, shopping experiences, discount codes and links to products. Further, they can engage in conversations and interactions through the comment or repost mechanism. Moreover, Weibo supports friend recommendation, so that users can easily find peers with similar tastes or interests. Basing on these, consumers are enabled to initiate collaborative shopping such as group-buy on Weibo. Additionally, Weibo can record and analyze a consumer's browsing history, basing on which products from Taobao.com are recommended and displayed in the right-side column of the page. Besides, Weibo has a "shop-window" function that can operate as a virtual store.

After the context being identified, a questionnaire was generated on an online survey website, wjx.cn. To effectively distinguish s-commerce participants in Weibo, we chose some high-traffic spots that s-commerce participants may catch sight of to issue the survey invitations. For instance, the comments section of influencers' posts. The invitation includes a brief introduction of the survey and the link to access the online questionnaire. Cash incentive (CNY 10/USD1.6) was offered to reward the respondents. The questionnaire started with a screening question that excludes those who are not s-commerce participants. Respondents should provide their usernames and personal homepage addresses in Weibo, otherwise they can't proceed the survey. Also, the survey website can recognize each participant's IP address, so that one person can only submit once.

The survey was open for two weeks. During this period, the website recorded 429 visits and 336 participate in this survey. However, 33 submissions were disqualified because they either indicate a same answer to most of all questions or were finished in an unreasonably short time. At last, 303 valid responses were collected. Thus the completion rate is 70.6%. Table 2 summarizes the demographic information of the sample. To check the representativeness of the sample, we refer to the 2018 report of China Internet Network Information Center, which shows that most of the online consumers are in the age range of 20-29, and most of them have a monthly income of CNY3001-5000 (CNNIC2018). Moreover, another research revealed that social media users in China are mostly females and aged between 25 and 30 (Pan et al., 2017). Also, it is notable that the majority of the Sina Weibo users are female and aged 20 and 29 (Zhang et al., 2014). Therefore, the demographic features of the sample are consistent with the characteristics of our research subject.

Table 2 Demographic Information of the Sample

Profile of Respondents (n= 303)		Frequency	Percentage
Gender	Male	114	37.6
	Female	189	62.4
Age	19-24	71	23.4
	25-29	119	39.3
	30-40	98	32.3
	≥40	15	5
Income per month (CNY)	<1000	13	4.3
	1000-2999	30	9.9
	3000-5999	98	32.3
	6000-7999	97	32.0
	≥8000	65	21.5
Frequency of online shopping	Several times a week	102	33.7
	Once a week	85	28.1
	Several times a month	104	34.3
	Once a month	6	2.0
	Several times a year	6	2.0
Frequency of using social networking sites	Several times a day	135	44.6
	Once a day	49	16.2
	Several times a week	87	28.7
	Once a week	24	7.9
	Once a month and less	8	2.6

4.3 Data Analysis

4.3.1 Data analysis technique

Partial Least Squares (PLS) is applied to conduct data analyses. First, PLS was chosen when formative and reflective constructs are both included in the research model (Liang et al., 2007). Second, PLS technique allows us to calculate loadings of indicators on constructs and therefore enables us to measure the assessed construct validity; it also supports the evaluation of the causal relationships among those constructs (Chen et al., 2015; Chen & Wei, 2019; Hair et al., 2011). Third, PLS is more adaptive to explain complex relationships without the influence of inadmissible solutions and factor indeterminacy (Liang et al., 2007). Fourth, PLS is a mature and comprehensive technique to examine SEM, which could perform confirmatory analyses, explanatory analyses, exploratory analyses, descriptive analyses and predictive analyses (Benitez et al., 2020).

4.3.2 Common method bias

To start with, we need to exclude the potential of common method bias (CMB). First, respondents' consistency motif and social desirability can be reduced by designing the

questionnaire appropriately (Podsakoff & Organ, 1986). To be specific, for different items, the instructions shall be diversified. Also, adjacent variables shall be located in separate sections. Furthermore, statistical analyses were performed to test CMB.

First is Harman's single-factor test. It is suggested that CMB is serious if a single factor explains most of the covariance (Podsakoff et al., 2003). We conducted explorative factor analysis (EFA) and extracted 6 factors whose eigenvalues exceed 1. The first factor accounts for 37.11% of all variance. Therefore, we preliminarily excluded the threats of CMB.

Second, with reference to Liang et al. (2007), we include all the items into one common method factor. Then we calculated each item's substantive variances that can be explained by the construct it belongs and by the common method factor in separate (Liang et al., 2007). According to Appendix B, the results are 0.809 and 0.002 respectively. Therefore, the ratio of the substantive variance to method variance is very large, and most of the items' loadings on common method factor are not significant. The results show common method bias is not a threat.

Third, we compared the model fit of the one-factor model ($\chi^2 / df = 6.750$, Root Mean Square Error of Approximation (RMSEA) = 0.138) and the present eight-factor model ($\chi^2 / df = 2.375$, RMSEA = 0.067). It is obvious that the one-factor model is inferior to our model. In conclusion, we suggest that CMB is not a serious concern for our research.

4.3.3 Results of measurement model

We test the measurement model and then the structural model (Anderson & Gerbing, 1988). As is presented in Table 3, all of the reliability coefficients are higher than 0.7, preliminarily indicating that the measurement is reliable (Churchill, 1979; Fornell & Larcker, 1981). Besides, all indicator loadings are in an acceptable range. Moreover, each average variance extracted (AVE) is greater than 0.5, which proves that each latent construct can explain more than 50 percent of the variance in the indicators. As Chin (1998) and Liang et al. (2007) state, it is not applicable for formative constructs to report reliability and AVE. The path weights of indicators comprising the formative construct need to be examined to check if an emergent construct can be contributed by its indicators (Chin, 1998; Liang et al., 2007). As formative measures "cause" the construct, the validity of the second-order formative construct should be assessed by examining the path weights of the first-order factors (Petter et al. 2007). Thus, the validity of source credibility, the second order formative construct, was evaluated by assessing the significance of the path weights of expertise and trustworthiness. As shown in Table 3, both path weights are significant at the 0.01 level, indicating that expertise and trustworthiness contribute significantly from different paths to form the construct of Source Credibility. According to the criterion reported in Ou et al.'s (2014) research, the moderate and significant weights of expertise and trustworthiness show the good validity of source credibility. In addition, as shown in Table 4, the square root of each constructs' AVE is greater than its correlations with other constructs, which suggest discriminant validity of the measurement model (Fornell & Larcker, 1981).

Table 3. Results of Confirmatory Factor Analysis

Constructs	Items	Loading	Cronbach's α	Composite Reliability	AVE
Continued Social Commerce Intention	CSCI1	0.781**	0.858	0.898	0.639
	CSCI2	0.715**			
	CSCI3	0.843**			
	CSCI4	0.826**			
	CSCI5	0.825**			
Emotional Social Support	ESS1	0.800**	0.764	0.864	0.680
	ESS2	0.815**			
	ESS3	0.858**			
Expertise	EXP1	0.799**	0.882	0.914	0.681
	EXP2	0.800**			
	EXP3	0.867**			
	EXP4	0.848**			
	EXP5	0.808**			
Informational Social Support	ISS1	0.804**	0.737	0.851	0.656
	ISS2	0.828**			
	ISS3	0.797**			
Perceived Enjoyment	PE1	0.778**	0.771	0.854	0.594
	PE2	0.752**			
	PE3	0.832**			
	PE4	0.716**			
Perceived Usefulness	PU1	0.802**	0.810	0.875	0.636
	PU2	0.782**			
	PU3	0.787**			
	PU4	0.819**			

	SI1	0.834**			
Social Interaction	SI2	0.783**	0.796	0.868	0.622
	SI3	0.724**			
	SI4	0.810**			
Source Credibility	Expertise	0.537**	NA	NA	NA
	Trustworthiness	0.600**			
Trustworthiness	TW1	0.827**	0.888	0.923	0.749
	TW2	0.895**			
	TW3	0.861**			
	TW4	0.877**			

Notes: AVE = average variance extracted.

The heterotrait-to-monotrait (HTMT) ratio was also examined to test the discriminant validity of all first-order latent variables. If the HTMT ratio of two latent variables is less than 0.90 (Benitez et al., 2020), it means that two latent variables are statistically different and have discriminant validity. The results in Table 5 show that all HTMT ratios are less than the threshold value (0.90) and thus demonstrate that all of the first-order variables in this study have good discriminant validity (Benitez et al., 2020).

Considering that some correlations between construct were greater than 0.6, we further perform multicollinearity check (Mason & Jr., 1991). The result shows that the value of variance inflation factors (VIF) are all between 1.803 to 2.636, which are lower than 10. Tolerance values are all between 0.379 and 0.555, which are higher than 0.1 (see Table 4.). Therefore, we can exclude the possibility of multicollinearity.

Table 4. Correlations of Constructs

	CSCI	ESS	EXP	ISS	PE	PU	SC	SI	TW
CSCI	0.80								
ESS	0.47**	0.82							
EXP	0.51**	0.43**	0.83						
ISS	0.62**	0.63**	0.50**	0.81					
PE	0.50**	0.50**	0.46**	0.51**	0.77				
PU	0.69**	0.46**	0.56**	0.45**	0.54**	0.80			
SC	0.57**	0.55**	0.90**	0.56**	0.52**	0.62**	NA		
SI	0.50**	0.48**	0.32**	0.63**	0.51**	0.35**	0.38**	0.79	
TW	0.50**	0.54**	0.55**	0.49**	0.46**	0.52**	0.86**	0.36**	0.87

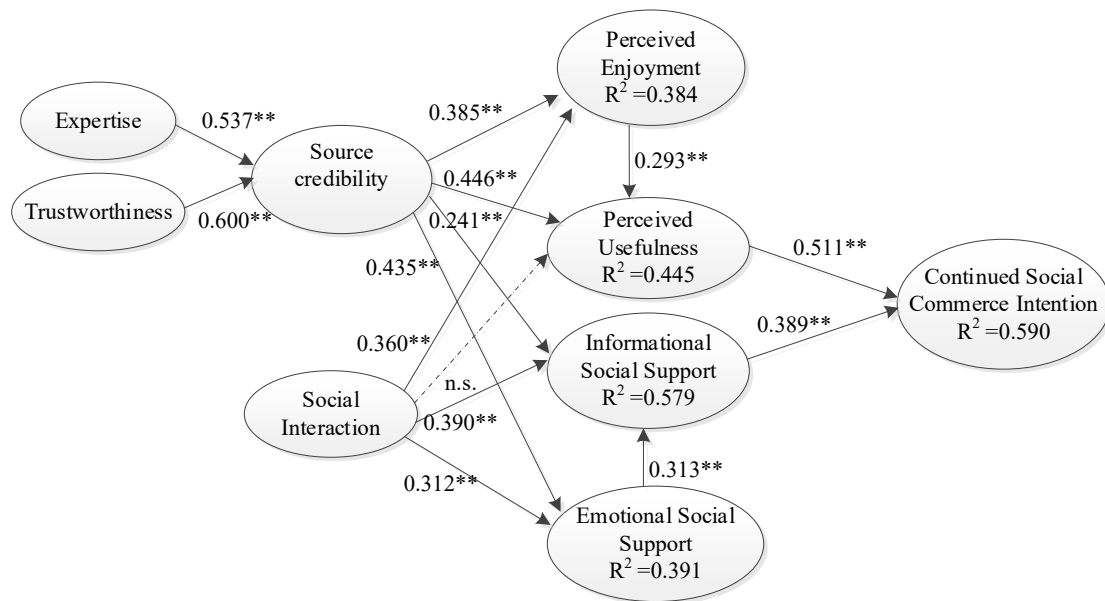
Notes: CSCI=Continued Social Commerce Intention; ESS=Emotional Social Support; EXP=Expertise; ISS=Informational Social Support; PE=Perceived Enjoyment; PU=Perceived Usefulness; SI=Social Interaction; SC=Source Credibility; TW=Trustworthiness; NA=Not Applicable; The shaded numbers in the diagonal row are square roots the AVE.

** p<0.01, * p<0.05

Table 5. The HTMT Ratio of All First-order Latent Variables

	CSCI	ESS	ISS	PE	PU	EXP	SI
CSCI							
ESS	0.58						
ISS	0.78	0.84					
PE	0.61	0.66	0.67				
PU	0.82	0.58	0.58	0.69			
EXP	0.59	0.52	0.62	0.56	0.66		
SI	0.61	0.61	0.82	0.65	0.44	0.38	
TW	0.57	0.66	0.61	0.56	0.61	0.62	0.43

4.3.4 Results of structural model



Note: The dotted line represent non-significant relationships
The solid lines represent significant relationships
Numbers in the brackets represent the weights of expertise and trustworthiness
** $p < 0.01$, * $p < 0.05$

Figure 2 Results of Research Model

In order to set expertise and trustworthiness as formative indicators of source credibility, we follow prior researchers (Ou et al., 2014, Liang et al., 2019) to mix repeated indicator approach and two-stage approach to analyze the structural model. Specifically, the repeated indicator approach is adopted to get the latent variable scores of expertise and trustworthiness in the first stage. In the second stage, the latent variable scores serve as item values of source credibility (Hair et al., 2017). The structural model is analyzed via PLS-SEM using the bootstrapping of Smart PLS.

The results of the structural model are depicted in Figure 2. It is observable that all the hypotheses are supported except for H6b, which represents the link between social interaction and perceived usefulness. Moreover, the R^2 values in Table 6 show that the model respectively explained 45%, 38%, 39%, 59%, and 58% of the variance in perceived usefulness, perceived enjoyment, emotional social support, continued social commerce intention, informational social support (see Table 6).

Table 6 R Square of Constructs

Constructs	R ²
Continued Social Commerce Intention	0.590
Emotional Social Support	0.391
Informational Social Support	0.579
Perceived Enjoyment	0.384
Perceived Usefulness	0.445

4.3.5 Mediation effect analysis

We further analyze the mediation (indirect) effects, following the suggestions of Hair et al. (2017). The results, as shown in Table 7, are reported by the PLS-SEM algorithm and the bootstrap procedure of Smart PLS.

Table 7 Results of Mediation Effect Analyses

Mediation Effect	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
SC -> PE -> PU	0.113	0.035	3.232	0.001
SC -> PU -> CSCI	0.228	0.049	4.654	0.000
SC -> ISS -> CSCI	0.094	0.025	3.769	0.000
SC -> ESS -> ISS	0.098	0.024	4.042	0.000
SI -> PE -> PU	0.105	0.025	4.238	0.000
SI -> PU -> CSCI	0.018	0.032	0.566	0.572
SI -> ESS -> ISS	0.098	0.024	4.042	0.000
SI -> ISS -> CSCI	0.094	0.025	3.769	0.000
PE -> PU -> CSCI	0.149	0.035	4.251	0.000
ESS -> ISS -> CSCI	0.122	0.030	4.063	0.000

Note: abbreviation SC-source credibility; PU-perceived usefulness; PE-perceived enjoyment; ISS - informational social support; ESS - emotional social support; CSCI - continued social commerce intention.

In particular, we confirm that the effect of perceived enjoyment on continued s-commerce intention is mediated by perceived usefulness. Moreover, the results confirm that the influence of emotional social support on continued s-commerce intention is mediated by informational social support. In addition, some other mediation effects are observed: perceived enjoyment significantly mediated the relationship between source credibility and perceived usefulness, and the relationship between social interaction and perceived usefulness; perceived usefulness mediated the effect of source credibility on continued s-commerce intention; emotional social support mediated the effect of source credibility on informational social support, and the effect of social interaction on informational social support; informational social support mediated the influence of source credibility on continued s-commerce intention, and the influence of social interaction on continued s-commerce intention.

4.3.6 Discussions

Through the course of this study, we empirically tested our research model on s-commerce continuance. Most of the hypotheses are supported, except for H6b, the relationship between social interaction and perceived usefulness.

First, we revealed the significant effect of perceived usefulness on individual's continued s-commerce intention, as suggested by H1. This means that when consumers make decisions about s-commerce continuance, they would reflect on whether the prior s-commerce experience has generated utilitarian benefits for them, such as enhanced shopping performance. Moreover, the establishment of H2 shows that perceived enjoyment is a significant influencer of perceived usefulness in the s-commerce continuance context. In addition, the indirect effect of perceived enjoyment on continued s-commerce intention is mediated by perceived usefulness. Thus, we clarified a mechanism through which consumers' intrinsic hedonism affects their judgements of the utilitarian outcomes of s-commerce and thereafter leads to continued participating intention. It implies that in the post-adoption stage of s-commerce, the role of perceived usefulness become more direct and important than that of perceived enjoyment. In contrast with initial adoption, a consumer's intention of ongoing participation is more utilitarian- and task-oriented. This finding sustains previous literature that highlight perceived usefulness as a crucial driver of continued IT use.

Second, we have some interesting findings about the mechanism of social support. The validation of H3 shows that the level of informational social support one perceives in the platform significantly influences the continuance intention to participate in s-commerce activities. Moreover, a significant positive relationship between emotional social support and informational social support is observed, as H4 shows. Further, we find that the effect of emotional social support on continued s-commerce intention is mediated by informational social support. This is new to prior understanding of social support in s-commerce settings. Previous studies on consumers' initial s-commerce intentions usually treat emotional social support and informational social support as two equal reflective indicators of social support that

both affect consumers (Zhang et al., 2014). However, as our results suggest, the role emotional social support plays in affecting an s-commerce user's continued intention is indirect and secondary to that of informational social support. This phenomenon is consistent to the fact that in the post-adopt stage, s-commerce users attach more importance to utilitarian factors. Hence, they would value more of the useful information that they can directly use to improve shopping performance.

Third, the results confirm that in the post-adopt stage of s-commerce, source credibility significantly affects users' perceived usefulness (H5a), perceived enjoyment (H5b), informational social support (H5c) and emotional social support (H5d). We can therefore conclude that in s-commerce, peer consumers' level of expertise and trustworthiness significantly affect users' evaluations of the activity regarding its usefulness and enjoyment. The credibility traits of peers also significantly influence users' expectations of the informational and emotional social support that they can obtain from s-commerce activities.

Fourth, social interaction is found as another critical factor that affects users' perceived enjoyment (H6a), informational social support (H6c) and emotional social support (H6d) of s-commerce. It shows that effective interactions among consumers can create a hedonic experience and increased social support among them. However, since the data fails to support H6b, the relationship between social interaction and perceived usefulness does not establish. A possible explanation is that the immediate outcome of social interaction is the exchange of affection and information, so consumers would immediately obtain enjoyment (H6a), emotional social support (H6d) and informational social support (H6c) as a result of interacting with each other. Whereas usefulness, such as improved shopping performance, is a complex result that demand for consumers' additional subjective efforts. Hence the direct effect of social interaction on perceived usefulness is unsure. Therefore, perceived usefulness, if any, should be an indirect result of social interaction. Actually, we can observe this indirect relationship (mediated by perceived enjoyment) in Table 7. Therefore, we can infer than in the s-commerce post-adopt context, social interactions affect perceived usefulness via the mediation of perceived enjoyment.

5. Research Contributions

5.1 Implications for Research

This study makes important contributions to literature. First and foremost, we extend the s-commerce literature by empirically investigating a consumer's continued participating intention, a vital issue that has not yet been examined by researchers. The growing literature on s-commerce has answered the question of why consumers adopt s-commerce in the first place, while few of them have further investigated users' continued participation. Nevertheless, as informed by literature, the characteristics of an individual's continuance intention might be

quite different from that of initial adoption. Hence, we build on the IS continuance literature and borrow theoretical insights from motivational theory and social support theory and develop an integrative framework that explicates s-commerce users' underlying mechanisms of continuance intention. Further, from the perspective of information sharing, the study identifies two crucial s-commerce constructs that determine users' psychological perceptions: source credibility and social interaction. Although the factors are not exhaustive, they shed light on the important facets of s-commerce environment which ultimately affect users' evaluations in post-adopt stage. This could enlighten future research that aims to inspect the technical and social features of s-commerce. In a nutshell, this study offers a new theoretical basis for comprehending continuance intention in an s-commerce context and serves as a foundation for subsequent studies.

Secondly, we provide a dialectical view of the utility-hedonism nature of s-commerce. Research suggests that different technologies have distinct natures in terms of the level of utility and hedonism (Xu et al., 2012). Intuitively, for hedonism-oriented technology, users pay more attention to its hedonic features, and vice versa. Extant research on users' adoption of s-commerce frequently highlight its hedonic aspects, since the rich functions and visually appealing interface can yield a lot of joy for users (Xiang et al., 2016). However, users' attitude change across different stages of s-commerce usage has not been fully recognized. Research suggests that, regarding a same technology, the effect of utilitarian and hedonic factors on user intention varies over time (Magni et al., 2010; Wen et al., 2011; Xu et al., 2012). Particularly, in the post-adoption stage, the importance of utilitarian factors increases while the importance of hedonic factors decreases (Magni et al., 2010). Therefore, we extend this view and find that user attitude toward the utility-hedonism nature of s-commerce is dynamically changing. With repeated use of s-commerce, users attach more importance to the utilitarian benefits. Thus, the role perceived usefulness plays in affecting continued s-commerce intention is more direct and prominent than that of perceived enjoyment. Accordingly, informational social support, which is associated with utilitarian outcome, affects continuance intention more immediately than emotional social support. Therefore, we extend and deepen the understanding of the utility-hedonism nature of s-commerce by showing participants' utilitarian tendency in the post-adoption stage.

Third, our study refines current understanding of social support as a multi-dimensional construct in the s-commerce setting. In spite of the fact that social support has been theorized as a key factor in s-commerce, few studies have distinguished between different types of social support. In prior research, informational social support and emotional social support are often proposed as parallel factors that have equal effect on user intentions. We make contributions by uncovering the significant effect of emotional social support on informational social support in the post-adopt stage of s-commerce. Additionally, the effect of emotional social support on continued usage intention is significantly mediated by informational social support, revealing the asymmetric effects of different types of social support on user intentions in the post-adopt stage. This finding is incremental to our understanding of social support in s-commerce

activities.

Fourth, this study makes contribution to the IS continuance research by extending it to the s-commerce context. Individual users' continued usage intention has been a crucial issue for IS researchers. Prior IS continuance studies are usually focused on the technical features of the technology. However, in the present age, social elements are increasingly included in technologies. Meanwhile, the quality of peer users becomes more and more salient in affecting user experience (Hu et al. 2016). Nevertheless, few studies have specifically identified the influence from the social factors when examining users' continued intentions. Thus, it becomes necessary to provide contextualized theoretical perspectives of IS continuance which recognize the function of social factors. In coping with this issue, we introduce social support, a peculiar social factor that is particularly important in the s-commerce context, into our research model. Therefore, this research provides a more comprehensive framework that explicates both social factors and traditional IS continuance factors as the underlying determinants of s-commerce users' continued intention. Future research on technologies with rich social cues, such as social media, can build upon our comprehensive framework.

5.2 Implications for Practice

This research could enlighten s-commerce industry in some ways. To begin with, user participation is vital to s-commerce service providers. We offer insights into the underlying mechanism of s-commerce users' continuance intention, so the findings should be of interest for them. We revealed that individual consumers' perceived usefulness and informational social support are direct drivers of continued participation. Therefore, we suggest that for platform managers, existing consumers' utilitarian needs should be the first priority in allocating technical resources. Instead of making the interface pleasant, it is more important to ensure that users can actually acquire useful knowledge and enhance shopping performance after participating in s-commerce activities. To be specific, it is critical to optimize the platform's technical support for efficient and fluent information exchange among users. Also, the website may provide multiple communication tools for users such as instant messaging and discussion forum. Moreover, the media richness of the communication channels can be improved so as to allow for the exchange of multi-form content.

Furthermore, the results show that active social interaction can foster positive user perceptions toward the s-commerce platform. Recognizing this, s-commerce platform could be supplied with more tools to facilitate various types of interaction among users. Both frequency and depth of user interactions need to be promoted. For example, "likes" is a handy little feature that can create an interaction among two users promptly. Moreover, the website could provide some perks to users who have usually been active, such as additional website functions.

In addition, our findings highlight the significance of source credibility in s-commerce. Therefore, on one hand, s-commerce platform managers can make effort to improve the credibility of members by enrolling shopping experts or training existing users. On the other

hand, it is crucial to let users be aware of the credibility of other members and help users identify and access expertized members. For example, tags can be used to label one's expertise in a certain aspect. Besides, the trustworthiness quality of users is equally important. In this regard, the platform could use some system to record and show users' trustworthiness cues. For instance, a peer-rating system can be utilized to present one's reputation.

Finally, our study provides guidance to managers who intend to employ s-commerce activities to enhance customer loyalty. Obviously, consumers who are consistently active in s-commerce activities would have increased exposure to commercial information and therefore enhanced awareness of products. Therefore, customer loyalty could be formed during the continued s-commerce activities.

6. Limitations

The findings of this research should be interpreted with its limitations. First of all, as with all empirical studies, we admit the methodological limitations. The cross-sectional database we used could restrict the findings. We use continued s-commerce intention as the dependent variable for the reasons we illustrated earlier. However, although that intention is a strong indicator of actual behaviour, it would be enlightening to further investigate the link between them. Hence to extend the current study, a longitudinal study of s-commerce users' actual usage behaviour over time would be valuable.

Second, the generalizability of our conclusions could be limited by the research context we use. The empirical study is conducted in a Chinese s-commerce platform. Prior s-commerce research has identified the role cultural influence plays in online WOM activities (Nakayama & Wan, 2019). Thus, our findings should be applied in other cultural settings with caution. Moreover, our research context, Sina Weibo, is an SNS-based s-commerce platform. As mentioned above, there are other types of websites which also support s-commerce, such as e-commerce websites that support direct transactions as well as consumer-consumer interactions. It has been confirmed that the relationship between s-commerce environmental stimuli and consumers' inner experience varies when it comes to different s-commerce platforms (Zhang et al., 2014). Thus, future studies might consider a comparison of different types of s-commerce platforms and consider their differences in affecting users' continuance intentions.

Third, the antecedent cues are selected from an information communication perspective, given that the focus of s-commerce activity is on commercial information sharing. Nonetheless, the s-commerce environment contains various factors besides source credibility and social interaction, and these factors may have potential impact on user perceptions. To illustrate a few, website quality was demonstrated to affect users' continued intentions (Liang et al., 2011). Therefore, to enhance the explanatory power of the current framework, subsequent studies could involve additional environmental cues and specify their influences.

7. Conclusions

Individual users' continued participation is central to the ultimate success of s-commerce. However, despite the explosive increase of s-commerce, this issue has not yet been sufficiently explored. Continuance intention is different from initial adoption, because post-adoption behavior represents a conscious decision based on previous experience which changes with time. Grounded in Motivation Theory and s-commerce literature, this paper empirically analyzes the determinants of s-commerce users' continuance intention, and the underlying influencing mechanisms. Particularly, perceived usefulness, perceived enjoyment, and social support are identified as antecedents of continued s-commerce intention. Further, users' perceptions of s-commerce are affected by the s-commerce outcome, which concerns the result of commercial information exchange. Thus, we identify source credibility and social interaction as two influencing factors that arise in the s-commerce environment and that affect user perceptions of s-commerce. The research model is then tested with 303 valid responses from Sina Weibo. We find that perceived usefulness and informational social support have direct and significant effects on individual's continued s-commerce intention. Perceived enjoyment leads to continued s-commerce intention via the mediation of perceived usefulness. The effect of emotional social support on continued s-commerce intention is mediated by informational social support. Moreover, source credibility significantly affects users' perceived usefulness, perceived enjoyment, informational social support and emotional social support. Social interaction significantly influences users' perceived enjoyment, informational social support and emotional social support. However, it doesn't affect perceived usefulness. The findings shed light on s-commerce continuance, and they could help managers operate s-commerce better.

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Appendix A

Measurements: Scale strongly disagree (1) – strongly agree (7)

Source credibility (Ohanian, 1990; Sussman & Siegal, 2003)

-Expertise

The users on this website are:

1. knowledgeable about shopping.
2. experts about shopping.
3. experienced about shopping.
4. qualified about shopping.
5. skilled about shopping.

-Trustworthiness

The users on this website are:

1. trustworthy.
2. reliable.
3. honest.
4. sincere.

Social Interactions (Chen & Huang 2007; Phang et al. 2009)

1. It's conducive to interact with others through this website.
2. It's easy to interact with other users via this website.
3. This website allow me to communicate and discuss with other users frequently.
4. I am willing to communicate and discuss with other users on this website in depth.

Perceived Usefulness (Davis 1992; Parboteeah et al. 2009)

1. Using this website can improve my shopping performance.
2. Using this website can increase my shopping productivity.
3. Using this website can enhance my shopping effectiveness.
4. I would find this website useful in shopping.

Perceived Enjoyment (Davis et al. 1992; Parboteeah et al. 2009)

Using this website is:

1. Enjoyable;
2. Exciting;
3. Pleasant;
4. Fun.

Informational Social Support (Liang et al. 2011)

On the website:

1. some people would offer suggestions when I need help;
2. when I encounter a problem, some people would give me information to help me;
3. when faced with difficulties, some people would help me discover the cause and provide me with suggestions.

Emotional Social Support (Liang et al. 2011)

When faced with difficulties:

1. some people on this website are on my side with me.
2. some people on this website comforted and encouraged me.
3. some people on this website listened to me talk about my private feelings.

Continued Social Commerce Intention (Liang et al. 2011)

1. In the future, I am willing to provide my experiences and suggestions when my friends on this website want my advice on buying something.
2. I am willing to continue sharing my own shopping experience with my friends on this website.
3. In the future, I am willing to recommend products that are worth buying to my friends on this website.
4. I will consider the shopping experiences of my friends on this website when I want to shop.
5. I am willing to continue buying the products recommended by my friends on this website.

Appendix B

Constructs	Items	Substantive Factor Loading (R1)	R1 ²	Method Factor Loading (R2)	R2 ²
Expertise	EXP1	0.814**	0.663	-0.020	0.000
	EXP2	0.767**	0.588	0.042	0.002
	EXP3	0.913**	0.834	-0.060	0.004
	EXP4	0.819**	0.671	0.039	0.002
	EXP5	0.807**	0.651	0.001	0.000
Trustworthiness	TW1	0.821**	0.674	0.009	0.000
	TW2	0.911**	0.830	-0.022	0.000
	TW3	0.864**	0.746	-0.004	0.000
	TW4	0.864**	0.746	0.017	0.000
Perceived Enjoyment	PE1	0.768**	0.590	0.013	0.000
	PE2	0.704**	0.496	0.058	0.003
	PE3	0.865**	0.748	-0.043	0.002
	PE4	0.739**	0.546	0.025	0.001
Perceived Usefulness	PU1	0.826**	0.682	-0.028	0.001
	PU2	0.814**	0.663	-0.036	0.001
	PU3	0.875**	0.766	-0.106	0.011
	PU4	0.682**	0.465	0.162**	0.026
Information Social Support	ISS1	0.807**	0.651	0.004	0.000
	ISS2	0.888**	0.789	-0.071	0.005
	ISS3	0.732**	0.536	0.078	0.006
Emotional Social	ESS1	0.769**	0.591	0.032	0.001

Support	ESS2	0.824**	0.679	-0.004	0.000
	ESS3	0.878**	0.771	-0.026	0.001
Social Interaction	SI1	0.862**	0.743	-0.041	0.002
	SI2	0.809**	0.654	-0.033	0.001
	SI3	0.660**	0.436	0.085	0.007
	SI4	0.813**	0.661	-0.003	0.000
Continued Social Commerce Interaction	CSCI1	0.785**	0.616	-0.003	0.000
	CSCI2	0.701**	0.491	0.026	0.001
	CSCI3	0.824**	0.679	0.019	0.001
	CSCI4	0.847**	0.717	-0.027	0.001
	CSCI5	0.832**	0.692	-0.012	0.000
Average		0.809	0.658	0.002	0.002
* P<0.05, **P<0.01					