



香港城市大學
City University of Hong Kong

專業 創新 胸懷全球
Professional · Creative
For The World

CityU Scholars

Social Support, Source Credibility, Social Influence, and Impulsive Purchase Behavior in Social Commerce

Hu, Xi; Chen, Xiayu; Davison, Robert M.

Published in:

International Journal of Electronic Commerce

Published: 01/01/2019

Document Version:

Post-print, also known as Accepted Author Manuscript, Peer-reviewed or Author Final version

Publication record in CityU Scholars:

[Go to record](#)

Published version (DOI):

[10.1080/10864415.2019.1619905](https://doi.org/10.1080/10864415.2019.1619905)

Publication details:

Hu, X., Chen, X., & Davison, R. M. (2019). Social Support, Source Credibility, Social Influence, and Impulsive Purchase Behavior in Social Commerce. *International Journal of Electronic Commerce*, 23(3), 297-327. <https://doi.org/10.1080/10864415.2019.1619905>

Citing this paper

Please note that where the full-text provided on CityU Scholars is the Post-print version (also known as Accepted Author Manuscript, Peer-reviewed or Author Final version), it may differ from the Final Published version. When citing, ensure that you check and use the publisher's definitive version for pagination and other details.

General rights

Copyright for the publications made accessible via the CityU Scholars portal is retained by the author(s) and/or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights. Users may not further distribute the material or use it for any profit-making activity or commercial gain.

Publisher permission

Permission for previously published items are in accordance with publisher's copyright policies sourced from the SHERPA RoMEO database. Links to full text versions (either Published or Post-print) are only available if corresponding publishers allow open access.

Take down policy

Contact lbscholars@cityu.edu.hk if you believe that this document breaches copyright and provide us with details. We will remove access to the work immediately and investigate your claim.

This is an Accepted Manuscript of an article published by Taylor & Francis in
INTERNATIONAL JOURNAL OF ELECTRONIC COMMERCE on 14 Jul 2019,
available online: <http://www.tandfonline.com/10.1080/10864415.2019.1619905>.

Title: Social Support, Source Credibility, Social Influence and Impulsive Purchase Behaviour in Social Commerce

Author names and affiliations:

Xi Hu
School of International Economics and Trade
Nanjing University of Finance and Economics
No. 3 Wenyuan Road, Nanjing, China
Email: cathyhu@ustc.edu.cn

Xiayu Chen (corresponding author)
^a School of Management, Hefei University of Technology Hefei, Anhui 230009, China
^b Key Laboratory of Process Optimization and Intelligent Decision Making, Ministry of Education, Hefei, Anhui 230009, China
Email: xychen@hfut.edu.cn

Robert Davison
Dept of Information Systems
City University of Hong Kong
Tat Chee Avenue, Kowloon, Hong Kong
Email: isrobert@cityu.edu.hk

Biography of authors:

Xi Hu is an Assistant Professor in the School of International Economics and Trade at Nanjing University of Finance and Economics. She obtained her Ph.D. degree from University of Science and Technology of China and City University of Hong Kong. Her current research focuses on social commerce and risk management. She has published papers in International Journal of Information Management, Weather, Climate and Society, Natural Hazards, Human and Ecological Risk Assessment and Pacific Asia Conference on Information Systems.

Xiayu Chen is an Assistant Professor in the School of Management at the Hefei University of Technology. She obtained her Ph.D. degree from University of Science and Technology of China and City University of Hong Kong. Her research focuses on the electronic commerce and social media. She has published papers in journals such as International Journal of Electronic Commerce (IJEC), Information Systems Journal (ISJ), International Journal of Information Management (IJIM), Information Technology & People (IT&P) and Computers in Human Behavior (CHB).

Robert Davison is a Professor of Information Systems at the City University of Hong Kong. His research focuses on the use and misuse of information systems, especially with respect to problem solving, guanxi formation and knowledge management, in Chinese organisations. He has published over 90 articles in a variety of journals such

as MIS Quarterly, the Information Systems Journal, IT&People, Journal of IT, Journal of the AIS, Journal of the American Society for Information Science & Technology, IEEE Transactions on Engineering Management, Decision Support Systems, Communications of the AIS, and Communications of the ACM. Robert chairs the IFIP WG 9.4 (Social Implications of Computing in Developing Countries) and is the Editor-in-Chief of the Information Systems Journal and the Electronic Journal of Information Systems in Developing Countries. Robert travels extensively, seeking to understand how people in different contexts and cultures make sense of their lives with IS. As a researcher and as an editor, he seeks to promote both an inclusive and a local perspective to research. Home Page: <http://www.is.cityu.edu.hk/staff/isrobert>

Acknowledgment

This research was funded by the National Social Science Foundation of China (18VSI017).

Social Support, Source Credibility, Social Influence and Impulsive Purchase Behaviour in Social Commerce

Xi Hu, Xiayu Chen, and Robert Davison*

ABSTRACT: Social commerce (s-commerce), the use of social media to support electronic commerce, has become pervasive nowadays. This paper aims to investigate an important type of consumer behaviour that could generate considerable economic value: impulsive purchase behaviour. Specifically, we focus on the role of peer influence. Social influence theory posits that the process via which peers change a consumer's behaviour can be interpreted along two dimensions: informational and normative. Furthermore, drawing from literature, source credibility and social support are proposed as the antecedent factors of the influencing processes in this context. We surveyed 303 s-commerce participants in Sina Weibo to empirically test the research model. The results indicate that peers' expertise and trustworthiness are significantly related to both types of social influence that could exert an influence on a consumer. Further, consumers' exchange of informational and emotional social support significantly facilitate social influence among them. This study contributes to both the s-commerce and the impulsive purchase literature by revealing the role of peer influence in consumers' impulsive consumption behaviour in the s-commerce setting. The practical implications are also illustrated in the paper.

KEYWORDS AND PHRASES: Social commerce, impulsive purchase, social influence, social support.

Introduction

Social commerce (s-commerce) is a subset of electronic commerce (e-commerce) that highlights the use of social media tools and users' online social networks (OSN) to facilitate the buying and selling of merchandise [90]. When consumers engage in s-commerce, they are connected by their personal OSN ties with which they can discover, share, recommend and rate products, exchange shopping information, knowledge and opinions and make transactions [39, 67]. Through participating in s-commerce, consumers can obtain practical shopping advice [53], discover interesting products [70], get bargains [46] and therefore improve their shopping performance [46, 53, 54]. S-commerce usually takes place on either a social network site that supports consumers' communications or an e-commerce platform that has social networking features [97]. Past literature suggests that social-related cues are crucial to e-commerce operations, indicating that the development of s-commerce is an inexorable trend [24]. Endeavors have been made to reveal the power of consumers' OSN in promoting products [32, 39]. The potential of s-commerce is also acknowledged by industrial practitioners: 80% of social media users pay attention to commercial information [87]. Moreover, an increasing number of users tend to share shopping information and buy products recommended by social media friends [24, 43]. Therefore, it is apparent that s-commerce can significantly influence a consumer's purchase behaviours. Hitherto, while research on purchase intention in s-commerce has been conducted [39], few researchers have investigated impulsive purchase behaviour in this context.

An impulsive purchase is a purchase that is made without planning or sufficient reflection after being exposed to certain stimuli [10]. A report shows that 68 percent of online purchases are made on impulse [50]. Rook and Hoch [77] identified five critical elements of impulsive purchase behaviour that distinguish it from general purchase behaviour: 1) a sudden and spontaneous desire to act; 2) a state of psychological disequilibrium; 3) the onset of psychological conflict and struggle; 4) a reduction in cognitive evaluation; 5) lack of regard for the consequences of impulse buying. Research on impulsive purchase behaviour has examined various antecedents including personal impulsiveness [91], normative influence [76], store environment [62], shopping companion [57], website attributes [55], recommendation agents [38], gender [27] and culture [44].

It is notable that there is both scholarly literature and industrial evidence implying the effect of social influence on a consumer's impulsive purchase in off-line scenarios. One early study revealed that people buy impulsively in order to acquire material symbols of social identity [27]. Meanwhile, Luo [57] examined different social influences on consumers' impulsive purchases and found that while shopping with peers increases the urge to engage in impulsive purchasing behaviour, and shopping with family members decreases it. Moreover, Bapna and Umyarov [8] conducted experiments to test the effect of peer influence from an OSN on consumers' purchase behaviour, showing that peer influence causes a more than 60% increase in the likelihood of buying a product. With the advent of s-commerce, the para-social shopping environment can make a difference to online-consumers' impulsive purchase

behaviours [94]. A report from iResearch.com revealed that consumers' OSN activities cause an increase in the number of online impulsive purchases [79]. Research has suggested that interactions between a shopper and his/her companions can significantly impact impulsive purchase behaviour [47]. Meanwhile, an s-commerce platform exactly facilitates such interactions among peer consumers [42]. Chen et al. [17] proposed that the person-to-person interactions in s-commerce can accentuate the influences of the social factors on consumers' impulsive buying, especially suggestive impulse buying. Thus it is apparent that social influence may have a strong effect on consumers' impulsive purchase behaviour in the s-commerce context [48]. However, given the relative novelty of s-commerce, little research has been undertaken on this issue to date. To address this research gap, we propose the following research questions:

- What role does social influence play in consumers' impulsive purchase behaviour in the social commerce context? What are the mechanisms via which peer consumers affect a consumer's impulsive purchase behaviour in the social commerce context?

Social influence means individuals alter their thoughts, feelings, attitudes, or behaviours as a result of interactions with other individuals [1]. In this study, we built on Deutsch and Gerard [25]'s Social Influence Theory and examine social influence along two dimensions: informational and normative. Informational social influence means accepting information obtained from another as evidence of truth; normative social influence means an influence to conform to the positive expectations of another [25]. Further, since social influence is the result of an individual's interaction with the

social environment, the determinants of influence shall be interpreted with the peculiar attribute of s-commerce, which is “community interaction” [54]. Research suggests that consumers participate in s-commerce in order to enhance their shopping performance [46, 53, 54]. Thus, they are usually susceptible to information sources with high credibility in this context. However, social influence can hardly be realized if there is no interaction between the source and the recipient. In s-commerce, such interaction is social support among consumers, which means individuals being cared for, responded to and helped, informatively or emotionally, by others in that individual’s social group [53]. Hence we include source credibility as well as social support as antecedents that determine the influencing process. As a result, we develop a conceptual model that encompasses the quality of peers and their interactions, the social influence dimensions and impulsive purchase behaviour. A survey was conducted to empirically test the research model.

This paper makes contributions to both literature and practice. To begin with, our study fills the research gap associated with impulsive purchase behaviour in social commerce. Leveraging social influence theory, we clarify how peers’ social influences affect a consumer’s impulsive purchase behaviour. Although previous research in the off-line shopping context has implied the significant role of social influence on purchase behaviour, this factor has not yet been studied in the online impulsive purchase context, to the best of our knowledge. We provide deep insights into the social influence mechanism by examining its two dimensions in detail: informational and normative. This finding extends research on social influence in the context of off-line

impulsive purchase behaviour, because social influence is generally treated as a general factor; for example, influence from family members versus influence from peers. Few researchers have dissected social influence into sub-dimensions and interpreted each of them in detail. Further, we incorporated source credibility and social support to reflect the antecedents of social influence in s-commerce, which enhances the understanding of peer influence among consumers. For practitioners, the actual transactions that s-commerce activities induce are a key determinant of the profits [67]. Therefore, the findings of our study can be interpreted by sellers and marketers to increase impulsive purchase opportunities.

Research Background

Social Commerce Activities

In general, s-commerce is a combination of online shopping and OSN activities [54]. S-commerce revolves around three key aspects: consumers' information exchange [70], collaborative shopping [67] and social interaction [65]. Information sharing includes consumers' exchange of shopping experiences, product reviews and recommendations, and other related information. Consumers usually receive shopping advice from their peers. Through these communications, consumers can discover new products and gain new knowledge of products. Collaborative efforts are reflected by consumers using collaborative shopping tools (e.g. collaborative browsing, instant chatting) to shop together and leverage collective wisdom and power to secure better deals (e.g. group buying). The social interaction process offers social value for consumers, since socializing has been acknowledged as an important motivation for shopping [6]. It is

suggested that s-commerce addresses the fundamental nature of shopping as a social experience [78]. Through the interactive consumption experience, consumers could gain social support in the form of information and affective care [53].

The boundary between s-commerce and SNS and between s-commerce and e-commerce may be indistinct. To identify the peculiar features of s-commerce, Liang and Turban [54] put forward three essential attributes of s-commerce applications, namely social media technologies, community interactions and commercial activities. Similarly, Huang and Benyoucef [42] propose a four-layer model of s-commerce design, covering the individual, conversation, community, and commerce levels. Based on these prior studies, we infer that the distinction between traditional e-commerce and s-commerce is that e-commerce is oriented toward effective business transactions while s-commerce is oriented toward social networking, collaborating, and information sharing, with shopping a secondary focus [90]. In an ordinary e-commerce website, customers are isolated and usually interact with the platforms individually. However, in s-commerce, efforts have been made to promote connections and conversations among consumers, allowing for intimacy and bonding [47].

Meanwhile, compared to general SNS activities, s-commerce attaches importance to commercial outcomes to a greater extent. Liang and Turban [54] pointed out that some activities on SNS are not commercial, and those affairs that failed to produce commercial benefits such as buying or selling products or attitude changes toward transactions should be excluded from the scope of s-commerce. The revenue of s-commerce practice relies heavily on the real transactions or at least transaction

possibilities that it induces [46, 96]. For example, a social commerce website is a platform dedicated to supporting s-commerce and thrives based on the commission of directing visitors to purchase on an external e-commerce website [67]. Therefore, transaction-based activities are critical to s-commerce.

Impulsive Purchase Behaviour in S-commerce

An impulsive purchase is a type of purchase that is made with no pre-existing intention [83]. It tends to be spontaneous and made without significant reflection when triggered by some external stimuli [10]. At first glance, impulse buying seems to be a negative concept that may be associated with defects in one's personal characteristics such as low self-control, weak self-discipline and immaturity [98]. However, some researchers have posited that an impulsive purchase is a common shopping practice that may lead to hedonic and pleasant consequences [10, 75]. Furthermore, this behaviour can be advantageous in some situations. According to the "deliberation-without-attention" hypothesis, when people make simple choices, conscious deliberation is required to produce better results; however, complex choices are better handled with unconscious thought [26]. Moreover, many researchers advocate that impulsive purchase is not totally free of cognitive processing [76]. Actually, impulsive purchase still involves cognitive deliberation and logical decision making, since affective feelings alone cannot lead to the making of a purchase decision [16].

It was assumed that e-commerce has created a new opportunity for consumers to buy impulsively [85], because it offers consumers more accessibility to diversified products and enhances the ease of conducting transactions [84]. However, there is a concern

about the traditional e-commerce model regarding impulsive purchase possibilities. Online consumers are more independent than off-line shoppers due to the absence of social surroundings, such as companions and attendants. In this case, without the pressure from salespeople, extra expenses could be saved [59]. S-commerce could compensate for this loss of sales chances, as it adds a social dimension to online shopping by supporting wide and strong connections and interactions among consumers [78].

In s-commerce, user contributions and information exchanges are both highly encouraged and facilitated [54]. As a result, consumers' perceptions, preferences and decisions may be significantly influenced by each other [42]. The core of social influence is "change": it implies that individuals alter their thoughts, feelings, attitudes or behaviours as a result of interactions with other individuals [1]. As mentioned above, the impulsive behaviour still involves cognitive processing, meaning that during this process, consumers can accept the influence from peers. For instance, they may be reminded of extra shopping needs or alter their opinions because of social influence. Hence, social influence, a particular factor that is unique to s-commerce, could be significantly related to consumers' impulsive purchases. To understand the mechanism of social influence in the s-commerce context, it would be enlightening to draw from the classic social influence theory [25].

Social Influence Theory

Social influence implies individuals alter their thoughts, feelings, attitudes or behaviours as a result of interactions with other individuals [1]. There are two streams

of classic social influence theory that are widely used. The first stream was proposed by Deutsch and Gerard [25] and explains the peer influence among members of a group, dividing social influence into informational and normative branches. Informational social influence is defined as “an influence to accept information obtained from another as evidence about reality”. Meanwhile, normative social influence refers to “an influence to conform to the positive expectations of another” [25]. These two branches of social influence are conceptually distinct [56]. Informational influence is associated with the acceptance of certain knowledge and evidence, whereas normative influence is related to self-maintenance and compliance [48].

The second stream was proposed by Kelman [45], who identified three processes through which one’s attitude changes: compliance, identification and internalization. Compliance occurs when an individual accepts influence to gain specific rewards or approval from another person or group; Identification implies an individual accepts influence to establish or maintain a satisfying self-defining relationship with another person or group; Internalization means that an individual accepts influence because the content of the induced behavior is intrinsically rewarding [45]. In consumer research, it has been demonstrated that each of Kelman’s processes can relate to one of Deutsch and Gerard’s social influence types, wherein informational social influence operates through the process of internalization and normative social influence may be accomplished through either the process of compliance or identification [9, 12]. To be specific, identification is the normative social influence from oneself to conform to one’s own judgment [25]. In this process, the individual holds expectations with regard

to his/her own behavior [25]. Both informational social influence and internalization is about gaining certain knowledge that can be useful to learn about the environment and to solve some problems confronting the individual, for example, evaluate products [12, 32]. Normative social influence encompasses compliance and identification, which are reflected in an individual's attempts to comply with expectations of others to gain some rewards, approval and to enhance self-image by association with others [9, 12]. Therefore, Deutsch and Gerard's adaption of social influence dimensions provides a succinct and conclusive framework that reflects the essential attributes of social influence among consumers. We build our research model based on this theory.

Hypothesis Development

Informational social influence

In s-commerce, informational social influence occurs when a consumer takes the information provided by the OSN friends as evidence of truth and makes inferences based upon the information. In comparison with brick-and-mortar shopping, the virtual shopping method imposes some restrictions on the way consumers evaluate merchandise [14]. Nevertheless, seller-provided product information is somehow interpreted as there are some commercial motives behind it. Thus, online shoppers have a high degree of reliance on the information created by peer customers, that is, electronic word-of-mouth (eWOM) [64, 82, 99]. Previous studies have reported that e-commerce users trust the eWOM of peer consumers more than traditional advertisements [1, 11, 19]. eWOM has been extensively acknowledged to affect consumers [51, 64, 82, 99]. Not only can eWOM raise awareness among consumers,

but it can also persuade them to adopt a product [29]. Accordingly, the influence of social relationships could create shopping needs for consumers as well as change their minds. For instance, consumers could be inspired by friends' sharing and then buy products that they otherwise do not need to buy [29].

S-commerce involves the communication of product reviews, shopping experiences, discounts, recommendations, comments and advice before, during and after shopping [42]. Informational social influence is especially important when a consumer is faced with difficulties or simply lacks interest in making the decision alone [49]. When informational social influence is strong, individuals are more likely to escape from full deliberation and use the ready-made recommendations or reviews as evidence of truth without question. If an individual tends to accept information from his/her OSN friends, there is a higher chance that this person will be persuaded to purchase additional items beyond any existing plan. In this way, the capacity of OSN members to spur and motivate a consumer to purchase impulsively is great. Therefore, we propose that

H1 In an s-commerce context, the informational social influence a consumer experiences is positively related to the individual's impulsive purchase behaviour.

Normative social influence

Normative social influence refers to an individual complying with another individual's expectation [25]. This type of influence is similar to the concept of "subjective norm," meaning a person's perception of the approval of most people who are important to him or her regarding a certain action, which is a common factor that guides people's social behaviours [33]. Normative influence reflects a person's value-expressive tendency,

driven by a need for psychological association with a social group [56]. This association is achieved by acceptance of group norms, values and behaviour patterns [56]. It is suggested that normative social influence is broad and strong in the social media context because individuals here face a large social circle [48].

Normative social influence drives an individual to gain approval from other group members. When a consumer is normatively influenced, this individual cares about the influencers' opinions, preferences, wishes and expectations and tends to behave in line with them. This inclination to conform to others' expectations shapes a consumer's purchase behaviour. In s-commerce, where major activities are product-related interactions, consumers can comply with others' tastes and preferences by purchasing the products valued, bought or recommended by them. It is suggested that normative social influence creates social pressure for a consumer such that he/she would be treated as antisocial if he/she didn't purchase a product [47]. Therefore the influenced consumers tend to voluntarily or involuntarily select products or services that reflect the tastes of the influencers. In addition, the influencers' purchases or recommendations can motivate the consumer to make a similar purchase because the focal purchase is deemed to represent a consumption norm. In this situation, excessive purchases, including impulsive purchases, could be induced. Thus, we hypothesize:

H2 In an s-commerce context, the normative social influence a consumer experiences is positively related to the individual's impulsive purchase behaviour

Antecedents of social influence in s-commerce

Social influence occurs as a result of an individual's interaction with the social environment. Therefore, in the s-commerce context, the determinants of social influence should be interpreted with the peculiar attributes of s-commerce. Liang et al. [53] proposed social support and relationship quality as critical factors that s-commerce participants look forward to. Social support refers to "an individual's experiences of being cared for, being responded to, and being helped by people in that individual's social group" [53]. Obviously, social influence can hardly be realized if there are no interactions between the source and the recipient. In s-commerce, such interactions are reflected by social support among consumers. When these reciprocating activities become frequent, the inter-personal influence could be amplified. Moreover, a fundamental element of relationship quality is trust [53]. In s-commerce where the major focus is exchanging shopping-related information, trust is determined by one's ability to provide useful shopping knowledge that will help others to solve problems [17]. In an s-commerce context, consumers are particularly susceptible to credible information sources [17, 64]. Also, since individuals' initial intentions of participating in s-commerce are to enhance shopping performance, the credible information sources would be more influential [46, 53, 54]. Hence, we put forward two critical factors that determine social influence in an s-commerce environment: source credibility and social support.

Source credibility

Source credibility implies a communicator's positive qualities that influence the listener's acceptance of the contents communicated [66]. Source credibility is a bidimensional concept. Firstly, it is competence-based, referring to a source's ability to provide the right information [86]. In the online shopping context, this ability is usually embodied as expertise, referring to a consumer who has rich knowledge, skills and competency in shopping [18]. Secondly, credibility is trustworthiness-based, reflecting an information providers' ethical traits ensuring that this person provides valid information [86].

Expertise is a key determinant for a person to be influential [3] and credible [12] in a social network. Early research showed that expertise causes a person to be persuasive in product recommendations [66]. Moreover, studies on group influence point out that expertise is a critical determinant of the group influence on members' purchase decisions [92]. In interpersonal communications, the information recipient tends to associate the correctness and usefulness of the message with the expertise of the sender [81]. For s-commerce users, expert-generated information is reliable and dependable, which can be used to evaluate products with confidence. Therefore, consumers tend to accept or adopt knowledge from shoppers with expertise [80].

H3a In an s-commerce context, the expertise of peer users is positively associated with their informational social influence on a consumer.

Experts are perceived as sources of valid assertions [66]. In s-commerce, expert shoppers usually have a good understanding regarding purchase and make better

decisions. Thus, it is advantageous for a consumer to behave within the expectation of experts. Moreover, social comparison theory states that people often make upward comparisons, choosing a target which is better than themselves in the certain domain in order to improve their decisions [80]. For an s-commerce consumer, associating his/her behaviour with expert others can strengthen his/her confidence in improving shopping performance, which brings internal satisfaction. Also, the normative association with experts can help the consumer to construct a better self-concept. Therefore, the consumer feels internally more positive when accepting normative influence from expert shoppers.

H3b In an s-commerce context, the normative social influence a consumer experiences is positively associated with the expertise of peer users.

Trustworthiness is another critical component of credibility. It reflects an information providers' ethical traits which ensure that this person will provide valid information [86]. Therefore, information from a trustworthy source is more likely to be accepted. Online customers should listen to their peers if they are impartial and disinterested; these characteristics make them more trustworthy than sellers and marketers [1, 11]. For subjective messages, such as recommendations, trustworthiness of the communicator will play an even more important role [66]. In s-commerce where users search for shopping suggestions, the perceived trustworthiness of the source will increase the seeker's perceived value of that advice [5], and intention to follow the advice [13]. Therefore, the trustworthiness of sources effectively facilitates the delivery of information.

H4a In an s-commerce context, the trustworthiness of other users is positively associated with their informational social influence on a consumer.

Trustworthiness reflects a person's positive intentions and benevolent traits. People would think that a trustworthy individual usually expects good results from others. Thus, people would feel safe and confident to behave within this individual's expectation. Therefore, we propose the following hypothesis.

H4b In an s-commerce context, the trustworthiness of other users is positively associated with their normative social influence on a consumer.

Social support

Social support has received intensive attention from s-commerce researchers, and it is suggested to be a critical indicator of participation and positive behaviours [53, 97]. In a broad sense, social support is defined as "the resources provided by another person" [30]. Specifically, it refers to "an individual's experiences of being cared for, being responded to, and being helped by people in that individual's social group" [53]. Social support is critical for peer influence because it creates supportive connections between individuals. As a result of these effective links, a party is more likely to alter another's perceptions, attitude and intentions.

Social support has various dimensions and it satisfies an individual's physical, psychological and cognitive needs [41]. In s-commerce, it is usually composed of two dimensions: informational and emotional [53]. Informational social support is related to assistance in the form of knowledge, suggestions, opinions and advice that could be

useful to this person [53]. Emotional social support is the expression of inner feelings such as understanding, solicitude and concern [53].

The s-commerce mechanism encourages user contribution as well as information exchange among users. In addition, users tend to seek help from the group when they have information needs. Informational support occurs when a person is supported by others in information provision [53]. When these pieces of information are accepted by listeners as evidence of truth, informational influence is delivered. A higher level of social support implies that a person is more willing to take part in information exchange activities in the group [53]. Therefore, informational social support creates occasions for informational influence to happen.

H5a In an s-commerce context, the informational social support an individual receives from other users is positively associated with the informational social influence this individual experiences.

It is suggested that the giving and receiving of social support between two parties is reciprocal [23]. Therefore, if the perception of informational social support is strong, a consumer is more likely to reciprocate with informational social support in return. Thus his/her ties with peers in the group are strengthened as the mutual support continues, reinforcing the impact of group norms on this consumer; the consequence is the consumer's increased conformance with group norms [22]. In addition, strong informational support can foster the recipient's dependency on the group; hence the recipient tends to sustain the relationship with the group by conforming to the group normatively. Moreover, as a consumer receives more information from a group, he

develops a better understanding of the group and learns about the group's nature, with the result that it is easier to adhere to the group's subjective norm.

H5b In an s-commerce context, the informational social support an individual receives from other users is positively associated with the normative social influence this individual experiences.

Emotional support indicates that a person receives emotional concern such as care, understanding or empathy from a social group [53]. When facing difficulties, a person needs not only direct help but also affective expressions that deliver encouragement and care, indirectly contributing to a solution to the problem. This type of support could foster interpersonal ties among a group of people. In an s-commerce group where consumers are closely bonded, mutual trust is enhanced, meaning that a person's reliability perception of the messages, feedback or recommendations from others increases [65]. Therefore the focal group of users becomes more willing to accept and adopt recommendations, advice and suggestions from each other.

H6a In an s-commerce context, the emotional social support an individual receives from other users is positively associated with the informational social influence this individual experiences.

Through emotional support, one could express affective feelings to another. The care receivers feel warmth and encouragement and tend to conceive a positive perception of the giver. Therefore, in this supportive environment, consumers would feel that others hold positive attitudes toward them. They would perceive that others' expectations of them are protective of their interests. Thus, they tend to normatively comply with

others. Hence, emotional social support among a group of users could create a phenomenon where the normative influence exerted by one on another is amplified.

H6b In an s-commerce context, the emotional social support an individual receives from other users is positively associated with the normative social influence this individual experiences.

Control variables

In order to reduce exogenous threats to the research model, several demographic cues are considered as control variables. First is the inherent impulsiveness of a consumer. Personal impulsiveness has been frequently proposed as a significant antecedent of impulsive purchase [10, 74, 91]. Since this is not the focus of this research, we control it for the research model. In addition, social presence may influence impulsive purchase behaviors. Third, age is controlled because research shows that younger users are more susceptible to inter-personal influence than older users [4]. Fourth, gender is included because the literature suggests that men and women often act differently regarding online social networking activities [93] and impulsive purchase behaviors [27]. Lastly, income deserves attention because the availability of disposable income should influence a person's impulsive consumptions [10]. In conclusion, we propose the research model, as shown in Figure 1.

< Insert Figure 1 here >

Methodology

Measurements

The measurement items employed in this study were adapted from previously validated scales in the existing literature. All the items were tailored to fit the specific context of this study. The items were modified by the author and a consulting expert panel including two Ph.D. candidates, two professors from an IS department and an s-commerce user. Next, we performed two rounds of card sorting on the potentially confusing constructs: informational social support, emotional social support, informational social influence, normative social influence, and impulsive purchase behaviour. In the first round, the correct hit ratio (referring to the number of items placed in the intended or target category by the judges) was 87.1%. Based on these results and the judges' qualitative feedback, we revised the ambiguous or poorly worded items and conducted a second round. This resulted in a correct hit ratio of 94.6%, a satisfactory level of reliability [63]. As a result, the measures for this research were obtained (see Appendix A). Since the research was conducted in China, the instrument items were translated into Chinese. Questions originally developed in English were translated into Chinese and then back-translated to ensure equivalence of meaning.

Online Survey

Since the targeted respondents are s-commerce users and it is more efficient to reach them online, we conducted an online survey to empirically test the model. A professional survey platform (sojump.com) was used to host an online questionnaire

and an URL was created to visit it. Sina Weibo (Weibo), a leading social network site in China [40], was selected as the research context. Weibo was established in August 2009. By the third quarter of 2018, it had 446 million active users per month and 195 million active users per day (www.weibo.com). The registered users of Weibo come from different occupations, which could provide a sample with diverse demographic information and hence high representativeness. More importantly, Weibo can effectively support s-commerce activities [97]. First, consumers can write product reviews or share shopping experiences via posting, and readers can comment on them. Thus, conversations and interactions on shopping interests can be realized. Second, by leveraging the network ties, consumers can gather a group of customers to initiate group buying. Beyond supporting s-commerce interactions, Weibo additionally supports friend matching and recommendation. In this way, consumers are likely to gain access to users with similar tastes. Therefore, the likelihood of users finding potentially interesting products increases, enhancing the s-commerce performance of Weibo. Moreover, the platform integrates the display of product recommendations from a third-party store, which operates by analyzing a consumer's browsing history. Owing to these merits, an increasing variety of s-commerce activities could be found on this platform [7]. For example, a number of shopping guides or master shoppers have set up Weibo accounts to share product recommendations, reviews and discount codes, and provide links to products.

To reach s-commerce participants, we placed a brief introduction to our research and a link to the online questionnaire at some high-traffic spots of Weibo, such as the

comment area of popular shopping experts. In motivating responses, a monetary reward of CNY 10 (USD1.6) was offered to each participant. In order to ensure the quality of respondents, at the beginning of the questionnaire, we explained what s-commerce means and set a screening question to exclude those who had not previously participated in s-commerce activities in Weibo. Then we asked for a link to the respondent's personal profile in Weibo and the username. Those who failed to provide this information were unable to continue with the survey. Moreover, each answerer's IP address was recorded; two submissions from the same address would lead to both being rejected. The online survey was open for two weeks. As a result, a total of 314 responses were received. The clicking record in the survey website shows that the survey has received 429 visits. Since 314 users have completed the questionnaire, the completion rate is 73%. Among the 314 answers, 11 responses were aberrant, including those completed within an unreasonably short time and those that indicated an identical answer to all the questions; these 11 were thus excluded from the data set. Finally, a total of 303 complete and valid responses were collected. Table 1 summarizes the demographic information of the sample.

< Insert Table 1 here >

To ensure the representativeness of the sample, we first compared the respondent demographic information and the demographic information of current online customers in China (CNNIC2018). According to CNNIC2018, the age group of 20-29 has the highest proportion and the group with monthly income of RMB 3001-5000 accounts for the highest proportion. Pan et al. [68] also noted that the typical social media user

in China is female and aged 25-30. In addition, Zhang et al. [97] stated that the typical user of Sina Weibo is female and aged 20-29. Thus, the sample representativeness is not a concern for this study.

Data Analysis

Common method bias

As all measures were self-reported, the potential for common method bias in the results was assessed. First, it is suggested that appropriate arrangements of the items in a questionnaire can reduce respondents' consistent motivation and thus decrease the common method bias in self-reporting [71, 72]. Thus we adopted different instructions for different scales, and the adjacent variables in the conceptual model were put in distinct sections.

Second, we conducted two tests following the recommendation of Podsakoff et al. [71]. Specifically, Harman's single-factor test was conducted. When one factor accounts for most of the covariance, the evidence for common method bias exists. We extracted eight factors with eigenvalues greater than 1, and the first factor accounted for 11.01% of the total variance. Because more than one factor emerged from the factor analysis and no single factor accounted for most of the covariance in the variables, we conclude that the data did not exhibit common method bias.

Following Liang et al. [52], we included a common method factor comprising all the principal indicators of constructs in the PLS model, and then we calculated how the method factor and the principal construct substantively accounted for each indicator's variances. Appendix B shows that the average substantively explained variance was

0.684, and the average method-based variance of the indicators was 0.004. In addition, most of the method factor loadings were not significant.

Furthermore, we compared the fit between the one-factor model and the measurement model to further ensure that common method bias was not serious. The fit of the one-factor model ($\chi^2=3689.39$ on 441 d.f., RMSEA=0.156) was considerably inferior to ($p<0.01$) the fit of the proposed model ($\chi^2=630.22$ on 406 d.f., RMSEA=0.043). This result further supported the fact that common method bias would not impact the results of this study.

Finally, following Malhotra et al. [60], we chose a single-item scale for past social commerce website usage behaviors (time-per-day) as a method variance to evaluate common method bias. Past social commerce website usage behaviors (time-per-day) measure how much time an average user spends on the s-commerce website [88]. The lowest positive correlation ($r = 0.018$, with emotional social support) between the method variance and other latent variables used to adjust to the correlations among the constructs. The results are shown in Table 2, suggesting that the comparison between the correlations above and below the diagonal indicated that the significant correlations kept significant after adjustment. Therefore, we suggest that common method bias is not a serious issue for this study.

< Insert Table 2 here >

Data analysis technique

To test the research model, PLS was used. We chose PLS as the statistical tool because of several advantages. First, PLS can evaluate the indicators' loadings on constructs

(thus, construct validity can be assessed) and evaluate the causal relationships among those constructs [85]. Second, PLS can provide a good approximation of covariance-based (CB) structural equation modeling (SEM) regarding final estimates, whereas CB-SEM better suits for theory development [37]. Finally, compared to CB SEM, PLS has fewer statistical identification issues and thus is robust [37].

Results of measurement model

After ensuring the non-existence of common method bias, we followed the two-step approach recommended by Anderson and Gerbing [2] to first examine the measurement model and then assess the structural model. The examination of the measurement model focuses on its reliability, convergent validity and discriminant validity. The results of the measurement model are presented in Table 3 and Appendix A. As reported, the Cronbach's Alphas for each construct all exceed the threshold value of 0.7 [21, 35]. Moreover, the composite reliability value of each variable is higher than the benchmark of 0.7 [35]. Further, convergent validity is assessed by testing the loading and the average variance extracted (AVE) [36]. The minimum pass value for AVE is 0.5 [35]. As Table 3 shows, the corresponding values all satisfy this requirement. Appendix A indicates that all items' loadings were greater than 0.6. Further, as shown in Table 2, for each construct, the square root of AVE is greater than its correlation with any other constructs, as depicted in the off-diagonal entry. Therefore, the model achieves sufficient discriminant validity [35].

< Insert Table 3 here >

Given that several construct correlations exceeded 0.6, we further eliminated the potential issue of multicollinearity by following Mason and Perreault [61] to check the variance inflation factors (VIF) value and the tolerance values. They suggested that when VIFs are lower than 10 or tolerance values are higher than 0.1, multicollinearity is not an important issue. Finally, our test results demonstrate that VIF values range from 1.169 to 2.307, and tolerance values range from 0.433 to 0.855, indicating that multicollinearity is not a serious concern for the present study.

Results of structural model

After examining the measurement model, we tested the structural model. The results depicted in Figure 2 show that all the hypotheses are supported, although H2 (normative social influence-> impulsive purchase behaviour), H5b (informational social support-> normative social influence) and H6a (emotional social support-> informational social influence) are only weakly supported. As to the control variables, personal impulsiveness and income positively affect impulsive purchases. Moreover, age negatively affects impulsive purchase behaviour, meaning that the younger a person is (more than 18 years old), the more likely it is that he/she engages in impulsive purchases behaviours.

< Insert Figure 2 here >

Given that one R^2 score (16%) was lower than 20% by excluding the control variables, we further used the F-test to evaluate the significance of the R^2 [31]. The results in Table 4 indicates that the R^2 score was significant at $p < 0.05$.

< Insert Table 4 here >

Post hoc analysis

To gain additional insights, we conducted post hoc analysis by investigating whether information and normative social influence play mediating roles in the research model. Following MacKinnon et al. [58], we used the bootstrapping sampling method (bootstrap sample size = 5000) to generate asymmetric confidence intervals (CIs) for the indirect effect. If the 95 percent CI does not contain zero, an indirect effect is significant [73]. As shown in Appendix C, the results confirmed that information and normative social influence mediated the effects of expertise, trustworthiness, informational social support, emotional social support on impulsive purchase behavior.

Discussion

First, both informational and normative social influence were found to affect a consumer's impulsive purchase behaviour, as suggested by H1 and H2. It means that in an s-commerce context, social influence from peer-customers could drive a shopper to purchase something the person didn't plan to buy, and this purchase is made without full deliberation on detailed facts and evidence about the focal purchase. Moreover, there are two paths to realize such an influence. One is that an individual accepts opinions and advice from peers and decides to make different purchase plans. The other is that the person orients their behaviours according to the norm of others. Both types of social influence are positively associated with the probability of a consumer's impulsive purchase behaviour. Moreover, informational social influence affects impulsive purchase behaviour to a greater extent than normative social influence.

In the s-commerce context, informational influence reflects the process whereby a consumer changes or reduces his/her pre-existing attitude, perception, understanding of a product or decision toward a purchase because he/she accepts certain information provided by peer consumers. This happens because the content of the change itself is beneficial in some way. Therefore, if informational influence is strong, a consumer will be more susceptible to peer consumers' eWOM and will tend to make more frequent changes to existing purchase plans. Normative influence suggests that a consumer is subject to s-commerce peers' expectations; this tendency is driven by the inner satisfaction derived from complying with peers or from supporting a self-concept associated with peers.

Second, the results for H3a, H3b, H4a and H4b reveal the significant effect of peer consumers' expertise and trustworthiness on their informational and normative influence on a consumer in the s-commerce context. When peer consumers are perceived as having high levels of expertise and trustworthiness, a consumer is more likely to assimilate their ideas to change his/her existing mind and opinion toward a purchase and to behave in a way that adheres to others' expectations.

Third, social support, both informational and emotional, is positively related to the two types of social influence in the s-commerce context, as suggested by H5a, H5b, H6a and H6b. This finding indicates that the more consumers support each other, the more likely it is that they are affected by each other. However, informational social support has a much stronger effect on informational social influence than on normative social influence. It means that in an s-commerce platform, when individual users are

informationally supportive to each other, actively offering information, suggestions and advice, they are more likely to accept other's information as the truth, and use them to make purchase decisions. Meanwhile, this informational support process would not affect normative social influence to the same extent. This may be due to the fact that normative social influence requires affective, sentimental and emotional inter-personal ties, which is little affected by the exchange of information. For the same reason, emotional social support can significantly affect normative social influence, but weakly affect informational social influence, which represents the utilitarian side of social relationships. In addition, the mutual emotional support among s-commerce users can foster a rapport in which they take each other's expectations and feelings into consideration when making a purchase decision.

Lastly, the results of the control variables suggest that a person's inherent personal impulsiveness significantly impacts impulsive purchase behaviour. Moreover, the younger a person is, the more likely it is that he/she buys things impulsively. This is similar to the common knowledge that juniors are generally more impulsive than seniors. In addition, high income notably encourages a consumer's impulse buying activities, which is consistent with the literature that suggests the availability of disposable money would foster impulsive buying.

Research Contributions

Implications for Research

This study contributes to both the s-commerce and the impulsive purchase literature.

First, we contribute to the understanding of consumer behaviour in s-commerce by

investigating the particularly important purchase phenomenon: impulsive purchase. Extant s-commerce research usually focuses on research issues such as adoption, participation and purchase intention. Few prior studies have investigated impulsive purchase behaviours. Leveraging the lens of social influence theory, our study filled in this research gap and clarified how peers' social influences affect a consumer's impulsive purchase behaviour in the s-commerce context. Moreover, we incorporated source credibility and social support to reflect the antecedents of social influence in s-commerce, which enhances the understanding of peer influence among consumers in this context. We recognize that the role of social influence could be significant for s-commerce research, since socializing plays a key role in s-commerce. In addition, we contribute to the understanding of the s-commerce mechanism and activities by revealing their potential for fostering impulsive purchase behaviour.

Second, prior research on online impulsive purchase behaviour has usually focused on the impact of the attributes of products or website features. Although there has been some research in the off-line shopping context that implies the significant role of social influence, this factor has not yet been studied in the online impulsive purchase context, to the best of our knowledge. Thus, through this empirical study, we contribute to the online impulsive purchase literature by examining the effect of two dimensions of social influence in detail: informational social influence and normative social influence. We clarified two routes via which a consumer's attitude, perception and purchase decision toward products is changed because of influence from peers. The informational and normative influence can drive a consumer to engage in impulsive

purchase with reduced deliberation. This finding is also an extension to research on social influence in off-line impulsive purchase behaviour, where social influence is usually treated as a general form of influence, for example, influence from family. Few studies have dissected the social influence and interpreted them in detail.

Furthermore, research on online impulsive purchase behaviour usually uses intention as a proxy of the actual transaction, because the actual transaction is supposed to be affected by many complex factors [69]. In this regard, we extend from intention to actual behaviour and provide empirical evidence to reflect consumers' actual behaviours in this context.

Implications for Practice

Our research findings have some implications for s-commerce service providers. To begin with, the results suggest that the influencing from highly trustworthy and expert peer consumers could facilitate impulsive purchases of consumers in the s-commerce platform via effective social influences. However, on an s-commerce platform, one can hardly determine others' trustworthiness. In order to measure consumers' trustworthiness, we trace their posting histories [20]. We suggest that s-commerce platform operators could incorporate a system which makes consumers' trustworthiness-related qualities more visible. For example, a peer-rating system that specifies the trustworthiness quality of the contributor. Moreover, the significant impact of consumers' expertise on their social influence suggests that managers should identify highly skilled members and make them both visible and accessible, so that they can have more opportunity to influence other consumers. For instance, expert consumers

can have special tags that manifest their expertise in some area. It would be more useful to recommend the expert peers to consumers who share interests in the same field.

Moreover, the s-commerce platform manager should pay more attention to the important role of social support. Intuitively, social interaction should facilitate social support. Therefore, efforts can be made to encourage interactivity among users. For example, a credit system can be created to record users' interactive activities, and these credits can be used to represent a user's level of seniority in this s-commerce platform. Also, the website can reward highly interactive users with some privileges to use additional functions, such as "comment with pictures".

In addition, this study sheds light on how companies can promote their products and brands via s-commerce. Overall, social marketing methods should be highlighted. Instead of advertising, taking advantage of peer influence could be more promising. Existing customers' OSN ties can be explored to attract new customers. Also, marketers can take advantage of the great influence of "expert buyers" to encourage more impulsive buying. Store owners may try to create an environment in which consumers can easily discover and evaluate products based on peer-interaction. For example, they can build a "group" that includes expert shoppers and potential consumers. In this way, sellers could achieve better performance.

Limitations and Future Research

This study generates fruitful findings which not only supplement extant research on s-commerce and impulsive consumption, but also inspire s-commerce practitioners.

Nevertheless, some additional efforts could be made to further improve and complete

the present research. To be specific, we suggest that the following aspects could be considered in future studies as an extension of the current one.

To begin with, this research takes a general approach regarding social influence valence. However, exploring and comparing the effect of positive and negative social influence is interesting because these two effects may be asymmetrical. Floh et al. [34] suggest that positive medium or strong reviews work more remarkably than negative ones. Some other studies, however, point out that negative eWOM spreads faster and influences readers to a greater extent than positive eWOM [28]. Hence, for the present study, involving valence could be an interesting and productive extension. In particular, researchers could consider the manner in which consumers demonstrate different patterns of information adoption toward others' critical and supportive opinions. They may also investigate the responses of consumers to positive and negative purchase norms. Through these efforts, the current knowledge will be refined.

Another potential area of extension for this research is investigating the outcome of impulsive purchases. In particular, the impulsive buyers' hedonism, satisfaction, shopping performance and re-purchase intention could be tracked. As suggested, an impulsive purchase is mostly conducted regardless of the consequences [77]. It is often associated with regretful outcomes, for example, sales return [95]. However, as mentioned previously, impulsive buying cannot be simply regarded as irrational behavior. It is a shopping strategy that may be effective in certain circumstances. Therefore, the outcome of impulsive consumption and its determinants deserves research attention. To the best of the researchers' knowledge, this area remains under-

explored. Hence, future research could usefully take a longitudinal approach, encompassing consumers' reports after impulsive purchase actions have been completed.

Furthermore, in future studies, the sample size can be enlarged in order to generate findings with a higher level of reliability. Moreover, data from other types of s-commerce websites, such as Xiaohongshu.com, can be collected to reveal the difference between consumers' impulsive purchases on these two platforms and to increase the generalizability of research findings.

Finally, as with all previous studies, other exogenous factors are more likely to affect the constructs in the research model. Future research can investigate additional potential explanations for the proposed relationships in this study. For example, website quality and other relationship quality indicators, such as satisfaction and commitment, may also affect consumers' s-commerce experience [53].

Conclusions

This paper investigates the role of social influence in consumers' impulsive purchase behaviours in an s-commerce setting. Grounded on social influence theory [12, 25], a research model is built and empirically tested with data from 303 s-commerce participants in Sina Weibo. Results show that a consumer's impulsive purchase behaviour could be impelled by peer-influence that drives the consumer to accept others' information or norms. On the one hand, the social influence is enabled by the credibility of the source. In particular, in s-commerce, expertise and trustworthiness of information source drive readers to accept eWOM or engage in behaviour without full

deliberation. On the other hand, social support allows for more and stronger social influences to occur. By offering informational or emotional social support to others, a peer consumer could alter a recipient's behaviour. In addition, several control variables are included in this study, which suggests that a consumer's inherent impulsiveness, age and income could affect the individual's impulsive consumption.

This empirical study contributes to s-commerce research by revealing how peer influence induces s-commerce users' impulsive purchase behaviours. We extend the current online impulsive purchase literature by providing insights into the social-related antecedents, a type of influencers that were previously infrequently studied. Notably, the research subject in this study is actual behaviour instead of intention or urge, providing an accurate understanding of impulsive purchase behaviour with empirical evidence. In addition, this study enriches the knowledge of social influence by revealing that peer influence may suppress a consumer's diligent deliberation and impel impulsive actions. For practitioners, several suggestions are made based on the research findings.

Building on this study, some future research can be conducted. The effect of social influence could be detailed based on its valence. A longitudinal study could be performed to check the post-purchase dynamics because the immediate and longer term consequences of an impulsive purchase are uncertain. When these issues are addressed, more refined knowledge of consumers' impulsive buying preferences/behaviours in s-commerce settings can be obtained.

REFERENCES

1. Amblee, N. and Bui, T. Harnessing the influence of social proof in online shopping: The effect of electronic word of mouth on sales of digital microproducts. *International Journal of Electronic Commerce*, 16, 2 (2011), 91-114.
2. Anderson, J.C. and Gerbing, D.W. Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 3 (1988), 411-423.
3. Aral, S. Commentary: Identifying social influence: A comment on opinion leadership and social contagion in new product diffusion. *Marketing Science*, 30, 2 (2011), 217-223.
4. Aral, S. and Walker, D. Identifying influential and susceptible members of social networks. *Science*, 337, 6092 (2012), 337-41.
5. Arazy, O., Kumar, N., and Shapira, B. A theory-driven design framework for social recommender systems. *Journal of the Association for Information Systems*, 11, 9 (2010), 455-490.
6. Arnold, M.J. and Reynolds, K.E. Hedonic shopping motivations. *Journal of Retailing*, 79, 2 (2003), 77-95.
7. Bai, J. *Weibo user development report 2013*. 2014; Available from: <http://data.weibo.com/report/reportDetail?id=76>, Accessed on June, 2018.
8. Bapna, R. and Umyarov, A. Do your online friends make you pay? A randomized field experiment on peer influence in online social networks. *Management Science*, 61, 8 (2015), 1902 - 1920.
9. Bearden, W.O., Netemeyer, R.G., and Teel, J.E. Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 15, 4 (1989), 473-481.
10. Beatty, S.E. and Ferrell, M.E. Impulse buying: Modeling its precursors. *Journal of Retailing*, 74, 2 (1998), 169-191.
11. Benlian, A., Titah, R., and Hess, T. Differential effects of provider recommendations and consumer reviews in e-commerce transactions: An experimental study. *Journal of Management Information Systems*, 29, 1 (2012), 237-272.
12. Burnkrant, R.E. and Cousineau, A. Informational and normative social influence in buyer behavior. *Journal of Consumer Research*, 2, 3 (1975), 206-215.
13. Casaló, L.V., Flavián, C., and Guinaliú, M. Understanding the intention to follow the advice obtained in an online travel community. *Computers in Human Behavior*, 27, 2 (2011), 622-633.
14. Cha, J. Shopping on social networking web sites: Attitudes toward real versus virtual items. *Journal of Interactive Advertising*, 10, 1 (2009), 77-93.
15. Chang, H.J., Yan, R.-N., and Eckman, M. Moderating effects of situational characteristics on impulse buying. *International Journal of Retail & Distribution Management*, 42, 4 (2014), 298 - 314.
16. Chen, J.V., Su, B.-c., and Widjaja, A.E. Facebook C2C social commerce: A study of online impulse buying. *Decision Support Systems*, 83, (2016), 57-69.
17. Chen, Y., Lu, Y., Wang, B., and Pan, Z. How do product recommendations affect impulse buying? An empirical study on WeChat social commerce. *Information &*

- Management*, 56, 2 (2019), 236-248.
18. Cheung, C.M.K., Lee, M.K.O., and Rabjohn, N. The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18, 3 (2008), 229-247.
 19. Cheung, C.M.K. and Thadani, D.R. The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54, 1 (2012), 461-470.
 20. Cheung, M.Y., Luo, C., Sia, C.L., and Chen, H. Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, 13, 4 (2009), 9-38.
 21. Churchill, G.A. A paradigm for developing better measures of marketing constructs *Journal of Marketing Research*, 16, 4 (1979), 64-73.
 22. Cialdini, R.B. and Trost, M.R. Social influence: social norms, conformity and compliance, in *The handbook of social psychology*, D.T. Gilbert, S.T. Fiske, and G. Lindzey, Editors., McGraw-Hill: New York, 1988, pp. 151-192.
 23. Crocker, J. and Canevello, A. Creating and undermining social support in communal relationships: The role of compassionate and self-image goals. *Journal of Personality and Social Psychology*, 95, 3 (2008), 555-575.
 24. Dennis, C., Bourlakis, M., Alamanos, E., Papagiannidis, S., and Brakus, J.J. Value co-creation through multiple shopping channels: The interconnections with social exclusion and well-being. *International Journal of Electronic Commerce*, 21, 4 (2017), 517-547.
 25. Deutsch, M. and Gerard, H.B. A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology*, 51, 3 (1955), 629-636.
 26. Dijksterhuis, A., Bos, M.W., Nordgren, L.F., and van Baaren, R.B. On making the right choice: The deliberation-without-attention effect. *Science*, 311, 5763 (2006), 1005-1007.
 27. Dittmar, H., Beattie, J., and Friese, S. Objects, decision considerations and self-image in men's and women's impulse purchases. *Acta Psychologica*, 93, 1-3 (1996), 187-206
 28. Doer, B., Fouz, M., and Friedrich, T. Why rumors spread so quickly in social networks. *Communications of the ACM*, 55, 6 (2012), 70-75.
 29. Duan, W., Gu, B., and Whinston, A.B. Do online reviews matter? An empirical investigation of panel data. *Decision Support Systems*, 45, 4 (2008), 1007-1016.
 30. Eastin, M.S. and LaRose, R. Alt.support: Modeling social support online. *Computers in Human Behavior*, 21, 6 (2005), 977-992.
 31. Falk, R.F. and Miller, N.B. *A primer for soft modeling*. 1992: University of Akron Press, 1992.
 32. Fang, X. and Hu, P.J.-H. Top persuader prediction for social networks. *MIS Quarterly*, 42, 1 (2018), 63-82.
 33. Fishbein, M. and Ajzen, I. *Belief, attitude, intention and behavior: An introduction to theory and research*. MA: Addison-Wesley, Reading, 1975.
 34. Floh, A., Koller, M., and Zauner, A. Taking a deeper look at online reviews: the

asymmetric effect of valence intensity on shopping behaviour. *Journal of Marketing Management*, 29, 5-6 (2013), 646-670.

35. Fornell, C. and Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 1 (1981), 39-50.

36. Hair, J.F., Anderson, R.E., Tatham, R.L., and Black, W.C. *Multivariate Data Analysis*. 1998, Upper Saddle River, N J Prentice Hall, 1998.

37. Hair, J.F., Ringle, C.M., and Sarstedt, M. PLS-SEM: Indeed a silver bullet. *The Journal of Marketing Theory and Practice*, 19, 2 (2011), 139-152.

38. Hostler, R.E., Yoon, V.Y., Guo, Z., Guimaraes, T., and Forgionne, G. Assessing the impact of recommender agents on on-line consumer unplanned purchase behavior. *Information & Management*, 48, 8 (2011), 336-343.

39. Hu, X., Huang, Q., Zhong, X., Davison, R.M., and Zhao, D. The influence of peer characteristics and technical features of a social shopping website on a consumer's purchase intention. *International Journal of Information Management*, 36, 6 (2016), 1218-1230.

40. Hu, X., Zhang, X., and Wei, J. Public attention to natural hazard warnings on social media in china. *Weather, Climate, and Society*, 11, 1 (2019), 183-197.

41. Huang, K.-Y., Chengalur-Smith, I., and Pinsonneault, A. Sharing is caring: Social support provision and companionship activities in healthcare virtual support communities. *MIS Quarterly*, 43, Forthcoming (2019).

42. Huang, Z. and Benyoucef, M. From e-commerce to social commerce: a close look at design features. *Electronic Commerce Research and Applications*, 12, 4 (2013), 246-259.

43. Iresearch. *Chinese Mobile Social Media Series Report 2016: Industrial*. 2016; Available from: http://report.iresearch.cn/report_pdf.aspx?id=2651, Accessed on March, 2018.

44. Kacen, J.J. and Lee, J.A. The influence of culture on consumer impulsive buying behavior. *Journal of Consumer Psychology*, 12, 2 (2002), 163-176.

45. Kelman, H.C. Compliance, identification, and internalization three processes of attitude change. *Journal of Conflict Resolution*, 2, 1 (1958), 51-60.

46. Kim, D. Under what conditions will social commerce business models survive? *Electronic Commerce Research and Applications*, 12, 2 (2013), 69-77.

47. Kim, Y.A. and Srivastava, J. Impact of social influence in e-commerce decision making. Paper presented at the *Proceedings of the Ninth International Conference on Electronic Commerce*. 2007.

48. Kwahk, K.-Y. and Kim, B. Effects of social media on consumers' purchase decisions: Evidence from Taobao. *Service Business*, 11, 4 (2016), 803-829.

49. Lee, M.K.O., Shi, N., Cheung, C.M.K., Lim, K.H., and Sia, C.L. Consumer's decision to shop online: The moderating role of positive informational social influence. *Information & Management*, 48, 6 (2011), 185-191.

50. Li, D. and Wang, M. *60% purchase is impulsive*. 2015; Available from: <http://www.bbtnews.com.cn/2015/1208/131385.shtml>, Accessed on April, 2018.

51. Li, X. Could deal promotion improve merchants' online reputations? The

- moderating role of prior reviews *Journal of Management Information Systems*, 33, 1 (2016), 171-201.
52. Liang, H., Saraf, N., Hu, Q., and Xue, Y. Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management. *MIS Quarterly* 31, 1 (2007), 59-87.
53. Liang, T.P., Ho, Y.T., Li, Y.W., and Turban, E. What drives social commerce? The role of social support and relationship quality. *International Journal of Electronic Commerce*, 16, 2 (2011), 69-90.
54. Liang, T.P. and Turban, E. Introduction to the special issue social commerce: A research framework for social commerce. *International Journal of Electronic Commerce*, 16, 2 (2011), 5-14.
55. Liu, Y., Li, H., and Hu, F. Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*, 55, 3 (2013), 829-837.
56. Lord, K.R. and Lee, M.S. Differences in normative and informational social influence. *Advances in Consumer Research*, 28, (2001), 280-285.
57. Luo, X. How does shopping with others influence impulsive purchasing? *Journal of Consumer Psychology*, 15, 4 (2005), 288-294.
58. MacKinnon, D.P., Lockwood, C.M., and Williams, J. Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 1 (2004), 99-128.
59. Madhavaram, S.R. and Laverie, D.A. Exploring impulse purchasing on the internet. *Advances in Consumer Research*, 31, (2004), 59-66.
60. Malhotra, N.K., Kim, S.S., and Patil, A. Common method variance in IS research: A comparison of alternative approaches and a re-analysis of past research. *Management Science*, 52, 12 (2006), 1865-1883.
61. Mason, C.H. and Perreault, W.D.J. Collinearity, power, and interpretation of multiple regression analysis. *Journal of Marketing Research*, 28, 3 (1991), 268-280.
62. Mattila, A.S. and Wirtz, J. The role of store environmental stimulation and social factors on impulse purchasing. *Journal of Services Marketing*, 22 7 (2008), 562 - 567.
63. Moore, G.C. and Benbasat, I. Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2, 3 (1991), 192-222.
64. Navid Aghakhani, Jahangir Karimi, and Salehan, M. A unified model for the adoption of electronic word of mouth on social network sites: Facebook as the exemplar. *International Journal of Electronic Commerce*, 22, 2 (2018), 202-231.
65. Ng, C.S.-P. Intention to purchase on social commerce websites across cultures: A cross-regional study. *Information & Management*, 50, 8 (2013), 609-620.
66. Ohanian, R. Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19, 3 (1990), 39-52.
67. Olbrich, R. and Holsing, C. Modeling consumer purchasing behavior in social shopping communities with clickstream data. *International Journal of Electronic Commerce*, 16, 2 (2011), 15-40.

68. Pan, Z., Lu, Y., Wang, B., and Chau, P.Y.K. Who Do You Think You Are? Common and Differential Effects of Social Self-Identity on Social Media Usage. *Journal of Management Information Systems*, 34, 1 (2017), 71-101.
69. Parboteeah, D.V., Valacich, J.S., and Wells, J.D. The influence of website characteristics on a consumer's urge to buy impulsively. *Information Systems Research*, 20, 1 (2009), 60-78.
70. Phang, C.W., Zhang, C., and Sutanto, J. The influence of user interaction and participation in social media on the consumption intention of niche products. *Information & Management*, 50, 8 (2013), 661-672.
71. Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 5 (2003), 879-903.
72. Podsakoff, P.M. and Organ, D.W. Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12, 4 (1986), 531-544.
73. Preacher, K.J. and Hayes, A.F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 3 (2008), 879-891.
74. Puri, R. Measuring and modifying consumer impulsiveness: A cost-benefit accessibility framework. *Journal of Consumer Psychology*, 5, 2 (1996), 87-113.
75. Rook, D.W. The buying impulse. *Journal of Consumer Research*, 14, 2 (1987), 189-199.
76. Rook, D.W. and Fisher, R.J. Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22, (1995), 305-313.
77. Rook, D.W. and Hoch, S.J. Consuming impulses. *Advances in Consumer Research*, 12, (1985), 13-27.
78. Shen, J. and Eder, L. Determining factors in the acceptance of social shopping websites. Paper presented at the *Americas Conference on Information Systems*. 2009.
79. Shen, L. *Mobile commerce brings more impulsive purchase*. 2014; Available from: <http://column.iresearch.cn/b/201403/671002.shtml>, Accessed on March, 2017.
80. Shen, Y.C., Huang, C.Y., Chu, C.H., and Liao, H.C. Virtual community loyalty: An interpersonal-interaction perspective. *International Journal of Electronic Commerce*, 15, 1 (2010), 49-74.
81. Smith, D., Menon, S., and Sivakumar, K. Online peer and editorial recommendations, trust, and choice in virtual markets. *Journal of Interactive Marketing*, 19, 3 (2005), 15-37.
82. Song, T., Huang, J., Tan, Y., and Yu, Y. Using user- and marketer-generated content for box office revenue prediction: Differences between microblogging and third-party platforms. *Information Systems Research*, March, (2019), Forthcoming.
83. Stern, H. The significance of impulse buying today. *Journal of Marketing*, 26, 2 (1962), 59-62.
84. Strack, F., Werth, L., and Deutsch, R. Reflective and impulsive determinants of consumer behavior. *Journal of Consumer Psychology*, 16, 3 (2006), 205-216.
85. Sun, Y., Fang, Y., Lim, K.H., and Straub, D. User satisfaction with information technology service delivery: A social capital perspective. *Information Systems Research*,

- 23, 4 (2012), 1195-1211.
86. Sussman, S.W. and Siegal, W.S. Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, 14, 1 (2003), 47-65.
87. Tan, G. *Online social network has great business potential: nearly 80% of the users pay attention to commercial information*. 2012; Available from: http://www.cnnic.cn/hlwfzyj/fxszl/fxswz/201211/t20121113_37194.htm, Accessed on May, 2018.
88. Turel, O. and Serenko, A. The benefits and dangers of enjoyment with social networking websites. *European Journal of Information Systems*, 21, 5 (2017), 512-528.
89. Verhagen, T. and van Dolen, W. The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information & Management*, 48, 8 (2011), 320-327.
90. Wang, C. and Zhang, P. The evolution of social commerce: An examination from the people, business, technology, and information perspective. *Communications of the AIS*, 31, 5 (2012), 105-127.
91. Wells, J.D., Parboteeah, V., and Valacich, J.S. Online impulse buying: understanding the interplay between consumer impulsiveness and website quality. *Journal of the Association for Information Systems*, 12, 1 (2011), 32-56.
92. Witt, R.E. and Bruce, G.D. Group influence and brand choice congruence. *Journal of Marketing Research*, 9, 4 (1972), 440-443.
93. Wu, J., Xie, K., Xiao, J., and Xie, J. Effects of customer heterogeneity on participation performance in virtual brand community: A two-stage semiparametric approach. *International Journal of Electronic Commerce*, 22, 2 (2018), 289-321.
94. Xiang, L., Zheng, X., Lee, M.K.O., and Zhao, D. Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. *International Journal of Information Management*, 36, 3 (2016), 333-347.
95. Xiong, X. *Sales return caused by impulsive buying: Returning rate of clothing is the highest*. 2015; Available from: <http://hb.qq.com/a/20151118/020448.htm>, Accessed on July, 2017.
96. Yadav, M.S., Valck, K.d., Hennig-Thurau, T., Hoffman, D.L., and Spann, M. Social commerce: A contingency framework for assessing marketing potential. *Journal of Interactive Marketing*, 27, 4 (2013), 311-323.
97. Zhang, H., Lu, Y., Gupta, S., and Zhao, L. What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences. *Information & Management*, 51, 8 (2014), 1017-1030.
98. Zhang, Y. and Shrum, L.J. The influence of self-construal on impulsive consumption. *Journal of Consumer Research*, 35, 5 (2009), 838-850.
99. Zimmermann, S., Herrmann, P., Kundisch, D., and Nault, B.R. Decomposing the variance of consumer ratings and the impact on price and demand. *Information Systems Research*, 29, 4 (2018), 779-1068.

Table 1. Demographic information of the sample

Profile of Respondents (n= 303)			
		Frequency	Percentage
Gender	Male	114	37.6
	Female	189	62.4
Age	19-25	71	23.4
	25-29	119	39.3
	30-40	98	32.5
	≥40	15	5
Income (CNY)	<1000	13	4.3
	1000-2999	30	9.9
	3000-5999	98	32.3
	6000-7999	97	32.0
	≥8000	65	21.5
Online shopping frequency	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
SNS frequency	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

Table 2. Correlations

	EXP	TW	ISS	ESS	ISI	NSI	IPB	Gender	Age	Income	PIM	SPR
EXP	0.82	0.54* *	0.47* *	0.42* *	0.55* *	0.47* *	0.30* *	-0.03	0.04	0.09	0.16* *	0.46**
TW	0.55* *	0.87	0.45* *	0.53* *	0.58* *	0.49* *	0.18* *	-0.01	0.13*	0.12*	0.19* *	0.56**
ISS	0.48* *	0.46* *	0.82	0.59* *	0.50* *	0.40* *	0.19* *	0.06	0.09	0.08	0.00	0.56**
ESS	0.43* *	0.54* *	0.60* *	0.82	0.50* *	0.45* *	0.19* *	0.07	-0.01	0.03	0.04	0.63**
ISI	0.56* *	0.59* *	0.51* *	0.51* *	0.80	0.64* *	0.33* *	0.11*	0.15* *	0.09	0.15* *	0.54**
NSI	0.48* *	0.50* *	0.41* *	0.46* *	0.65* *	0.82	0.35* *	-0.05	0.15* *	0.13*	0.32* *	0.57**
IPB	0.31* *	0.20* *	0.21* *	0.21* *	0.34* *	0.36* *	0.82	0.00	-0.04	0.14*	0.37* *	0.22**
Gender	-0.02	0.01	0.08	0.09	0.13*	-0.03	0.02	NA	-0.10	-0.13*	-0.10	0.01
Age	0.06	0.15*	0.11	0.01	0.17* *	0.16* *	-0.02	-0.09	NA	0.43* *	-0.01	0.16**
Income	0.10	0.14*	0.10	0.04	0.11	0.14*	0.15* *	-0.11	0.44* *	NA	0.08	0.15**
PIM	0.18* *	0.20* *	0.02	0.06	0.17* *	0.33* *	0.38* *	-0.08	0.01	0.09	0.77	0.18**
SPR	0.47* *	0.57* *	0.56* *	0.63* *	0.55* *	0.58* *	0.23* *	0.03	0.17* *	0.17* *	0.20* *	0.72
MV marker	0.06	0.02	0.07	0.02	0.04	-0.05	-0.03	0.11	0.01	0.05	-0.10	0.08

Note: 1. EXP = Expertise; TW = Trustworthiness; ISS = Informational Social Support; ESS = Emotional Social Support; ISI = Informational Social Influence; NSI = Normative Social Influence; IPB = Impulsive Purchase; PIM= Personal Impulsiveness; SPR = Social Presence.
2. *p < 0.05; **p < 0.01 (two-tailed test).
3. NA = not applicable.

Table 3. Results of Confirmatory Factor Analysis

	Items	AVE	Composite Reliability	Cronbach's Alpha
Expertise	5	0.68	0.92	0.88
Trustworthiness	4	0.75	0.92	0.89
Informational social support	3	0.67	0.86	0.75
Emotional social support	3	0.68	0.86	0.76
Informational social influence	4	0.64	0.88	0.80
Normative social influence	4	0.68	0.89	0.84
Impulsive purchase behavior	4	0.68	0.89	0.84

Table 4. F-test for R²

F-test for R ²			
	R ²	F	p (F)
Impulsive purchase behavior	0.16	5.80	0.000

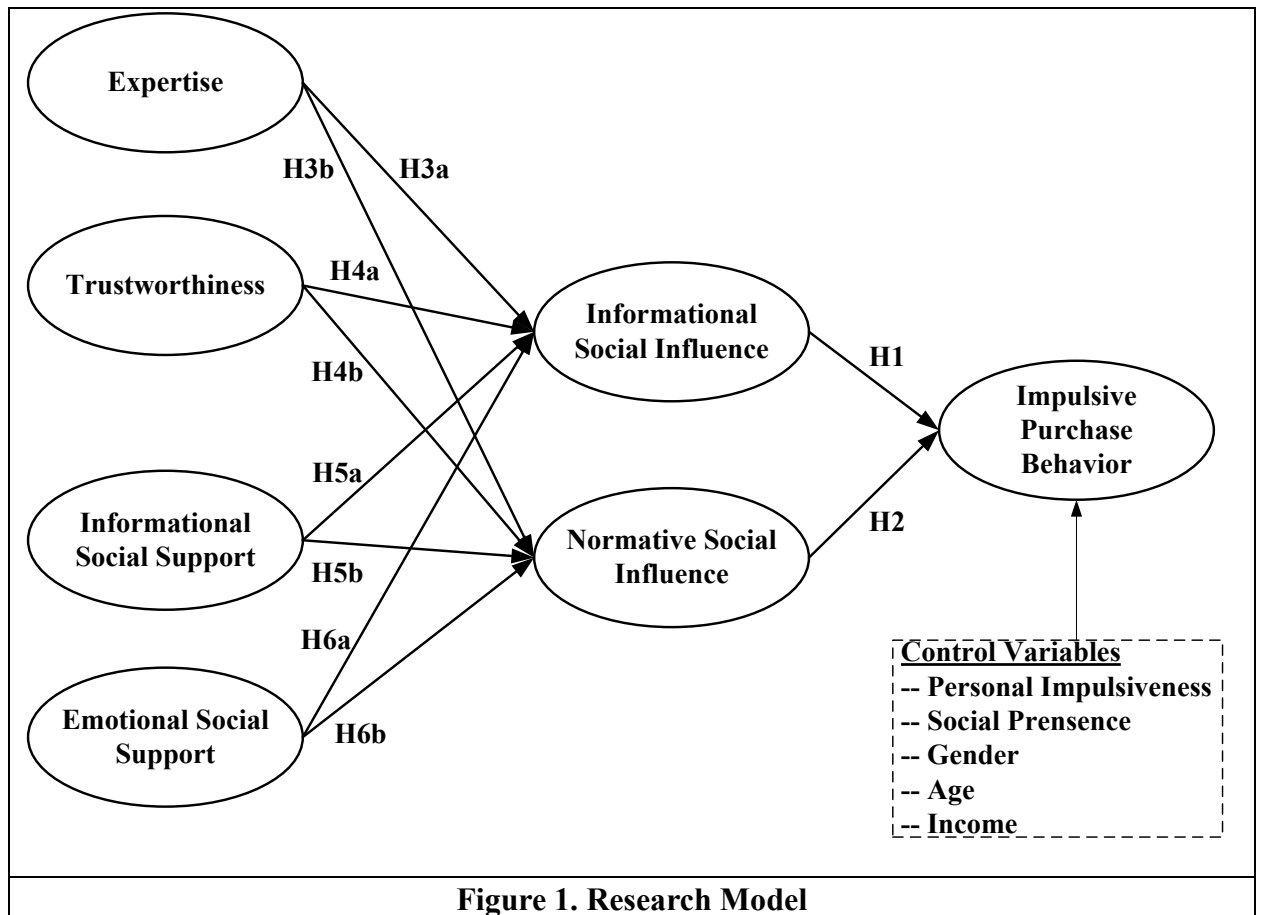


Figure 1. Research Model

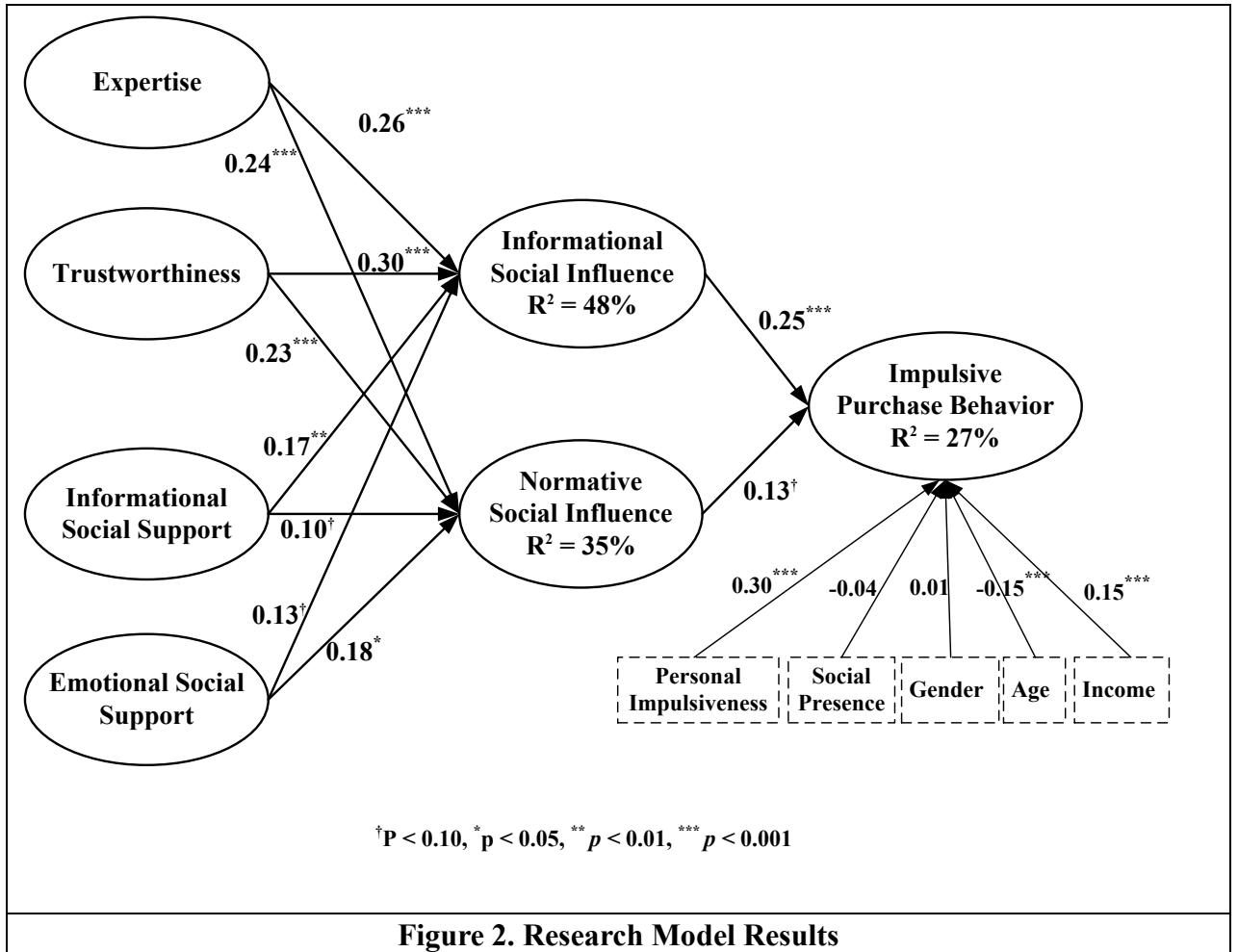


Figure 2. Research Model Results

Appendix A. Measurement Items

Constructs and Measurements	Sources	Loading
Expertise	[67, 89]	
The users on this website are:		
1. knowledgeable about shopping.		0.80
2. experts about shopping.		0.80
3. experienced about shopping.		0.87
4. qualified about shopping.		0.85
5. skilled about shopping.		0.81
Trustworthiness	[67, 89]	
The users on this website are:		
1. trustworthy.		0.83
2. reliable.		0.89
3. honest.		0.86
4. sincere.		0.88
Informational social support	[55]	
On the website:		
1. some people would offer suggestions when I need help.		0.81
2. when I encounter a problem, some people would give me information to help me.		0.84
3. when faced with difficulties, some people would help me discover the cause and provide me with suggestions.		0.80
Emotional social support	[55]	
When faced with difficulties:		
1. some people on this website are on my side with me.		0.79
2. some people on the this website comforted and encouraged me.		0.82
3. some people on the this website listened to me talk about my private feelings.		0.86
Informational social influence	[83]	
1. I often consult others on this website to help choose the best products.		0.77
2. I frequently gather information from the website about products.		0.83
3. To make sure I buy the right product or brand, I often observe what my friends/ followers/ followings on this website are buying and using.		0.77
4. If I have little experience with a product, I often ask my friends/ followers/ followings on this website about the product.		0.82
Normative social influence	[83]	
1. I achieve a sense of belonging by purchasing the same		0.83

products and brands that my friends/ followers/ followings on this website purchase.		
2. If I want to be like my friends/ followers/ followings on this website, I often try to buy the same brands that they buy.		0.81
3. What my friends/ followers/ followings on this website consider important is also important to me.		0.82
4. When buying products, I generally purchase brands that I think my friends/ followers/ followings on this website will approve of.		0.83
Impulsive purchase behavior	[15, 92]	
1. I bought items I had not planned to purchase on this website/after using this website.		0.79
2. During exploring this website, I felt a sudden urge to buy something and I bought it		0.79
3. When/after using the website, my purchase was spontaneous.		0.84
4. When/after using the website, my purchase was unplanned		0.87

Appendix B. Common Method Bias Analysis.

Construct	Indicator	Substantive Factor Loading (R ₁)	R ₁ ²	Method Factor Loading (R ₂)	R ₂ ²
EXP	EXP1	0.800 ^{***}	0.640	-0.002	0.000
	EXP2	0.743 ^{***}	0.552	0.070	0.005
	EXP3	0.912 ^{***}	0.832	-0.055	0.003
	EXP4	0.833 ^{***}	0.694	0.019	0.000
	EXP5	0.830 ^{***}	0.689	-0.028	0.001
TW	TW1	0.813 ^{***}	0.661	0.019	0.000
	TW2	0.922 ^{***}	0.850	-0.035	0.001
	TW3	0.873 ^{***}	0.762	-0.015	0.000
	TW4	0.851 ^{***}	0.724	0.033	0.001
ISS	ISS1	0.789 ^{***}	0.623	0.030	0.001
	ISS2	0.900 ^{***}	0.810	-0.086 [*]	0.007
	ISS3	0.759 ^{***}	0.576	0.060	0.004
ESS	ESS1	0.762 ^{***}	0.581	0.040	0.002
	ESS2	0.822 ^{***}	0.676	0.001	0.000
	ESS3	0.886 ^{***}	0.785	-0.037	0.001
ISI	ISI1	0.841 ^{***}	0.707	-0.088	0.008
	ISI2	0.934 ^{***}	0.872	-0.128 [*]	0.016
	ISI3	0.752 ^{***}	0.566	0.019	0.000
	ISI4	0.659 ^{***}	0.434	0.194 ^{**}	0.038
NSI	NSI1	0.853 ^{***}	0.728	-0.031	0.001
	NSI2	0.819 ^{***}	0.671	-0.008	0.000
	NSI3	0.826 ^{***}	0.682	-0.006	0.000
	NSI4	0.800 ^{***}	0.640	0.044	0.002
IPB	IPB1	0.771 ^{***}	0.594	0.040	0.002
	IPB2	0.804 ^{***}	0.646	-0.036	0.001
	IPB3	0.843 ^{***}	0.711	-0.001	0.000
	IPB4	0.876 ^{***}	0.767	-0.003	0.000
Average		0.825	0.684	0.0004	0.004

Note: 1. *p<0.05, **p<0.01, ***p<0.001; 2. EXP = Expertise; TW = Trustworthiness; ISS = Informational Social Support; ESS = Emotional Social Support; ISI = Informational Social Influence; NSI = Normative Social Influence; IPB = Impulsive Purchase Behavior.

Appendix C. Bootstrapping Methods Results

	DV -- Impulsive Purchase Behavior			
	Informational Social Influence		Normative Social Influence	
	Indirect	CI (lower / upper)	Indirect	CI (lower / upper)
Expertise	0.064	0.024 / 0.133	0.038	0.009 / 0.099
Trustworthiness	0.069	0.030 / 0.140	0.029	0.004 / 0.076
Informational Social Support	0.040	0.009 / 0.108	0.019	0.001 / 0.053
Emotional Social Support	0.034	0.003 / 0.087	0.038	0.007 / 0.090