

The impact of 5G online social media interaction on consumer purchase intentions : A social impact theory perspective

Jao-Hong Cheng^a, Li-Wei Lin^{b*}

Abstract

The advent of the 5G era in 2020 has affected consumers' shopping habits. This study mainly surveys of social networking platforms, including Facebook, Twitter, Wechat, and other related Live online platforms. The main purpose is to investigate the impact of consumers of social networking platforms communicating with each other through messages and instant interactions. Specifically, it is determined whether, once the exchange of information is judged to be correct, consumers will make decisions to purchase on the Internet.

This study collects data through a questionnaire. Through the structural equation model, whether consumers will influence other consumers' purchasing intentions through online community interaction is investigated. The effective sample of our research is 297 participants. The main respondents are consumers of online community websites in Taiwan in 2020.

The results of this study demonstrate that consumers are highly interested in, and affected by, other consumers' purchasing intentions. Consumers use the information on social networking websites to determine whether or not the information is factual, and then decide whether to purchase a product. In this interactive process of the platforms, consumers can discern the value of the product through online text interactions and online real-time interactions with other consumers.

In this study, only a survey was used, and other methodologies may provide increased robustness and generalizability. The study also investigates only the setting of China, and studies of other varied settings are requisite. Online merchants are advised to provide ample opportunities for consumers to read other consumers' comments and feedback, and actively engage with them via social networking services (SNS) concerning specific products.

This is the first study to perspective consumer intention in online community. Many e-commerce merchants in China interact with consumers through webcasting. We believe that this is an innovative way to study consumer buying behavior.

Keywords: purchase intention,online text interaction, online real-time interaction, e-WOM

INTRODUCTION

In recent years, social commerce business in China has become more and more developed. Social commerce encourages new businesses to go online quickly and easily (Crain's Chicago Business, 2012). In addition, a key feature of social commerce is conducting commercial activities on social media to utilize online social capital (Liang et al., 2011). By

sharing shopping information,

product knowledge, or purchasing experiences among social network members, consumers can make more informed and accurate purchase decisions (Zhou et al., 2013), so that online purchase intention can be created.

To promote the purchase intention of using social commerce sites,it is of strategic importance for online merchants to understand those factors related to social impacts that affect consumers' intention. Research on consumer purchase intention in social commerce has examined

^a Department of Information Management, National Yunlin University of Science and Technology, Douliu, Taiwan

^b Department of Information Management, National Yunlin University of Science and Technology, Douliu, Taiwan
E-mail at: d10323009@yuntech.edu.tw

information/content, business strategies, technological features, and behavioral perspectives, among other factors, as shown in Table 1. Few studies, however, have investigated the social impact of electronic word-of-mouth (eWOM) consistency/inconsistency among customers that affect individuals' self-determination and purchase decisions, despite constituting a critical issue in online review research (Wu et al., 2011; Bagozzi & Dholakia, 1999; Kivetz, 2005; Zhang et al., 2010). Many consumers will decide on their purchase intentions based on celebrities or expert recommendations or endorsements. Consumers also actively search the huge volumes of diverse eWOM information in the pre-purchase stage to reduce product uncertainty (Grewal et al., 1994).

SNS provides a communication channel for information exchange in online environments. Consequently, the current study draws on social impact theory, supplemented by consumer self-determination, to examine what informational influence can reinforce feelings of competence and enhance purchase intention in social commerce sites. Both social impact and self-determination are major perspectives which facilitate intrinsic motivation and behavioral intention by supporting individuals' innate psychological needs (Deci & Ryan, 1985; Moller et al., 2006). Since the amount of eWOM in social networks is often at a large scale (Dellarocas, 2003), it is possible to show information consistency (i.e., informational social influence) or information inconsistency (i.e., conflict) in online shopping contexts. These eWOM could reduce the risk of product uncertainty (Zhang et al., 2010), increase a consumer's competence (Sweeney et al., 2011), and affect purchase intention (Kwahk & Ge, 2012). This research address the questions of (1) whether Information Social Influence is that influence customer purchase intention (2) whether information conflict is a significant factor affecting customer purchase intention. This paper is organized as follows: Section 2 discuss social impact theory and the theoretical background of social influence; Section 3 presents the proposed research model and hypotheses; Section 4 discuss the research method in this paper; Section 5 provide to the data analysis; Section 6 discusses the key findings in this paper; (7) Section 7 presents the conclusion and limitations of this paper.

LITERATURE REVIEW

1.1 Social impact and self-determination in consumer purchase intention

Consumer purchase intention is the major factor in understanding individuals' subjective preferences for purchasing products. It can then be utilized as a critical index in predicting consumption behavior (Fishbein & Ajzen, 1975). Purchase intention refers to an individual's level of intention to purchase a specific product or service (Dodds et al., 1991). Recently, social commerce has emerged as a new model of e-commerce by combine online with offline shopping models. Social commerce is a form of commerce mediated by social media involving convergence between online and offline environments (Wang & Zhang 2012). Wang and Zhang (2012) introduced a four-component framework for social commerce, including people, business strategies, technology, and information. In the context of social commerce (e.g., a 'Fan page' in Facebook), online merchants manage interactions with consumers directly, connect consumers for commerce purposes, and promote their brand or product. Consumers interact with each other in sharing product information and making purchase decisions collaboratively. Accordingly, social networking can be considered effective in eliciting consumer purchase intention in social commerce. Establishing good social interaction and communication among consumers to promote their purchase intention constitutes the most critical task for social commerce marketing.

1.2 Social influence and information consistency-inconsistency

(1) Social impact theory

In agreement with the social influence literature, connections between people and their social interactions and information communication result in the development of idea adaption and behavioral intention (Deutsch & Gerard, 1955; Kelman, 1958; Kelman, 1961; Davis et al., 1989). Social impact theory suggests that an individual's feelings, attitudes, and behaviors can be influenced by the presence of others (Latane, 1981). According to this theory, individuals change their attitudes as a consequence of other people's influence.

Social impact theory asserts that the likelihood that a person will respond to social influence will increase with three dimensions: strength, immediacy, and number.

(2) Form of social influence

Following early conceptual work by Deutsch and Gerard (1955), researchers have distinguished two forms of social influence: normative and informational. Normative social influence refers to conformity with the expectations of others to

achieve rewards or avoid punishment (Homans, 1961). Normative social influence is usually exerted within specific reference groups, such as one's immediate family or friends (Cooley, 1962). Recognizing conformity under the pressure of normative social influence in many decision situations, Fishbein and Ajzen (1975) incorporated "subjective norm" into their Theory of Reasoned Action, developing and validating a measurement instrument for the normative construct as a determinant of their behavioral intention model. Informational social influence refers to influence to accept information obtained from another as evidence about reality (Deutsch & Gerard, 1955).

Informational social influence is more significant in ambiguous situations, especially when an individual is uncertain about the accuracy of his or her own judgment about reality. While consumers try to find the best choice, they will also attempt to obtain more information (e.g., through online reviews or other consumer-generated contents via social media) as evidence for the purchase decision. Indeed, it has been shown that one tends to follow the choices of others rather than making judgment by oneself (Bonabeau, 2004). If there are more individuals agreeing that the reviewed object is good or bad compared to neutral

conditions, the buyer may possess more confidence that the information is true (Burnkrant & Cousineau, 1975). As a result, such consistent information in the positive or negative balance is perceived as more useful than relatively inconsistent information in the neutral balance. It has been proven that such information can affect consumers' decision-making and purchase intention (Ye et al., 2010; Kwahk & Ge, 2012). Consumers are frequently exposed to multiple consumer-generated contents and messages when shopping for products online. They often actively search for external information (e.g., other consumers' opinions and experiences) to reduce their pre-purchase uncertainty (Grewal et al., 1994) and infer product quality from extrinsic cues (Zhou et al., 2002). Currently, SNS has made it possible for anyone to advocate his or her opinion and to establish communication with others.

To address this issue of purchase intention in social commerce, this study examines not only how information consistency, but also how information inconsistency, affects consumer purchase intention in social commerce. Meyer (1981) suggests that a lack of consensus in opinions (i.e., conflicting information) can create uncertainty for consumers in decision-making processes. Prior research has also shown that consumers respond negatively to

information uncertainty (Jaccard et al., 1988). Cognitive dissonance may be caused by conflicting information from other sources. Festinger's theory of cognitive dissonance states that an individual may experience cognitive dissonance, i.e., a state of psychological unease whenever he or she holds conflicting cognitions simultaneously. Dissonant consumers are uncertain about product choices when they have doubts about their choices (Engel, 1963; Straits, 1964; Montgomery & Barnes, 1993), which might lead to purchase delay. However, some studies have shown that conflicting information from previous consumers is found to be more trustworthy and useful (Willemssen et al., 2011; Purnawirawan et al., 2012), and to have more influence on the brand attitudes, purchase intentions, and purchase behaviors of consumers (Purnawirawan et al., 2012). Indeed, it has been demonstrated that, by showing both positive and negative online messages, the social influence of information inconsistency strengthens consumers' emotional trust in their purchasing intention (Zhang et al., 2010).

Both positive and negative evaluations from reviews allow a consumer to make a more accurate judgment (i.e., to buy or not to buy) in the purchase intention of a product. Accordingly, this study argues that conflicting information is more valuable and useful than non-conflicting information. This, in turn, will affect the formation of purchase intention towards the product. How Does Social Media Impact Bitcoin Value? (Feng et al., 2018). Societal effects of mass media digitization in the case of the sopa discourse. (Shaila et al., 2016). We can understand the importance of social impact to consumers.

(3) Consumer self-determination

Individuals conduct any behavior in accordance with motivation, which can be divided into intrinsic and extrinsic motivation (Houle, 1961). Self-determination theory (Ryan & Deci, 2000) distinguishes three kinds of motivation: intrinsic motivation, extrinsic motivation, and amotivation, situated along a continuum ranging from high to low self-determination. Intrinsic motivation represents the highest degree of self-determined motivation and occurs in situations in which individuals feel free to commit to activities that they find interesting and/or fun and that offer them the opportunity to learn. The satisfaction of these psychological needs is associated with high levels of intrinsic motivation, which relate to favorable life outcomes (Deci & Ryan, 2001).

Self-determined motivation influences

individuals' intentions, which are known to affect behavior (Osbaldiston & Sheldon, 2003). Prior research suggests that enhanced perceptions of autonomy, competence, and relatedness are more closely associated with intrinsic motivation and greater self-determination than extrinsic ones, which supports the positive influence of self-determination on an individual's goal-directed behavior, such as physical activity intention, e-commerce experience, customer purchase, and energy-conserving behavior (Standage et al., 2003; Sun et al., 2010; Dholakia, 2006; Webb et al., 2013). Self-determination is a significant instrument to analyze individual psychological processes during participation in marketing activity (Zheng et al., 2012). Cognitive evaluation theory, a sub-theory within SDT, also claims that social-contextual factors stimulate feelings of competence, and autonomy can enhance intrinsic motivation (Deci & Ryan, 1985).

Online review information has been widely utilized by online consumers to facilitate purchase decisions (Sher & Lee, 2009). In the pre-purchase stage, a consumer experiences a feeling of psychological uncertainty and delay in choosing when he or she cannot predict the outcome of a purchase decision. He or she may also experience

cognitive dissonance, a state of psychological unease due to uncertain choice situations. Consumer-generated product reviews can add great value to e-commerce by assisting buyers to increase decision precision and reduce uncertainty and perceived risk (Kim et al., 2008). Essentially, eWOM can have a great influence on competence in purchase decision-making when messages are potent (Sweeney et al., 2011). Shihao Zhou et al. (2018) refer s to Measuring Customer Agility from Online Reviews Using Big Data Text Analytics. Srinivasan Raghunathan and Sumit Sarkar (2016) provide to Competitive bundling in information markets.

RESEARCH MODEL

Fig. 1 shows the developed research model with the factors investigated. It begins with the social influence of eWOM information stimuli, and then proceeds to the mediating variables, which also affect purchase intention. Four hypotheses were tested with respect to this model. Each hypothesis is indicated by the letter H and a corresponding number. The arrows indicate the hypothesized relationships, and the plus signs indicate positive relationships.

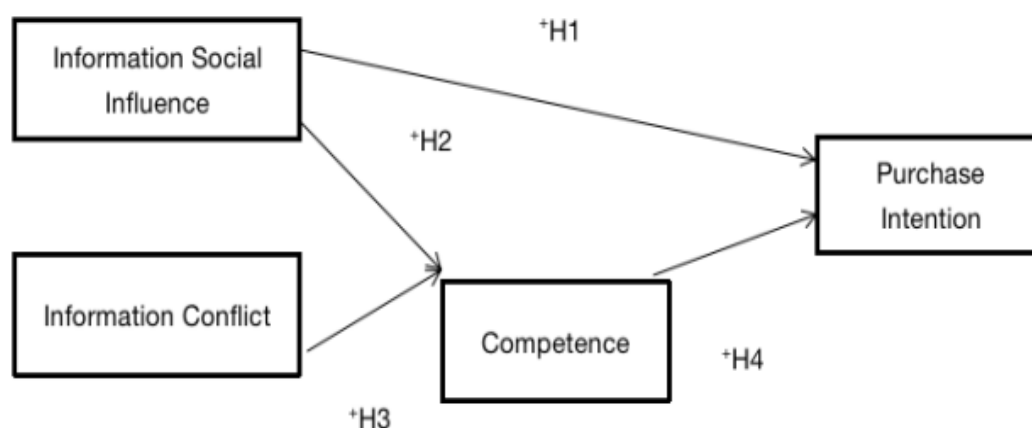


Figure 1. The research models

2.1 Informational social influence

Social commerce utilizes social media features that have created manifold opportunities for eWOM communication. With a fairly high level of product uncertainty, ambiguity, or unfamiliarity, many consumers tend to read online messages about others' evaluations prior to making purchase decisions. Thus, informational social influence affects the consumer decision-making process, as well (Zhang et al., 2010). Informational social

influence refers to the influence to accept information obtained from others as evidence about reality. It can be considered as a learning process, in which a person observes the experience of early adopters in a social network and then decides whether or not to buy a product or service (Kim & Srivastava, 2007). It has been demonstrated that the quantity of online product reviews exerts a positive effect on consumer purchase intention (Zhou et al., 2013). In cases in which there are more

reviewers agreeing that the reviewed object is good or bad compared to neutral states, the reader may have more trust that the information is accurate (Burnkrant & Cousineau, 1975). As a result, such consistent information in the positive or negative balance is perceived as more useful in affecting attitudes and intention formation (Purnawirawan et al., 2012). It is thus hypothesized that:

H1. Informational social influence is positively related to purchase intention.

Informational social influence indicates that individuals are influenced by information and evidence, and has been proven to affect consumer behavior (Burnkrant & Cousineau, 1975; Kim & Srivastava, 2007). Sweeney et al. (2011) reported that eWOM increases a recipient's competence, and this effect is stronger when messages are useful. Lee and Lee (2011) also argued that consumer self-determination is greatly enhanced due to abundant information. Consumers' perception of the review set's usefulness will occur in an online environment that provides relevant product information that assists them in understanding and evaluating the target object's quality and/or performance (Ahluwalia & Gürhan-Canli, 2000; Jiang & Benbasat, 2007). These would subsequently increase perceived competence in the decision-making process. Such information consistency will be further reflected as a positive influence on one's own competence. It is thus hypothesized that:

H2. Informational social influence is positively related to competence.

2.2 Information Conflict

The development and rising utilization of SNS has ensured that increasing numbers of opportunities for interaction and conflict are inevitable in cyberspace (Kane et al., 2009). Indeed, much more information exists on network platforms than any single consumer can process, which leads consumers to judge information and results in information conflicts. Conflict refers to the awareness of differences in viewpoints and opinions pertaining to purchasing tasks. Conflicting reviews reveal different views of products, services, and brands, which affect consumer preference confidence and purchase likelihood (Simonson, 2014). Prior research has demonstrated that online consumer reviews are perceived as more useful if they depend on a high level of positive and negative argument diversity (Willemsen et al., 2011).

Argumentation diversity affects the perceived usefulness of reviews in the context of computer-mediated communication (Willemsen et al., 2011).

In general, the mere presence of arguments consequently leads recipients to have more confidence in deliverers and to find their judgments to be more persuasive. In addition, consumers are more likely to adjust their attitudes and product or brand preferences with the online review after reading the pros and cons of a position than after reading the pros or cons alone. In the context of SNS, disagreement between posted reviews highlights the pros and cons of a product that reflect product information disclosure from customers. Consumers are more likely to actively seek product or brand information about potential purchases about which they have received inconsistent information in social commerce site.

Cognitive dissonance may be resultant from conflicting information from different recommendations (Henning-Thurau & Walsh, 2004). However, dissonance can be reduced by neutral or unbiased information in social commerce platforms. Disagreement is able to evoke high levels of arousal and enhance consumer trust and perceived usefulness, which may reduce pre-purchase cognitive dissonance in the purchase decision process (Willemsen et al., 2011). Conflicting reviews are regarded as useful and trustworthy eWOM for potential consumers to help them choose products (Cheung et al., 2009; Purnawirawan et al., 2012). The perceived usefulness of conflicting reviews has been found to constitute an important antecedent of consumers' intent to comply with the recommendations of a review and to affect purchase intention (Cheung et al., 2008; Zhang et al., 2010). It is thus hypothesized that:

H3. Conflict is positively related to purchase intention.

2.3 Competence

Prior research has shown that competence, a self-determined motivation, is an antecedent to reinforcing intention to act and facilitates engagement in activity (Standage et al., 2003; Sun et al., 2010; Dholakia, 2006; Webb et al., 2013). Competence refers to the belief that one can efficaciously interact with his or her environment to feel competent in achieving desired outcomes (Deci & Ryan, 1985; Deci & Ryan, 1991; Vallerand & Ratelle, 2002). Competence also extends beyond self-efficacy, as it is not only a measure of confidence in ability, but also expresses a need, the fulfilment of which is "a source of satisfaction and a contributor to well-being over and above any satisfaction resulting from the outcomes that competence might yield" (Deci & Ryan, 2000). The

findings of previous research also reveal that self-determined customers are more motivated, and they possess a greater desire to purchase products (Dholakia, 2006). In online shopping environments, a potential consumer desires to efficiently interact with others in online environments to feel competent in achieving desired outcomes.

Online merchants can develop social commerce campaigns to offer consumers a useful means to fulfill desired competence needs. For example, a consumer who searches actively for others' comments and opinions about a product or brand could become less uncertain about what to purchase or not to purchase. Others' evaluations could reinforce consumer competence to decide what is best for him or her. Consequently, social commerce sites could help consumers to improve competence in the purchasing task and foster their intrinsic motivation and decision-making. It is thus hypothesized that:

H4. Competence is positively related to purchase intention.

RESEARCH METHOD

To develop the survey instrument, a pool of

items were identified from the extant literature for measuring the constructs of the research model. Data from a survey sample were collected to assess the instrument's validity and reliability, and to test the hypothesized relationships of the research model.

3.1 Content validity

All measures of the survey instrument were developed from marketing literature. To measure informational social influence, this study developed three items based on two studies (Bearden et al.,

1989; Park & Lessig, 1977). The three conflict items were adapted from Jehn (1995) and Jehn and Mannix (2001). The four-item competence scale was based on the work of Standage et al. (2005) and McAuley (1989). Finally, the four purchase intention items were adapted from Limayem et al. (2000) and Yoo and Donthu (2001). The expressions of the items were adjusted, where appropriate, to the context of social commerce, as shown in Table 2. The items were measured on a seven-point Likert-type scale, ranging from 'Strongly disagree' (1) to 'Strongly agree' (7).

Table 1. Measurement items.

Construct	Source
Informational Social Influence	
IS11 I frequently gather information from social network members about a product before I buy.	
IS21 I often seek brand related knowledge and experience from social network friends who have reliable information about the brands.	Bearden et al. (1989); Park & Lessig (1977)
IS31 My choice of product is influenced by social network members' word of mouth or some evaluation reports from an independent testing agency.	
Competence	
COM1 I think I am pretty good at making a purchase decision.	
COM2 I am satisfied with my performance at making a purchase	
COM3 When I have participated in making a purchase decision for a while, I feel pretty competent.	Standage et al. (2005); McAuley (1989)
COM4 I am pretty skilled at making a purchase decision.	
Purchase Intention	
PI1 I will definitely buy products from this social commerce site in the near future.	
PI21 I intend to purchase through this social commerce site in the near future.	Limayem et al. (2000); Yoo and Donthu(2001)
PI3 It is likely that I will purchase through this social commerce site in the near future.	
PI4 I expect to purchase through this social commerce site in the future.	
Information Conflict	
ICo1 Consumers in social network site sometimes disagree about opinions regarding the purchase decision being done.	
ICo2 Sometimes there are conflicts about opinions of product in social network site.	Jehn(1995) ; Jehn&Mannix(2001)
ICo3 Sometimes there are differences of opinion in social network site.	

Table 2. Profiles of participating consumers

Demographic profile	Number of people	Percentage
Gender		
Male	121	40.7
Female	176	59.3
Age		
Less than 19	8	2.7
20-24	101	34.0
25-29	105	35.4
30-34	56	18.9
35-39	19	6.4
40-44	3	1.0
45-49	3	1.0
Occupation		
Student	91	30.6
Working	170	57.2
Unemployed	23	7.7
Housekeeper	10	3.4
Other	3	1.0
Monthly income (NT\$)		
Less than 20,000	120	40.4
20,001-35,000	94	31.6
35,001-50,000	68	22.9
50,001-65,000	13	4.4
65,001 or above	2	0.7
Product type purchased online		
Travelling	11	3.7
Apparel	59	19.9
Electronics	56	18.9
Health and care	8	2.7
Sporting goods	3	1.0
Food	59	19.9
Beauty care	26	8.8
Furniture	2	0.7
Books/magazines	69	23.2
CDs, etc.((audio-video))	3	1.0
Other	1	0.3
Recently used social commerce		
Groupon	41	13.8
Gomaji	46	15.5
17Life	12	4.0
Yahoo!	82	27.6
Books	90	30.0
Rrakuten	18	6.1
iPeen	4	1.3
Other	4	1.3
Respondent experience in SNS		
Short experienced	103	34.7
Rrakuten	18	6.1
iPeen	4	1.3
Long experienced	194	65.3

3.2 Pre-test and Pilot-test

A pre-test was performed with three expert academics and four Ph.D. students on a

questionnaire consisting of 14 items of the survey instrument for improvement in its content and appearance. Several online merchants' Facebook

fan page fans were contacted to assist with the pilot-test of the instrument. This study sought to choose respondents who were expected to possess adequate knowledge about the online shopping experience in social commerce contexts. It was decided that social commerce users who were fans in Facebook fan pages and engaged in online shopping of social commerce were chosen as respondents for the current study. An online survey packet, including a cover letter explaining the research objectives and the Internet address of the online questionnaire, was posted to the social commerce users. The respondents were instructed to click on a URL, and were asked to complete the questionnaire and provide comments on the wording, understandability, and clarity of the items. Table 1 shows the 14 items together with the corresponding constructs to be measured.

3.3 Data Collection

Online questionnaire sampling is the main instrument in the current study. Specifically, my Survey is utilized, which accepts only one response per IP address to avoid duplicate responses. The invitation to participate in the study and the URL of the online questionnaire were posted on the most representative SNSs (e.g., Facebook) and the most popular forum websites (e.g., mobile01 and PTT) in China. Data collection lasted approximately one month. Finally, 434 samples were collected, and the result of this survey was 297 effective responses. All of our respondents, who were social commerce users located across China, reported that they purchased products at least once through the social commerce site in the previous year. Table 2 presents the demographic and characteristic profiles of the participants.

RESULTS

Structural equation modeling (SEM) with AMOS 24.0 was used to test and analyze the hypothesized relationships of the research model. SEM aims to examine inter-related relationships between a set of posited constructs simultaneously; each construct is measured by one or more observed items (measures). SEM comprises the analysis of two models: a measurement (or confirmatory factor analysis) model and a structural model (Anderson & Gerbing, 1988).

4.1 Assessment of the measurement model

Prior to the analysis, this study performed exploratory factor analysis using principal axis factoring to ascertain whether or not our items loaded onto a common latent factor. With the

measures and their underlying constructs shown in Table 3, the measurement model specified for the research model was found to be able to ascertain the extent to which the observed measures (surveyed items) actually measure their corresponding construct. The 14 items of the survey instrument were first analyzed to assess their dimensionality and measurement properties. An assessment of the eigenvalues suggested a four-factor solution, including informational social influence, conflict, competence, and purchase intention. Moreover, all items loaded significantly and substantially on their underlying constructs, thus providing evidence of convergent validity. With a confirmatory factor analysis, all items performed well and were thus retained in the model.

The chi-square of the measurement model was significant ($\chi^2 = 113.366$, $df = 71$, $p < 0.001$), with the value of χ^2/df smaller than 2, indicating an ideal fit (Bentler, 1990). The large chi-square value was not surprising since the chi-square statistic has been shown to be directly related to sample size (Joreskog & Sorbom, 1993). To assess the overall model fit without being affected by the sample size, alternative stand-alone fit indices less sensitive to sample size were employed. These indices included the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA) (Joreskog & Sorbom, 1993). To have a good model fit, GFI should be close to 0.90, AGFI more than 0.80, CFI more than 0.9, RMSR less than 0.05, and RMSEA less than 0.10 (Joreskog & Sorbom, 1993). An assessment of the measurement model suggests an acceptable model fit (GFI = 0.949; AGFI = 0.925; CFI = 0.984; NFI = 0.959; RMSEA = 0.045).

To assess the reliability of the constructs, composite reliability (CR) was facilitated. All of the composite reliability values, ranging from a low of 0.814 to a high of 0.924, exceeded the recommended cut-off value of 0.80 (Joreskog & Sorbom, 1993). A variable's squared multiple correlation (SMC) is the proportion of its variance that is accounted for by its predictors. The average variance extracted (AVE) was greater than 0.5 in all cases, meaning that the variance accounted for by each of the constructs was greater than the variance accounted for by measurement error (Joreskog & Sorbom, 1993). In addition, an assessment of discriminant validity between the constructs supported the model fit. Table 3 summarizes the assessment results of the measurement model.

Table 3. Assessment results of the measurement model

Construct	Items	Standardized loading	Standardized error	tValue	SMC	CR	AVE
Informational Social Influence	ISI1	0.826***	0.037	7.124	0.682	0.866	0.682
	ISI2	0.850***	0.033	7.261	0.722		
Information Conflict	ISI3	0.801***	0.035	8.686	0.642	0.814	0.594
	ICO1	0.778***	0.030	7.768	0.605		
	ICO2	0.762***	0.036	7.307	0.581		
Competence	ICO3	0.771***	0.030	7.805	0.594	0.913	0.724
	COMI1	0.875***	0.018	8.399	0.766		
	COMI2	0.874***	0.019	8.478	0.765		
	COMI3	0.851***	0.021	9.024	0.725		
Purchase Intention	COMI4	0.801***	0.028	10.111	0.641	0.924	0.751
	PI1	0.883***	0.015	8.596	0.779		
Purchase Intention	PI2	0.849***	0.017	9.568	0.721	0.924	0.751
	PI3	0.876***	0.017	8.815	0.767		
	PI4	0.859***	0.018	9.339	0.738		

*** denotes significance at $p < 0.001$.

4.2 Assessment of the structural model

Table 4 presents the inter-correlations between three constructs of the structural model, which supports the positive relationships of the research model shown in Fig. 3. The overall fit of the

structural model is acceptable, since all measures of fit reach an acceptable level ($\chi^2 = 116.987$, $df = 72$, $p < 0.001$; $GFI = 0.948$; $AGFI = 0.924$; $CFI = 0.983$; $NFI = 0.957$ $RMSEA = 0.046$).

Table 4. Discriminant validity matrix of constructs

Construct	(1)	(2)	(3)	(4)
Informational Social Influence	0.826			
Information Conflict	0.449***	0.771		
Competence	0.357***	0.160**	0.851	
Purchase Intention	0.424**	0.382***	0.477***	0.867

** and *** denote significance at $p < 0.01$ and $p < 0.001$ respectively.

4.3 Comparison with alternative models

In order to examine the existence of a mediating effect of competence in the proposed model of this study, a simple coefficient test was conducted. A model with a mediator variable (competence) was created as a partial mediation model, which is the same as the proposed model, to check for a significant change of correlation between the independent variables (informational social influence and conflict) and a dependent variable (purchase intention). The result shows that the significance of an independent variable (informational social influence) on the dependent variable (purchase intention) was decreased and transferred to the coefficient relations on both sides of mediator. It is thus concluded that competence exerts the mediating effect in this model.

In order to fully elucidate the mediating effect, this study followed the procedure suggested by Baron and Kenny (1986) and Gelfand et al. (2009),

and evaluated the three models shown in Table 7. The first (Model 1) was the proposed model, which allowed the partial mediation of competence and direct effects for purchase intention, shown in Fig. 3. The second (Model 2) allowed full mediation of competence, shown in Fig. 4. The third (Model 3) contained informational social influence, conflict, and competence, and their direct impact on purchase intention without any mediating variables to examine their full direct effect, shown in Fig. 5.

Model 1 proposed a partial mediated model for the effect of competence on purchase intention, which was supported by the data of this study. This model represents one of several possible ways in which the relationships between the constructs could be configured. Alternative models could also provide plausible predictions and explanations about the influences of competence on purchase intention. Specifically, informational social influence could affect purchase intention through the mediation of competence (i.e., Model 2). On the

other hand, informational social influence, conflict, and competence could have direct impacts on purchase intention without any mediation (i.e., Model 3). To explore these possibilities, this study compared Model 1 with two alternative models, Models 2 and 3, on the following criteria: (1) the

same model fit indices used to assess the research model; (2) the explanatory power of the predictive variables on the outcome variables, as measured by the R2 of the outcome variables; and (3) the percentage of the model's hypothesized parameters that are statistically significant.

Table 5. Alternative mediating model comparison

Construct	(1)	(2)	(3)
Attribute	Model1: partially mediated	Model2: Fully mediated	Model3: All direct effect
Standardized path estimates			
COM→PI	0.367***	0.415***	0.372***
ISI→COM	0.307***	0.311***	-
ISI→PI	0.155**	-	0.163***
CO→PI	0.255***	0.348***	0.255***
R2(COM)	12.7%	13.2%	-
R2(PI)	34.7%	33.1%	29.9%
Model fit indices			
χ ² (df)	116.987 (72)	124.329 (73)	148.589 (73)
GFI	0.948	0.944	0.936
AGFI	0.924	0.920	0.908
CFI	0.983	0.981	0.971
NFI	0.957	0.955	0.946
RMSEA	0.046	0.049	0.059

** and *** denote significance at p < 0.01 and p < 0.001 respectively.

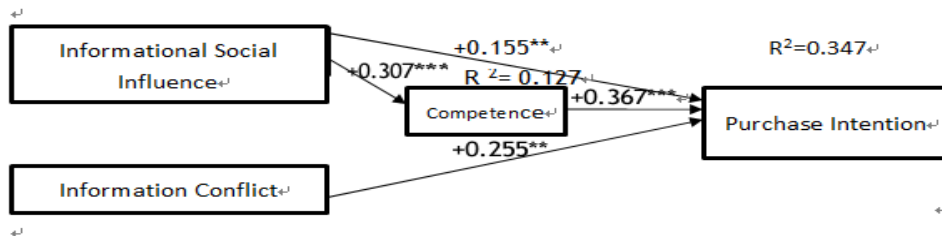


Fig. 2 Model with mediator

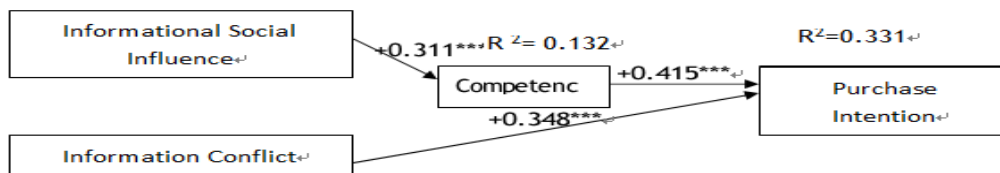


Fig. 3 Fully mediated effect model

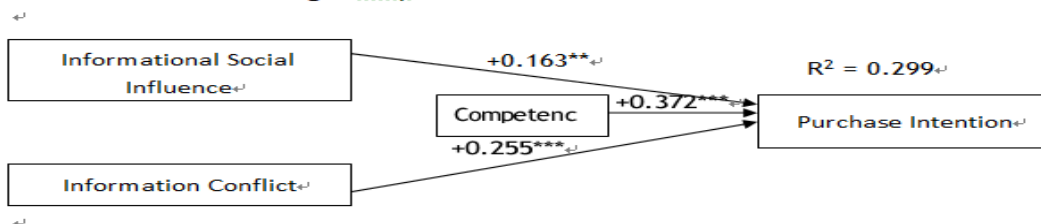


Fig. 4 All direct effect model

A comparison of the direct effect of informational social influence on purchase intention between Models 1 and 3 revealed that the path coefficient of informational social influence increased from 0.155 in Model 1 ($p < 0.01$) to 0.163 in Model 3 ($p < 0.01$) when the mediators were introduced into the model, revealing that competence partially mediated the influence of purchase intention. These results satisfied the conditions suggested by Baron and Kenny (1986). Model 1 was superior to Models 2 and 3 on all indices. Concerning explanatory power, Model 2 explained 33.1% of the variance. Model 3 explained 29.9% of the variance of purchase intention. The results suggested that the partially mediated model was relatively superior. Since the model fit indices were lower in Model 2 and Model 3, this study

concludes that Model 1 would constitute a better representation of the relationships among the constructs due to its good model fit.

4.4 Common method bias

Following the suggestion of Podsakoff and Organ (1986), Harmon's one-factor test was performed to ensure that common method variance did not account for the research findings. Unrotated principal components analysis revealed four factors with eigenvalues greater than 1, which accounted for 78.837% of the total variance. The first factor did not account for the majority of the variance (23.156%). As no single factor emerged that accounted for most of the variance, common method bias does not appear to constitute a problem in this study.

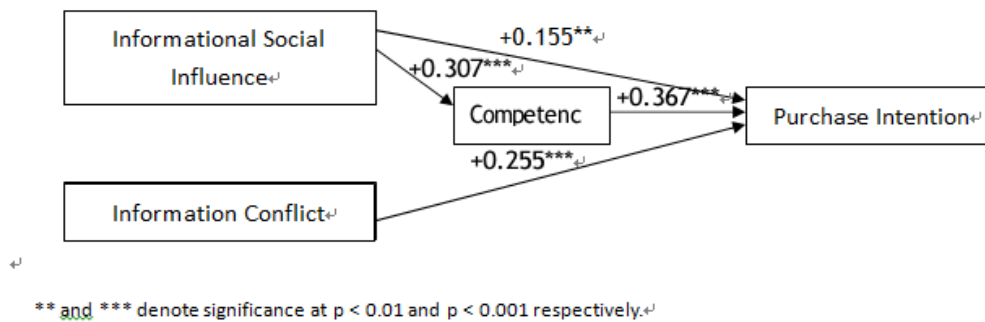


Fig. 5 The structural model

4.5 Hypotheses testing

In the SEM analysis, the relationships among independent and dependent variables were assessed simultaneously via covariance analysis. Maximum likelihood (ML) estimation was facilitated to estimate model parameters with the covariance matrix as data input. The ML estimation method has been described as being well-suited to theory testing and development (Anderson & Gerbing, 1988).

Fig. 5 shows the structural model with the coefficients for each path (hypothesized relationship), in which all hypothesized relationships are supported. Informational social influence has a positive impact on purchase intention (H1: $\gamma = 0.155$, $t = 2.704$, $p < 0.01$) and competence (H2: $\gamma = 0.307$, $t = 5.544$, $p < 0.001$). Conflict is significantly associated with purchase intention (H3: $\gamma = 0.255$, $t = 3.507$, $p < 0.001$). Competence is significantly associated with purchase intention (H4: $\gamma = 0.367$, $t = 6.176$, $p < 0.001$). Overall, the model explains 12.7% of the variance in competence and 34.7% in purchase intention.

4.6 Multi-group analysis

According to the returned questionnaires, most of the consumers are above 25 years old (63.30% of age levels). The 297 usable responses were divided into two groups. Group 1's age is younger (below 25 years), while group 2's age is older (above 25 years). For examining the differences between the parameters of the two groups, a statistical comparison is conducted following the multi-group procedure suggested by [51]. With this procedure, individual paths are separately examined across groups, and whether the estimated coefficients for each group are equal is tested using a chi-square difference test. The path coefficients of both groups were separately analyzed using a multiple group analysis, assuring that the model's goodness of fit is similar for both. For group 1, the fit indices were acceptable ($\chi^2 / df = 1.54$, GFI = 0.870; AGFI = 0.824; CFI = 0.958; NFI = 0.891; RMSEA = 0.071). For group 2, the fit indices were also acceptable (age2: $\chi^2 / df = 1.74$, GFI = 0.916; AGFI = 0.878; CFI = 0.970; NFI = 0.932; RMSEA = 0.063). The estimation results show that the differences between the parameters of the two groups are significant. The findings

reveal that informational social influence has a significant positive impact on purchase intention in group 1 ($\gamma = 0.239$, $t = 2.420$, $p < 0.05$), but a significant impact was not found in group 2 ($\gamma = 0.090$, $t = 1.268$, $p < 0.05$).

Further, multi-group analysis of social impact

and self-determination is a direct extension of the literature. As shown in Table 8, the total effect of informational social influence on competence and purchase intention in the younger age group is more intense than that in the older age group.

Table 6. Direct and indirect effect of informational social influence, competence, and purchase intention

	Effect on purchase intention					
	Group1(younger)			Group2(older)		
	Direct Effect	Indirect Effect	Total Effect	Direct Effect	Indirect Effect	Total Effect
Effect of informational social influence	0.239	0.092	0.331	0.090	0.127	0.217
Effect of competence	0.434		0.434	0.332		0.332

DISCUSSION

The results of the present study demonstrate that informational social influence exerts a significantly positive effect on consumer purchase intention in china social commerce. This is not surprising, and is consistent with the social impact perspective (Latane,1981). According to this perspective, conformity is related to a majority number since the majority is thought to be correct. Indeed, people depend on majority opinions and experiences through eWOM when planning to purchase products (Kim & Kim, 2010). The critical role that informational social influence plays in consumer behavior is supported by Bickart and Schindler's (2001) findings that consumer-generated reviews are more highly considered than online merchants' information in the formation of customer purchase intention in online shopping (Bronner & de Hoog 2010). For instance, Japanese clothes retailer Uniqlo has frequently used Twitter in its marketing campaigns to increase sales. In fact, Uniqlo's "Lucky Counter" promotion substantially augmented brand recognition in the U.K. via Twitter in 2010. Specifically, the more customers tweeted about 10 clothing items chosen by the brand, the more reduced were the prices of these items. Lucky Counter also promoted the launch of their Uniqlo U.K. online store using social media to both spread the word about the new e-commerce site and provide a discount to its fans.

Conforming to the hypothesis, informational social influence shows evidence of a positive relationship with competence of the consumer, while competence displays a significantly positive effect on purchase intention in social commerce. These results indicate that informational social influence will have an influence on one's competence which will, in turn, affect one's intention to purchase a product or service. Stated differently, massive online consumer product

reviews (i.e., informational social influence) is valid, and the credibility of online reviews may be importantly related to consumer competence. Essentially, eWOM has a great influence on competence in purchase decision-making when messages are potent (Sweeney et al., 2011). This is consistent with the cognitive evaluation perspective (Deci & Ryan, 1985), which proposes that intrinsic motivation is based on individuals' needs to be competent and self-determining in dealing with their environment. According to this perspective, informational social influence plays a key role in assisting consumers to achieve competence to make purchasing decisions.

As a case in point, the Black Thunder Chocolate bar has become widely popular in China. The reputation of this chocolate bar was rapidly and dramatically increased by eWOM and social media in 2013. "The popular soft ice cream" impression immediately affected consumers positively due to online mentions or recommendations. Consequently, it has become a kind of obsession throughout China. In the above three cases, it can be seen that social proof is highly influential for Chinese consumers who are uncertain about product quality prior to making a purchase. Their needs and wants can be effectively motivated by campaigns on social networks of virtual and physical stores (Rad & Benyoucef, 2011). Within the China market, the content of social marketing and communication must allow consumer engagement in SNS. It is also worth noting that the competence of consumer choices depends on whether they obtain consistent eWOM messages in time to make optimal purchase decisions.

Information conflict is found to have a positive impact on consumer purchase intention. The result also suggests that consumers rely more on diverse information provided in the pre-purchase stage to make evaluations in the first purchase decision. This

finding is noteworthy. It is well documented in the literature that there may be a positive effect of the pre-purchase judgment (Purnawirawan et al., 2012; Cheung et al., 2009). This phenomenon indicates that conflicting information may be more readily identifiable if consumers are actively involved in online reviews. Reading both positive and negative reviews can help a consumer to understand the strengths and weaknesses of a product or service and allow a consumer to make a purchase that is the optimal one for him or her, not necessarily the "best" product according to others. Conflict opinions can actually enhance credibility, and consumers do perceive consumer argument diversity as superior.

5.1 Theoretical implications

Specifically, although competence is an important construct in the literature, noteworthy gaps remain in understanding its impact on online purchase intention (Sweeney et al., 2011). We attempted to fill these gaps by identifying perceived competence, and investigated how the proposed antecedent affects consumer purchase intention. Therefore, this study makes a theoretical contribution in incorporating informational social influence with competence and consumer purchase intention for elucidating social impact among social network members. The result indicates that strengthening consumers' competence leads to a higher intention to purchase products. The findings highlight the particular importance of competence. The theoretical framework established in this work can also be applied to other forms of consumer self-determination involving online purchasing behavior.

Secondly, this study makes a theoretical contribution in incorporating information influence (consistency/ inconsistency) and purchase intention for investigating consumer purchase intention. The result shows that conflicting information among consumers is significantly and positively associated with purchase intention in social commerce. It is also found that a potential consumer may experience cognitive dissonance when faced with a situation in which a conflict of opinion may arise. Our research identified that conflicting information initially leads to potential confusion among consumers, but also produces two-sided argumentation to reduce consumers' dissonance. According to our findings, conflict is actually a positive force toward realization of the brands or products. Indeed, such conflict may play a powerful role in improving consumers' intention to purchase in social commerce site.

Finally, the multi-group analysis of social impact and self-determination constitutes a direct extension of the literature. According to the research findings, informational social influence is significantly and positively associated with consumer purchase intention in the younger age group (group 1), but less significant in the older age group (group 2). Moreover, the total effect of informational social influence on competence and purchase intention in the younger age group is more intense. These findings of multi-group analysis are noteworthy. These results are in line with previous research indicating that younger people are inherently more impressionable than older people (Guimond, 1997). Younger people often experience interest or social pressure to conform to reference groups (e.g., peers or keypals), older people are less susceptible to external social influences and focus more on internal perception. Social proof is the most powerful way to trigger young consumers' purchase intention. Indeed, young consumers attempt to gain acceptance into social groups through the products that they purchase (Vigneron & Johnson, 2004). For instance, clothing is an important status symbol for youth (Elliott & Leonard, 2004). Thus, they purchase certain clothing to obtain the support and approval of others (Prendergast & Wong, 2003).

5.2 Managerial and practical implications

The findings of this study provide useful insights for online merchant marketers and marketing managers on how to build interactive online engagement and social influence environments to enhance consumers' competence in order to improve their intention to purchase products. First, consumers assume that the majority is likely to be correct because "several pairs of eyes are better than one". They would conform to the majority opinion, i.e., online informational influence, in the context of online shopping. Especially for younger consumers, the tendency to conform to the behavior and appearance of others, including peers and those in different social groups, is very significant. Accordingly, the customer is the best source of product information in social commerce. An online merchant's social marketing campaign should enhance majority influence and provide shoppers with more incentive to spread the word to others to buy, as was done in the case of Uniqlo's "Lucky Counter" campaign.

Second, the study shows that online informational influence constitutes a useful information source for consumers to compete for a

specific purchasing. The result indicates that strengthening the consumer's competence leads to an increase in confidence in making the purchase decision, and thus purchase intention is augmented.

CONCLUSION AND FUTURE RESEARCH

6.1 Research contribution

Research contribution

The contributions of the paper to the literature are described as follows. This study contributes to a better understanding of how informational social influence works through the mediator of competence toward consumers, which is a key determinant of the motivation of a consumer to make optimal choices for him or her. First, this study provided insights into how the positive effect of conflict fosters trust or usefulness in order to enhance purchase intention. Second, consumers' competence is found to be positively associated with purchase intention. Especially, it is demonstrated that the social construct view of social impact (e.g., informational social influence) fosters cognitive ability during decision-making, which has not yet been addressed in the literature (Kwahk & Ge, 2012). The findings of this study also provide some pragmatic guidance for how online merchants should reinforce their customer-to-customer communication in order to improve the bandwagon effect and satisfy consumers' needs for competence, in order to reduce perceived risk and enhance confidence in making decisions to purchase products in social commerce.

6.2 Research limitations and suggestions for future research

This study is subject to several limitations. First, the study relied on a questionnaire method only and time limitation. In addition, the results reflect the setting of platforms social commerce marketplaces. To address this limitation, future research in cross-country settings on various forms of SNS would be worth performing to elucidate differences in the development of social commerce activities.

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