

Research on the impact of consumer interaction behaviour on purchase intention in an SNS environment: evidence from China

Information Development
1–13
© The Author(s) 2014
Reprints and permission:
sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0266666914556821
idv.sagepub.com


Ya Ping Chang

Huazhong University of Science & Technology

Xue Bing Dong

Huazhong University of Science & Technology

Abstract

The purpose of this study is to propose a conceptual equation model to first, investigate the relationships among consumer interaction behaviour, trust as well as purchase intention, and secondly, demonstrate the indirect effect of consumer interaction behaviour on purchase intention through consumer psychology (cognitive trust and emotional trust). A questionnaire was distributed to 331 virtual community members from the nine most frequently used SNS websites in China. These members have had interactive experience. Data were analyzed by applying the partial least squares method (PLS). The results show that interactive behaviour in the SNS environment can be described in six dimensions: interaction frequency, interestingness, decentration, responsiveness, situationality and reciprocal swap. Except for responsiveness and situationality, the other four dimensions all have positive effects on purchase intention through cognitive trust and emotional trust significantly. Responsiveness and situationality have a positive effect on the purchase intention through cognitive trust significantly, but do not have significant influence on purchase intention through emotional trust. Based on these findings, companies that aim to develop SNS website marketing strategies should find ways to conduct effective marketing campaigns based on the characteristics of interaction behaviour to enhance members' product trust.

Keywords

social networks, SNS, consumer behaviour, interactive behaviour, cognitive trust, emotional trust, purchase intention, China

In an SNS environment, frequent interaction helps consumers obtain more useful purchasing information.

Introduction

When consumers realize that they have a need and are aware of the need to address this issue, they will try to search for information via a variety of means and evaluate the information in order to finally make the decision to purchase (Shim et al. 2001). Pitta and Fowler (2005) pointed out that the information interaction among consumers influences the intention to purchase products as well as services. With the popularity of the Internet, the network community, being a

new information interaction platform for customers, is growing rapidly. In the interactive activities of customers in the network community, there is a lot of interaction about product consumption information. According to a survey by iResearch company in

Corresponding author:

Xue Bing Dong, School of Management, Huazhong University of Science & Technology, 1037 Luoyu Road, Wuhan, China.
Email: dongxuebing116@sina.com

Table 1. The differences between SNS, traditional and virtual communities.

	Traditional community	Virtual Community	SNS community
Members' relations	Real interpersonal relations Unequal Relatively fixed	Virtual interpersonal relations Equal Not quite fixed	Between real and virtual relations Fundamentally equal Relatively fixed
Interaction mode	Semi-active push	Passive push	Active push
Interaction purpose	Emotion-based	Information-based	Both emotion and information
Interactive features	Differentiated interaction High situationality	Non-differentiated interaction Low situationality	To a certain degree Middle situationality
Interaction media	Face-to-face	Text-based	Text, online games and audio-visual
Communication media	Phone calls, letters and meetings, etc.	Computer (mainly within the space of online forum)	Computer (mainly within individual space)

2006, more than 80 percent of Internet users seek information through an Internet community, while around 61.7 percent of the Internet community would first take into account the views of other persons of the Internet community (iResearch 2007).

Network communities are of two types. The first type is the virtual community, like forums such as Bulletin Board System (BBS), blogs, etc. The common and obvious characteristics of these online communities are anonymity, which strongly contrasts with communities in reality. Another type of network community is the social network site (SNS), like Facebook, Twitter, and so on. These are emerging network communities and feature real identities and real relationships (Mayfield 2005, Boyd and Ellison 2007). SNS is considered to be an important trend in the development of the network community (iResearch 2009). According to s China Internet Network Information Center (CNNIC) report released in January 2013, by the end of 2012, the number of Chinese using dating sites and social networking sites reached 288 million (CNNIC 2013).

There are substantial differences between interaction in an SNS environment and that in a traditional environment or virtual community. As shown in Table 1, interaction in a traditional environment is based on totally real relationships. The objects of such interaction are mainly family, friends, colleagues and school mates, featuring a narrow information source, a small amount of information, low frequency of interaction, and low risk. Compared with traditional environments, the main difference in virtual communities' interaction

is that interactive objects are all virtual people, featuring a wide information source, limited attachment relationships, a large volume of information, high efficiency of interaction and lower cost. However, there are more risks in gaining information and trust.

Opinion leaders in an SNS environment result from individuals' performance on the social network site rather than their real-life status (Jepsen 2006). While in an SNS environment, people expand their interpersonal relations based on their real-life relationships. Therefore, the interaction features advantages such as high frequency, wide information source, large information volume and low interaction cost, as well as a guarantee of low risk and a high level of trust provided by a relatively realistic interpersonal network. All these reduce uncertainty in interpersonal relations. In addition, equality and free participation are emphasized among members. Decentralization is also realized (Antheunis et al. 2010).

Interaction among related groups has a significant impact on consumers' purchasing intention (Pitta and Fowler 2005). Research on interpersonal impact theory also shows that consumers will influence each other in values, beliefs, attitudes and behaviour through interaction (Mehdi et al. 2005). How does interaction behaviour in an SNS environment affect purchase intention? The purpose of this study is to build a model of interaction behaviour affecting purchase intention in an SNS environment from the perspective of trust, to solve the problem how enterprises carry out social marketing in an SNS environment.

Literature review

Product trust

Distinguished in terms of objects, apart from supplier trust, trading partner trust, trust also includes brand trust and product trust, etc. (Becerra and Korgaonkar 2011).

Trust has been categorized into two dimensions, namely cognitive trust and emotional trust. In the study on the trust of human-computer interaction, Lee (2002) believes that cognitive trust includes the capacity and credibility of the provided information, while emotional trust is the perception of goodwill. The product cognitive trust in the study refers to consumers' understanding of the product and the body of evidence about trustworthiness. Product emotional trust is established based on the emotional bonds between consumers and the product and relies on consumers' emotional attachment towards the product.

If the object of consumer interaction is the product, when the information under evaluation is positive, trust in others (trust in information source) will make consumers trust in others' trust in a product. In the SNS environment, consumers discuss product-related information and their views are relatively objective and unbiased (Fogel and Nehmad 2009), thus providing evidence for purchase decisions by other consumers.

Interaction behaviour

Scholars with different areas of concern have offered different definitions of interaction (e.g. Ko et al. 2005; Liu and Shrum 2002). The definitions mainly the following aspects: user-machine interaction; user-user interaction and user-information interaction. This research is aimed at consumers' interaction in the SNS environment, namely, the user-user interaction, and we therefore refer to Ha and James' (1998) definition and define interaction as: the degree to which consumers respond to each other and meet each other's needs for the communication of product information in an SNS environment.

Under the SNS environment, the interpersonal interaction process is actually interpersonal communication. Xue and Yu (2012) pointed out that interpersonal communication has the following characteristics: high-frequency interaction (interaction frequency), non-institutionalized spontaneity (decentralization), two-way communication, timely feedback (responsiveness), and a strong

situationality. Levin and Cross (2004) pointed out that reciprocal swap is an important dimension of interpersonal interaction. Carlson et al. (2008) pointed out that the interestingness of the interpersonal interaction influences members' participation in the network interaction platform.

Interaction frequency in SNS refers to the frequency of interactions among members. Interestingness in SNS refers to the members' perceived pleasure and curiosity during interaction. Decentralization in SNS refers to the state of equal, free access and the spreading of information among members. Responsiveness in SNS refers to the psychological state where members feel other members' response via interaction. Situationality in SNS is the degree of people's perception of social emotion offered by media being similar to face-to-face communication. Reciprocal swap in SNS refers to the exchange of information among members during interaction.

Research hypothesis

According to the Stimulus-Organism-Response (SOR) model, stimulation from related groups influences consumers' psychological activity (trust) (Monsuwé et al. 2004). Interaction behavior generally has two direct results: familiarity and interaction experience. The more familiar we are with the object and the more we know about it, the more we will be able to predict future behavior of the objects. Familiarity is more likely to produce trust-building (Pavlou et al. 2003). When an individual's expectation could be satisfied in the interaction experience, trust would be strengthened (Elliott and Yannopoulou 2007).

Many scholars have also confirmed that previous interactive experience significantly influences trust level (Chow and Chan 2008; Dwyer et al. 2007; Gefen 2000). When the two parties involved interact regularly with each other, trust is created. The underlying reason is that one party can observe the behavior of another through scenarios. In this way, information gained through interaction enables one party to predict with credibility the future behavior of another party. Then trust has been established (Lee and Dawes 2005). Senecal and Nantel (2004) believe that the information from the interaction with other consumers is usually more authentic and credible than general product information or advertising. Therefore, in an SNS environment, the interaction among consumers will influence their trust.

Interaction frequency and trust. In general, as the frequency of interaction grows, consumers will acquire more product information. If the attitude towards the product is positive, then the sense of trust will also be better. The study of Cao (2007) also confirmed that the higher the frequency of interaction among virtual community members is, the greater their trust in other members will be; thus greater trust on other members' comments on related products will be established. Consequently, trust in a product will be enhanced when consumers' attitude towards product is positive. By communicating frequently about products, consumers gradually get a deep understanding of all kinds of product characteristics. When consumers discuss products frequently they communicate their emotions; consumers place an even deeper emotional reliance on products when they have had a positive evaluation or experience with the product. Therefore, the research proposes the following assumptions:

H1a. The higher the interaction frequency among consumers in an SNS environment, the higher the degree of cognitive trust in the discussed products.

H1b. The higher the interaction frequency among consumers in an SNS environment, the higher the emotional trust in the discussed products.

Interestingness and trust. The stronger the interestingness consumers feel in the interaction process will increase their interest in further interaction, which would generate more understanding of discussed products. When the attitude towards the product is positive, the perceived credibility will also be higher. According to the research of Moon and Kim (2001) and Heijden (2003), the more interestingness users feel in the use of information technology systems, the greater the possibility of the system usage. The interestingness in the interaction process arouses consumers' attention, which excites their interest in discussed products, thus deepening their understanding of a product's characteristics. Based on a positive product evaluation, consumers will like products more because of interesting and vivid communication with other consumers rather than a flat presentation. Therefore, the research proposes the following assumptions:

H2a. The higher the interaction interestingness among consumers in an SNS environment, the

higher the degree of cognitive trust in the products.

H2b. The higher the interaction interestingness among consumers in an SNS environment, the higher the emotional trust in the products.

Decentralization and trust. Thanks to the decentralization of the network, with a stronger sense of equality, people can interact with each other freely. If innovative ideas are published, they will be eagerly commented upon by a variety of members, whatever the members' true status is. In an SNS environment consumers can continually ask for product information until they have all the information on a product's characteristics and functions. Free and open discussion on products will stimulate consumers to like a product if the product evaluation is positive. Therefore, the research proposes the following assumptions:

H3a. The higher the decentralization among consumers' interaction in an SNS environment, the higher the degree of cognitive trust in the products.

H3b. The higher the decentralization among consumers' interaction in an SNS environment, the higher the emotional trust of the products.

Responsiveness and trust. When the individual in the community posts some information, they often expect some types of response. If the individual does not get a response, trust in others will not be developed (Ridings et al. 2002). If others always respond quickly, it might mean that they can interact with each other, thus building trust in their ability. Similarly, higher responsiveness from other people means that the individual is willing to help other members, which may also show honesty and benevolence. A good response will increase the efficiency and effectiveness of communication, make interaction parties effectively understand each other's information and when the attitude towards the product is positive this enhances the sense of trust of the products. Consumers can instantly communicate with friends to eliminate misunderstanding, which enhances the relationship between consumers and products, thus promoting consumers' emotional trust in products. Therefore, the research proposes the following assumptions:

H4a. The higher the responsiveness among consumers in an SNS environment, the higher the degree of cognitive trust in the products.

H4b. The higher the responsiveness among consumers in an SNS environment, the higher the degree of emotional trust of the products.

Situationality and trust. Improved flow experience and the richness of social presence makes communication more accurate, real and credible (Tompkins 2011). In an SNS environment, stronger situationality of interaction among consumers indicates that consumers manage to obtain more communication clues and more adequate understanding of the product when the attitude towards the product is positive, thus improving the degree of trust of the products. Situationality provides multidimensional and abundant product information to make consumers understand products' characteristics and functions precisely, which enhances consumers' cognitive trust. Meanwhile, introducing products with pictures and words shows friends' respect for products' emotional characteristics, which enhances the emotional relationship between consumers and products. Therefore, the research proposes the following assumptions:

H5a. The higher the interaction of situationality among consumers in an SNS environment, the higher the degree of cognitive trust in the products.

H5b. The higher the interaction of situationality among consumers in an SNS environment, the higher the emotional trust of the products.

Reciprocal swap and trust. Reciprocal exchange is a relatively strong social norm. Those who do not understand the value of retribution are considered to be "not trustworthy" or "dishonest". Eventually they will lose their peer trust (Lee and Dawes 2005). In an SNS environment, the more effective information, knowledge and experience consumers share, the deeper the level of understanding of the products will be, and when the attitude towards the product is positive, thus the higher the degree of trust in the products will be. This process that consumers share information with their friends saturates their product knowledge. Information saturation includes both understanding of a product's functional characteristics and communication

of product's emotional characteristics, thus deepening the emotional relationship between consumers and products. Therefore, the research proposes the following assumptions:

H6a. The higher the degree of mutual reciprocity among consumers in an SNS environment, the higher the degree of cognitive trust in the products.

H6b. The higher the degree of mutual reciprocity among consumers in an SNS environment, the higher the emotional trust of the products.

Cognitive trust, emotional trust and purchase intention. In an SNS environment, consumers lack interpersonal direct contact with others. Therefore it is difficult for them to form purchase intention through direct interaction. Only when consumers believe that the product is worth trusting, will they begin to generate purchase intention. Many scholars have confirmed in their research that consumers' trust in the products is the main factor that determines people's purchase intention (Becerra and Korgaonkar 2011; Lee and Lee 2005). Cognitive trust provides the basis for emotional (Komiak and Benbasat 2006). Therefore, the research proposes the following assumptions:

H7. The higher the degree of cognitive trust among consumers in an SNS environment, the higher the degree of emotional trust in the products.

H8a. In an SNS environment a higher degree of consumers' cognitive trust of the products results in stronger purchase intention.

H8b. In an SNS environment, a higher degree of consumers' emotional trust of the products results in stronger purchase intention.

Research design

Data collection

On the basis of statistics of the Chinese Internet Users Report on Social Networking Application published by CNNIC, we distributed questionnaires on the most frequently used nine SNS websites, namely QQ alumni, Renren, Sina Space, kaixin001.com, bai.sohu.com, Douban, 139.com and kaixin.com. Questionnaires were issued by community forum posts, short messages and onsite letters sent to site members.

Table 2. Sample composition of formal questionnaire.

Variable	Category	Frequency	Percentage
Gender	Male	172	52%
	Female	159	48%
Age	Under 18	69	21%
	19 to 29	199	60%
	Above 30	63	19%
Education	Middle School	43	13%
	High/Vocational School	82	25%
	Junior College	77	23%
	Bachelor	129	39%
Occupation	Students	170	51%
	Others	161	49%

QQB was given to those completing questionnaires. In this way a total of 614 questionnaires were collected, among which 331 were valid.

It can be seen from Table 2, with the sample structure, men accounted for 52 percent, women accounted for 48 percent; 21 percent are below 18 years old, 60 percent are 19–29 years old, 19 percent are 30 years old or above; 13 percent have educational level below middle school, 25 percent high school/vocational school, 23 percent junior college, 39 percent bachelor; students accounted for 51 percent and the rest 49 percent. Apart from the difference in age structures, the sample structure generally fits well with the research report on social network application by Chinese netizens released by CNNIC in 2009. The difference in age structure mainly comes from the fact that the research objects are consumers with a certain degree of buying power. Therefore the investigating targets are mainly over 16 years old. According to the viewpoint of Gefen et al. (2000), the number of required samples using a PLS method is 10 times the number of measuring items within the most complicated latent variable. The number of measuring items of the most complex latent variables (interaction frequency) is 5. Therefore, the sample size meets the requirements.

Measurement of variables

The measurement of the independent variable mainly considers the following six variables, namely interaction frequency, interestingness, decentralization, responsiveness, situationality, and reciprocal swap. The measurement of the variables is mainly based on existing research and has been modified under the SNS environment. The measurement of interaction frequency

refers to the scales of Wu (2003) and is evaluated from three aspects, namely the frequency of participation in interaction, the frequency of actively initiating interaction, and the frequency of response in interaction. For the measurement of interestingness, we refer to the scale of Moon and Kim (2001) and van der Heijden (2003). We measure interestingness from three aspects: happiness, focus and curiosity. Currently there is no scale of decentralization, therefore, based on scholars' description of decentralization (Kickul et al. 2005; Primeaux et al. 2003), we refine the scale of decentralization. The measurement of response refers to the scale of Wu (2006) and Yin (2002), the study measures responsiveness from three aspects: response speed, attitude and content. For the measurement of situationality, we refer to the scale of Jiang (2004), from three aspects, namely recognition of the discussion, content of the environment and of the interaction object; the research eventually proposes the measuring items of situationality. The measurement of reciprocal swap takes reference from the scale of Tang (2006) and Wu (2003). The study draws on the scales and measures reciprocal swap from two aspects: gaining help and willingness to assist.

There are scales of the mediator variables involved in the research. However, these scales have yet to be applied to the research of consumer interactions in the SNS environment. Therefore, the research takes reference from the existing scales. Hence, based on the specific content, we make corresponding changes: In the measurement of trust, we take reference from Becerra and Korgaonkar (2011) and Johnson and Grayson (2005). We refer to the above two scales. Based on the specific content of the research, we propose the scale of trust; among them cognitive trust involves three items and emotional trust involves three items. The measurement of the dependent variable, namely purchase intention, takes reference from the scale of Ku et al. (2012).

All scale items used 7-point Likert scales anchored between “strongly disagree” and “strongly agree”. The scale items are listed in Appendix A.

Data analysis

The research applies the partial least squares method (or PLS) to test the concept model. The PLS demonstrates satisfactory predictive and explanatory ability to the causal model of latent variables. The PLS analysis is divided into two steps. The first is to testify the reliability and validity of the model. The second is to

Table 3. Confirmatory factor analysis.

Latent variable	Item	Loading	T value	α	CR
Interaction frequency (FREQU)	FREQU 1	0.794	30.495	0.881	0.913
	FREQU 2	0.794	25.780		
	FREQU 3	0.822	34.264		
	FREQU 4	0.851	44.305		
	FREQU 5	0.853	48.821		
Interestingness (INTER)	INTER 1	0.834	38.582	0.873	0.908
	INTER 2	0.860	42.743		
	INTER 3	0.817	27.090		
	INTER 4	0.767	26.510		
	INTER 5	0.793	29.723		
Decentralization (DECEN)	DECEN 1	0.812	23.925	0.814	0.889
	DECEN 2	0.891	55.587		
	DECEN 3	0.854	43.209		
Responsiveness (RESPON)	RESPON 1	0.797	29.104	0.867	0.904
	RESPON 2	0.804	30.901		
	RESPON 3	0.843	44.798		
	RESPON 4	0.815	32.128		
	RESPON 5	0.782	22.434		
Situationality (SITUA)	SITUA 1	0.819	37.319	0.854	0.895
	SITUA 2	0.786	24.420		
	SITUA 3	0.849	41.929		
	SITUA 4	0.719	19.114		
	SITUA 5	0.795	21.782		
Reciprocal swap (RECIP)	RECIP 1	0.872	51.564	0.891	0.920
	RECIP 2	0.850	44.432		
	RECIP 3	0.840	46.560		
	RECIP 4	0.807	29.496		
	RECIP 5	0.801	27.001		
Cognitive trust (COGTRU)	COGTRU 1	0.905	62.714	0.900	0.938
	COGTRU 2	0.929	90.983		
	COGTRU 3	0.906	66.146		
Emotional trust (EMOTRU)	EMOTRU 1	0.867	49.742	0.824	0.895
	EMOTRU 2	0.874	50.566		
	EMOTRU 3	0.838	24.286		
Purchase intention (INTEN)	INTEN 1	0.867	27.328	0.855	0.912
	INTEN 2	0.884	28.872		
	INTEN 3	0.890	28.807		

testify the significance and predictive capacity of the path coefficients of the structural model.

Measuring model

Reliability. The study uses Cronbach's Alpha coefficient as a criterion to observe the internal consistency of the factors of the questionnaire. Through calculation, the Cronbach α coefficient of all factors ranges from 0.814 to 0.917, which are more than 0.70 of the recommended value (Nunnally 1978). Therefore it can be decided that the scale of the research has fine

internal consistency. It can be seen from Table 3 that the construct reliability of variables of the questionnaire ranges from 0.889 to 0.938, which is higher than the recommended value 0.70 (Chin and Gopal 1995), indicating that the construct reliability of the scale of the research is high.

Validity. The research examines the scale's convergent validity by measuring an item's standardized loading and average variance extracted (AVE) of the confirmatory factor analysis. It can be seen from Table 3

Table 4. Discriminant validity.

	FREQU	INTER	DECEN	RESPON	SITUA	RECIP	COGTRU	EMOTRU	INTEN
FREQU	0.823								
INTER	0.461	0.815							
DECEN	0.393	0.581	0.853						
RESPON	0.629	0.565	0.498	0.808					
SITUA	0.496	0.600	0.509	0.609	0.795				
RECIP	0.591	0.581	0.517	0.673	0.663	0.834			
COGTRU	0.503	0.566	0.492	0.575	0.609	0.579	0.913		
EMOTRU	0.598	0.627	0.541	0.614	0.570	0.626	0.719	0.860	
INTEN	0.526	0.588	0.483	0.558	0.513	0.618	0.660	0.734	0.866

Note: The data on diagonal lines is root-mean-square of AVE of the variables. Other data refers to the coefficients of other variables.

that the standardized factor loadings of the corresponding potential variables of the research's measuring items range from 0.723 to 0.897, which is more than the recommended value of 0.60 (Fornell and Larcker 1981). Under the condition of $P < 0.001$, T value passes the significance testing; the AVE value of latent variables varies from 0.632 to 0.751, which is over the acceptable level of 0.50. Therefore, the nine variables of the research model were all found to have good convergent validity. As with discriminant validity, the root-mean-square of AVE values of latent variables are all greater than the correlation coefficient, indicating that fine discriminant validity exists among variables. The analysis results are presented in Table 4.

Structural model

Based on the above regression analysis, we can generate the validation result of the research hypotheses, as is shown in Figure 1. Judging by the result, excluding that the path from responsiveness to emotional trust and from situationality to emotional trust are not significant, the standardized path coefficients of other paths are statistically significant ($p < 0.10$). In addition, R^2 value of consumers' purchase intention has reached 0.576. Therefore, the structure model constructed in the research has explanation effect. Figure 1 shows the path coefficients and their significance level of the structural model.

From Figure 1 it can be seen that interaction frequency, interestingness, decentralization, responsiveness, situationality and reciprocal swap are important factors that influence cognitive trust. In fact they can explain 49.3 percent of the variation of cognitive trust. Therefore, assumptions H1a, H2a, H3a, H4a, H5a and H6a are supported. Interaction frequency,

interestingness, decentralization, reciprocal swap and cognitive trust are important factors that influence emotional trust; they can explain 65.1 percent of the variation of emotional trust. Therefore, assumptions H1b, H2b, H3b, H6b and H7 are supported while H4b and H5b are not. Cognitive trust and emotional trust are important factors that influence purchase intention. They explain 57.6 percent of the variation of purchase intention. Therefore, assumptions H8a and H8b are supported.

Conclusion and discussion

Conclusion

Based on the theory of interpersonal communications, the research developed the dimensions of consumers' interaction behaviour in an SNS environment. The research also studies the influence mechanism of consumers' interaction behaviour on purchase intention in an SNS environment. We analysed the conclusion of the research as follows.

In an SNS environment, consumers' interaction behaviour can be demonstrated by six dimensions, namely, interaction frequency, interestingness, decentralization, responsiveness, situationality and reciprocal swap. Interaction frequency, interestingness, decentralization, responsiveness, situationality and reciprocal swap have a positive effect on purchase intention through cognitive trust. Interaction frequency, interestingness, decentralization and reciprocal swap have a positive effect on purchase intention through emotional trust.

In an SNS environment, frequent interaction helps consumers obtain more useful purchasing information. If consumers are willing to spend a lot of time and effort on interaction, it means that they are willing to consider the product as the interaction topic. In an

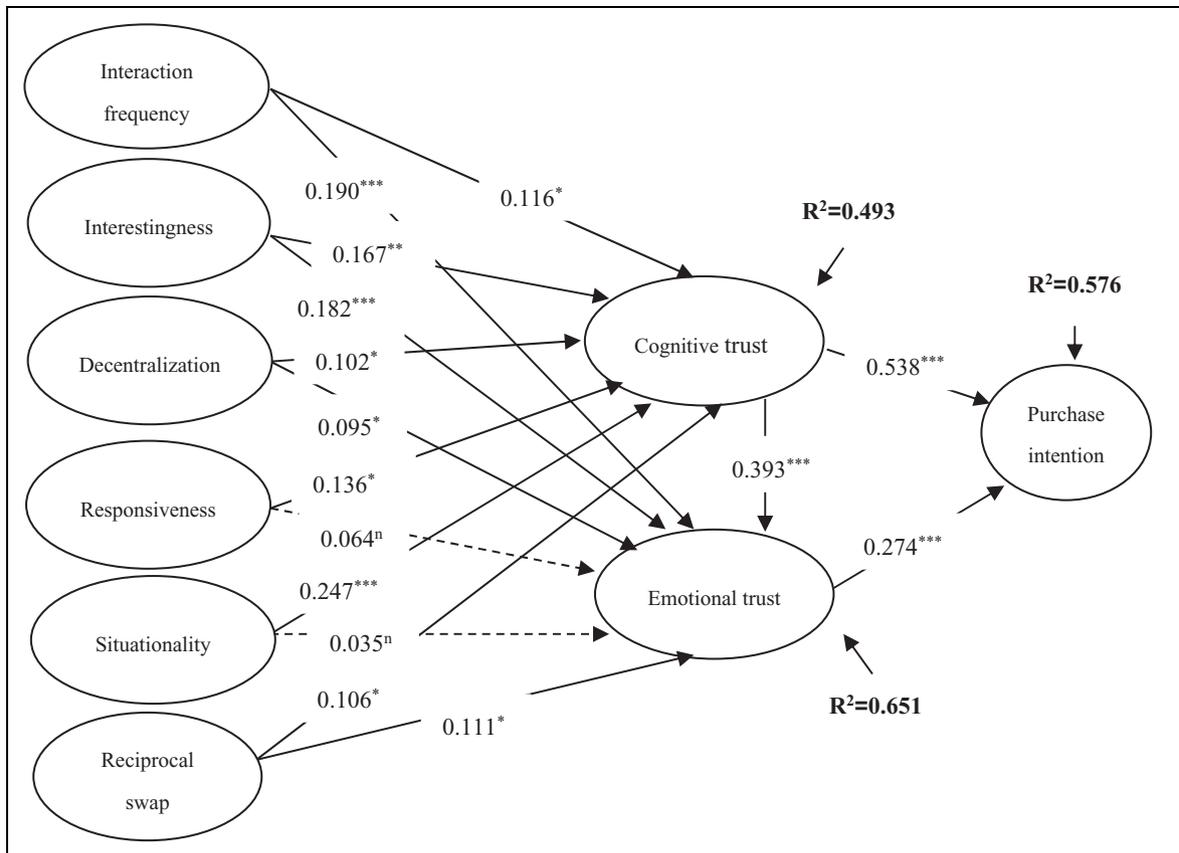


Figure 1. Analytical results of the research model.
 Note: *p < 0.10, **p < 0.05, ***p < 0.01, n not significance.

SNS community, enterprises should frequently guide consumers to release product discussions on the topics that consumers are interested in.

In an SNS environment, consumers’ interaction interestingness has a positive influence on purchase intention through cognitive trust and emotional trust. The interaction interestingness causes consumers to spend more time and effort interacting with friends, thus they will naturally gain more useful product information. The interaction interestingness brings more enjoyment to consumers, and this kind of pleasure will increase the degree of trust in the product. In an SNS community, enterprises can develop some special gaming software with embedded product information to enhance the consumers’ interaction interestingness.

In the SNS environment, interaction decentralization among consumers has a positive influence on purchase intention through cognitive trust and emotional trust. The equality and non-restricted interaction will render consumers to believe that the product information is objective, thereby increasing trust in the product. In an SNS community, enterprises

should interfere with consumers’ interaction content as little as possible; meanwhile, they should use effective methods to identify consumers who are not active, encourage them to speak actively by rewarding points.

In an SNS environment, consumers’ responsiveness has a positive influence on purchase intention through cognitive trust. With good response, consumers will quickly acquire much useful information to help themselves make judgments. In an SNS community, enterprises can remind consumers to reply to friends in a timely manner. If consumers do not reply to their friends within a specific period of time, enterprises can remind consumers by email.

In an SNS environment, consumers’ interaction situationality has a positive influence on purchase intention through cognitive trust. When situationality is low in an SNS environment, consumers cannot accurately grasp friends’ attitudes as they can in a face-to-face interaction. There will be a lack of understanding and trust in the product information. In an SNS community,

enterprises need to enable consumers to have remote video chats to communicate product information, thus improving their internet flow experience.

In the SNS environment, consumers' reciprocal swap has a positive influence on purchase intention through cognitive trust and emotional trust. The fact that consumers are willing to share and provide product information shows that they have a relatively strong product preference per se. In an SNS community, enterprises can reward consumers who have spread product information, thus reminding other consumers to actively feedback.

Limitations and future research

Although our findings provide meaningful implications, this study has several limitations that should be addressed in the future. First, the research only selected purchase intention as the outcome variable. We did not undertake research on the influence mechanism of consumers' interaction behaviour on consumers' further search for product information, evaluation and recommendation. We can further explore the relationship between them in follow-up studies. Second, the study constructed a research model of the influence mechanism of consumers' interaction behaviour on purchase intention in the SNS environment, without introduction of moderator variables such as product involvement and consumers' characteristics. In future studies, these moderator variables can be introduced to the research model. Third, the research only studies the relationship between interaction behaviour and purchase intention in an SNS environment. Research on the relationship in the traditional environment and virtual community environment has also been carried out. In future studies, we can conduct comparative research on the relationship of consumers' interaction behaviour in the traditional environment, virtual communities and SNS environments and identify their differences in order to provide a theoretical and practical basis for developing different marketing strategies in different environments for the company.

Appendix A

Measurement items and their sources

Interaction frequency (FREQU).

FREQU 1: I often discuss the positive product information with friends.

FREQU 2: I often interact with friends about positive product information through activities and games.

FREQU 3: I frequently release, share, or inquire positive product Information.

FREQU 4: I frequently reply, or comment on positive product Information.

FREQU 5: For the positive product information, my friends and I interact frequently.

Interestingness (INTER).

INTER 1: I feel interested in the process of interaction with my friends about the positive product information.

INTER 2: I feel very happy in the process of interaction with my friends about the positive product information.

INTER 3: In interaction with my friends about the positive product information, I feel that time passes quickly.

INTER 4: In interaction with friends about the positive product information, I can't realize the hustle around.

INTER 5: The interaction with my friends about positive product information aroused my interest in the product.

Decentralization (DECEN).

DECEN 1: In interaction about the positive product information, I feel that we are equal.

DECEN 2: In interaction about the positive product information, we can freely express our own views.

DECEN 3: In interaction about the positive product information, I provided product information, and vice versa.

Responsiveness (RESPON).

RESPON 1: During interaction, I will soon be replied by friends about the positive product information.

RESPON 2: My friends give me lots of positive product information.

RESPON 3: My friends patiently answer my questions about the positive product information.

RESPON 4: Positive product information provided by friends is closely related to my questions.

RESPON 5: My friends communicate with me about positive product information in full statement, instead of just by “yes” or “no”.

Situationality (SITUA).

SITUA 1: In interaction about the positive product information, I judge a friend’s response easily by his words.

SITUA 2: In interaction about the positive product information, I feel as a natural as in real environment

SITUA 3: In interaction about the positive product information, I feel my friend is very cordial.

SITUA 4: In interaction about the positive product information, I seldom make the wrong gesture or misunderstand my friends.

SITUA 5: Through interaction, I have a good understanding of my friends’ opinion on the product.

Reciprocal swap (RECIP).

RECIP 1: I receive a lot of positive useful product information from interaction.

RECIP 2: I think the positive product information I obtain through interaction helped me a lot.

RECIP 3: Through interaction, I learn more about the positive product information.

RECIP 4: If the friend has questions about the positive product information, I am willing to help.

RECIP 5: I am willing to share the positive product Information with my friends.

Cognitive trust (COGTRU).

COGTRU 1: I think that the product is a trustworthy.

COGTRU 2: I believe that the product is the correct choice.

COGTRU 3: I believe that I will be rest assured using the product.

Emotional trust (EMOTRU).

EMOTRU 1: I love the product very much.

EMOTRU 2: I will often pay attention to this product.

EMOTRU 3: I would like to tell others about my love for the product.

Purchase intention (INTEN).

INTEN 1: In future, I intend to buy this product.

INTEN 2: In future, I plan to buy this product.

INTEN 3: In future, I am willing to consider buying this product.

References

- Antheunis ML, Patti MV and Jochen P (2010) Getting acquainted through social network sites: Testing a model of online uncertainty reduction and social attraction. *Computers in Human Behavior* 26(1): 100–109.
- Becerra EP and Korgaonkar PK (2011) Effects of trust beliefs on consumers’ online intentions. *European Journal of Marketing* 45(6): 936–962.
- Bernoff J and Li C (2008) Harnessing the power of the oh-so-social-web. *MIT Sloan Management Review* 49(3): 36–42.
- Boyd DM and Ellison NB (2007) Social network sites: definition, history, and scholarship. *Journal of Computer-Mediated Communication* 13(1): 210–230.
- Cao W (2007) *Research on the influence of virtual-community-based relational interaction on online purchase intention*. Master’s Degree Thesis, Zhejiang university.
- Carlson BD, Tracy AS and Tom JB (2008) Social versus psychological brand community: The role of psychological sense of brand community. *Journal of Business Research* 61(4): 284–291.
- Chin WW and Abhijit G (1995) Adoption intention in GSS: relative importance of beliefs. *ACM SIGMIS Database* 26(2): 42–64.
- Chow WS and Lai SC (2008) Social network, social trust and shared goals in organizational knowledge sharing. *Information & Management* 45(7): 458–465.

- China Internet Network Information Center (2012) *Reports on social networking sites users' behavior in China in 2012*. <http://www.cnnic.net.cn/hlwfzyj/hlwzxbg/mtbg/201302/P020130219611651054576.pdf>
- China Information Network Information Center (2013) *The 32nd reports on Internet users' behavior in China*. <http://tech.163.com/13/0717/13/9407C2DH00094NSI.html>.
- Dwyer C, Starr RH and Katia P (2007) Trust and privacy concern within social networking sites – A comparison of Facebook and MySpace. In: *Proceedings of the Thirteenth Americas Conference on Information Systems*, Colorado. Available at: <http://csis.pace.edu/~dwyer/research/DwyerAMCIS2007.pdf>
- Elliott R and Yannopoulou N (2007) The nature of trust in brands: a psychosocial model. *European Journal of Marketing* 41(9): 988–998.
- Fogel J and Nehmad E (2009) Internet social network communities: risk taking, trust, and privacy concerns. *Computers in Human Behavior* 25(2): 153–160.
- Fornell C and David F (1981) Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18(1): 39–50.
- Gefen D (2000) E-commerce: The role of familiarity and trust. *Omega* 28(6): 725–737.
- Gefen D, Straub DW and Boudreau MC (2000) Structural equation modeling and regression: guidelines for research practice. *Communications of the Association for Information Systems* 4(7): 1–79.
- Ha L and James EL (1998) Interactivity reexamined: A baseline analysis of early business web sites. *Journal of Broadcasting & Electronic Media* 42(4): 457–474.
- iResearch (2007) Consumer online reviews are more influence than expert reviews [EB/OL]. New Marketing. (2007-12-04) [2008-05-04]. <http://news.iresearch.cn/0200/20071204/73689.shtml>.
- iResearch (2009) China social network research report. <http://news.iresearch.cn/Zt/103796.shtml>.
- Jepsen AL (2006) Information search in virtual communities: Is it replacing use of off-line communication? *Journal of Marketing Communications* 12(4): 247–261.
- Jiang J (2004) *Research on the using motivation and social presence of virtual community sites*. Master's Degree Thesis, National Sun Yat-sen university, Guangzhou.
- Johnson D and Kent G (2005) Cognitive and affective trust in service relationships. *Journal of Business Research* 58(4): 500–507.
- Kickul J, Lisa KG and Margaret P (2005) Does trust matter? The relationship between equity sensitivity and perceived organizational justice. *Journal of Business Ethics* 56(3): 205–218.
- Ko H, Chang HC and Marilyn SR (2005) Internet uses and gratifications: A structural equation model of interactive advertising. *Journal of Advertising* 34(2): 57–70.
- Komiak SYX and Izak B (2006) The effects of personalization and familiarity on trust and adoption of recommendation agents. *MIS Quarterly* 30(4): 941–960.
- Ku HH, Chien CK and Tzu WK (2012) The effect of scarcity on the purchase intentions of prevention and promotion motivated consumers. *Psychology and Marketing* 29(8): 541–548.
- Lee EJ (2002) *Factors that enhance consumer trust in human-computer interaction: An examination of interface factors and moderating influences*. PhD Thesis, University of Tennessee, Knoxville.
- Lee DY and Dawes PL (2005) Guanxi, trust, and long-term orientation in Chinese business markets. *Journal of International Marketing* 13(2): 28–56.
- Lee SM and Lee SL (2005) Consumers' initial trust toward second-hand products in the electronic market. *Journal of Computer Information Systems* 46(2): 85–98.
- Levin DZ and Rob C (2004) The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science* 50(11): 1477–1490.
- Liu Y and Shrum LJ (2002) What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence of interactivity on advertising effectiveness. *Journal of Advertising* 31(4): 53–64.
- Mayfield R (2005) Social network dynamics and participatory politics. In Lebkowsky J. and Ratcliffe M. (Eds.) *Extreme Democracy* 116–132.
- Mehdi M, Laroche M and Pons F (2005) Individual orientation and consumer susceptibility to interpersonal influence. *Journal of Services Marketing* 19(3): 164–173.
- Moon JW and Young GK (2001) Extending the TAM for a World-Wide-Web context. *Information & Management* 38(4): 217–230.
- Nunnally JC (1978) *Psychometric theory*. New York: McGraw-Hill.
- Pavlou P, Tan YH and Gefen D (2003) Institutional trust and familiarity in online interorganizational relationships. *ECIS*, 1497–1509.
- Perea y Monsuwé T, Benedict GCD and de Ruyter K (2004) What drives consumers to shop online? A literature review. *International Journal of Service Industry Management* 15(1): 102–121.
- Pitta DA and Fowler D (2005) Internet community forums: An untapped resource for consumer marketers. *Journal of Consumer Marketing* 22(5): 265–274.
- Primeaux PSM, Ranjan K and Cam C (2003) Cultural insights to justice: A theoretical perspective through a subjective lens. *Journal of Business Ethics* 46(2): 187–199.
- Ridings CM, Gefen D and Arinze B (2002) Some antecedents and effects of trust in virtual communities. *Strategic Information Systems* 11(3–4): 271–295.
- Senecal S and Nantel J (2004) The influence of online product recommendations on consumers' online choices. *Journal of Retailing* 80(2): 159–169.

- Shim S, Eastlick MA, Lotz SL and Warrington P (2001) An online prepurchase intentions model: The role of intention to search. *Journal of Retailing* 77(3): 397–416.
- Tang J (2006) *The research on the influence of interactivity on trust and purchase behavior tendency under the B2C environment*. PhD thesis, Fudan University, Shanghai.
- Tompkins PS (2011) Truth, trust, and telepresence. *Journal of Mass Media Ethics: Exploring Questions of Media Morality* 18(3–4): 194–212.
- van der Heijden H (2003) Factors influencing the usage of websites: the case of a generic portal in The Netherlands. *Information & Management* 40(6): 541–549.
- Wu G (2006) Conceptualizing and measuring the perceived interactivity of websites. *Journal of Current Issues & Research in Advertising* 28(1): 87–104.
- Wu J (2003) *Research on the relationship between the satisfaction of virtual community members and purchasing behavior*. Master's Degree Thesis, National Cheng Kung University, Taiwan.
- Xue K and Yu M (2012) *Interpersonal Communication*. Shanghai: Shanghai People's Publishing House.
- Yin J and Detmar S (2002) The interactivity of Internet-based communications: impacts on E-business consumer decisions. In: *Twenty-Third International Conference on*

Information Systems. Available at: <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1154&context=icis2002>

About the authors

Ya Ping Chang is a professor at the School of Management, Huazhong University of Science & Technology, PR China. His research interests include customer behavior and electronic commerce. His work has been published in a variety of journals including *Computers in Human Behavior*, *Journal of Business Ethics*, *Social Behavior and Personality*, *Journal of Euro-marketing*, *Journal of Interactive Advertising*, etc. Contact: School of Management, Huazhong University of Science & Technology, 1037 Luoyu Road, Wuhan, China.

Xue Bing Dong is a PhD at the School of Management, Huazhong University of Science & Technology, PR China. His research interests include customer behaviour and network marketing. His work has been published in *Social Behavior and Personality*. Contact: School of Management, Huazhong University of Science & Technology, 1037 Luoyu Road, Wuhan, China. Email: dongxuebing116@sina.com.