

Mood and social presence on consumer purchase behaviour in C2C E-commerce in Chinese culture

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Abstract While the importance of mood and emotion has been recognized in Information Systems research, they have been studied only tangentially. To explore the influence of mood and social presence on consumer purchase behaviour in consumer-to-consumer (C2C) e-Commerce, a lab experiment with 200 participants is conducted in China. The structural model explains 36.9 % of the variance in purchase intention. The results indicate that mood plays an important role in consumer purchase behaviour, which has significant

impacts on perceived benefit and purchase intention. Social presence has moderating effects between mood and perceived benefit, and between mood and purchase intention. We also find that two cultural dimensions (individualism and uncertainty avoidance) have significant impacts on purchase intention.

Keywords Mood · Social presence · National culture · Perceived benefit · Perceived risk · Purchase intention

JEL classification M15

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Introduction

With the rapid development of Internet and commutation technologies, consumer-to-consumer (C2C) electronic commerce has become a new trend and attracted many consumers both in China and globally. C2C e-Commerce involves the electronically-facilitated transactions between sellers and buyers through an online platform, whose function is to match consumers. The popular C2C online platforms include eBay in the U.S., Taobao and Dangdang in China. Taobao reported more than 170 million registered users in the end of 2009 and generated gross merchandise volume of more than 208.3 billion RMB in 2009 although the company was only established in 2003 (Taobao).

Information Systems research has a long history of studying IT usage and adoption through cognitive-based models such as the innovation diffusion theory (Rogers 1983), the technology acceptance model (Davis 1989), the unified theory of acceptance and use of technology (Venkatesh et al. 2003), and the social cognitive theory (Compeau et al.

1999). However, IT usage and adoption is complex and multifaceted, and these cognitive models do not capture all of the antecedents of behaviors. Previous research models focus primarily on external factors (e.g., perceived ease of use, perceived usefulness, compatibility, and relative advantage), not paying enough attention to internal factors that influence individual behaviour and intention (Malhotra and Galletta 2005). Therefore, there is a need for new studies that can predict the occurrence of moods and emotions and explain their consequences on IT use (Beaudry and Pinsonneault 2010; Lewis et al. 2003).

Mood plays a powerful role in our lives; mood influences our beliefs and attitudes and it helps guide our thinking, decision making, and actions (Gratch and Marsella 2004). Forgas (1995) proposed the affect infusion model to explain how affective states influence one's ability to process information and judgment. Prior studies have looked at how IT use triggered emotions and how these emotions affect subsequent user attitudes and beliefs (Zuboff 1988). In addition, several studies attempted to integrate mood and emotion into cognitive-based models, such as affect toward use in the decomposed theory of planned behaviour (Hsu and Chiu 2004) and anxiety in social cognitive theory (Compeau et al. 1999). However, little attention has been given to understanding how mood can influence consumer's purchase behaviour, particularly in the context of C2C e-Commerce.

To address this need, this study examines how mood impacts consumer's perceived benefit, perceived risk, and purchase intention. C2C e-Commerce has a different mechanism from other types of e-Commerce. In C2C e-Commerce, an online platform performs just as an intermediary, in which consumers are confronted with vendors who have distinct web pages and provide different services. Therefore, the consumer's mood is an important factor for their judgment and purchase intention. Furthermore, vendors have different interfaces in C2C e-Commerce. Some have rich information and appealing images, which will provide a sociable and warm environment to consumers. Other vendors only have limited information and low visual appeal, which may make consumers feel distant and unfriendly. Thus social presence is a significant factor to mediate the consumer's decision process in C2C e-Commerce. Last, C2C e-Commerce is a global phenomenon and national culture will affect the behaviour and decision of consumers. This study also examines how cultural dimensions influence the purchase intention.

This article is organized as follows. Section 2 reviews the literature on affect infusion model and social presence. The research model and hypotheses are developed in section 3. Section 4 reports the data collection and research results. Finally, section 5 discusses the study's contributions and implications.

Theoretical background

Affect infusion model

The Affect Infusion Model (AIM) is a theoretical model developed by Forgas (1995) to explain how affective states influence one's ability to process information and judgment. The main argument of the AIM is that the influences of mood would become accelerated in complex and unanticipated situations. Affect is defined as one's feeling state or how one feels when performing a task or activity (George and Jones 1996). Affect includes one's moods and emotions (Fredrickson 2003; George 1989). Moods and emotions differ in specificity, intensity, and pervasiveness. Unlike emotions, moods are less likely to be triggered by a specific stimulus or event (Thayer 1989). Moods are usually less intense affective states than emotions (Fredrickson 2003; George 1989). Unlike volatile emotions, moods are pervasive and enduring. Thus, moods are more likely to serve as "input to other processes that determine their motivational implications" (Martin et al. 1993). Affect infusion is generally likely to be associated with moods (Forgas, 1995). In the research on e-commerce, mood is also defined as affective states influencing consumer's purchase intentions and behaviours (Li et al. 2011). Because of these characteristics, moods provide a suitable framework for studying cognitive processes (Mathwick et al. 2001). Hence, this study focuses on moods rather than emotions.

Forgas defined *affect infusion* as "the process whereby affectively loaded information exerts an influence on and becomes incorporated into the judgmental process, entering into the judge's deliberations and eventually colouring the judgmental outcome" (1995, p. 35). In other words, a process that determines the degree to which mood can influence our judgment and decision.

Forgas (1995) further identified four alternative judgmental strategies: direct access, motivated, heuristic, and substantive processing. He argued that judgments requiring heuristic or substantive processing tend to be more infused by mood than are direct access or motivated judgments. In other words, the effects of mood will generally happen more strongly as a situation becomes more complex. Complex situations have the following qualities, such as the amount of effort needed, familiarity of the situation, and severity of the situation.

Several researchers have investigated the effects of mood in IS context. Park studied the effects of online product presentation on consumer responses, and found a negative relationship between mood and perceived risk, and a positive relationship between mood and apparel purchase intention (Park et al. 2005). Djasasbi examined the effects of positive mood on the technology acceptance model. They found that positive mood had a significant influence on

acceptance of a decision support system (Djamasbi et al. 2010). Other researchers examined the role of emotions in online consumers' privacy behaviours and decision-making (Li et al. 2011, 2008).

Social presence theory

The concept of social presence was originally developed by Short et al. (1976) as a way to characterize social presence as a quality inherent in a communication medium. Central to social presence theory is the assumption that "the presence of the information sender influences recipients' understanding of the message" (Miranda and Saunders 2003).

Previous research has characterized the capacity of social presence to transmit information about facial expressions, posture, and non-verbal cues (Short et al. 1976). Others focus on the relationship of social presence to information richness (Rice et al. 1989; Straub and Karahanna 1998). Recent studies stress the psychological connection, where social presence is concerned about "warmth" (Fulk et al. 1987). In this perspective, a medium is viewed as warm if it conveys a feeling of human contact, sensitivity, and sociability (Steinfeld 1986; Yoo and Alavi 2001). A medium with a high degree of social presence is seen as being sociable, warm, and personal, whereas a medium with a low degree of social presence is seen as less personal. In this study, we take the last perspective on social presence, where the medium gives the user a sense of human warmth and sociability.

Recent studies on e-Commerce found that participants can accomplish the sense of human warmth and sociability by providing means for actual interaction with other humans in online environments, such as e-mail after-sales support (Gefen and Straub 2003), virtual communities, chats (Kumar and Benbasat 2002), message boards and human web assistants (Swan and Shih 2005). Other studies found that social presence can also be accomplished by stimulating the imagination of interacting with other humans, such as rich picture content, socially-rich text content, and personalized greetings (Hassanein and Head 2007; Kumar and Benbasat 2002).

Research model and hypotheses development

To investigate the mood effect and role of social presence in C2C e-Commerce in Chinese culture, we construct a research model (Fig. 1) based on the theory of AIM, social presence and valence framework.

The valence framework is a theory to understand consumers' purchasing behaviour that incorporate the simultaneous perception of risk and benefit (Paul Peter and Tarpey

1975). Paul Peter and Tarpey (1975) stated that perceived benefit and perceived risk are two fundamental aspects of consumer decision-making. On one hand, the "perceived benefit" perspective regards consumers as motivated to maximize the positive utility of purchasing the product. On the other hand, the "perceived risk" perspective regards consumers as motivated to minimize any negative utility related to purchasing behaviour. The "perceived value" contends that consumers perceive products as having both positive and negative qualities, and make decisions in accordance to maximize net valence.

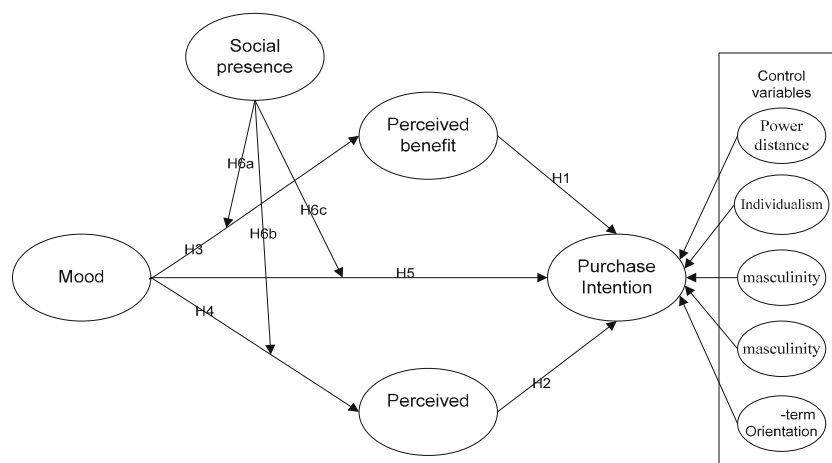
The valence theory is used by several studies in e-Commerce contexts, such as e-Commerce relationships (Kim et al. 2009), decision-making (Kim et al. 2008), and risk reduction strategies (Chu and Li 2008). The benefits of e-Commerce include offering diverse choices to customers, reducing the cost of searching information, and saving time and money. The risks of e-Commerce are perceived greater than that of the traditional in-store because online shopping is lack of face-to-face communication or some special information which can only be obtained from the traditional ways, such as touch and smell of the products (Chu and Li 2008). Thus, consumers make an online purchasing decision by considering not only perceived benefit, but also perceived risk (Kim et al. 2000).

Perceived benefit and purchase intention

Consumer's perceived benefit is their subjective perception of gains from vendors before getting products (Dan J. Kim et al. 2009). The perceived benefit in this study is defined as consumer gains or benefits in the purchasing process. One of the main motivations for consumers in C2C e-Commerce is that it brings more gains for customers such as convenience, the variety of choices, and cost saving. Previous research has classified perceived benefit as two categories of benefits: intrinsic perceived benefit and extrinsic perceived benefit (Shang et al. 2005).

Intrinsic perceived benefit is the benefit that serves as psychological experience gained from online shopping, which is relevant to individual interest, enjoyment, self-determining, novelty and so on (McKinney 2004; Shih 2004). On the other hand, extrinsic perceived benefit is the benefit that serves as means to achieve other outcomes, which includes wide selection of products, competitive prices, low search costs, and so on. Prior studies have found the perceived benefit had significant relationship with purchase intention in Internet banking and Internet purchase behaviour (Lee 2009; Liu and Wei 2003). Therefore, we hypothesize:

- H1 Perceived benefit is positively associated with purchase intention in C2C e-Commerce.

Fig. 1 Research model

Perceived risk and purchase intention

The concept of perceived risk consists of two dimensions: uncertainty and seriousness of undesirable consequences. For example, it is defined as “a combination of uncertainty plus seriousness of outcome involved” (Bauer 1967), and “the expectation of losses associated with purchase and acts as an inhibitor to purchase behaviour” (Peter and Ryan 1976).

Consumers will endure more risk in a C2C e-Commerce environment than in a traditional retail store (Gabriel and Nyshadham 2008; Samadi and Yaghoob-Nejadi 2009). In a traditional retail store, consumers have the chances to touch, feel, and even try the products. It reduces consumer’s perceived risk and strengthens their favour. Different from traditional shopping, C2C shopping cannot guarantee the practical feeling of the products. Consumers concern whether the promised products are equivalent to their expectations and whether the vendors will deliver the products according to the demand. Besides, consumers have to give their credit card numbers, addresses, and other personal information to accomplish purchases. Previous studies have found that perceived risk has negative effects on purchase intention in e-Commerce (Dash and Saji 2007; Liu and Wei 2003). Therefore,

H2 Perceived risk is negatively associated with purchase intention in C2C e-Commerce.

Mood and purchase behaviour

Mood generally has assimilative influences on evaluations, decisions, and behaviours. According to the Affect Infusion Model (Forgas, 1995), an individual usually has a more favourable judgment on object when he is in a good mood than in a bad mood. A positive mood may be associated with

looking at one’s world through rose-colored glasses, while a bad mood may produce analogously colour evaluations (Clark and Isen 1982).

In e-Commerce context, the consumers’ judgment and evaluation is a complex processing, which requires heuristic and substantive judgmental strategies. It should have a strong mood infusion effect in consumer online decision-making. In fact, if consumers have a positive mood, they may attribute this mood states to characteristics of the present situation and evaluate the situation more favourably (Park et al. 2005). Therefore, In C2C e-Commerce, the consumers in positive mood states are likely to feel strong confident and influence their judgments. Particularly, they tend to increase the evaluation of perceived benefit and decrease the evaluation of perceived risk.

H3 Positive mood is positively associated with perceived benefit in C2C e-Commerce.

H4 Positive mood is negatively associated with perceived risk in C2C e-Commerce.

Mood exerts a notable influence not only on their evaluations but on the resulting response behaviours as well. Consumers in positive mood states appear to enhance the likelihood of performance of behaviours that lead to positive outcomes (Chou et al. 2007). The consumers in positive mood states are more able to attend positive information, which produces greater purchase motivation. Previous study has found the influence of moods on behaviours and purchase intention (Mano 1999). Therefore,

H5 Positive mood is positively associated with purchase intention in C2C e-Commerce.

The Moderating Role of Social Presence

Social presence is individual subjective sense of salience of the other person in the interaction, which can be

implemented through communications medium. Social presence has recently been identified as a key variable in a connection between a website and its visitors (Hassanein and Head 2007; Kumar and Benbasat 2006).

The features of web interface have been suggested to help impact the perception of social presence for e-Commerce. For example, Kumar found that the provision of recommendations and consumer reviews increased the social presence of the website (Kumar and Benbasat 2006). Zimmer found that information disclosure could increase the social presence of the website (Zimmer et al. 2010). Park also found that the presentation of products, such as warm (unfriendly) texts and pretty (vapid) pictures would affect consumers' mood states (Park et al. 2005). The consumer reviews and information disclosure can evoke consumer's imagination of pleasurable using of products and present to other people. Thus, social presence can also impact purchase intention (Gefen and Straub 2004).

If a web interface has a friendly and sociable environment, the consumers are likely to increase mood congruency and extend their mood infuse effects. Hence, they will evaluate the vendors and services favourably and increase their perceived benefit. Specifically, the higher the degree of social presence, the stronger the positive relationship between mood and perceived benefit.

H6a Social presence positively moderates (reinforces) the relationship between mood and perceived benefit in C2C e-Commerce.

When feeling high social presence, the consumers are likely to feel pleasant, which keep them in delighted mood and decrease the perception of risk. Positive mood of the consumer will reduce uneasiness and bring more trust in the seller. Specifically, the higher the degree of social presence, the stronger the negative relationship between mood and perceived risk.

H6b Social presence positively moderates (reinforces) the negative relationship between mood and perceived risk in C2C e-Commerce.

In the context of high social presence, the consumers tend to feel warm and evaluate the products favourably, and they are more likely to buy the product. Therefore, social presence will lead to high purchase intention. Specifically, the higher the degree of social presence, the stronger the positive relationship between mood and purchase intention.

H6c Social presence positively moderates (reinforces) the relationship between mood and purchase intention in C2C e-Commerce.

National culture as control variables

E-Commerce is now an international phenomenon, and national culture can affect the behaviours of customers. Culture is defined as collective programming of the mind that distinguishes the members of one group or category of people from another. According to Hofstede's cultural framework, National culture is the shared values of people within a certain national environment. There are five cultural dimensions: **power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation** (Hofstede 2001). We treat these five cultural dimensions as control variables in this study and examine how they influence purchase intention in the context of C2C e-Commerce in China.

Power distance means "the degree of inequality in power between less powerful individual and more powerful other" (Mulder 1977), p. 90). In a culture of high power distance, superiors and subordinates regard each other as unequal and subordinates do what they are told to do, whereas in a culture of low power distance, superiors and subordinates regard each other as equal and they are interdependent.

Individualism reflects the degree to which a culture stresses the role of the individual members. In a high/low continuum, collectivistic societies occupy the low end of the spectrum and individualistic societies take the other end. The Individualism dimension could explain cross-cultural differences in consumer purchase intentions. Individualism means a loosely knit social structure and individual initiatives are strong. In Europe and North America, consumers tend to express their own individual consciousness more strongly. On the other hand, collectivism implies a tight social framework that emphasizes organizational belonging and membership. Chinese society has historically focused on harmony and conformity in governing all interpersonal relations. Therefore, Chinese consumers tend to value group decisions, order, and security in their purchase behaviours (Neelankavil et al. 2000).

Masculine cultures emphasize competition, aspiration, performance, and material value. In masculine cultures, winning and achieving are more important than caring for others and promoting the quality of life and society (Moon et al. 2008).

Uncertainty avoidance reflects the degree to which individuals in a society feel uncomfortable with uncertainty and ambiguity. In a culture with high uncertainty avoidance, people are likely to create more formal regulations and do not put up with abnormal ideas and behaviours (Moon et al. 2008).

Long-term orientation reflects a culture that fosters virtues oriented towards future rewards. A society with long-term orientation lay stress on behaviours such as thrift or perseverance, which intends to secure future rewards.

Data analysis and results

We constructed the initial set of items by analyzing the literature on the proposed theoretical model. All the measurement items for this study's principal constructs are adopted from existing measures. Mood is assessed with items from Djamasbi and Strong (2008). Appendix A summarizes the constructs and their operationalization. All the items are measured on a 7-point Likert scale.

We adapted Taobao's websites as our experimental context because Taobao takes a dominant position in the Chinese C2C market and the consumers are familiar with it. According to the CNNIC Report, clothing and shoes accounted for the largest proportion in C2C e-Commerce in China (CNNIC 2009). Therefore, clothing and shoes are selected as the testing products. The experimental web pages also keep other information, such as Taobao's label and general regulation, middling price, the colour and size of products. In order to avoid brand preference, there is no brand information on the experimental web pages.

The participants were college students who had online shopping experience before in a major state university in China. The college students are ideal participants for this study on C2C e-Commerce. According to a national Internet report, the young people is the mainstream in C2C (CNNIC 2009). Online consumers are generally younger and more educated than conventional consumers. Several studies have college students as participants for e-Commerce topics (Dan J. Kim et al. 2008; McKnight et al. 2002).

The participants were recruited from a campus online discussion forum. The online forum could be accessed by any students in the university. A link to the questionnaire was posted online and allowed the students to access during a month period. For the online questionnaire, the participants were first required to rate their current mood. The placement of mood survey question is crucial because earlier questions can affect the answers to the mood question. Then they were allowed to browse the experimental web pages and answered the other questions. There were 200 participants in the study. After removing invalid questionnaire, 154 effective questionnaires were used in the following analysis.

Evaluating the measurement model

To test the proposed research model, data analyses for both the measurement model and structural model were performed by Smart-PLS with bootstrapping (Wixom and Watson 2001). The assessment of the measurement model includes the estimation of internal consistency for reliability, and tests of convergent and discriminant validity for construct validity.

Internal consistency was calculated by Cronbach's alpha and Fornell's composite reliability (Fornell and Larcker 1981). According to the results showed in Appendix 2, the Cronbach reliability coefficients of all variables are higher than the minimum cutoff score of 0.70 (Nunnally 1978). All composite reliabilities of constructs have a value higher than 0.7 (Fornell and Larcker 1981). These results indicate adequate internal consistency (Nunnally 1978). Additionally, all Average Variance Extracted (AVE) values of constructs are higher than the minimum cutoff score of 0.50 (Fornell and Larcker 1981), which indicates that more than 50 % of the variance of the measurement items could be accounted for by the constructs. Construct validity was examined by assessing convergent validity and discriminant validity (Chin et al. 1997). As is noted in Appendix 2, all item loadings are greater than 0.70 (Wixom and Watson 2001), indicating convergent validity is considered as acceptable.

Discriminant validity can be checked by the means of examining whether the correlations between the variables are lower than the square root of the average variance extracted (Dan J. Kim et al. 2008). Table 1 indicates that all the square roots of each AVE value are greater than the off-diagonal elements. This indicates discriminant validity among constructs. Nomological validity is a form of construct validity. It is the degree to which a construct behaves as it should within a system of related constructs called a nomological set. We did the nomological validity for this model and the nomological test is valid.

For self-reported survey data, there is a potential for common method biases from multiple sources such as consistency motif and social desirability. We performed statistical analyses to assess the common method bias. First, a Harmon one-factor test was conducted on the ten constructs in the mode. The results demonstrate that ten factors are present and the most covariance explained by one factor is 23.52 %, indicating that common method biases are not a likely contaminant of our study.

Second, we included in the PLS model a common method factor whose indicators included all the principal constructs' indicators and calculated each indicator's variances substantively explained by the principal construct and by the method. The results show that the average substantively explained variance of the indicators is .56, while the average method

Table 1 Inter-construct correlations of latent variables

Constructs	Mean	Std	1	2	3	4	5	6	7	8	9	10
1.MD	4.82	1.12	0.94									
2.SP	4.32	1.32	0.25	0.82								
3.PB	4.41	1.25	0.13	0.32	0.87							
4.PR	4.58	1.04	0.12	0.24	0.33	0.92						
5.PI	4.76	1.07	0.22	0.41	0.42	-0.43	0.91					
6.PD	4.79	1.24	0.21	-0.51	-0.30	0.52	0.32	0.88				
7.IDV	4.68	0.92	-0.32	0.12	0.12	0.12	0.30	0.21	0.92			
8.MAS	4.35	0.97	-0.27	0.46	-0.35	0.41	-0.32	0.31	0.22	0.91		
9.UA	4.46	1.09	0.35	0.37	0.33	-0.31	-0.41	0.32	0.17	0.32	0.96	
10. LTO	4.12	0.98	0.41	-0.21	0.31	0.22	0.43	0.38	0.32	0.21	0.12	0.85

The diagonal elements (in bold) represent the square root of AVE

based variance is .012. The ratio of substantive variance to method variance is about 57:1. In addition, most method factor loadings are not significant. Given the small magnitude and insignificance of method variance, we contend that the method is unlikely to be a serious concern for this study.

Testing the structural model

The standardized PLS path coefficients for testing the structural model are shown in Table 2. The moderating effects were computed following by cross-multiplying the standardized items of each construct. The explanatory power of the structural model was assessed based on the amount of variance explained in the endogenous construct (i.e., purchase intention). The structural models explained 36.9 % of the variance

in purchase intention. Table 2 summarizes the hypothesis testing.

The results show that perceived benefit is positively related to purchase intention ($b=0.49, p<0.01$) and thus H1 is supported. Perceived risk is negatively related to purchase intention ($b=-0.17, p<0.05$) and thus H2 is supported. Mood is positively related to perceived benefit ($b=0.60, p<0.01$) and purchase intention ($b=0.31, p<0.05$), thus supporting H3 and H5. Although mood has negative relationship with perceived risk, the influence is not significant ($b=-0.12, p>0.05$), thus rejecting H4.

For the moderating effects, we found that social presence reinforces the positive relationship between mood and perceived benefit is significant ($b=0.30, p<0.01$), and social presence also reinforces the positive relationship between mood and purchase intention is significant ($b=0.26, p<0.01$). But social presence has no moderating effect on the relationship between mood and perceived risk ($b=-0.09, p>0.05$).

The results also show that two cultural variables (individualism and uncertainty avoidance) have significant impacts on purchase intention, while the other three cultural variables (power distance, masculinity, and long-term orientation) have no significant impacts on purchase intention.

Discussion and conclusion

The purpose of this study is to examine the roles of mood and social presence on consumer purchase behaviour in the C2C e-Commerce context. Most extant IS studies are based on cognitive-based models, and they neglect the impacts of mood on consumer purchase decision-making process. This study applied the affect infusion model and investigated how mood influences perceived benefit, perceived risk, and purchase intention in C2C e-Commerce. The results show that mood has a positive effect on purchase intention.

Table 2 Results of hypothesis testing

Hypotheses	Coefficient	<i>t</i> -value	Supported
H1: PB→PI	0.49	4.32**	Yes
H2: PR→PI	-0.17	2.32*	Yes
H3: MD→PB	0.60	3.25**	Yes
H4: MD→PR	-0.12	1.36	No
H5: MD→PI	0.31	3.01**	Yes
H6a: SP*MD→PB	0.30	3.67**	Yes
H6b: SP*MD→PR	-0.09	1.05	No
H6c: SP*MD→PI	0.26	2.78**	Yes
Control variables:			
PD→PI	0.04	1.22	
IDV→PI	0.34	2.78**	
MAS→PI	0.10	1.48	
UA→PI	0.38	3.21**	
LTO→PI	0.13	1.24	

* Significant at 5 % level of significance; ** Significant at 1 % level of significance

This result is consistent with the finding of Park et al. (2005), who found a positive relationship between mood and purchase intention in online purchase of apparel environment.

Two hypotheses are not supported by this research: H4 and H6b. The research results suggest that although mood is negatively associated with perceived risk, but the relationship is not significant. We find that social presence does not positively moderates the negative relationship between mood and perceived risk in C2C e-Commerce. These are interesting findings and future research can continue to explore.

Theoretical contributions

Although prior studies have explored the role of social presence in the e-Commerce context (Kumar and Benbasat 2006; Zimmer et al. 2010), few research focuses on the roles of social presence on mood affect. Our study examined the moderating effects of social presence on consumer purchase decision-making. We found that social presence has significant moderating effects between mood and perceived benefit, and between mood and purchase intention. We found that social presence has significant moderating effects between mood and perceived benefit, and between mood and purchase intention. These findings can provide practical guidance for online vendors. The vendors should accordingly not only supply product information online, but also construct an affective and alive shopping environment. They can create warm and friendly web interfaces to strengthen the consumer's positive mood effects and enhance their perceived gains and purchase activities.

Furthermore, this study examined the impacts of five cultural dimensions on purchase intention. The research results showed that two cultural variables (individualism and uncertainty avoidance) have significant impacts on purchase intention in C2C e-Commerce in China. In fact, the uncertainty is a prominent cultural characteristic with the rapid economic development in China. The consumers fear uncertainty and unfamiliar adventure in C2C e-Commerce. Therefore, the strategy of reducing ambiguity is very important to Chinese consumers. Besides culture dimensions, future studies should also consider other factors such as website familiarity, gender, and prior online shopping experience.

Practical contributions

From a practical standpoint, our results emphasize several manageable factors, which are useful to steer e-vendors to treat website and consumers. First, we found that individualism has a significant and positive influence on purchase

intention. This result seems to contradict the traditional perspective of Chinese culture, where collectivism plays a great role in social decisions. One possible explanation for this result is that the online consumers are usually young people who are growing up in the drastic changing environment of China, which emphasizes more individual gain and success. This result implies that firms need to determine the increase in customer individual values and personalization so that young consumers will be willing to pay for the incremental value.

Second, our study suggests that mood and culture influence the purchase intentions of the customers, which implies the need for customization when approaching the customers around the world through the Internet.

It is particularly beneficial for a firm to charge a price premium for customized products. E-commerce technologies have made it possible to produce customized products at costs similar to standardized ones.

Mood is positively related to perceived benefit ($b=0.60$, $p<0.01$) and purchase intention

Third, we found that social presence reinforces the positive relationship between mood and perceived benefit, and social presence reinforces the positive relationship between mood and purchase intention. Therefore, online firms can give customers the sense of human warmth and sociability by providing means for social interaction with other customers in online environments, such as virtual communities, online chatting, Facebook pages, and Twitter groups.

Research limitation

It should be noted that this study only examines consumer purchase intention in two levels of social presence groups. Although our model recognizes the importance of social presence's influence, we do not further explore whether the perceived social presence constructed by different types of textual information has different influence, and this is a key question still needed to be addressed by future research.

Although our model recognizes the importance of moods on cognition, we do not further explore which elements influence consumer's moods. This is a key question still needed to be addressed by future research. On the other hand, it is necessary to take attitude as combination of emotion and cognition. Future research could take another direction to examine which factor influences moods and emotions.

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Appendix A

Table 3 Survey instrument

Construct	Item
Mood	<p>Please circle the number that best reflects your current mood states:</p> <p>“Unpleasant” 1 2 3 4 5 6 7 “Pleasant”</p> <p>“Unhappy” 1 2 3 4 5 6 7 “Happy”</p> <p>“Undelighted” 1 2 3 4 5 6 7 “Delighted”</p>
Social presence	<p>There is always a sense of human touch whenever I interact through the online store.</p> <p>There is always a possibility of social networking through the interaction with the online store.</p> <p>There is always a sense of friendliness whenever I interact through the online store.</p> <p>There is always a feeling of belongingness whenever I interact through the online store.</p>
Perceived benefit	<p>I think using this Website is convenient.</p> <p>I can save money by using this Website.</p> <p>I can save time by using this Website.</p> <p>Using this Website enables me to accomplish a shopping task more quickly than using traditional stores.</p> <p>Using this Website increases my productivity in shopping</p>
Perceived risk	<p>Purchasing from this Website would involve more product risk when compared with more traditional ways of shopping.</p> <p>Purchasing from this Website would involve more financial risk when compared with more traditional ways of shopping.</p> <p>How would you rate your overall perception of risk from this site?</p>
Purchase intention	<p>I am likely to purchase the products(s) on this site.</p> <p>I am likely to recommend this site to my friends.</p> <p>I am likely to make another purchase from this site if I need the products that I will buy.</p>
Power distance	<p>Subordinates should follow their superior’s decisions unconditionally.</p> <p>Managers should make most decisions by themselves.</p> <p>Subordinates should not question their superior’s decisions.</p>
Individualism	<p>Individual rewards are more important than group welfare.</p> <p>Individual success is more important than group success.</p> <p>Having autonomy and independence is more important than being accepted as a member of a group.</p>
Masculinity	<p>The fulfillment of tasks is more important than caring for others.</p> <p>A job with high earnings is better than a job with quality of life.</p> <p>A man should be strong and a woman should be tender.</p>
Uncertainty avoidance	<p>When starting a new job, I fear doing it.</p> <p>I fear uncertainty about the future.</p> <p>I fear ambiguous situations and an unfamiliar adventures.</p>
Long-term orientation	<p>Thrift.</p> <p>Persistence (perseverance).</p> <p>Having a sense of shame.</p>

Appendix 2

Table 4 Summary of measurement model

Construct	Factor loading	Cronbach alpha	Composite reliability	AVE
Mood (MD)		0.93	0.96	0.88
MD1	0.89			
MD2	0.91			
MD3	0.94			
Social presence (SP)		0.87	0.91	0.67
SP1	0.75			
SP2	0.78			
SP3	0.86			
SP4	0.82			
Perceived benefit (PB)		0.85	0.91	0.76
PB1	0.92			
PB2	0.94			
PB3	0.82			
PB4	0.74			
PB5	0.77			
Perceived risk (PR)		0.83	0.92	0.85
PR1	0.85			
PR2	0.88			
PR3	0.89			
Purchase intention (PI)		0.89	0.94	0.82
PI1	0.92			
PI2	0.91			
PI3	0.89			
Power distance (PD)		0.82	0.85	0.78
PD1	0.78			
PD2	0.73			
PD3	0.77			
Individualism (IDV)		0.72	0.88	0.84
IDV1	0.81			
IDV2	0.84			
IDV3	0.72			
Masculine (MAS)		0.80	0.91	0.83
MAS1	0.74			
MAS2	0.71			
MAS3	0.82			
Uncertainty avoidance (UA)		0.91	0.96	0.92
UA1	0.79			
UA2	0.83			
UA3	0.88			
Long-term orientation (LTO):		0.78	0.73	0.72
LTO1	0.78			
LTO2	0.80			
LTO3	0.75			

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