

## EFFECTS OF DISSATISFACTION ON CUSTOMER REPURCHASE DECISIONS IN E-COMMERCE—AN EMOTION-BASED PERSPECTIVE

Yunfan Lu  
School of Management  
Huazhong University of Science and Technology, Wuhan 430074, China  
[lyf2006@126.com](mailto:lyf2006@126.com)

Yaobin Lu<sup>1</sup>  
School of Management  
Huazhong University of Science and Technology, Wuhan 430074, China  
[luyb@mail.hust.edu.cn](mailto:luyb@mail.hust.edu.cn)

Bin Wang  
College of Business Administration  
University of Texas-Pan American, Edinburg, TX 78539, USA  
[binwang@utpa.edu](mailto:binwang@utpa.edu)

### ABSTRACT

Dissatisfaction is one of the factors that drive customers' decisions to reduce repurchase intention. Repurchase is crucial to the success of online stores. The present study attempts to examine what coping behavior will be triggered by negative emotion in e-commerce and examines the potential influence of coping behavior on customer repurchase decisions in e-commerce. A research model that reflects the relationships among dissatisfaction, negative emotion, and customers' behavior is developed and tested by structural equation modeling on data sets consisting of 411 subjects in China. Our findings show that negative emotion is an important mediator between dissatisfaction and repurchase intention. Different coping behaviors have different impacts on repurchase intention. Based on empirical findings, we offer managerial suggestions for enhancing purchase intention in e-commerce.

Keywords: Dissatisfaction, Negative emotions, Repurchase intention, Coping behavior, E-commerce

### 1. Introduction

Ensuring customer satisfaction is the goal of online sellers [Eid 2011], but few sellers can guarantee that customers will be completely satisfied with every purchase. It can be reasonably assumed that satisfaction leads to repurchase behaviors [Fornell & Wernerfelt 1987]. Similarly, dissatisfaction is one of the factors that lead to customers' reduced repurchase intentions [Lam et al. 2004]. However, customers often decide to leave a supplier because of inadequate responses rather than for the dissatisfying problem itself [Bitner et al. 1990]. Based on the assumption that customers often complain before they leave suppliers, service recovery and complaint management efforts are employed as the main methods for retaining customers [Holloway & Beatty 2003; Schoefer & Ennew 2005]. However, customers don't always show dissatisfaction before they leave a provider [Colgate & Hedge 2001] and the phenomenon is especially prevalent in e-commerce.

Online shops have provided customers with services through which they can post reviews about products purchased online, and these reviews are made available to other prospective customers. For example, bulletin board systems (BBS) on eBay.com link to Twitter and Facebook; in China, BBS on Taobao.com (the largest consumer-to-consumer (C2C) marketplace in China and is provided by Alibaba) links to popular social networking sites. However, it is not particularly common for customers to post online reviews. According to the China Internet Network Information Center (CNNIC) [CNNIC 2009], only 29.5% of customers are inclined to comment on their online purchases. Among the customers who shared their purchase information, 63.8% provided reviews in the e-shops' BBS, and about 65.7% reviewed their purchases on social networking sites such as blogs, virtual spaces and virtual communities. Some dissatisfied customers express their dissatisfaction to sellers through their complaining behaviors, while others do not necessarily report their dissatisfaction directly to the sellers—they tend

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<sup>1</sup> Corresponding author

to remain silent about the problems, or they seek support via social networking sites. Because of these tendencies, it is not enough to retain or recover customers just by handling complaints in e-commerce. Other post-purchase behaviors triggered by dissatisfaction should also be carefully examined [Stewart 1998].

Post-purchase behaviors are influenced by emotions rather than cognitive aspects [Bigne & Andreu 2004; Bonifield & Cole 2007]. Previous studies have indicated that an unfavorable service experience will result in negative emotions [Bougie et al. 2003]; and negative emotions signal a great need for coping behaviors such as complaining and non-complaining [Lazarus 1991; Chebat et al. 2005; Chebat & Slusarczyk 2005]. However, insufficient research has been conducted regarding the relationship between negative emotions and customer post-purchase behavior in e-commerce. Therefore, the objectives of the study are: (1) to examine what coping-purchase behavior will be triggered by negative emotions in e-commerce, and (2) to examine the influence of coping-purchase behavior on customer repurchase decisions in e-commerce. The research focus is on dissatisfied shoppers in e-commerce, as they have much relevant experiences.

The study specifically contributes to the knowledge base by answering questions pertinent to e-commerce researchers and practitioners. For researchers, the emotion-based perspective helps to better understand the influence of customers' dissatisfaction on post-purchase decisions. The paper extends the study of negative emotions in e-commerce by a detailed investigation of the relationship between negative emotions and coping behaviors.

For practitioners, the study provides a new perspective on understanding customers' negative emotions, which can help managers successfully identify the initial signs of dissatisfaction so that they might minimize dissatisfaction. The research model can also assist practitioners in recognizing the influence of negative emotions on customer behaviors and repurchase intentions.

The paper is organized as follows. In the next section, the extant literature is examined to develop the theoretical background for studying the effects of dissatisfaction on negative emotions and repurchase intentions. This is followed by the presentation of a conceptual model and associated hypotheses. An overview of the methodology and the results from empirical studies are reported and discussed in later sections. Finally, the implications of the study are discussed.

## 2. Literature Review

We first introduce two key components examined in this study—dissatisfaction and negative emotion—and review the theoretical and empirical work regarding these two components. We then briefly review coping behaviors, which together provide a theoretical foundation for our investigation into the impacts of these two components on customers' repurchase intentions.

### 2.1. Dissatisfaction

The definition of dissatisfaction comes from Oliver's disconfirmation between prior expectations and post-purchase outcomes [Ferguson & Johnston 2011; Oliver 1980]. Expectations are the pre-exposure beliefs about the product [Venkatesh & Goyal 2010; Olson & Dover 1979]. The discrepancy between expectations and actual outcomes is defined as disconfirmation. Better-than-expected outcomes result in satisfaction, while worse-than-expected outcomes result in dissatisfaction [Oliver 1980]. Though dissatisfaction was believed to be the result of a cognitive process (comparison between expectations and outcomes), more recent research maintains that affective processes also contribute to explaining customer dissatisfaction. Fornell and Wernerfelt [1987] defined dissatisfaction as "*a state of cognitive/affective discomfort caused by an insufficient return relative to the resources spent by the consumer at any stage of the purchase/consumption process*". Therefore, dissatisfaction includes the cognitive process and the affective process.

In online settings, satisfaction (or dissatisfaction) includes satisfaction (or dissatisfaction) with a Web site [Reibstein 2002] and satisfaction (or dissatisfaction) with the purchase process [Anderson & Srinivasan 2003]. Lee et al. [2009] provided a perspective on online satisfaction formation by exploring Web site information satisfaction, system satisfaction, and overall online service quality. Audrain et al. [2008] empirically examined the consequences of online purchase dissatisfaction on complaining behaviors, recommendation, and exit. In line with these findings and definitions, we propose that the definition of online purchase dissatisfaction includes cognitive discomfort (such as information dissatisfaction, system dissatisfaction, and overall online service quality) and affective discomfort (negative emotions and such).

To our knowledge, few studies have empirically investigated the consequences of online purchase dissatisfaction on the affective process in e-commerce. In our study, we primarily investigated the influence of affective discomfort triggered by dissatisfaction on customers' behaviors.

### 2.2. Negative Emotions

As a mental state of readiness for actions, emotions arise from the appraisal of an event that is relevant and important to an individual [Lazarus 1991; Bagozzi et al. 1999]. Therefore, emotions influence customers' behaviors

in action readiness [Beaudry & Pinsonneault 2010]. In addition, emotions contribute to guiding an individual's thinking, decision-making, and actions [Loewenstein et al. 2001; Gratch & Marsella 2004]. In the marketing context, emotions are a crucial factor that affects customer behaviors and their purchase decisions [Barsky & Nash 2002; Allen et al. 2005]. In the online purchasing context, emotions are likely to be triggered prior to customers' behaviors and repurchase intentions.

Emotions include three sets as identified by Izard [1977]. First, positive emotions such as interest and joy; second, negative emotions such as anger, disgust, contempt, shame, guilt, sorrow, distress and fear; third, both positive and negative emotions such as surprise. From this we see that negative emotion is a subset of all emotions. Because events relevant to consumption goals can result in negative emotions—according to consumer behavior research [Dube & Menon 2000]—dissatisfaction due to an unfavorable purchase outcome is relevant to consumption goals. For our study, the focus is on negative emotions.

In the information systems context, negative emotions include unhappiness, worry, anger, nervousness, regret, disgust, fear, anxiety, and irritation [Cenfetelli 2004]. Negative emotions are defined in terms of anger, disappointment, regret, and worry by Yi and Baumgartner [2004]. In particular, anger is one of the most powerful emotions when customers consider an unfavorable purchase outcome's effects on them [Lazarus 1991]. Because consumption emotions' anger set includes upset, angry, and irritated [Richins 1997; Reynolds et al. 2006], we identify the three aspects as the key items for the construct of negative emotions in our research [Bui et al. 2011].

### 2.3. Coping Behaviors

Coping research originated from Folkman and Lazarus' study [Folkman & Lazarus 1980]. They defined coping as “*the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands, along with the conflicts among them.*” Most coping behaviors can be divided into two basic styles: problem-based coping and emotion-based coping [Folkman & Lazarus 1988]. Problem-based coping attempts to alter the personal and environmental realities behind negative emotions. This style of coping involves taking direct actions to change a situation. Emotion-based coping tries to reduce the negative emotion by altering the appraisal of a demanding situation [Krohne 2001]. This style of coping involves indirect actions that minimize emotions [Mattila & Ro 2008].

In the context of marketing, negative emotions—usually derived from dissatisfaction—signal a great need for coping behaviors [Lazarus 1991]. Problem-based coping involves consumers directly dealing with dissatisfaction [Menon & Dube 2004]. Problem-based coping has been categorized as complaining behavior [Chebat et al. 2005; Chebat & Slusarczyk 2005]. On the other hand, emotion-based coping has been categorized as non-complaining behaviors [Chebat et al. 2005; Chebat & Slusarczyk 2005]. Emotion-based coping means that consumers take passive actions such as controlling their emotions or seeking support from others [Menon & Dube 2004]. Thus, we propose that psychological distancing and seeking social support are the main passive actions.

Psychological distancing is directing attention away and detaching from the stressor in order to minimize the negative effects of negative emotions such as anxiety [Folkman et al. 1986; Yi & Baumgartner 2004]. Psychological distancing contributes to maintaining emotional stability [Beaudry & Pinsonneault 2010]. In other words, psychological distancing helps control emotions. Seeking social support also includes looking for sympathy, understanding, encouragement, advice, and moral support from others [Carver et al. 1989; Bagozzi et al. 1999; Yi & Baumgartner 2004].

In addition, when customers encounter negative emotions, they often simultaneously engage in diverse coping behaviors [Yi & Baumgartner 2004]. Accordingly, we propose that, in a dissatisfaction context, customers' coping behaviors include a combination of complaining behavior (problem-based), psychological distancing, and seeking social support (emotions-based).

## 3. Research Model and Hypotheses

Figure 1 presents the research model. The model includes six variables that explain the role of dissatisfaction on customer behavior in e-commerce. Each of the hypotheses is detailed below.

### 3.1. The Influence of Dissatisfaction on Customers' Behavior

Satisfaction with purchase experiences influences customers' future purchase intentions. Similarly, dissatisfaction with purchase experiences will also affect customers' future purchase decisions [Ferguson and Johnston 2011; Sheth 1973]. Many studies have shown that dissatisfaction can cause customers to leave a seller [Athanasopoulos 2000; Keaveney & Parthasarathy 2001]. The exit-voice-loyalty (EVL) theory is mainly used in situations where customers are dissatisfied with a seller [Yang et al. 2009]. According to the EVL theory [Hirschman 1970], customers respond to dissatisfaction in one of three ways: “exit” by not purchasing again, “voice” their complaints to the sellers, or remain “loyal.” According to the EVL theory, exit by not purchasing again is the typical choice of customers who are dissatisfied with the seller. Hence, we hypothesize that:

*H1 Dissatisfaction will have a negative impact on customers' repurchase intentions.*

Negative emotions are usually the result of an unfavorable experience [Mattsson et al. 2004]. It is the unfavorable service or purchase experience caused by discrepancy between expectations and actual outcomes that leads to negative emotions such as anger and regret, [Sachez-Garcia & Curras-Perez 2011]. For these reasons, we developed the following hypothesis:

*H2 Dissatisfaction will have a positive impact on customers' negative emotions.*

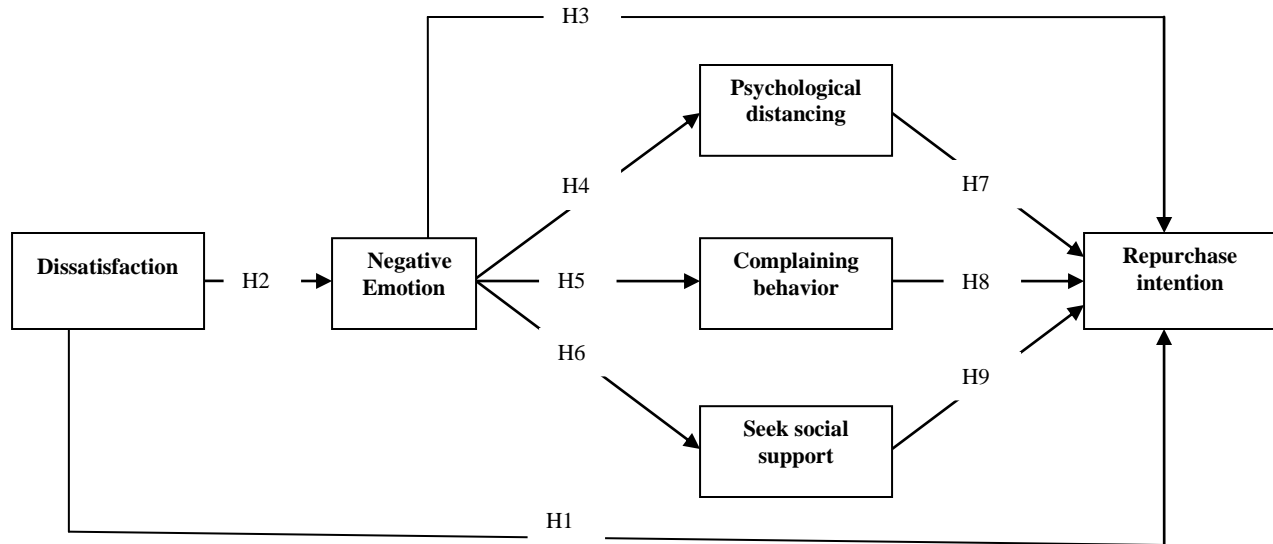


Figure 1: The Conceptual model

### 3.2. The Influence of Negative Emotion on Customers' Behaviors

Recent studies on customer emotions have shown that negative emotions experienced by customers directly influence their post-purchase behaviors [Laros & Steenkamp 2005; Mattila & Ro 2008]. Negative emotions such as anger and regret often have a positive impact on switching intentions [Sachez-Garcia & Curras-Perez 2011]. Especially, regrets are positively related to brand switching intentions [Bui et al. 2009]. In the context of service experience, negative emotional experiences are likely to have an adverse effect on establishing or maintaining a committed relationship [Tronvoll 2010]. Base on this information, we hypothesize that:

*H3 Negative emotions will have a negative impact on customers' repurchase intentions.*

Negative emotions signal a great need for coping behaviors [Lazarus 1991]. When customers encounter negative emotions, they often simultaneously engage in diverse coping behaviors [Yi & Baumgartner 2004], including problem-based coping behaviors such as complaining and emotions-based coping behaviors such as psychological distancing and seeking social support. Hence, we hypothesize that:

*H4 Negative emotions will have a positive impact on psychological distancing.*

*H5 Negative emotions will have a positive impact on complaining behavior.*

*H6 Negative emotions will have a positive impact on seeking social support.*

### 3.3. The Influence of Coping Behaviors on Repurchase Intention

In this study, customers' coping behaviors mainly include psychological distancing, complaining, and seeking social support.

Psychological distancing contributes to restoring emotional stability by directing attention away from the stressor [Beaudry & Pinsonneault 2010]. Because customers attempt to maintain emotional stability by taking their minds off the problem, typically by escaping [Yi & Baumgartner 2004], the indication is that they will likely leave the sellers. Though some customers may be dissatisfied with their online purchases, they often do not review the purchases made and they may be less likely to repurchase in the future. We therefore expect that psychological distancing reinforces the negative effect of negative emotions on repurchase intentions. For these reasons, we hypothesize that:

*H7 Psychological distancing will have a negative impact on repurchase intention.*

Dissatisfied customers might complain. Complaining behavior can be a channel for venting frustration, gaining sympathy, seeking redress, and taking revenge [Nyer 1999]. In this study, we look at complaining behaviors such as venting frustration and seeking redress. As a positive mechanism, venting can help customers "let off steam" or

“clear the air,” which can lead to restoring emotional stability [Bushman et al. 2001; Beaudry & Pinsonneault 2010]. However, this mechanism highlights overly restoring emotion, ignores the role of complaint in solving problems. We thus believe that the positive mechanism of complaining behavior is not a major influence on repurchase intentions. On a negative note, venting can reinforce anger [Bushman 2002] and usually has a negative impact on repurchase intentions. Vocal responses (such as complaining to the seller) and private responses (such as complaining to family and friends) are the two most commonly employed complaint methods [Singh 1988]. Complaining behavior often includes excessively negative reviews regarding the purchase, which exacerbates the significance of distress over the dissatisfaction, and amplifies the adverse effects of negative emotions [Brown et al. 2005]. We thus expect that complaining behavior can be linked to a negative impact on repurchase intentions. As such, we derive the following hypothesis:

*H8 Complaining behavior will have a negative impact on repurchase intention.*

Social support is often a turnaround mechanism through which the initial situation is re-evaluated and often yields a more positive result than initially expected [Lazarus & Folkman 1984; Beaudry & Pinsonneault 2010]. Social support influences customers' belief structures and behaviors by urging compliance with others' expectations and internalization of values and norms with regard to e-commerce (that is, others expecting one to tolerate the product quality; for example, taking the position that you get what you pay for) [Venkatesh et al. 2003]. We thus expect that seeking social support can have a positive impact on repurchase intentions. Based on this logic, we hypothesize that:

*H9 Seeking social support will have a positive impact on repurchase intention.*

## 4. Methodology

### 4.1. Online Survey Method

Because the study involves e-commerce customers, an online survey was used to gather data. The data were collected from Paipai.com, a Chinese C2C portal. Paipai (provided by Tencent) had the second largest C2C market share (6.1%) in China. The customer attrition rate on Paipai was 34.4%, which means that 34.4% of existing customers would have left Paipai after six months. Because Paipai had more customers (10.5% of Chinese Internet users shopped on Paipai), and customer satisfaction with Paipai was lower than that with the largest e-commerce Web site [CNNIC 2009], we chose bbs.paipai.com as the Web site for our online survey. To mirror the characteristics of overall online dissatisfaction, the sampling frame included members who shopped online and were dissatisfied with their purchases on Paipai within the last six months.

Items used in our research were adapted from the prior literature. Dissatisfaction was measured by three items adapted from Olive [1993] and Hellier [2003]. Negative emotion was measured by three items adapted from Richins [1997] and Reynolds et al. [2006]. Complaining behavior was measured by three items adapted from Bougie et al. [2003]. Seeking social support and psychological distancing were measured by items adapted from Folkman and Lazarus [1985] and Beaudry and Pinsonneault [2010]. Repurchase intention was measured by three items adapted from Parasuraman [2005] and Pavlou and Fygenon [2006]. We used seven-point bipolar semantic differential scales with agree/disagree for the measures. Table 1 outlines the questions used in this section of the survey.

### 4.2. Sample and Demographic Profiles

We developed an online questionnaire and posted the URL on Paipai's virtual community. We received 558 responses in total. Our method also recorded the time that was taken to complete the questionnaire. We removed responses from those who had no purchase dissatisfaction experience with Paipai along with those who completed the questioner in less than two minutes. (A pre-test showed that it was impossible to complete all the questions within two minutes.) As a result, we had 411 valid responses. Table 2 presents the descriptive information of the data set. About 55.0% of the subjects were male and 45.0% were female. According to the 28th Statistical Survey Report on Internet Development in China, 55.1% of Internet users in China were male and 44.9% were female [CNNIC 2011]. Therefore, our male to female ratio was similar to that of the CNNIC survey ( $\chi^2(1)=0.000, p=1.000$ ). The majority of the respondents (93.3%) were between 18 and 35 years old, and 71.4% had two or more years of college education. The monthly income for 77.7% of the subjects was below 3000 yuan. According to CNNIC, more than 90% of online shoppers in China were between 18 and 35 years old; more than 70% had two or more years of college education, and 70% had a monthly income below 3000 yuan [CNNIC 2009]. In addition, 66.7% of the subjects were employees and students, and 97% had one or more years of experience using the Internet. Based on these comparisons, our data set represented the majority of Chinese online shopping customers.

Table 1: Survey Items

Dissatisfaction (DIS) [Oliver 1993; Hellier. 2003]	
DIS 1	On the whole, I was dissatisfied with purchase in the e-shop.
DIS 2	Over all, my negative experiences outweighed my positive experiences.
DIS 3	In general, I was unhappy with the e-shop.
Negative Emotion (NE) [Richins 1997; Reynolds et al. 2006]	
NE 1	To what extent would you feel angry with your online purchase decision?
NE 2	To what level would you feel irritated with your online purchase decision?
NE 3	To what degree would you feel upset with your online purchase decision?
Complaining Behavior [Bougie et al. 2003]	
COM 1	I let the salesperson know about the problem.
COM 2	I complained to the e-shop about the product/service quality.
COM 3	I asked the salesperson to solve the problem.
Seeking social Support (SEE) [Folkman & Lazarus 1985; Beaudry & Pinsonneault 2010]	
SEE1	I sought moral support from my colleagues.
SEE2	I talked about it with my spouse or family members.
SEE3	I met with my superior to talk about my concerns.
Psychological Distancing (PSY) [Folkman & Lazarus 1985; Beaudry & Pinsonneault 2010]	
PSY1	I told myself that time would take care of it all.
PSY2	I told myself that there was nothing I could do about it.
PSY3	I tried not to worry about it.
Repurchase Intention (REP) [Parasuraman 2005; Pavlou & Fygenson 2006]	
REP1	If I could, I would like to continue using the e-shop to purchase products.
REP2	It is likely that I will continue purchasing products from the e-shop in the future.
REP3	I intend to continue purchasing products from the e-shop in the future.

#### 4.3. Data Analysis

We tested the research model using Partial Least Squares (PLS). PLS is less restrictive in sample size, sample data distribution, measurement scales, and residual distributions [Chin 1998]. PLS employs a component-based approach for estimation, and it is best suited for testing complex relationships by avoiding inadmissible solutions and factor indeterminacy [Fornell & Bookstein 1982]. We first tested the measurement model and then tested the hypotheses.

##### 4.3.1 Analysis of Reliability and Validity

Principal components factors (PCF) is often used to examine the factorial convergent validity of the scales. The Barlett's Test of Sphericity generated a Kaiser-Meyer-Olkin (KMO) statistic of 0.850, which was significant at the 0.01 level, indicating that it was suitable to use the principal components factors analysis on the data set. We extracted eight factors with Eigenvalues above 1, which explained 82.11% of the total variance. Table 3 displays the factor loadings of the items after varimax rotation. The loading of items on the expected factors were higher than 0.5, while the cross-loadings were lower than 0.5. Thus, convergent validity and discriminant validity were established.

Table 4 summarizes additional validity measures of the scales. The standard loading of items was mostly above 0.7. The average variance extracted (AVE) for each construct was above 0.5, which means that the scales had a good

convergent validity [Bagozzi&Yi 1988]. Composite reliabilities (CRs) were used to evaluate the internal consistency of the measurement model. As shown in Table 4, CRS were all above 0.8, indicating that the scales had good reliability. In addition, Cronbach's alpha was above 0.8, indicating that the scales were reliable [Nunnally 1967].

In Table 5, we show the correlation matrix and the square roots of the AVEs. All the square roots of the AVEs were larger than their corresponding correlation coefficients with other factors. This indicated that the scales had good discriminant validity.

Table 2: Sample Demographics (N=411)

Measure	Item	Count	%
Gender	Male	226	55.0
	Female	185	45.0
Age	>18 and ≤24	223	54.2
	>25 and ≤30	120	29.1
	>31 and ≤35	41	10.0
	>36 and ≤40	27	6.7
Education	High school or below	118	28.6
	Two-year college	160	39.0
	Four-year college	113	27.4
	Graduate school or above	20	5.0
Monthly income (RMB)	<1000	88	21.5
	>1000 and ≤3000	231	56.2
	>3000 and ≤5000	58	14.1
	>5000	34	8.2
Years of Internet Use	≤1 year	12	3.0
	>1 year and ≤3 years	62	15.2
	>3 years and ≤5 years	93	22.7
	>5 years	244	59.1
Occupation	Corporate	183	44.6
	Government	54	13.2
	Education	43	10.5
	Student	91	22.1
	others	40	9.6

#### 4.3.2 Hypothesis Testing

We tested our research model and summarize the results in Figure 2. Only the path between complaining behavior and repurchase intention was insignificant. Thus, H8 was not supported. The remaining hypotheses were all supported, including H1, H2, H3, H4, H5, H6, H7, and H9. The proportions of variances explained were 12.0% for psychological distancing, 12.4% for complaining behavior, 15.3% for seeking social support, and 25.6% for repurchase intentions.

Given that psychological distancing, complaining behavior, and seeking social support sit between two variables (negative emotion and repurchase intention), and negative emotion sits between dissatisfaction and repurchase intention, their mediating effects were also examined. The mediating effect tests were conducted by following the procedures proposed by Baron and Kenny [1986]. The results are presented in Table 6. As shown, the relationship between negative emotion and repurchase intention is partially mediated by psychological distancing. The relationship between dissatisfaction and repurchase intention is partially mediated by negative emotion. Complaining behavior and seeking social support do not carry the indirect influence of dissatisfaction on repurchase.

## 5. Discussion

The present study examined two main research questions: how would online customers respond to dissatisfaction based on their emotion-based perspectives, and what influence does coping behavior have on online customer repurchase decisions. Based on these questions, we next discuss the research model and main findings.

### 5.1 The Influence of Dissatisfaction on Negative Emotions and Repurchase Intention

We have found that dissatisfaction has significant direct and indirect influences on repurchase intentions. At the same time, dissatisfaction has a strong influence on negative emotions.

Our results indicate that dissatisfaction will directly lead to online customers leaving a supplier as found in previous studies [Lam et al. 2004]. More importantly, as indicated by the mediating effects in Table 6, the indirect

influence of dissatisfaction via negative emotions is significant. This suggests that customers may often be affected by negative emotions when they make repurchase decisions. The findings highlight the importance of negative emotions in e-commerce. Though several studies posit that dissatisfaction has a direct influence on post-purchase behavior [Keaveney and Parthasarathy 2001; Zeelenberg and Pieters 2004], they have ignored the mediation of negative emotions. We advise that the mediation of negative emotions should be emphasized in e-commerce.

Table 3: Principal Components Factors Analysis with Varimax Rotation

Factors	1	2	3	4	5	6
DIS1	-0.188	0.173	0.037	<b>0.839</b>	0.148	0.171
DIS2	-0.213	0.168	0.079	<b>0.833</b>	0.125	0.084
DIS3	-0.183	0.151	0.054	<b>0.852</b>	0.121	-0.009
NE1	-0.163	<b>0.869</b>	0.161	0.177	0.129	0.182
NE2	-0.123	<b>0.882</b>	0.104	0.211	0.098	0.128
NE3	-0.074	<b>0.860</b>	0.178	0.131	0.175	0.137
COM1	0.030	0.089	0.189	0.047	0.093	<b>0.852</b>
COM2	-0.088	0.233	0.146	0.166	0.099	<b>0.748</b>
COM3	-0.021	0.098	0.246	0.018	0.081	<b>0.829</b>
SEE1	0.006	0.129	<b>0.834</b>	0.065	0.129	0.237
SEE2	-0.001	0.125	<b>0.884</b>	0.030	0.119	0.209
SEE3	0.016	0.150	<b>0.890</b>	0.071	0.064	0.149
PSY1	-0.106	0.110	0.091	0.143	<b>0.865</b>	0.066
PSY2	-0.171	0.148	0.107	0.118	<b>0.810</b>	0.094
PSY3	-0.128	0.102	0.103	0.107	<b>0.852</b>	0.113
REP1	<b>0.905</b>	-0.120	-0.002	-0.203	-0.151	0.013
REP2	<b>0.920</b>	-0.107	0.016	-0.178	-0.119	-0.037
REP3	<b>0.908</b>	-0.109	0.008	-0.196	-0.156	-0.049
Eigenvalues	6.168	3.014	1.639	1.430	1.288	1.240
Percentage of variance	15.096	14.241	13.869	13.405	13.115	12.381
Cumulative	15.096	29.337	43.026	56.611	69.726	82.107

## 5.2 The Influence of Negative Emotion on Coping Behaviors and Repurchase Intention

Our study shows that negative emotion has significant direct and indirect influences on the repurchase intention. At the same time, negative emotion has significant direct influences on psychological distancing, complaining behavior, and seeking social support.

With regard to the direct influence of negative emotion on repurchase intentions, the study shows that the extent of negative emotion is inversely proportional to repurchase intention. This result is consistent with our hypothesis and results from previous studies [Laros & Steenkamp 2005; Mattila & Ro 2008].

Regarding indirect influences, our study shows that customers will deal with negative emotions by psychological distancing, complaining behavior, and seeking social support. Few studies have analyzed the specific coping behaviors triggered by negative emotions in e-commerce. This result also indicates that it is inadequate when companies only pay attention to customers' complaining behaviors [Stewart 1998]. Psychological distancing and seeking social support are also very important coping behaviors. Specifically, psychological distancing is a customer's avoidance behavior, a behavior that is difficult to be perceived. Thus psychological distancing should be attached more importance [Beaudry & Pinsonneault 2010].



### 5.3 The Influence of Coping Behaviors on Repurchase Intention

Psychological distancing and seeking social support have significant influences on repurchase intention. However, complaining behavior has an insignificant influence on repurchase intentions.

With regards to psychological distancing and seeking social support, our results are consistent with those from previous research [Beaudry & Pinsonneault 2010]. Psychological distancing reduces repurchase intention, but seeking social support often increases repurchase intention. The important aspect noted is that seeking social support can offset some of the negative effects of negative emotions on repurchase intention.

One plausible explanation on why complaining behavior has an insignificant influence on repurchase intentions is that although customers may not be completely satisfied with some online purchases, their repurchase decisions will not be affected by their complaining behavior if elements of the dissatisfaction are not related to a core transaction failure. This result also indicates that complaining behavior is not always harmful, which is consistent with results from a previous study [Levesque & McDougall 1996]. Another plausible explanation is that complaining behavior can have an impact on repurchase intentions depending on the effectiveness of complaint handling [Lariviere & Van den Poel 2005]. This indicates that further research is needed on the impact of complaining behavior on customer repurchase decisions in e-commerce.

Table 4: Results of Confirmatory Factor Analysis

Factor	Item	Standard loading	t-Value	AVE	CR	Cronbach's alpha
Dissatisfaction	DIS 1	0.9040	27.2518	0.800	0.923	0.875
	DIS 2	0.9002	26.7732			
	DIS 3	0.8794	24.4883			
Negative emotion	NE 1	0.9466	40.6486	0.865	0.951	0.922
	NE 2	0.9292	33.1507			
	NE 3	0.9146	36.7668			
Complaining Behavior	COM1	0.8357	8.4490	0.723	0.887	0.815
	COM2	0.8767	10.7954			
	COM3	0.8374	9.4186			
Seeking social Support	SEE 1	0.8943	15.4155	0.828	0.935	0.896
	SEE 2	0.9212	14.8129			
	SEE 3	0.9145	12.9871			
Psychological Distancing	PSY 1	0.8856	19.3881	0.776	0.912	0.855
	PSY 2	0.8777	13.6760			
	PSY 3	0.8786	16.9833			
Repurchase Intention	REP 1	0.9480	36.5431	0.901	0.965	0.945
	REP 2	0.9483	40.2897			
	REP 3	0.9510	34.4330			

Table 5: Correlation matrix and Square roots of AVEs

	DIS	NE	PSY	SEE	COM	REP
DIS	0.894					
NE	0.422	0.939				
PSY	0.347	0.347	0.881			
SEE	0.180	0.352	0.268	0.910		
COM	0.255	0.391	0.272	0.460	0.850	
REP	-0.446	-0.298	-0.338	-0.037	-0.121	0.949

Table 6. The Results of Mediating Effects ( $p^* < 0.05, p^{**} < 0.01$ )

IV	M	DV	IV→DV	IV→M	IV+M→DV	
					IV	M
DIS	NE	REP	-0.446**	0.424**	-0.388**	-0.135**
NE	PSY	REP	-0.298**	0.347**	-0.205**	-0.267**
NE	SEE	REP	-0.298**	0.353**	-0.325**	0.077
NE	COM	REP	-0.298**	0.389**	-0.296**	-0.005

The overall results indicate that customers have an inherent need to maintain emotional stability and a desire to reduce the impact of negative emotions before they make repurchase decisions. The results are consistent with related research on consumer psychology [Folkman & Lazarus 1985; Folkman et al. 1986] and the effects of emotions on IT acceptance [Beaudry & Pinsonneault 2010]. Specifically, negative emotion originating in dissatisfaction is an important factor that affects customers’ repurchase intentions.

Recognizing the direct relationship between negative emotions and repurchase intentions is important. The influences of psychological distancing and seeking social support on repurchase decisions are interesting. One creates an amplifying path; psychological distancing reinforces the negative effects of negative emotions. The other offers an attenuating path; seeking social support can offset some of the negative effects of negative emotions.

## 6. Implications

### 6.1. Theoretical Implications

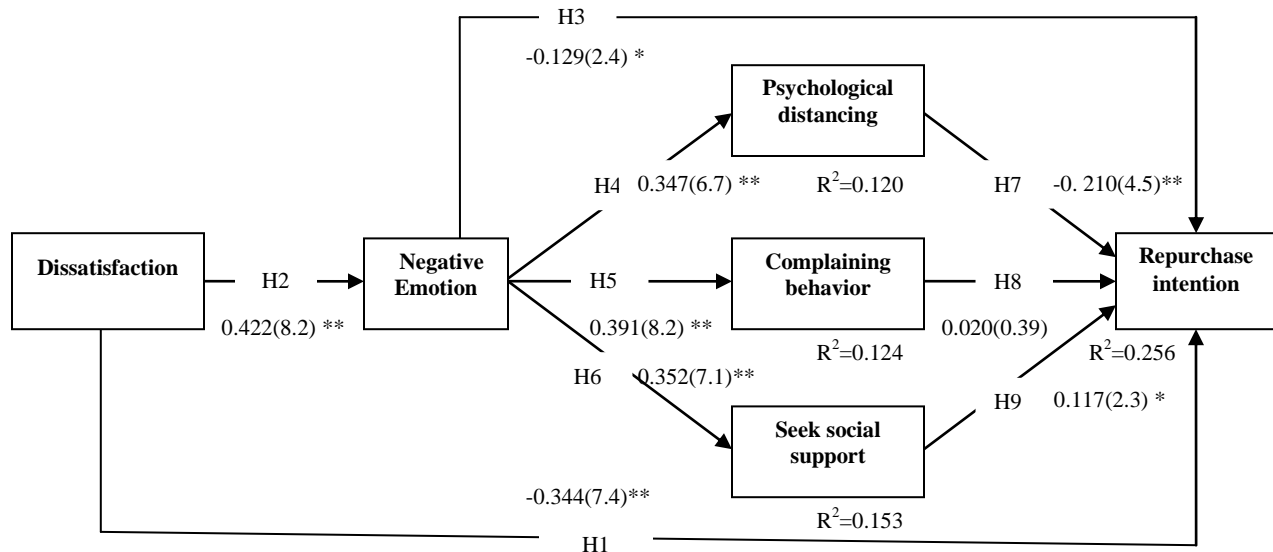


Figure 2: Model Testing Results ( $p^* < 0.05, p^{**} < 0.01$ )

This study makes three contributions to theory. First, by studying customers who have dealt with dissatisfaction from an emotion-based perspective, our study complements existing research regarding dissatisfaction from a problem-based perspective and helps explain dissatisfied customers’ post-purchase behaviors. This paper provides an integrated understanding of dissatisfaction and negative emotions, and their relationships to repurchase intentions and various coping behaviors. This research shows that negative emotions have important mediation implications for the relationship between dissatisfaction and repurchase intentions. It suggests that considering negative emotions can be instrumental in understanding dissatisfied customers’ post-purchase behaviors in e-commerce.

Next, the research helps to predict and explain how negative emotions directly and indirectly relate to repurchase intentions via coping behaviors. Different coping behaviors have different influences on repurchase intentions. This paper opens a new avenue for further research on dealing with customers’ negative emotions via coping behavior. The study has significant implications for both research and practice.

Finally, the study reveals that customers deal with negative emotions by simultaneously engaging in diverse coping behaviors (emotion-based and problem-based), which is consistent with results from a previous study [Yi & Baumgartner 2004]. Though customers will simultaneously engage in diverse coping behaviors, the effects of emotion-based coping behavior and problem-based coping behavior on repurchase intention are different. In this study, the research shows that emotion-based coping behavior significantly affects repurchase intention, while problem-base coping behavior does not.

#### 6.2. Practical implications

The research can help online sellers deal with negative emotions. This paper posits that online sellers can reduce the effects of negative emotion by providing a channel for seeking social support. In particular, online shops should provide links to popular social networking sites, instant messaging, and micro-blogs so that their customers have a convenient channel for seeking social support. In addition, online sellers can also try to prevent customers from psychologically distancing themselves by inviting them to participate in reviews of their online purchases and encouraging them to voice their dissatisfactions with their online purchases. For instance, as online sellers usually successfully retain and recover customers by handling dissatisfaction correctly and timely, dissatisfied customers may become satisfied at the end. If customers share these positive experiences in Bulletin Board Systems (BBS) on e-shops, dissatisfied shoppers may be encouraged to voice their dissatisfaction. Thus offering customers the opportunity to share their positive experiences is in favor of preventing dissatisfied shoppers from psychological distancing.

Finally, we have shown that complaining behavior is not always bad for repurchase intentions. Online sellers should modestly accept complaints and try to improve their products and service quality. Learning to genuinely accept customer feedback and implementing changes for the better can greatly contribute to a stronger sense of emotional stability for customers. Such efforts can enhance repurchase intentions.

### 7. Limitations and Future Research

The study has two main limitations. First, we did not divide negative emotions into discrete constructs such as anger, anxiety, and regret. Our study considered all discrete negative emotions as a single construct. We analyzed the relationships among dissatisfaction, negative emotions, coping behaviors, and repurchase intentions. However, different discrete negative emotions can cause different coping behaviors. Similarly, different coping behaviors will have different effects on repurchase intentions. More studies are needed to understand the influence of discrete negative emotions on coping behavior.

A second limitation lies in the fact that, although they are essential, the coping behaviors studied—psychological distancing, complaining behavior, and seeking social support—are insufficient to examine all customer behaviors triggered by negative emotions. Therefore, it is important for future research to investigate how other coping behaviors such as negative word-of-mouth and switching intentions [Sachez-Garcia & Curras-Perez 2011] affect repurchase intentions in e-commerce.

This research suggests that a comprehensive examination into other relevant aspects is warranted. Future study should examine the interplay of all emotions and coping behaviors as they relate to post-purchase decisions in e-commerce. Contextual factors such as social norms, cultural contexts [Van Slyke et al. 2010], and customer characteristics [Cha 2011] may influence the relationships between emotions and coping behaviors.

The study provides evidence on the effects of negative emotions on understanding customers' post-purchase behaviors in e-commerce. The paper provides some insights regarding the relationships between negative emotions, a restricted set of coping behaviors, and customers' repurchase intentions. We hope the results will stimulate further studies on emotion and customers' post-purchase behaviors in e-commerce.

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