

Summer 6-1-2014

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## Recommended Citation

Liu, Xinyan; Li, Eric; and Li, Qian, "The Impact of Online Store Characteristics on Service Recovery Satisfaction in C2C Online Markets" (2014). *WHICEB 2014 Proceedings*. 93.

<http://aisel.aisnet.org/whiceb2014/93>

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# The Impact of Online Store Characteristics on Service Recovery Satisfaction in C2C Online Markets

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**Abstract:** In this study, the authors examine the effects of C2C online store characteristics on customer satisfaction. Drawing on the equity theory, they investigate the way retailer reputation and price impact the relationship between customers' perceptions of justice and the satisfaction towards service recovery. To test the study hypotheses, two  $2 \times 2 \times 2$  between-subjects factorial experiments were conducted, and in which the retailer reputation and price have two levels as low and high, respectively. The results show the role online store characteristics play as moderators of different service recovery strategies on service recovery satisfaction. The authors conclude and discuss their findings and implications for both marketing theory and practice.

Key words: Service failure, Equity theory, Retailer reputation, Price, Service recovery satisfaction

## 1. INTRODUCTION

In recent years, C2C e-commerce is booming and has become a new spotlight in economic growth. However, the fakes and false promotion activity are hard to eliminate completely, continuing striking the customers' online shopping enthusiastic. The statistics of China Electronic Commerce Research Center show that in 2012, online shopping complaints reached a number of 51,854, accounting for 55.4% of the total e-commerce complaints.

Service failure may lead to customer complaints and negative word-of-mouth. Facing the numerous service failure problems, how to build good service recovery needs to be paid attention to. From the point of service recovery research results domestically and worldwide, the majority of scholars adopt equity theory to study on service recovery. Scholars have discussed the definition and classification of service failure<sup>[1]</sup>, the service recovery efforts<sup>[2]</sup>, the influence of perceptions of justice on customer satisfaction and behavior<sup>[3]</sup>, etc. In addition, scholars have refined four major categories of external factors affecting service recovery effect in different situations. These are: environmental factors<sup>[4]</sup>, consumer factors<sup>[5]</sup>, relationship factors<sup>[6]</sup> and organizational factors<sup>[7]</sup>.

However, in previous studies, most scholars handle the scope of their researches in traditional offline service industries such as retailing industry, catering industry and aircraft industry. The study in online retail industry, especially C2C online retail industry is rather absent. In fact, in C2C online markets, perceptions of uncertainty will force customers to use online store characteristics (such as price, reputation, brand, service assurance, etc) as cues for product and service quality as well as the basis of purchase decision<sup>[8]</sup>.

Therefore, this study provides a framework of considerations on the way retailer reputation and price influence the relationship between customers' perceptions of justice and customer satisfaction, and provide practical suggestions for the online retailer service.

## 2. LITERATURE REVIEW AND HYPOTHESES

### 2.1 Equity theory

Tax and Brown found that customers evaluated retailer's service recovery through fairness, and customers' perceptions of fairness determined his satisfaction<sup>[9]</sup>. Three dimensions of perceptions of justice have been identified<sup>[10]</sup>: distributive justice, which involves resource allocation and the perceived outcome of exchange<sup>[11]</sup>;

procedural justice, which involves the means by which decisions are made and conflicts are resolved<sup>[12]</sup>; and interactional justice, which involves the manner in which information is exchanged and outcomes are communicated<sup>[13]</sup>.

When service failure occurs, customers often want to receive compensation such as discount, free return and refund for unfair result. In addition, interactional justice plays a critical role in customer decision making process. Explanations, the communication between customers and service providers can help customers reconstruct self-esteem, meeting customers' psychological needs and enhancing the evaluation of service recovery<sup>[14]</sup>. However, in C2C online markets, procedural justice has little impact on customer satisfaction<sup>[15]</sup>. This is because in traditional offline industries, the business process is quite familiar to consumers and enterprises can solve the problems for customers face to face, thus customers can track the process of resolving problems. As online recovery process is less transparent than offline, it is hard for customers to evaluation service recovery performance through perceived procedural justice. The result of the pretest also shows that the main effect of perceived procedural justice on recovery satisfaction is not significant ( $p > 0.05$ ).

Therefore, this study takes no account of the dimension “procedural justice” and add two online store characteristics to study whether they will affect the customer satisfaction toward service recovery.

## **2.2 Store characteristics**

Store characteristics, including store location, product price, product display, building construction, store logo, advertising, sales promotion and so on, will affect customers' choice. Although previous scholars identified online retailer characteristic dimension differently, there is a common understanding that products, price, safety, reputation, service, store design and website design these seven characteristics of the seven dimensions are the key factors determining customers' perceptions of the of the store image<sup>[16]</sup>.

Different dimensions can be divided into high-scope cues and low-scope cues<sup>[17]</sup>. To accumulate high-scope cues needs a long period of time and it will not change in a short time. Changing high-scope cues needs time and cost, thus the high-scope cue such as retailer reputation have high reliability and stability. On the contrary, low-scope cues can be changed in a short period. Therefore, low-scope cues such as product price may transmit false signals.

Based on the previous researches, this study use the online retailer reputation and price to represent store characteristics as retailer reputation and price are the most important factors influencing customers' perceptions of value in online environment. They also represent the perceived high-scope and low-scope cues respectively in C2C online shopping.

### **2.2.1 Retailer reputation**

Retailer reputation is the resource accumulated by enterprise business activities within a certain period of time, helping customers to form certain cognition of enterprise information. In online markets, on the one hand, customers will see retailer reputation as a reliable cue. Good reputation makes customers form higher expectation for products and services. On the other hand, customers have realized that retailer reputation is a precious resource which can only achieved by a difficult and time consuming process. Therefore, customers believe that retailers who have high reputation are more willing to maintain their reputation<sup>[18]</sup>. From the two above-mentioned points of view, when service failure occurs, customers are more likely to require high reputation online retailer to take effective recovery measures and treat customers seriously. The service failure occurring in high reputation online store makes consumers much more unsatisfied. Based on the analysis above, this study puts forward following hypothesis:

H1a: The relationship between perceptions of distributive justice and customer satisfaction towards service recovery is more positive when retailer reputation is higher than when retailer reputation is lower.

H1b: The relationship between perceptions of interactional justice and customer satisfaction towards

service recovery is more positive when retailer reputation is higher than when retailer reputation is lower.

H2: Online retailer reputation acts as a moderator of the relationship of different service recovery strategies on customer satisfaction .

**2.2.2 Price**

Price is one of the most important dimensions of store characteristics. From an economic perspective, the price is the external manifestation of commodity value, stimulating the customer value perception in trading. There are large numbers of online stores and different stores set different prices for the same product. Some prices are higher or lower than others.

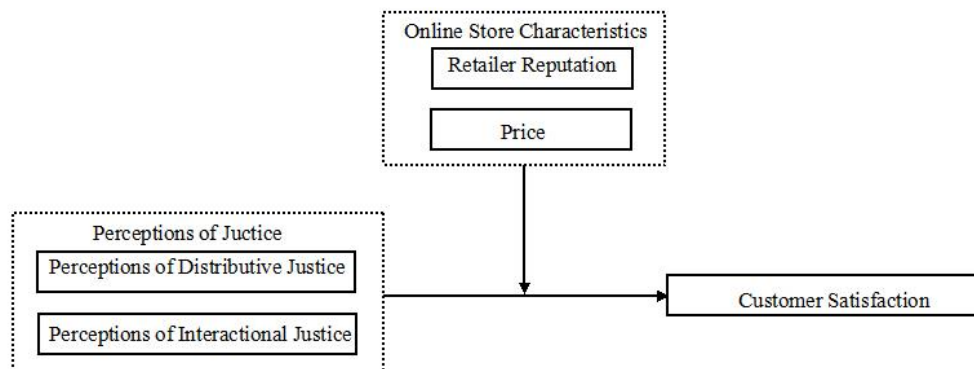
Under the condition of information asymmetry between sellers and buyers in the C2C market, customers tend to judge from the existing information including the price factor<sup>[19]</sup>. Large numbers of studies have shown that price and customers’ perceptions of value are positively correlated. For the same product, usually, as the price increases, the customers’ perceptions of product quality will also increase<sup>[20]</sup>. Customers who choose to buy the same product in higher price are more focused on the product quality while the customers who buy the same product in lower price see more importance in economic result.

Price will also affect customers' perceptions of psychological risks. When service failure occurs, customers may feel dissatisfaction, remorse and anxiety<sup>[21][22]</sup>. This psychological risk increases as the customers pay a higher price. Therefore, customers who pay a higher price for the same product value the psychological recovery more. When the online retailer’s response is in poor attitude, the satisfaction of customers who pay a higher price will become even lower.

H3a: The relationship between perceptions of distributive justice and customer satisfaction towards service recovery is more positive when price is lower than when price is higher.

H3a: The relationship between perceptions of interactional justice and customer satisfaction towards service recovery is more positive when price is higher than when price is lower.

H4: Price acts as a moderator of the relationship of different service recovery strategies on customer satisfaction .



**Figure 1. The theoretical model**

**3. METHODS**

**3.1 Study 1**

Study 1 was a 2×2×2 between-subjects factorial experiment. Broken U-disks were chosen as the product category for the study because of the relevance of this the product to the students participants. While designing the service recovery situation, in order to ensure the authenticity of the experiment, this study selected 35 postgraduates to determine the degree of different performance of distributive justice and interactional justice. According to the results of the pretest, this study ultimately chose free return, negotiations or apologies as distributive justice and interactional justice respectively. To control the online retailer reputation, stores who

have sold at least one U-disk in nearly thirty days were collected and the average reputation of the stores were 8. During the data processing, we compared reputation of certain retailer with the average and put the stores whose reputation is below the average into low reputation group and the rest into high reputation group. Again we averaged the two groups respectively, finding that the average reputation of the low-reputation group was 4 while the average reputation of the high-reputation group was 12.

Manipulation check included perceived distributive justice ( a three-item scale developed by Smith, Bolton & Wanger [1999] )<sup>[23]</sup>, perceived interactional justice( a four-item scale developed by Maxham & Netemyer [2003] )<sup>[24]</sup>and perceived retailer reputation (a three-item scale developed by Ranganathana & Ganapathy [2002] )<sup>[25]</sup>. To evaluate customer service recovery satisfaction, we used a three-point scale developed by Bitner & Hubbert<sup>[26]</sup>. All the scales are seven-point (“1” represents “strongly disagree”, “7” represents “strongly agree”).

217 college students participated in the experiment. Participants were randomly assigned to the experimental groups and each group had its own simulative shopping environment. Eight groups browsed the product description page of different reputation online in 3 minutes under the arrangement of the researchers. After browsing the webpage, subjects were asked to complete a questionnaire on the web. 217 questionnaires were collected. Eliminating invalid questionnaires, 206 questionnaires were available. The data showed the proportion of gender is 68 men(33%) and 138 women (67%). Chi-square test results showed that there was no significant difference between the network shopping experience in men and women ( $P = 0.000$ ).The Cronbach alpha coefficient of retailer reputation, distributive justice, interactional justice and service recovery satisfaction were 0.893, 0.961, 0.919, 0.945 respectively, showing a very good reliability of the scale.

Results of the Test of Homogeneity of Variance and T test showed that the variance in control groups were homogeneous and difference between control groups were significant. Differences between perceptions of online retailer reputation (Mean high reputation= 5.2381, Mean low reputation = 3.3153), perceptions of distributive justice (Mean high distributive justice = 4.8617, Mean low distributive justice = 2.7203) and perceptions of interaction (Mean high interactional justice = 5.1705, Mean low interactional justice = 2.7412) were significant( $p < 0.01$ ). Two main effects for experimental variables were significant: perceptions of distributive justice ( $F(1, 204)=82.724, P < 0.01$ ) and perceptions of interactional justice ( $F(1, 204)=33.247, P < 0.01$ ). The homogeneity test for variance showed that each group had homogeneous variance (Levene Statistic = 0.442,  $p = 0.723 > 0.05$ ) so that multiple ANOVA and multiple comparisons could be conducted .

As H1b proposed, there was a significant interaction between perceptions of interactional justice and reputation ( $F(1, 204)=6.482, p < 0.05$ ).Recovery strategies based on interactional justice increased satisfaction by 1.3149 points for the high reputation store but only by 0.4864 for the low reputation store. On the contrary, interaction between perceptions of distributive justice and reputation was not significant ( $F(1, 204)=0.008, p=0.929$ ). Retailer reputation also moderated the impact of different recovery strategies on customer satisfaction significantly ( $F(3,204)= 2.717, p < 0.05$ ). Therefore H1b and H2 were supported.

**Table 1. Tests of Between-Subjects Effects**

Source	df	Mean Square	F	Sig.
Perceptions of distributive justice	1	108.480	82.724	.000
Perceptions of interactional justice	1	43.598	33.247	.000
Retailer Reputation	1	2.604	2.381	.124
Perceptions of distributive justice × Retailer Reputation	1	.011	.008	.929
Perceptions of interactional justice × Retailer Reputation	1	8.500	6.482	.012

a. R Squared = .380 (Adjusted R Squared = .360)

Furthermore, the result of multiple comparison analysis showed that for the online retailers of high reputation, Strategy A (high distributive justice with high interactional justice) achieved the highest satisfaction (Mean = 5.5800). The difference between Strategy B (Mean = 3.7986) and Strategy C (Mean = 3.7041) was not significant. For the online retailers of low reputation, four kinds of service recovery strategies achieved different customer satisfaction .

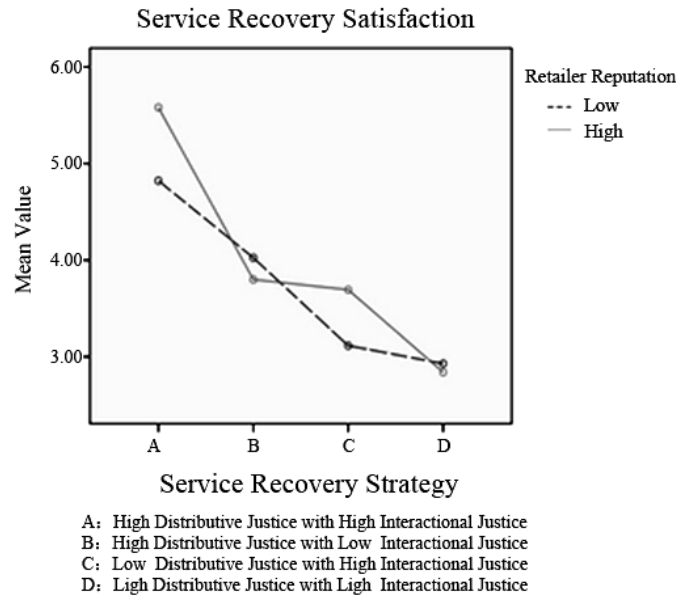


Figure 2. The impact of retailer reputation on the effects of different recovery strategies

Through the experiment, the researchers found that online retailer reputation significantly moderated the effects of service recovery strategy on customer satisfaction . For online retailers of high reputation , strategies based on perceived distributive justice and interactional justice had the same effect. But when customers chose low reputation online retailers, they weigh more of the compensation of the economic outcome. Customers would focus on the interaction only when they had already got economic recovery. If the perceived distributive justice was low, any recovery strategies based on interactional justice were useless.

### 3.2 Study 2

Also, scenario method was used to test the hypotheses. On designing the online retailer price, the authors selected stores who have sold at least one U-disk in the experiment above in nearly thirty days and calculated that the average price is 78 yuan. Then the authors took the first quartile price 65 yuan of the U-disk as a low price while the third quartile price 89 yuan as a high price .Service failure situation, scales of perceived justice and customer service recovery satisfaction followed the study 1.While measuring the customers perceived price , we used Bell’s (1999) three-item scale<sup>[27]</sup>.

181 college students participated in Study 2. Experiment manipulation is similar to Study 1. 170 of 181 questionnaires were available. The data showed the proportion of gender is 42 men(25%) and 128 women (75%). There was no significant difference between the network shopping experience in men and women (P = 0.000 < 0.05). The Cronbach alpha coefficient of retailer reputation, distributive justice, interactional justice and service recovery satisfaction were 0.855, 0.930 ,0.961 and 0.924 respectively.

Differences between perceptions of price (Mean high price = 5.1867 , Mean low price = 3.3313, perceptions of distributive justice (Mean high distributive justice = 4.9438, Mean low distributive justice = 2.6362), perceptions of interactional justice (Mean high interactional justice = 5.4077, Mean low interactional justice = 2.5180) were significant (p<0.05). Two main effects for experimental variables were significant : perceptions of distributive justice (F(1,

168)=132.201,  $P<0.01$ ) and perceptions of interactional justice ( $F(1, 168)=90.920, P<0.01$ ).

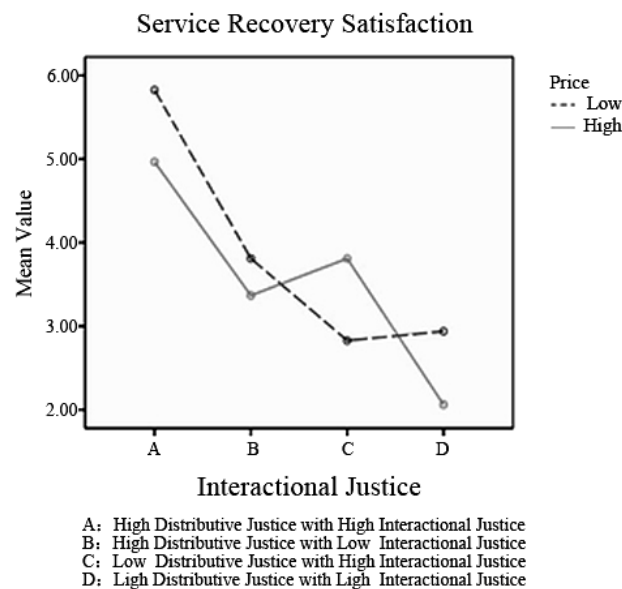
As H3a and H3b proposed, there was a significant interaction between perceptions of distributive justice and price ( $F(1, 168)=6.541, p<0.05$ ) as well as perceptions of interactional justice and price ( $F(1, 168)=6.839, p<0.05$ ). Recovery methods based on distributive justice increased satisfaction only by 1.2153 for the retailers of high price but by 1.9172 points for the low price. Methods based on interactional justice increased satisfaction only by 0.9387 for the retailers of low price but by 1.6600 points for the high price. Price also moderated the impact of different recovery strategies on service recovery satisfaction significantly ( $F(3, 168)= 7.768, p<0.05$ ). Therefore H3a, H3b and H4 were all supported.

**Table 2. Tests of Between-Subjects Effects**

Source	df	Mean Square	F	Sig.
Perceptions of distributive justice	1	139.018	132.201	.000
Perceptions of interactional justice	1	95.609	90.920	.000
Price	1	4.977	1.733	.061
Perceptions of distributive justice $\times$ Price	1	6.878	6.541	.011
Perceptions of interactional justice $\times$ Price	1	7.191	6.839	.010

a. R Squared = .555 (Adjusted R Squared = .541)

The result of multiple comparison analysis showed that for the online retailers of high price, Strategy A (high distributive justice with high interactional justice) achieved highest satisfaction (Mean = 4.9659). The results Strategy B (Mean = 3.3672) and Strategy C (Mean = 3.8093) showed no significant difference; For the online retailers of low price, the difference between Strategy C (Mean = 2.8274) and Strategy D (Mean = 2.9381) was not significant ( $p=0.704>0.05$ ).



**Figure 3. The impact of price on different recovery strategies**

Results of Study 2 showed that online retailer price significantly moderated the effects of different service recovery strategies on customer recovery satisfaction. For the online retailers whose prices are higher than others, customer's perceptions of distributive justice and interactional justice are of the same importance. For the online retailers whose prices are lower than others, perceived distributive justice is more important. If the

customers' perceptions of distributive justice is low, any recovery strategies based on interactional justice cannot effectively improve customer satisfaction.

#### 4 MANAGEMENT IMPLICATIONS

The results show that online retailer reputation and price will affect the customer satisfaction of service recovery. For online retailers of high reputation, communications with customers can achieve good service recovery satisfaction. Therefore, when service failure occurs, the high reputation online retailers can use telephone, SMS, E-mail and other tools to apologize to customers, providing a harmonious trading atmosphere and humanistic care. In this way, customer dissatisfaction can be eliminated on a large scale. For the online retailers of low reputation, customers' willingness to maintain trading relationship is low, so when service failure occurs, first and foremost, make up for customers' economic losses. Only by apologizing and explaining cannot hold customers. Nothing but reasonable economics compensation and a heartfelt apology can achieve better results and restore the confidence of the customers.

Retailers who set higher price should put emphasis on both economic and psychological recovery while retailers who set lower price should, at first, make customers feel distributive justice by methods such as free return and refund.

#### 5 LIMINATIONS AND FUTURE DIRECTIONS

Many variables can represent the online store characteristics but this research only choose retailer reputation and price as the moderate variables. Although college students belong to the most active groups of Chinese netizens, their income is usually below 2000 yuan per month, much less than the young white-collar workers. Future study may expand samples to such as white-collar works, enterprise staff and government staff. In addition, future study may choose other online store characteristics, such as store decoration and service guarantees, to enrich the existing research conclusion. At the same time, whether product characteristics, such as the function, appearance, packing and so on will affect customer satisfaction towards service recovery still need further study.

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