The Effects of Service Recovery Justice and Perceived Switching Costs on Customer Loyalty in E-tailing

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Abstract

Based on the existing theoretical results, a model explaining the relationship of perceived justice, postrecovery satisfaction, perceived switching costs and online customer loyalty is established, by which a series of research hypotheses are proposed. Then a questionnaire is conducted with scenario simulation method and hypotheses are empirically testified by the use of Partial Least Squares (PLS). The results indicate distributive justice, postrecovery satisfaction and perceived switching costs have directly positive influences on customer loyalty, while procedural justice and interactional justice have indirect effects on customer loyalty through postrecovery satisfaction, and that perceived switching costs are found not to moderate the link between postrecovery satisfaction and customer loyalty significantly. These conclusions have some managerial implications to online retailers.

Key Words: e-tailing; perceived justice; postrecovery satisfaction; perceived switching costs; customer loyalty

Introduction

B2C electronic commerce has fundamentally changed the way of traditional retailing. The potential of this new business mode and enormous profit space keeps attracting more and more organization and individuals involved in online retailing. As a result, competition is increasingly intensive in this new field. Many online retailers have already realized that to be competitive in online retailing, customer loyalty is critical. However, because of the unique service characteristics of online retailing, like the shipping delay, the outage of server during checkout, etc., service incidents cannot be completely avoided. As one of the major challenge in gaining customer loyalty, service incidents could lead to customer attrition. Thus, how to take effective
service recovery measures to regain customer loyalty is important to change an unsatisfactory customer into a satisfactory customer and increase customer retention rate. Because of above reason, service incidents and recovery became an important research topic recently in academic field.

Though there are existing studies on service incidents and recovery in online retailing, most research is on the classification of service incidents and recovery [1, 2]. For the research on customer loyalty, the focus is on perceived quality, value, trust and the correlation between service satisfaction and loyalty [3, 4]. Few study explores the mechanism of customer loyalty restoration when service recovery. Previous research indicated perceived justice is important for customer satisfaction after service recovery [5]. Increasing switching cost is also an important measure for companies to increase customer loyalty [6]. Switching cost has important mediation effect on customer satisfaction and loyalty [7]. However, we need to know if similar effect exists between customer satisfaction after service recovery and loyalty.

In this research, we explored the perceived justice, customer postrecovery satisfaction, perceived switching cost and customer loyalty after service recovery in online retailing. We want to verify the mediating effect of switching cost on customer postrecovery satisfaction and customer loyalty. We hope this research provide more insights about service incidents and recovery in online retailing as well as providing useful implications for online retailing practitioners.

**Literature review and hypothesis**

**Service incident and recovery in online retailing**
Service incident happens when the service provider cannot satisfy customer needs or the service provided is below customer expectations [8]. Service recovery is defined as the responses and actions service provider adopted to make a remedy of the service incident so as to regain customer loyalty [9]. With the popularity of online retailing, many researchers studied service incidents and recoveries in online retailing context. For example, Forbes [1] classified two major and ten sub-categories of service incidents in online retailing as well as eleven different types of service recoveries. Kuo et al. [2] proposed 3 major and 18 sub-categories of service incidents in online auction as well as 10 different type of service recoveries.

**Customer loyalty**

Customer loyalty is defined as “a deep held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior “ [10]. In B2C ecommerce, Smith [11] argued that e-loyalty is nothing different from customer loyalty in traditional shopping environment, of which, establishing a long-lasting relationship with consumers by using information technology is critical. Srinivasan et al. [12] defined e-loyalty as the preference towards a specific online retailer by customers by repeated purchase from the vendor. Thus, we understand customer loyalty in online retailing as sharing the same nature as customer loyalty in traditional shopping environment, which include repeated purchase, recommendation to others, positive WOM, as well as willing to pay premium price for the same products, etc.

**Perceived justice**
From the perspective of social exchange theory, service incident and recovery can be regarded as a special exchange process. Customer suffered loss due to service incident and they feel certain extent of injustice because of the incident. The service provider tries to use service recovery to make a remedy for the customer loss so as to restore the feeling of justice by the customer. Justice theory could serve as the theoretical foundation of service recovery and has received wide attention from the academia. When evaluating the service recovery strategy by online retailers, scholars usually analyze three dimensions of perceived justice: distributive, procedural, and interactional justice [13, 14].

Distributive justice is the perceived fairness customer feels about the tangible outcome of service recovery efforts, including compensation, discount, coupon or free exchange, etc. Procedural justice is perceived fairness customer feels about the service recovery procedure and standard. Interactional justice is the fairness customer feels about the way being treated by service providers during the service recovery interaction process. Customers could appreciate the interactional justice by observe the honesty, courtesy, attentiveness, and respect by service providers during the service recovery.

Effective service recovery procedure can improve the degree of satisfaction of customers about the product and service, thus increase customer loyalty. Maxham III and Netemeyer [15] found that the higher perceived procedural justice in service recovery is correlated with positive word-of-mouth motivations by customers while perceived interactional justice is correlated with repeated purchase. H and Jang [16] also found that perceived justice is correlated with repeated purchase by customers. Thus, in service recovery of online retailing, we hypotheses:

\[ H1a: \text{distributive justice has positive impact on customer loyalty} \]

\[ H1b: \text{procedural justice has positive impact on customer loyalty} \]
**H1c: interactional justice has positive impact on customer loyalty**

**Postrecovery satisfaction**

Customer postrecovery satisfaction is the overall degree of satisfaction after the recovery act by service provider when a service incident occurs. It is also called “degree of satisfaction after recovery” or “service recovery satisfaction”. The Postrecovery satisfaction is usually lower than customer satisfaction before service incident, however, if appropriate service recovery being adopted by service provider, it could make the customer’s postrecovery satisfaction higher than satisfaction before the incident, or the so-called “paradox of service recovery” [17, 18].

Justice theory is an important theoretical framework to study postrecovery satisfaction. Many studies confirmed that perceived fairness in service recovery is an important factor lead to postrecovery satisfaction. Maxham III and Netemeyer [19] found distributive and interactional justices have positive correlation with postrecovery satisfaction in banking services. Patterson [20] found all three dimensions of perceived justices have significant positive impact on postrecovery satisfaction. Thus, in online retailing service recovery, we hypothesize:

- **H2a: distribute justice has positive impact on postrecovery satisfaction of customers**
- **H2b: procedural justice has positive impact on postrecovery satisfaction of customers**
- **H2c: interactional justice has positive impact on postrecovery satisfaction of customers**

Customer satisfaction is an important factor of customer loyalty. Previous research confirmed the significant positive correlation between postrecovery satisfaction and customer loyalty. Maxham III and Netemeyer [19] also found that postrecovery satisfaction has direct impact on repeated purchase of customers as well as positive word-of-mouth effect by customers. Collier and Bienstock [21] found that if customer loyalty will be negatively impacted if they are not
satisfied with service recovery outcome in online retailing, such as switching and negative word-of-mouth effect. However, if a customer is satisfied with service recovery efforts by online retailers, they will actively involved in positive word-of-mouth behavior and strong repeated purchase intention in the future. Thus, we have following hypothesis:

\[ H3: \text{customer postrecovery satisfaction has positive impact on customer loyalty} \]

\textit{Perceived switching cost}

Switching cost is the one time cost customer incurred when transfer from one product or service provider to another, including economic cost and psychological cost. Switching cost is influenced by factors like the complexity and heterogeneity of products, customer care and dependency, etc. Switching cost is considered a barrier for customer to switch service or product providers, an important factor to keep customer loyalty. If postrecovery satisfaction is a kind of pulling force to retain customers, then switching cost is a pushing force behind customers to let them be loyal to product and service providers. In this research, we define switching cost as the total time, money and psychological loss a customer suffers when switching from one online retailer to another.

Previous research has validated switching cost as an important factor of customer loyalty. Colgate and Lang [22] found that when the perceived switching cost of changing service provider is higher than establishing relationship with new provider, they will keep loyal to existing provider. Deng et al. [23] identified positive correlation between switching cost and customer loyalty. In online retailing, switching cost is low because comparison-shopping agents aggregated shopping information like price and product review into one page thus allowing
customers making quick and easy switching decisions [24]. To verify if switching cost has impact on customer loyalty in online retailing, we have following hypothesis:

\[ H4: \text{perceived switching cost has positive impact on customer loyalty} \]

When customer experienced service incident or other negative service experience, switching cost could prevent them from changing service providers even though they are not satisfied with the current provider. Lam et al. indicated that customers are loyal to service provider when switching cost is high, no matter their degree of satisfaction. On the contrary, if the switching cost is low, customer could change their provider anytime they feel uncomfortable. Jones et al. confirmed the negative mediating effect of switching cost on customer satisfaction and customer loyalty. Thus, we hypothesize that switching cost may also have negative mediating effect between customer postrecovery satisfaction and customer loyalty:

\[ H5: \text{perceived switching cost negatively affect correlation between postrecovery satisfaction and customer loyalty} \]

The research model is conceptualized in figure 1:
Research design

Research method

In this research we use simulated service recovery scenarios and experimental survey to explore customer reactions. This method can effectively avoid memory loss on previous service incidents as well as limitations of finding customers experienced the same service incidents. It could also shorten the experiment time and lower cost. To make the simulated scenarios more realistic, we use product quality as the most frequently encountered service incidents in online retailing. Based on that, we designed a total of 2 (with or without compensation) x 2 (fast or slow response time) x 2 (with or without psychological compensation) scenarios.

Survey instrument design and development

The instruments we used in this experiment are all obtained from existing literatures with necessary adaptations to accommodate online retailing context. The questionnaire to measure distributive, procedural, and interactional justices come from [25] and [5], perceived switching cost from [7] and [26], postrecovery satisfaction from [27], customer loyalty from [28]. All questionnaire used 1 to 5 Likert scale to measure the degree of agreement, whereas 1 represent total disagree and 5 represents totally agree.

A pilot study was conducted with 30 MBA students from a university business school. Experts in marketing are consulted about the survey questions and design. Feedback from pilot study and experts are investigated and improvements are incorporated into the experiment design including the ambiguity of language as well as inaccurate descriptions, etc.

Data Collection
A combination of paper-based and Web-based survey was used for data collection. Paper-based survey was conducted among college students who were interested and volunteered for the study. Web-based survey was conducted through social network and solicited via MSN, QQ and Email. They are mainly working professionals. Each subject was randomly assigned one scenario. The subject was asked to imaging oneself as the customer in the scenario who experienced the service incident and then indicate their responses. We received a total of 236 responses. It includes 55.7% female, 44.3% male; 87.4% of the subjects aged between 18 and 30; 83.5% of them are earning or having already earned a college or more advanced degree. 81% are students and the remaining have a professional in companies, non-profit organizations as well as governments.

**Data Analysis**

**Reliability and Validity**

Partial Least Square Regression (PLS) was used to analyze data collected in this study. We use SmartPLS 2.0 processed the data collected.

The validity of the data is measured by composite reliability and Cronbach’s α and results is listed in Table 1. All independent variables have a composite reliability of 0.8 and above and the Cronbach’s α of 0.7 and above. This indicated the high validity and reliability of the data collected. AVE was used to calculate the convergent validity. According to Hair[29], all AVE should higher than 0.5 and in this research all are higher than 0.7. Thus all variables exceed the minimum threshold (see Table 1), which means very high convergent validity. Discriminant validity is tested by examining the dependent variables’ AVE square root and correlations. If a dependent variable’s AVE square root is more than its correlation with other dependent variables,
then it has discriminant validity. Table 2 listed all dependent variables’ AVE square root are more than their correlations, which means high Discriminant validity.

**Table 1: Reliability and Internal Validity**

<table>
<thead>
<tr>
<th>Dependent Var.</th>
<th>Independent Var.</th>
<th>Std. Factor Load</th>
<th>AVE</th>
<th>CR</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justice</td>
<td>DJ1: The final compensation is reasonable compared with what I suffered</td>
<td>0.89</td>
<td>0.75</td>
<td>0.90</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>DJ2: I think the compensation from the store to my loss is fair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DJ3: I got what I should be compensated during the resolution of the problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justice</td>
<td>PJ1: The store responds quickly when incident happens</td>
<td>0.86</td>
<td>0.67</td>
<td>0.89</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>PJ2: The store displayed enough flexibility when dealing with my complaint</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>PJ3: The store has a set of effective problem solving management policy</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>PJ4: The store is effective in dealing with the incident</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justice</td>
<td>IJ1: The customer service have courtesy when solving my complaint</td>
<td>0.82</td>
<td>0.65</td>
<td>0.90</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>IJ2: Customer service are trying their best to help me solve the problem.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IJ3: Customer service are concerned about my problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IJ4: Customer Service understand my problem correctly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IJ5: Customer Service is honest when processing my request</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Switching Cost</td>
<td>PSC1: Choose another store will cost me too much</td>
<td>0.76</td>
<td>0.63</td>
<td>0.87</td>
<td>0.73</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------</td>
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<td>-------</td>
<td>-------</td>
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</tr>
<tr>
<td></td>
<td>Time</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PSC2: Choose another store will cost me too much money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PSC3: Choose another store will cost me too much effort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PSC4: I am not sure another store will guarantee better service</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postrecovery Satisfaction</td>
<td>CSS1: I think the service recovery by this store is Good</td>
<td>0.88</td>
<td>0.78</td>
<td>0.91</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>CSS2: I am satisfied with the way my problem was handled in this store</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CSS3: Generally speaking, I am very satisfied with the service recovery by this store.</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>CL1: I am positive about the promotion of this Store</td>
<td>0.90</td>
<td>0.80</td>
<td>0.94</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>CL2: I will recommend this store to my friends And relatives</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CL3: If buy similar product, I will first choose this Store</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CL4: I will buy more product from this store in the future</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Discriminant Validity Test Results

<table>
<thead>
<tr>
<th></th>
<th>DJ</th>
<th>PJ</th>
<th>IJ</th>
<th>PSC</th>
<th>PS</th>
<th>CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributive Justice (DJ)</td>
<td>0.866</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural Justice (PJ)</td>
<td>0.451</td>
<td>0.818</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactional Justice (IJ)</td>
<td>0.337</td>
<td>0.311</td>
<td>0.806</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Switching Cost (PSC)</td>
<td>0.213</td>
<td>0.177</td>
<td>0.159</td>
<td>0.793</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postrecovery Satisfaction (PS)</td>
<td>0.558</td>
<td>0.421</td>
<td>0.325</td>
<td>0.263</td>
<td>0.883</td>
<td></td>
</tr>
<tr>
<td>Customer Loyalty (CL)</td>
<td>0.506</td>
<td>0.293</td>
<td>0.232</td>
<td>0.364</td>
<td>0.586</td>
<td>0.894</td>
</tr>
</tbody>
</table>

SEM analysis on hypotheses

After the reliability and internal validity test, we use PLS SEM to examine the research model and related hypotheses. The result is listed in Table 3. 6 out of 9 hypotheses are supported. The $R^2$ is 51.8%, which indicated the research model adequately explained the data.

Table 3: Model Measurement

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Relationship</th>
<th>Path Coefficient</th>
<th>t-value</th>
<th>Support?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>DJ→CL</td>
<td>0.26**</td>
<td>3.68</td>
<td>Yes</td>
</tr>
<tr>
<td>H1b</td>
<td>PJ→CL</td>
<td>0.11</td>
<td>1.26</td>
<td>No</td>
</tr>
<tr>
<td>H1c</td>
<td>IJ→CL</td>
<td>0.05</td>
<td>0.73</td>
<td>No</td>
</tr>
<tr>
<td>H2a</td>
<td>DJ→PS</td>
<td>0.32***</td>
<td>4.97</td>
<td>Yes</td>
</tr>
<tr>
<td>H2b</td>
<td>PJ→PS</td>
<td>0.18**</td>
<td>3.12</td>
<td>Yes</td>
</tr>
<tr>
<td>H2c</td>
<td>IJ→PS</td>
<td>0.13*</td>
<td>2.05</td>
<td>Yes</td>
</tr>
<tr>
<td>H3</td>
<td>PS→CL</td>
<td>0.39***</td>
<td>5.76</td>
<td>Yes</td>
</tr>
<tr>
<td>H4</td>
<td>PSC→CL</td>
<td>0.15*</td>
<td>2.12</td>
<td>Yes</td>
</tr>
<tr>
<td>H5</td>
<td>PS X PSC→CL</td>
<td>-0.09</td>
<td>0.77</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: *, **, *** represent 0.05, 0.01, 0.001 significant level
Based on the data analysis, the relationship among variables in the research model is in Figure 2:

**Figure 2: Relationship**

**Conclusion and Discussion**

Following are the main conclusions for this study:

In the three dimensions of perceived justice, only distributive justice has positive impact on consumer loyalty. Procedural and interactional justice has no direct positive impact on customer loyalty but has indirect impact on the latter via the mediation of postrecovery satisfaction. This could attribute to the discount and compensation by online retailers from the service recovery. Timely response and friendly attitude cannot reduce the cost of purchase, thus cannot trigger repeated purchase from customers. In addition, in service recovery, customer only collect more information about the service, thus could compare it with the recovery measures. Also, during the interaction with online retailers, customer could evaluate the recovery outcome easily.
This study confirmed previous research that postrecovery satisfaction is positively related to customer loyalty. The three dimensions in perceived justices are the antecedent variables for postrecovery satisfaction and all of them have significant positive influence. Of which, distributive justice has the most impact. This is consistent with [19, 30].

Perceived switching cost has significant positive influence on customer loyalty. This is consistent with [23]. However, it has no significant negative mediating effect on postrecovery satisfaction and customer loyalty. This finding is different from [7] and [31]. They found switching cost has negative mediating effect on the relationship between customer satisfaction and loyalty. This differences could be the changing of market structure. When there is only one supplier or very few alternative suppliers in the market, switching cost is high and unsatisfied customers are unlikely to switch. On the contrary, in a highly competitive market, switching cost is lower, this makes customers more sensitive to postrecovery satisfaction. In other words, unsatisfied customers could switch their supplier if they are not happy with the outcome of service incident recovery. In online retailing, the competition is intense; switching cost is very low; thus the mediating effect of switching cost is not significant.

**Management Implications**

Our study has following managerial implications to online retailers:

Pay attention to compensation. Distributive justice is the only perceived justice dimension that have direct impact on customer loyalty and postrecovery satisfaction. So if online retailer emphasis distributive justice and compensate customer for their loss from the service incident, it will increase customer satisfaction, re-establish customer loyalty and eventually realize the sustainable profit growth.
Keeps increasing postrecovery satisfaction, this study indicated postrecovery satisfaction is positively related to customer loyalty. Thus, if online retailers could timely respond and update customer about service indecent recovery progress and compensate customer adequately, it could comfort customer both physically and psychologically. It will improve the customer satisfaction to the recovery efforts and compensation plan by online retailers, thus increase customer loyalty.

Create high switching cost, perceived switching cost has significant positive impact on customer loyalty. Thus online retailers should allocate resources to create high perceived switching cost to prevent customer switching to other retailers. For example, customer loyalty program, discount for high value customers are all measure to increase switching cost. Systematic service incident recovery process and quality customer services could increase trustworthiness of the online store. If a customer has more trust on shopping in the current store than in other stores, he or she will not switch casually. However, this study also found that switching cost has no negative mediating effect on postrecovery satisfaction and customer loyalty. This means online retailers cannot solely depend on increasing switching cost to decrease the customer sensitivity on postrecovery satisfaction. It must be combined with other measure. Actually, there is little room for online retailers to significantly increase switching cost for customers.

**Limitation and Future Research**

The limitations of this research could be the future research directions: 1. The literature are mostly from traditional service research. Considering the difference between traditional and online service, it is necessary to reexamine the factors and causal relationship among these factors. This could be an interesting future direction. 2. We mainly used a convenient sample of students and their friends in this study. The overall sample population is restricted in one region.
The external validity of this study could be further confirmed by expanding the demographic and geographic scope of the subjects. 3. Though by using scenarios to simulate the real life situation could help us collect matching data, there does exist differences between imagined scenario and past experience. We suggest future research could use memorization of previous experience or transaction data from online retailing to further verify our research outcome.

Reference


