UNDERSTANDING DETERMINANTS OF COMPLAINT INTENTIONS IN ONLINE SHOPPING

The Perspectives of Justice and Technology

Ing-Long Wu¹, Chi-Ying Huang² and Chu-Ying Fu³

¹²Department of Information Management, National Chung Cheng University, Chia-Yi, Taiwan
³Department of Information Management, WuFeng University of Science and Technology, Chia-Yi, Taiwan

Keywords: Online shopping, Complaint intention, Justice theory, Expectation-confirmation model.

Abstract: Consumers’ complaint behaviors are critical in determining repurchase behaviors in online shopping. An understanding of complaint behaviors can provide insight to the failed service experience with consumers and in turn, effectively redress consumers’ problems. Therefore, it is important to comprehend the antecedents of complaint intentions in online shopping. The major issue is two-fold: behavior and technology. This study thus integrates justice theory and expectation-confirmation model to examine the antecedents of complaint intentions in terms of these two issues. Moreover, customer satisfaction is an important mediator in the relationship structure. Data are collected from online shoppers with dissatisfied experience. Structural equation modeling is used to analyze this model. The results indicate that distributive justice and interactional justice are important in influencing customer satisfaction and complaint intentions while interactional justice is not. Technology-based antecedents, such as perceived usefulness, are all important in determining customer satisfaction and complaint intentions. Implications for managers and scholars are discussed.

1 INTRODUCTION

Approximately half of the huge revenue is brought by online shopping in B2C e-commerce. Although online shopping market is relatively huge, however, the growth rate has been decreasing recently. A recent survey by market intelligent center in Taiwan in 2009 has indicated the same situation in online shopping market. Moreover, according to consumer research report, acquiring a new customer is about five to eight times more expensive than retaining an existing one (Reichheld and Schefter, 2000, Chea and Luo, 2008). As a result, research on online shopping was previously focused on understanding consumer’s acceptance/purchase behaviors, but more attention has been paid recently to consumer’s post-adoption behaviors (Chea and Luo, 2008; Kim and Son, 2009). Consumer’s post-adoption/repurchase behaviors are the key to a firm’s survival in a highly competitive e-marketplace (Chea and Luo, 2008, Kim and Son, 2009).

Research on post-adoption behaviors in online shopping has been focused on customer satisfaction and continuance intention to purchase (Gefen et al., 2003, Finn et al., 2009). However, complaint behaviors have often occurred to most buyers due to dissatisfaction of online services (Voorhees and Brady, 2005, Thogersen et al., 2009). Complaint behaviors have been proven to play an important role in consumers’ decision making of their purchase (Breazeale, 2009). Little research on complaint behaviors has been discussed in the online shopping context.

Many researchers pointed out that online consumers are different from traditional offline consumers (Shankar et al., 2003, Teo, 2006). Online consumers are buyers and at the same time they are users of information systems (Shankar et al., 2003). Accordingly, two major concerns need to be considered in this study, behavioral issue and technological issue. For behavioral issue, many studies has claimed the importance of justice perception in linking to customer satisfaction and complaint intentions/behaviors (Maxham and Netemeyer, 2002, Martinez-Tur el al. 2006, Thogersen et al., 2009). However, the literature has been a lack of considering its influence on complaint intentions or behaviors in the online shopping context.

For technological issue, expectation confirmation
model of IS continuance (ECM) indicated the relationships between technology acceptance model (TAM) based features such as perceived usefulness (Davis, et al., 1989), and customer satisfaction and continuance intention to use (Bhattacherjee, 2001). Furthermore, ECM-based features have been widely used and extended to indicate two other post-adoption behaviors: complaint and recommendation intentions (Chea and Luo, 2008, Finn et al., 2009). Grounding on justice theory and extended ECM-based features, this study proposed a novel research framework to understand the antecedents of complaint intentions in the online shopping context.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Based on the above discussion, Figure 1 provides a pictorial depiction of this research framework. The following discusses the theoretical bases and development of relevant hypotheses.

H1. Distributive justice has a negative effect on complaint intention in online shopping.

H2. Procedural justice has a negative effect on complaint intention in online shopping.

H3. Interactional justice has a negative effect on complaint intention in online shopping.

2.1 Justice Theory

Colquitt et al. (2001) comprehensively reviewed 183 justice-related studies from the literature and integrated into three major justice constructs: distributive, procedural and interactional justice. Distributive justice refers to the perceived fairness where individuals assess the fairness of an exchange by comparing their inputs to outcomes to form an equity score. Procedural justice refers to the perceived fairness of policies, procedures and criteria used by decision makers in reaching the outcome of a dispute or negotiation (Thibaut and Walker, 1975, Alexander and Ruderman, 1987).

Bies and Moag (1986) separated out the interpersonal aspect of procedural justice that is termed interactional justice. Interactional justice refers to the perceived fairness of interpersonal treatment that individuals receive in the decision making process. Recently, one study on online context defined interactional justice as the degree to which online users perceive online companies as honest and trustworthy in complying with their promises related to information privacy (Son and Kim, 2008). Accordingly, interactional justice is in a position to reflect the perceived fairness of a communication between system interface and consumers.

Justice perception can be used not only in exploring service recovery process such as post-complaint behaviors, but also in understanding entire failed service experience in consumer purchase context (Turel et al., 2008, Sangareddy et al., 2009). Online shopping process can be considered as an exchange of time, effort, and money for receiving products or services. The consideration of justice should be the major concern of online shoppers in the post-purchase process. Therefore, this paper used justice theory to investigate consumer’s complaint intentions in the online shopping context. The following discusses the development of relevant hypotheses. Tax et al. (1998) argued that complaint is the behavior after consumers have injustice treatments in distribution, procedure and interaction with retailers. Some studies reported that the three justice components are all considered to be the important drivers of complaint intentions in a failed service experience (Maxham and Netemeyer, 2002). Other studies unequivocally suggested that higher levels of distributive, procedural, and interactional justice will decrease the likelihood of complaint intentions (Blodgett et al., 1993, Clemmer, 1993). Hence, it is hypothesized that:

H1. Distributive justice has a negative effect on complaint intention in online shopping.

H2. Procedural justice has a negative effect on complaint intention in online shopping.

H3. Interactional justice has a negative effect on complaint intention in online shopping.

Martinez-Tur et al. (2006) argued that justice components, distributive, procedural, and interactional justice, are all important predictors of customer satisfaction in the study of hotel and restaurant industries while distributive justice is more influential than procedural and interactional justice. Maxham and Netemeyer (2002) indicated the support of an influence of three justice components on customer satisfaction in the study of service industries. They further found that procedural and interactional justices are more influential in forming satisfaction than distributive justice. Other studies
also concluded the importance of the three components in impacting customer satisfaction in service industries (Tax et al., 1998, Voorhees and Brady, 2005). Hence, it is hypothesized that:

H4. Distributive justice has a positive effect on consumer satisfaction in online shopping.

H5. Procedural justice has a positive effect on consumer satisfaction in online shopping.

H6. Interactional justice has a positive effect on consumer satisfaction in online shopping.

2.2 Expectation Confirmation Model

Bhattacherjee (2001) proposed expectation confirmation model of IS continuance (ECM) by integrating expectation confirmation theory (ECT) (Oliver, 1980, 1981) and TAM-based studies, such as perceived usefulness (Davis et al., 1989), to explore user satisfaction continuance intention to use. ECT was originally proposed by Oliver (1980) for consumer behavior research to examine consumer satisfaction and post-purchase behaviors. Bhattacherjee (2001) argued that IS user’s continuance decision, in general, is similar to consumer’s repurchase decision in ECT. Furthermore, a post-expectation of IS use is considered to be included in ECM while ECT only examines the effect of pre-expectation in the purchase decision. Based on TAM-based studies, perceived usefulness is considered as an appropriate post-expectation in the IS continued use. Accordingly, this model is indicated as a similarity to the lower part of Figure 1. Moreover, ECM-based features have been widely used were extended to include two other post-adoption behaviors, complaint and recommendation intentions, in e-commerce (Yen and Lu, 2008, Finn et al., 2009). In this study, we only considered complaint intentions for the extension of ECM.

Since online shopping context, in essence, is a website-based technology, post-adoption behaviors, are also the major concern of consumer’s repurchase decision (Chea and Luo, 2008). The online complaint behaviors may be explained by an extension of ECM-based features in a technological perspective. The following discusses the development of relevant hypotheses. According to TAM, perceived ease of use is positively related to perceived usefulness (Davis et al., 1989). Previous studies indicated that perceived ease of use and confirmation are similar because they are cognitive constructs stemming from a consumer’s post-consumption expectation after the initial use of online shopping (Bhattacherjee, 2001). Moreover, many studies also argued that confirmation has a positive impact on perceived usefulness in online environment (Chea and Luo, 2008; Kang et al., 2009). Hence, it is hypothesized that:

H7. Confirmation has a positive effect on perceived usefulness in online shopping.

According to ECT, confirmation is determined by the combination of pre-expectation and perceived performance (Oliver, 1980). Positive confirmation arises when the perceived performance of customers exceeds their pre-expectation. Positive confirmation indicates a positive effect on customer satisfaction. Previous studies on ECM in online environment also indicated empirical evidence in terms of the effect of disconfirmation on customer satisfaction (Chea and Luo, 2008, Finn et al., 2009). Hence, it is hypothesized that:

H8. Confirmation has a positive effect on consumer satisfaction in online shopping.

Consumers are more likely to form favorable feelings of satisfaction when the online shopping website is perceived to be useful (Bhattacherjee, 2001). Perceived usefulness as drawn from TAM is considered to be post-expectation in IS use (Thong et al., 2006). According to ECT in consumer behavior research, post-consumption expectation is a predictor to consumer satisfaction (Bhattacherjee, 2001, Chea and Luo, 2008). Furthermore, prior studies also showed that perceived usefulness is an important antecedent of consumer satisfaction (Chea and Luo, 2008, Chiu et al., 2009). Hence, it is hypothesized that:

H9. Perceived usefulness has a positive effect on customer satisfaction in online shopping.

Prior research revealed that complaint intentions arise when they encounter a dissatisfied circumstance in online shopping (Velazquez et al., 2006, Thogersen et al., 2009). Many studies also supported a direct relationship between customer satisfaction and complaint intentions in online environment (Voorhees and Brady, 2005, Chea and Luo, 2008). In other words, when consumers feel more dissatisfied, the complaint intentions increase. Hence, it is hypothesized that:

H10. Customer satisfaction has a negative effect on complaint intention in online shopping.

3 RESEARCH DESIGN

3.1 Instrumentation

A survey method was conducted to collect empirical
data. The instrument contains a two-part questionnaire, a nominal scale for basic information and a seven-point Likert scale for research constructs. Basic information collects the information about consumer characteristics in online shopping, including gender, education level, job, online shopping experience, and failed service experience. The measuring items for the three justice components were adapted from the measurement developed by Blodgett et al. (1997), Martinez-Tur et al. (2006), and Turel et al. (2008). They contain 4 items, 4 items and 4 items respectively. The measuring items for confirmation, perceived usefulness and satisfaction were adapted from the measurement developed by Bhattacherjee (2001), Olsen (2002), and Finn et al. (2009). They contain 3 items, 3 items and 5 items respectively. Complaint intention was measured with items based on Singh (1988), Liu and McClure (2001), Chea and Luo (2008). It comprises 5 items.

### 3.2 Sample Design

Empirical data was collected via consumers who had a failed or dissatisfied service experience when they shopped online for products or services. This online survey was placed on online communities for their users as the potential respondents. Public notice of the survey questionnaire was published in a number of bulletin board systems and forums. There is also a reward system offered for the respondents. Initially, pretest was conducted for the scale. The scale was carefully examined by selected practitioners and academicians in this area, including translation, wording, structure, and content. After the questionnaire was finalized, the online survey was carried out in terms of the above procedure. A total of 1072 questionnaires were received and 699 are valid with a failed service experience (65%). Of the respondents, 453 are female (65%) and 246 are male (35%), 607 are between 20 and 39 years old (87%), and 600 are at least college degree (86%). The number of respondents whose online shopping experience was more than three years is 472 (68%).

### 3.3 Measurement Model

This study used a structural equation modeling (SEM) technique with AMOS 7.0 software to test the proposed model. There are 699 valid questionnaires and it is enough to execute SEM with a sample size of 10 times of the total measuring items (Hair et al., 2006). The testing results report a goodness of model fit with the indices of $\chi^2/df$ (884.39/391=2.26), TLI (0.90), CFI (0.91), and RMSE (0.08). Next, item loadings range from 0.72 to 0.90, composite reliabilities range from 0.81 to 0.91, and AVEs range from 0.54 to 0.82. This indicates reliability and convergent validity in a highly acceptable level. The correlation matrix for discriminant validity indicates that each construct’s square root of AVE is above its correlations with other constructs. This indicates divergent validity in a highly acceptable level.

### 4 HYPOTHESES TESTING

The structural model was used to examine path significance of the hypothesized relationships and variance explained for the endogenous variables ($R^2$). The testing results of the structural mode are shown in Figure 2.

For justice components, distributive justice and interactional justice are two important predictors of complaint intentions ($\beta=-0.24$ and $-0.22$) while procedural justice is not significant in its influence ($\beta=0.04$). Therefore, Hypotheses 1 and 3 are supported, but Hypothesis 2 is not supported. Next, distributive justice and interactional justice are two important antecedents in determining customer satisfaction ($\beta=0.26$ and 0.17) and procedural justice indicates no significance in its influence ($\beta=0.03$). Therefore, Hypotheses 4 and 6 are supported and in contrast, Hypothesis 5 is not supported. For ECM-based components, confirmation of expectation plays an important role in determining perceived usefulness and customer satisfaction ($\beta=0.47$ and 0.36). Therefore, Hypotheses 7 and 8 are supported. Moreover, confirmation of expectation explains 29% variance of perceived usefulness ($R^2=0.29$). Perceived usefulness is a significant influencer of customer satisfaction ($\beta=0.19$). Therefore, Hypotheses 9 is supported. Moreover, the three justice components and two ECM-based
components jointly explain 69% variance of customer satisfaction ($R^2=0.69$). Finally, customer satisfaction is an important predictor of complaint intention ($\beta=0.28$). Therefore, Hypotheses 10 is supported. Moreover, the three justice components and customer satisfaction jointly explain 41% variance of complaint intention ($R^2=0.41$).

5 FINDINGS AND DISCUSSIONS

In the justice components, distributive and interactional justices remain to be important predictors of complaint intentions, as in many prior studies with physical stores. These results are quite interesting to online vendors. First, while the Internet-based mechanisms is highly penetrable for their users to share beliefs, thoughts and behaviors, such as virtual communities, blogs, and Facebook, online consumers are often in an easy way to compare the products or services offered by online stores, such as the quality of products and prices, with other buyers for the fairness of their exchange or purchase. If the outcome of their exchange is unfair, that is, the failure of distributive justice, consumers will definitely tend to complain it to online vendors. Next, interactional justice for the online stores indicates the importance of the design of system interface. The design of system interface should be presented both in an honest and trustworthy manner and in a user-friendly mode for a good communication to online consumers. More specifically, it can be trusted by online consumers in terms of the features of privacy, security, and accuracy in the interaction with online stores.

Besides, procedural justice has no significant impact on complaint intentions and customer satisfaction, which is not consistent with prior studies (Clemmer, 1993; Blodgett et al., 1997). The reasons behind this may be explained as below. The history of e-commerce has been for a long time in a mature form since the advent of the Internet and communication technologies in a decade ago. The procedures or policies for dealing with online shopping, such as trading rules, payment, return, delivery, and so on, have been defined clearly for most online firms. They are embedded into system architecture and are operated without any interference from human being. It is convenient for experienced and inexperienced shoppers to follow these rules in a straightforward manner. Online shoppers do not regularly feel inconsistent in the purchase procedures applied to them and are treated in a relatively fair form. While most shoppers are well known with these rules defined in the online system, there is less possibility to give rise to unfairness in the purchase process. In contrast, there is more possibility to introduce unfairness in a human-handling purchase process while these rules intend to be amended by service representatives from time to time. Next, procedural justice also is not correlated with customer satisfaction. As above discussion, it can be considered as a regular norm in the online shopping and consumers feel procedural justice as not important to their online shopping. As result, their correlation would not be built significantly in the online shopping.

In the ECM-based components, confirmation of expectations, perceived usefulness, and customer satisfaction reveal positive relationships between them. Overall, this study indicates the importance of a technological perspective with ECM-based features in the online shopping. Specifically, confirmation of expectations has positive impact on perceived usefulness and further, both of them significantly influence customer satisfaction. This may explain the importance of confirmation of expectations in initially driving the activities of online shopping. Before consumers can be ready for doing their online shopping, they need to first confirm what they originally expect from the online shopping as a convenient and efficient way to get their products or services. In that, the better way to find and search purchase items in online stores can be termed perceived usefulness. Finally, complaint intentions are well demonstrated with its explained ability. This may indicate a fact that an integration of both justice theory and ECM-based features is in a position to effectively explain the complaint intentions of online shopping while this idea is rooted in a consideration of both behavioral and technological aspects.

6 CONCLUSIONS AND SUGGESTIONS

The results indicated that distribution and interactional justices are more influencing in determining complaint intentions and customer satisfaction than procedural justice. The findings with justice perception are unique and important in the particular online shopping context. This is a major contribution of this research. Next, ECM-based components were also applied successfully to examine complaint intentions in this context. The results showed the significant relationships among these technology-based components. Overall, the proposed model provides
insights into explaining and predicting complaint behaviors in the online shopping.

Several important practical implications arise from our findings. The survey result reported a high proportion of online shoppers (over 65%) that has the experience of a service or produce failure in online shopping. Consumers not only want to express negative feelings and to seek for redress, but also want to give advices for improving the process of products and services offered in online stores. Therefore, online stores should take account of consumer’s complaints, and pay attention on the communication channel between online stores and consumers. Specifically, distributive and interactional justices and ECM-based components have indicated well as the underlying drivers in determining complaint intentions. The communication channel should be considered from both marketing and technological aspects and can be effectively improved accordingly.

For marketing aspect, the products and treatments of online stores play an important role in consumer’s perceived justice. Online stores should maintain and improve the quality of products and treat consumers fairly with the implementation of customer relationship management. For technological aspect, online stores need to improve front-end and back-end mechanisms simultaneously. In the front-end part, online stores should implement new and useful information and communication technologies, design user-friendly system interface, build effective searching engines, and develop easy understanding form of layout. In the back-end part, online stores can provide useful customized information to fulfill consumer requirements and let consumers manage their orders, payments, and deliveries in a more efficient way.

Finally, a limitation of this study showed that approximately 65% and 35% of the respondents are female and male respectively. The result may not reflect properly the regular population distribution of gender and cause a potential bias against the current findings. However, in fact, women are more likely to do online shopping than men and this would, in essence, reflect the actual situation.

REFERENCES

Liu, R. R., McClure, P., 2001. Recognizing cross-cultural differences in consumer complaint behavior and
Teo, T. S. H., 2006. To buy or not to buy online: adopters and non-adopters of online shopping in Singapore. Behaviour & Information Technology 25 (6), 497-509.