

THE ROLE OF CUMULATIVE ONLINE PURCHASING EXPERIENCE IN SERVICE RECOVERY MANAGEMENT

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The research presented here extends the traditional theoretical model of service failure and service recovery to the online shopping environment by investigating the moderating role of cumulative online purchasing experience. Using a multigroup structural equation modeling approach to assess differences across two groups with low and high levels of online purchasing experience, the study provides empirical support that cumulative online purchasing experience moderates several key attitudinal and behavioral outcomes of the service failure/recovery encounter. Specifically, in the group with less online purchasing experience, the perceived fairness of the remedy offered by the seller has a greater impact on post-recovery satisfaction. Further, if dissatisfied following a service failure encounter, the group with low levels of purchasing experience is more likely to engage in negative word of mouth. Finally, post-recovery satisfaction is more predictive of repurchase intentions in the highly experienced group than the less experienced group.

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INTRODUCTION

Service recovery consists of the deliberate activities companies employ to address a customer complaint regarding a perceived service failure. Service recovery management is increasingly acknowledged as critical for ensuring customer loyalty, retention, and firm profitability. In attempting to respond to a service failure, organizations should carefully implement a recovery, taking into consideration factors unique to both the situation and the consumer. Although there has been more focus on service recovery in recent literature, it is still commonly acknowledged as a topic worthy of additional study (McCollough, Berry, & Yadav, 2000; Tax, Brown, & Chandrashekar, 1998). In particular, researchers have recently acknowledged the need for further research to examine the various prefailure conditions—outside and independent of the service failure and recovery experience—that influence attitudes and behaviors in the service failure/recovery encounter (e.g., DeWitt & Brady, 2003).

Further, despite the extraordinary growth in electronic commerce in general and online retailing in particular, the literature has only begun to address the role of service recovery management in this environment. The inherent features of online retailing, such as the lack of physical presence of products and the overall environment of perceived insecurity on the Internet (Warrington, Abgrab, & Caldwell, 2000), are introducing new forms of service failure and challenging online firms in their service recovery efforts (Holloway & Beatty, 2003). In particular, the interpersonal interactions so fundamental to traditional (i.e., offline) service failure and recovery research are now replaced by technology. The influence of technology—and the interactive and personalized communication it allows—has a meaningful impact on consumer attitudes and behaviors in the online service encounter vis-à-vis the offline environment (e.g., Meuter, Ostrom, Roundtree, & Bitner, 2000; Parasuraman & Grewal, 2000; Shankar, Smith, & Rangaswamy, 2003). Certainly technology is influencing traditional retailing as well; however, the consumer must be an active user of the technology in online retailing.

Furthermore, unlike the offline marketplace, consumers enter the world of e-tailing with a wide range of experience with and knowledge about the Internet

and computer technology. While consumers inevitably experience traditional (i.e., stores, malls) retailing from an early age, online retailing is a new phenomenon with continuous entry of first-time shoppers. Thus, unlike the offline marketplace, online service providers must learn to serve consumers with a wide range of experience in the online setting. Research shows that previous experience and prior knowledge considerably influence consumer attitudes and behaviors (e.g., Bettman & Park, 1980; Montoya-Weiss, Voss, & Grewal, 2003; Sheth & Parvatiyar, 1995). In essence, as consumers gain more knowledge about and experience with the online channel, their perceptions, attitudes, and behaviors will evolve. However, research has yet to consider the impact of consumers' cumulative online purchasing experiences on their reactions to e-tailers' recovery endeavors. We therefore believe that retailers who understand how customers with varied online purchasing experience react to their service failure/recovery encounters should be rewarded with additional competitive advantage.

Therefore, this study seeks to investigate the moderating influence of cumulative online purchasing experience by testing a traditional model of service recovery in the context of online retailing with two groups of online shoppers—one group with low online purchasing experience and the other with high online purchasing experience. The paper is organized as follows: it first presents an overview of the relevant literature pertaining to the cumulative online purchasing experience construct. Next, the model of the service recovery process is reviewed, and the moderating effects of cumulative online purchasing experience are posited. The research methods and results are then presented, including a multi-group analysis examining the moderating influence of cumulative online purchasing experience across the two groups. The paper concludes with managerial implications and suggestions for future research.

CUMULATIVE ONLINE PURCHASING EXPERIENCE

The principal goal of this research is to empirically examine the influence of cumulative online purchasing experience in the service recovery process. Cumulative online purchasing experience encompasses the total purchase frequency and volume for

an individual consumer across all previous online exchange transactions. The role of consumer experience has been studied in several streams of research. The retailing literature has evaluated the role of the shopper's level of experience in price formation (Yadav & Seiders, 1998), and the new product literature has considered the role consumer experience may play in technology adoption (Szymanski & Henard, 2001). Further, in a traditional retailing context, Michell and Prince (1993) find that as buy-frequency increases, general perceived risk decreases. More recently research has focused on the role of shopper experience in the context of Internet privacy and security issues (Miyazaki & Fernandez, 2001) and in the electronic (i.e., the Internet) domain (e.g., Bhatnagar, Lurie, & Zeithaml, 2003).

A review of the literature on consumer experience suggests that there are several underlying reasons that may explain the influences of consumers' experience in forming their attitudes and behaviors. First, Mittal and Kamakura (2001) found that customer characteristics moderate the relationship between satisfaction and repurchase behavior; specifically, their findings indicate that consumers with different characteristics have different thresholds so that at the same level of reported satisfaction, repurchase rates vary systemically among the different customer groups. Building from these findings, we believe that online purchasing experience may be yet another definable characteristic by which to examine such subgroup differences, and that cumulative experience will impact both behaviors and future intentions. Further rationale lies in the fact that one's previous experience changes one's expectations for product or service quality (Cadotte, Woodruff, & Jenkins, 1987). Olson and Dover (1979) defined consumer expectations as some type of pre-trial belief about a good or service. Expectations for service quality have been conceptualized as being cumulative in nature, based on past experience, word-of-mouth communications, and explicit and implicit service promises made by a given service organization (e.g., Parasuraman, Zeithaml, & Berry, 1985). In this sense, consumers update their expectations and perceptions over time and continuously blend prior beliefs with new information (Boulding, Kalra, Staelin, & Zeithaml, 1993). Expectations prior to a service encounter impact customer evaluations

of the service performance as well as customer satisfaction (Parasuraman et al.), thus providing a basis for service quality evaluations.

Yet another way in which consumer experience may influence the formation of attitudes and behaviors is based in the rationale that consumers' prior experience and knowledge influence their perceptions of any given product or service encounter. Consistent with a Bayesian updating process, research indicates that a history of favorable prior experience with a given service organization increases the likelihood of favorable attitudes going forward; any marketing action is perceived positively (or negatively) depending on positive (or negative) prior beliefs which develop over time (e.g., Boulding et al., 1993). In essence, customers who have a history of satisfying experiences with an organization are more likely to develop positive attitudes toward and further interactions with that provider. Weiner (2000) maintains that impressions of product/service quality are not only influenced by previous experiences, but also become "frozen" or not easily changed by current product/service performance. As such, as the frequency of previous service encounters increases, customers are less likely to base their intentions about whether to continue a relationship with an organization based upon their experience with one single encounter. In addition to this, Solomon, Surprenant, Czepiel, and Gutman (1985) argue that as the number of past service encounters increases, the customer becomes more familiar with the organization and its offerings, and consequently he/she perceives less risk than those possessing less experience with the organization.

CONCEPTUAL DEVELOPMENT

As indicated in the proposed model (see Figure 1), service failure/recovery research consistently supports a direct and positive relationship between distributive justice and post-recovery satisfaction, which in turn is negatively related to negative word of mouth intentions and positively related to repurchase intentions. We posit that cumulative online purchasing experience will moderate the relationships between these variables in the online service failure/recovery encounter. A detailed discussion of each of these constructs and the associated hypotheses follows.

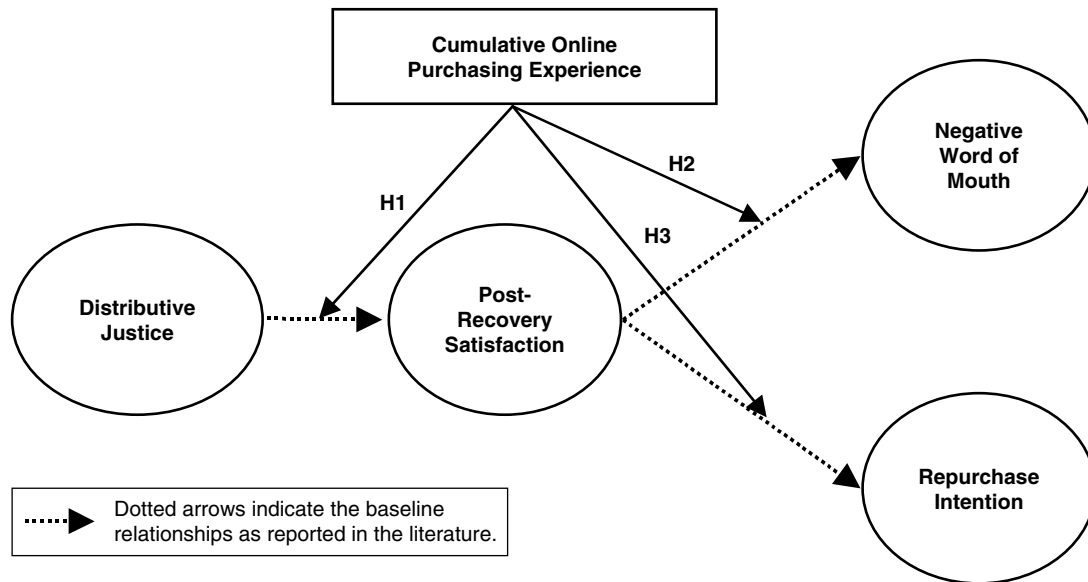


FIGURE 1
The Conceptual Model

Distributive Justice and Post-Recovery Satisfaction

The service recovery literature focuses on justice theory as a meaningful way to explain consumers' perceptions of service failures and subsequent recovery efforts and the link between the service recovery and post-recovery satisfaction. In a consumer complaint context, distributive justice refers to the perceived fairness of the remedy offered by the seller and is a function of both the severity of the service failure and subsequent recovery efforts (Smith, Bolton, & Wagner, 1999). Secondly, satisfaction plays a crucial role in the service recovery process, directly impacting consumer attitudes and behaviors. Conceptually, satisfaction has been treated as a cumulative evaluation by some researchers (e.g., Shankar, Smith, & Rangaswamy, 2003) but as a transaction-specific measure by others (e.g., McCollough et al., 2000) in order to provide specific diagnostic information about a particular product or service encounter (Lam, Shankar, Erramilli, & Murthy, 2004). Consistent with much prior service failure/recovery research (e.g., Boshoff, 1999; Goodwin & Ross, 1992; McCollough et al.; Smith et al., 1999), this study examines satisfaction with the hypothetical recovery effort, or transaction-specific post-recovery satisfaction,

defined as "the degree to which a customer is satisfied with a service firm's transaction-specific service recovery effort following a service failure" (Boshoff, 1999, p. 237). Research has shown that satisfaction with complaint handling serves as an important mediator linking perceptions of fairness to post-complaint behaviors and attitudes and the posited relationship is supported in the literature (e.g., Tax et al., 1998).

Building from the findings previously provided, we expect that a history of online purchasing will serve to buffer the injustice felt following a service failure. In particular, experience with a product or service is considered to be a primary determinant of one's expectations for product/service quality (Cadotte et al., 1987), and expectations prior to a service encounter impact customer evaluations of the service performance as well as customer satisfaction (Parasuraman et al., 1985). Previous research shows that when customers have little or no actual experience, they rely on "should" expectations to make normative reactions, i.e., what they feel a service provider *should* provide to meet needs and wants (Parasuraman et al.), rather than more realistic expectations that are constrained by the performance customers believe to be possible based on actual experience, or

experience-based norms (Woodruff, Cadotte, & Jenkins, 1983). We believe this is particularly relevant to the current focus on service failure and recovery, as we would expect that more experienced online purchasers have become “conditioned” to operating in the online environment and have more realistic expectations for potential service problems. In other words, if past cumulative online purchasing experience has taught customers that service failure/recovery is a reasonably common phenomenon, they ought to react less negatively (i.e., less dissatisfied) when such an unpleasant experience occurs.

On the other hand, compared with highly experienced purchasers, less experienced online purchasers are in the process of learning online shopping activities, and therefore may be more willing to make elaborate judgments about the online retailer based upon individual encounters. Thus, less experienced purchasers may be more likely to alter their satisfaction levels based on any single service failure and recovery incident. Based upon this discussion, we therefore posit that as cumulative online purchasing experience increases, the strength of the relationship between distributive justice and satisfaction will decrease. The following hypothesis results from this discussion:

H₁: Cumulative online purchasing experience will moderate the relationship between distributive justice and post-recovery satisfaction; as online purchasing experience increases, the strength of the relationship between distributive justice and post-recovery satisfaction will decrease.

Negative Word of Mouth

Previous research has established the importance of satisfaction and dissatisfaction as antecedents of word-of-mouth behavior (Richins, 1983). While a service failure and recovery provide the opportunity to delight the customer, resulting in positive word-of-mouth communications, it likewise presents the possibility of disappointing the customer, leading to negative word-of-mouth behavior. Previous research indicates that consumers are more likely to engage in negative word of mouth than positive word of mouth (e.g., Arndt, 1967; Richins, 1983). For example, Hart, Heskett, and Sasser (1990) suggest that those who

have experienced poor service tell approximately 11 people while those with pleasant experiences tell only six. Research also shows that relative to positive word of mouth, negative word of mouth is more influential in determining the word of mouth receiver’s attitudes and purchase intentions (Herr, Kardes, & Kim, 1991). Further, preliminary research indicates that negative word of mouth may be particularly detrimental in the Internet environment, where “word of mouse spreads even faster than word of mouth” (Reichheld & Schefter, 2000, p. 107), magnifying the need to understand the potential impact of negative word of mouth in an online context. As such, a primary goal of service recovery management involves minimizing the negative word of mouth so common after service failure/ recovery encounters, making this construct a focus of previous service failure/recovery research (e.g., Blodgett, Granbois, & Walters, 1993; DeWitt & Brady, 2003).

Research supports the negative relationship posited between satisfaction and negative word of mouth (e.g., Richins, 1983; Szymanski & Henard, 2001). We believe that cumulative online purchasing experience will have a moderating influence on this relationship as well. As discussed previously, we expect a history of online purchasing experiences will temper the effects of any one dissatisfactory service encounter; unlike the less experienced online purchasers, who should be more likely to react based upon a single encounter, the high-experience group should have more tempered reactions based upon their history of online experiences. For the high experience group, a failure/ recovery encounter is an expected part of online shopping, as opposed to the low experienced group for whom the failure/recovery encounter would be a more noteworthy event. We therefore posit that as purchase experience increases, the strength of the relationship between post-recovery satisfaction and negative word of mouth intentions will decrease.

H₂: Cumulative online purchasing experience will moderate the relationship between post-recovery satisfaction and negative word of mouth intentions; as online purchasing experience increases, the strength of the relationship between post-recovery satisfaction and negative word of mouth intentions will decrease.

Repurchase Intentions

Previous research consistently illustrates the important link between satisfaction and subsequent repurchase intentions in a variety of contexts (see Yi, 1990, p. 104 for a review). Repurchase intentions is often treated as a key indicator of loyalty (e.g., Lam et al., 2004). In the context of service failure and recovery, research shows that satisfaction with the service recovery response is positively related to repurchase intentions (e.g., Hess, Ganesan, & Klein, 2003). The construct, repurchase intentions, signifies the likelihood of future purchase behavior from a specific retailer, in this case from the hypothetical retailer involved in the failure/recovery scenario. We again posit that cumulative online purchasing experience will have a moderating influence on this relationship. In particular, we believe that for the more experienced group satisfaction with the recovery will be highly predictive of repurchase intentions. This is consistent with previous findings that experienced individuals are more confident in their decisions and tend to engage in hypothesis-confirming behaviors (e.g., Grazioli & Jarvenpaa, 2000). Thus, individuals with higher levels of cumulative online purchasing experience are more likely to return to the service provider after a satisfactory recovery in part to confirm their initial choice of this particular service provider.

Further, Montoya-Weiss, Voss, and Grewal (2003) posit that greater knowledge and experience with the Internet creates a greater sense of comfort with the online channel, thereby reducing its perceived uncertainty or risk. This would suggest that customers with more online purchasing experience are generally more confident about continuing or even increasing online purchasing with the retailer given a satisfied recovery. However, satisfaction with the recovery will not be as strongly predictive of repurchase intentions for less experienced purchasers because they are still uncomfortable with the online channel; the negative service failure experience may have increased the perceived risks of purchasing online for this group of consumers so much so that even if satisfied with the recovery effort, they may nonetheless be discouraged from repurchasing. Thus, the following hypothesis is offered:

H₃: Cumulative online purchasing experience will moderate the relationship between post-recovery

satisfaction and repurchase intention; as online purchasing experience increases, the strength of the relationship between post-recovery satisfaction and repurchase intentions will increase.

RESEARCH METHOD

This research involves a survey-based method in which the subjects were asked to imagine themselves, in the role of the customer, experiencing the hypothetical online shopping scenario that followed. This role-playing technique has been used frequently in marketing and service failure/recovery research (e.g., McCollough et al., 2000; Smith et al., 1999). For the purposes of the study, sixteen online service failure/recovery scenarios were created based upon qualitative research previously reported in the literature (Holloway & Beatty, 2003) to depict the specific circumstances involved in the four most frequently encountered service failures in online retailing, including (1) common delivery problems; (2) Web site design problems; (3) inadequate customer service; and (4) payment/security failures. Further, to ensure not only generalizability but also adequate variance in the outcome variables under investigation here, each failure type was demonstrated in four scenarios that vary by the severity (high/low) of service failure and the sufficiency (high/low) of service recovery. The scenarios went through several rounds of pre-testing, and the survey instrument was revised and refined to reflect the pretest findings (all scenarios are available upon request).

Students from a variety of both business and non-business classes from three southeastern universities were recruited to participate in this study. Because the population of interest consists strictly of Internet users, data for the study were collected via a Web-based survey, allowing random assignment to each of the 16 different scenarios. To encourage participation, students were given extra credit and respondents were eligible for a \$50 cash prize. This recruiting effort yielded 649 usable responses, resulting in a 54% response rate.

Measures

With the exception of cumulative online purchasing experience, the constructs used in this study are drawn from existing literature (see Table 1 for sample

TABLE 1

Reliabilities of Construct Measures

CONSTRUCT	INDICATOR	STANDARDIZED FACTOR LOADINGS	CRONBACH'S ALPHA
Distributive Justice (adapted from Smith, Bolton, and Wagner, 1999)			
			0.88
1. The outcome received was fair.	X1	1.000	
2. I did not get what I deserved. (R)	X2	0.955	
3. In resolving the problem, the company offered what was needed.	X3	0.700	
Post-Recovery Satisfaction (adapted from Goodwin and Ross, 1992)			
			0.90
1. Overall, I felt that this service response would have been good.	Y1	1.000	
2. Overall, I was satisfied with the way this complaint was resolved.	Y2	0.950	
3. Overall, I was pleased with the service I experienced.	Y3	0.765	
Negative Word of Mouth (adapted from Blodgett, Granbois, and Walters, 1993)			
			(0.86)*
1. How likely would you be to warn others not to purchase from this company?	Y4	1.000	
2. How likely would you be to recommend this retailer to family and friends? (R)	Y5	0.882	
Repurchase Intentions (adapted from Blodgett, Granbois, and Walters, 1993)			
			0.96
1. The next time I purchase this product online, I will buy from the same online retailer.	Y6	1.000	
2. I would be willing to purchase from this company again.	Y7	1.000	
3. I would purchase from this online retailer again in the future.	Y8	0.982	
4. How likely would you be to increase your shopping activity with this online retailer?	Y9	0.978	

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*(correlation coefficient for two items).

items and their sources) and used seven-point multi-item reflective scales. A test of reliability using Cronbach's alpha determined that the measures used for each construct exceeded Nunnally and Bernstein's (1994) standard of 0.70. Table 1 also presents the standardized factor loadings and Cronbach's alpha for each of the latent variables, all of which proved to be quite satisfactory.

In order to examine the influence of cumulative online purchasing experience, we first eliminated

the respondents who have never engaged in any online purchases by using the screening question "how frequently do you make a purchase on the Internet." When the respondents answered "never," they were deemed to have no online purchasing experience, resulting in the elimination of 228 of the total 649 respondents. We then classified the remaining 421 respondents into two groups for the purposes of data analyses. A multi-variable cluster analysis with Ward's method was conducted to classify the total respondents into the two groups: low

TABLE 2

Online Purchasing Experience Comparison and Discriminant Analysis*

INDICES	ITEMS	LOW-EXPERIENCE GROUP (N = 138)	HIGH- EXPERIENCE GROUP (N = 283)	F	P
Frequency of online purchases	1. How frequently do you make a purchase on the Internet?	Quarterly to yearly (88.2%)	Monthly to quarterly (85%)	1009.86	0.000
Total number of items purchased online	2. How many items have you purchased online in the past six months?	1-3 items (70%)	4-6 items (76%)	703.44	0.000
Average dollar amount per trip	3. What do you estimate is the average dollar amount you spend per online shopping trip?	\$26–75 (32%) less than \$25 (68%)	\$76–125 (52%) more than \$125 (33%)	297.15	0.000
Total dollar amount in the past six months	4. What do you estimate is the total dollar amount you have spent online in the past six months?	\$50–250 (18%) less than \$50 (82%)	\$50–250 (51%) more than \$250 (35%)	279.15	0.000
Equal assignment by sixteen scenarios		Chi-square = 15.275 (df = 15)	Chi-square = 30.141 (df = 15)	No serious violation for equal assignment	
Gender (female %)		45.2%	48.1%	1.012	0.364
Age (mean, years old)		20.3	19.9	1.012	0.364

*The numbers in parentheses represent the proportion of respondents whose answers fell into the corresponding categories in each group.

cumulative online purchasing experience ($n = 138$) and high cumulative online purchasing experience ($n = 283$). Four indices reflecting respondents' online purchasing activities were used in the classification process (see Table 2): (1) frequency of online purchase (response options: weekly, monthly, quarterly, yearly), (2) the total number of items purchased online in the previous six months (response options: 1–3, 4–6, 7–10, more than 10), (3) the average dollar amount spent per online shopping trip (response options: less than \$25, \$25–\$75, \$76–\$125, more than \$125), and (4) the total dollar amount spent online in the previous six months (response options: less than \$50, \$50–\$250, \$251–\$500, \$501–\$1,000, more than \$1,000). Post-hoc discriminant analysis was conducted to illustrate various characteristics of the two groups (provided in Table 2). For instance,

respondents in the high experience group more frequently engage in online shopping, spend more money and buy more items than those in the low experience group (all p values < 0.001).

ANALYSIS AND RESULTS

Before testing the three hypotheses by examining group differences across the low and high online purchase experience groups, it is desirable to first rule out the possibility of confounding variables. First, we investigated whether the low/high respondents were equally exposed to the sixteen scenarios in order to confirm that any group differences are not attributed to unequal assignment to the scenario versions. As illustrated in Table 2, our data indicates a lack of difference in respect to assignment of high/low group

members by scenario. Similarly, we examined whether individual characteristics (gender and age) could be responsible for the group differences, finding a lack of difference across the two groups. Finally, in order to ensure that the hypothetical scenarios were perceived as “believable,” the questionnaire included several questions to examine how realistic each scenario seemed as well as how easy it was for the respondents to imagine themselves as the customer in the scenario. On a seven-point scale (with seven indicating most realistic), the mean rating was 5.97 (for the failures) and 5.73 (for the recoveries). Based upon these analyses it is reasonable to conclude that the following reported differences across the two groups result from different levels of cumulative online purchasing experience.

Given the fact that our hypotheses predict the moderating effects of cumulative online purchasing experience, a multigroup structural equation modeling technique using LISREL 8.3 (Jöreskog & Sörbom, 1999) was conducted to test the three hypotheses simultaneously. This involved testing the path invariance by constraining the structural path coefficients (as shown in Figure 1) to be invariant across the high ($n = 283$) and low ($n = 138$) online purchasing experience groups. These values were then compared with the baseline model (chi-square of 75, degrees of

freedom = 409.60), which did not have path invariance constraints; the model with equal path constraints performed less favorably than the baseline model (chi-square of 91 degrees of freedom = 441.88), and the difference of chi-squares between the two models was significant (chi-square difference with 16 degrees of freedom = 32.28, $p = 0.009$), indicating there was significant difference across the path coefficients of the two groups. A detailed comparison of the structural path coefficients is provided in Table 3.

Following Aiken and West (1991), three t tests were conducted to detect group differences between the magnitudes of the path coefficients. As a more conservative approach, we adopted the standard deviation of each path coefficient generated from the full sample ($N = 421$), rather than from the subgroups (i.e., 138 or 283) when conducting the t tests. As illustrated in Table 3, a comparison of the path coefficients across the two groups indicates a number of differences in the strength of the relationships posited in H_1 – H_3 . First, the impact of distributive justice on post-recovery satisfaction (H_1) is significantly stronger for the low experience group than the high experience group, as the path coefficient for the low group is 0.93 while the high experience group is 0.73 ($p < 0.001$). Second, the impact of post-recovery

TABLE 3

Structural Path Coefficient Comparison

STRUCTURAL PATH (STANDARD ERROR)	LOW-EXPERIENCE GROUP ($n = 138$)	HIGH-EXPERIENCE GROUP ($n = 283$)	DIFFERENCE BETWEEN LOW- AND HIGH-EXPERIENCE GROUPS
H_1 : DISTJUST \rightarrow PRSAT (0.03)	0.93	0.73	0.20*** ($P < 0.000$)
H_2 : PRSAT \rightarrow NGWOM (0.05)	−0.62	−0.46	0.16*** ($P < 0.000$)
H_3 : PRSAT \rightarrow REPINT (0.04)	0.60	0.70	0.10*** ($P = 0.007$)

Note: 1. all coefficients are unstandardized coefficients with significance.
2. all the p -values for the between-group differences of path coefficients are calculated based on the standard error of path coefficients for the pooled sample with a size of 421. This approach should arrive at more conservative conclusions because all the path coefficient variances for the pooled sample tend to be larger than for any subset of samples.
3. *** indicates significant difference based on t -test results with significance level less than 0.01.

satisfaction on negative WOM (H_2) is significantly higher for the low experience group than for the high experience group. The path coefficients for the low and high experience groups are 0.62 and 0.46, respectively, and this difference is also highly significant ($p < 0.001$). Third, the impact of post-recovery satisfaction on repurchase intention (H_3) is significantly higher for the high experience group than for the low experience group. The path coefficients for low and high experience groups are 0.60 and 0.70, respectively. Again, the difference is significant ($p < 0.007$). In summary, all the hypothesized moderating effects of cumulative online purchasing experience are supported by the data. A number of theoretical and managerial implications are now discussed.

DISCUSSION

The primary goal of this research was to improve our understanding of service failure and recovery by examining the moderating influence of the consumer's cumulative online purchasing experience among consumers with both low and high levels of online purchasing experience. Because consumers enter the world of e-tailing with a wide range of experience with and knowledge about the Internet, online service organizations must understand how cumulative online purchasing experience impacts the attitudes and behaviors of their customers. As posited, these findings indicate that as consumers gain more experience with purchasing in the online channel, their perceptions, attitudes, and behaviors are evolving. Specifically, several significant differences between the two groups (i.e., experience levels) of online shoppers are illustrated, thus providing empirical support for the notion that cumulative online purchasing experience moderates key attitudinal and behavioral outcomes of the online service failure/recovery encounter. The findings suggest that a single service failure/recovery encounter has a more profound impact for the low-experience respondents than for those with more experience. In this sense, a history of previous purchasing experience acts as a buffer to the service failure/recovery encounter.

First, these findings indicate that the low experience purchase group is more responsive to the perceived fairness of the remedy offered in the service recovery, and this perceived justice has a greater impact on

post-recovery satisfaction than in the high experience group. Second, our findings illustrate that consumers with low levels of purchasing experience are more likely to engage in higher levels of negative word of mouth if they feel dissatisfied after a service failure incident. This finding is particularly relevant for online retailers, as those shoppers with little experience may be inclined to "over-react" following a service failure encounter. Thus, less experienced online customers may require additional reassurance following the failure/recovery encounter in order to minimize the negative consequences that are otherwise likely, including negative word of mouth. Third, these findings indicate that post-recovery satisfaction is more predictive of repurchase intentions in the high experienced group than in the less experienced group. It appears that the high experience group reacts in a manner that is consistent with "traditional" service failure/recovery research: post-recovery satisfaction is highly predictive of intentions to repurchase from the retailer in question. In the low experience group, however, post-recovery satisfaction is less predictive of repurchase intentions, as the strength of this relationship increases with experience. The results therefore suggest that the potential consequences of a service failure encounter are considerably greater for the less experienced shopper.

Finally, considering the poor service often associated with online retailing (e.g., Holloway & Beatty, 2003; Walker, 2004), these findings further illustrate that effective service recovery management must be a key strategy for all online retailers to encourage loyalty and increased shopping activity among their online consumers. Given the support provided for the important differences among shoppers with varying levels of cumulative online purchasing experience, online retailers should strive to use the technology available to them to compile as much information about their online shoppers as possible. CRM technologies increasingly allow the ability to integrate personal information about customers, allowing the formulation of strategies that are customized to the unique conditions of individuals, often touted as "one-to-one" marketing. The cumulative online purchasing experience scale provided here could be incorporated into the variables driving individual service failure/recovery strategies, allowing special consideration of the less experienced group in service recovery management.

LIMITATIONS AND FUTURE RESEARCH

While useful insights have been obtained through this study, there are a number of limitations that could be addressed with future research. Although the sample of undergraduate students adequately represents varying levels of cumulative online purchasing experience, future research could strive to confirm these findings among more varied samples of online consumers. Moreover, while this research illustrates that cumulative online purchasing experience has an impact on consumer reactions to service failure/recovery encounters, the model tested in this study is limited. We believe the moderating role of cumulative online purchasing experience could extend to other attitudinal and behavioral outcomes, including disconfirmation, anger, trust, willingness to complain, and other forms (i.e., procedural and interactional) of justice, but future research is needed to examine these additional variables. Similarly, though there are unique advantages to a hypothetical scenario design, research would benefit from examining the role of cumulative online purchasing experience in actual ("real") service encounters, allowing for an examination of relational variables such as cumulative satisfaction and loyalty. Moreover, some researchers suggest that a superior recovery might increase satisfaction levels even higher than they were prior to the failure encounter, commonly referred to as recovery paradox (e.g., McCollough et al., 2000). The research reported here could be extended to examine the effect of cumulative online purchasing experience on levels of satisfaction measured prior and subsequent to a failure/recovery encounter, improving our understanding of the recovery paradox phenomenon.

Finally, it is likely that cumulative online purchasing experience is directly related to a consumer's expectations for online service quality. While research is only beginning to address the issue of online service quality and the role of consumer expectations in the online purchase experience (e.g., Rust & Lemon, 2001), it is clear that online service quality expectations involve a number of issues unique to the Internet environment. Future research could build from the findings reported here by examining how

purchasing experience and consumer expectations may interact to impact attitudes and behaviors in the online service failure/recovery encounter.

In conclusion, this research makes an initial contribution to both academicians and business practitioners by examining the influence of cumulative online purchasing experience in the context of service failure and recovery. As suggested previously, online service providers are challenged to learn how to serve consumers with a wide range of experience in the online setting. Those service providers who understand how customers with varied online purchasing experience react to online service delivery will be rewarded with competitive advantage. This research emphasizes the need for this by providing empirical evidence that cumulative online purchasing experience moderates several key attitudinal and behavioral outcomes of service failure and recovery. We hope that future researchers will build from these findings to further understand the role of cumulative online purchasing experience in the online service encounter.

REFERENCES

- Aiken, L.S., & West, S.G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. London: Sage.
- Arndt, J. (1967). Role of Product-related Conversations in the Diffusion of a New Product. *Journal of Marketing Research*, 4(3), 291–295.
- Bettman, J.R., & Park, C.W. (1980). Effects of Prior Knowledge and Experience and Phase of the Choice Process on Consumer Decision Processes: A Protocol Analysis. *Journal of Consumer Research*, 7(3), 234–246.
- Bhatnagar, N., Lurie, N., & Zeithaml, V. (2003). Reasoning About Online and Offline Service Experiences: The Role of Domain-Specificity in the Formation of Service Expectations. *Advances in Consumer Research*, 30, 383–384.
- Blodgett, J.G., Granbois, D.H., & Walters, R.G. (1993). The Effects of Perceived Justice on Negative Word-Of-Mouth and Repatronage Intentions. *Journal of Retailing*, 69(4), 399–428.
- Boshoff, C. (1999). RECOVSAT: An Instrument to Measure Satisfaction with Transaction-Specific Service Recovery. *Journal of Service Research*, 1, 236–249.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V.A. (1993). A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. *Journal of Marketing Research*, 30(1), 7–27.

- Cadotte, E.R., Woodruff, R.B., & Jenkins, R.L. (1987). Expectations and Norms in Models of Consumer Satisfaction. *Journal of Marketing Research*, 24(3), 305–314.
- DeWitt, T., & Brady, M.K. (2003). Rethinking Service Recovery Strategies: The Effect of Rapport on Consumer Responses to Service Failure. *Journal of Service Research*, 6(2), 193–207.
- Goodwin, C., & Ross, I. (1992). Consumer Responses to Service Failures: Influence of Procedural and Interactional Fairness Perceptions. *Journal of Business Research*, 25(2), 149–163.
- Grazioli, S., & Jarvenpaa, S. (2000). Perils of Internet Fraud: An Empirical Investigation of Deception and Trust with Experienced Internet Consumers. *IEEE Transactions on Systems, Man, and Cybernetics*, 30(4), 395–410.
- Hart, C.W.L., Heskett, J.L., & Sasser, W.E. (1990). The Profitable Art of Service Recovery. *Harvard Business Review*, 68(4), 148–156.
- Herr, P.M., Kardes, F.R., & Kim, J. (1991). Effects of Word-of-Mouth and Product-Attribute Information on Persuasion: An Accessibility–Diagnosticity Perspective. *Journal of Consumer Research*, 17(4), 454–462.
- Hess, R.L., Ganesan, S., & Klein, N.M. (2003). Service Failure and Recovery: The Impact of Relationship Factors on Customer Satisfaction. *Journal of the Academy of Marketing Science*, 31(2), 127–145.
- Holloway, B.B., & Beatty, S.E. (2003). Service Failure in Online Retailing: A Recovery Opportunity. *Journal of Service Research*, 6(1), 92–105.
- Jöreskog, K.G., & Sörbom, D. (1999). LISREL 8.3. Chicago, IL: Scientific Software International.
- Lam, S.Y., Shankar, V., Erramilli, M.K., & Murthy, B. (2004). Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration from a Business-to-Business Service Context. *Journal of the Academy of Marketing Science*, 32(3), 293–311.
- McCollough, M.A., Berry, L.L., & Yadav, M.S. (2000). An Empirical Investigation of Customer Satisfaction After Service Failure and Recovery. *Journal of Service Research*, 3(2), 121–137.
- Meuter, M.L., Ostrom, A.L., Roundtree, R.I., & Bitner, M.J. (2000). Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters. *Journal of Marketing*, 64(3), 50–64.
- Michell, V.W., & Prince, G.S. (1993). Retailing to Experienced and Inexperienced Consumers. *Journal of Retail & Distribution Management*, 21(5), 10–22.
- Mittal, V., & Kamakura, W.A. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics. *Journal of Marketing Research*, 38(1), 131–142.
- Miyazaki, A.D., & Fernandez, A. (2001). Consumer Perceptions of Privacy and Security Risks for Online Shopping. *The Journal of Consumer Affairs*, 35(1), 27–44.
- Montoya-Weiss, M., Voss, G.B., & Grewal, D. (2003). Online Channel Use and Satisfaction in a Multichannel Service Context. *MSI Reports*, 2 (No. 03-107), 19–35.
- Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric Theory*. New York, NY: McGraw-Hill.
- Olson, J.C., & Dover, P.A. (1979). Disconfirmation of Consumer Expectations Through Product Trial. *Journal of Applied Psychology*, 64(2), 179–189.
- Parasuraman, A., & Grewal, D. (2000). The Impact of Technology on the Quality-Value-Loyalty Chain: A Research Agenda. *Journal of the Academy of Marketing Science*, 28(1), 168–174.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(4), 41–50.
- Reichheld, F.F., & Scheffer, P. (2000). E-Loyalty: Your Secret Weapon on the Web. *Harvard Business Review*, 78(4), 105–113.
- Richins, M.L. (1983). Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study. *Journal of Marketing*, 47(1), 68–78.
- Rust, R.T., & Lemon, K.N. (2001). E-Service and the Consumer. *International Journal of Electronic Commerce*, 5(3), 83–99.
- Shankar, V., Smith, A.K., & Rangaswamy, A. (2003). Customer Satisfaction and Loyalty in Online and Offline Environments. *International Journal of Research in Marketing*, 20(2), 153–175.
- Sheth, J.N., & Parvatiyar, A. (1995). Relationship Marketing in Consumer Markets: Antecedents and Consequences. *Journal of the Academy of Marketing Science*, 23(4), 255–271.
- Smith, A.K., Bolton, R.N., & Wagner, J. (1999). A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery. *Journal of Marketing Research*, 36(3), 356–372.
- Solomon, M.R., Surprenant, C., Czepiel, J.A., & Gutman, E.G. (1985). A Role Theory Perspective on Dyadic Interactions: The Service Encounter. *Journal of Marketing*, 49(1), 99–111.
- Szymanski, D.M., & Henard, D.H. (2001). Customer Satisfaction: A Meta-Analysis of the Empirical Evidence. *Journal of the Academy of Marketing Science*, 29(1), 16–35.
- Tax, S.S., Brown, S.W., & Chandrashekar, M. (1998). Customer Evaluations of Service Complaint Experiences: Implications for Relationship Marketing. *Journal of Marketing*, 62(2), 60–77.

- Walker, M.A. (2004). Online Service Lags at Big Firms. *The Wall Street Journal* (Eastern Edition), July 1, B4.
- Warrington, T.B., Abgrab, N.J., & Caldwell, H.M. (2000). Building Trust To Develop Competitive Advantage In E-Business Relationships. *Competitiveness Review*, 10(2), 160–168.
- Weiner, B. (2000). Attributional Thoughts About Consumer Behavior. *Journal of Consumer Research*, 27(3), 382–387.
- Woodruff, R.B., Cadotte, E.R., & Jenkins, R.L. (1983). Modeling Consumer Satisfaction Processes Using Experience-Based Norms. *Journal of Marketing Research*, 20(3), 296–304.
- Yadav, M.S., & Seiders, K. (1998). Is the Price Right? Understanding Contingent Processing in Reference Price Formation. *Journal of Retailing*, 74(3), 311–329.
- Yi, Y. (1990). A Critical Review of Consumer Satisfaction. In V. Zeithaml (Ed.), *Review of Marketing* (pp. 68–123). Chicago: American Marketing Association.