

TRUST VIOLATION IN ELECTRONIC COMMERCE: CUSTOMER CONCERNS AND REACTIONS

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ABSTRACT

The positive relationship between trust and purchase-related variables (such as willingness to buy) has been widely reported in literature. By implication, it is sometimes suggested that violation of trust will lead to negative consequences. However, there is a dearth of empirical support for the consequences of trust violation. In the current study, we examine a research model that proposes that the three characteristics of a trust violation (magnitude of negative outcome, causal attribution to seller, and perceived fairness of seller response) will influence psychological contract violation (PCV), which will affect customer trust (both affect-based and cognition-based trust) and which, in turn, will influence customer repurchase intentions with the offending seller, customer intentions to engage in negative word of mouth communication, and, customer intention to continue purchases on the Internet. The results indicate significant support for the research model. The theoretical and practical implications of the results are discussed.

Keywords: Trust violation, psychological contract violation, perceived fairness, causal attribution, magnitude of negative outcome, repurchase intentions, word of mouth communication.

INTRODUCTION

Trust has been identified as a key success factor in online retailing [23, 24]. However, there is limited research on the consequences of trust violation. Trust violation is defined as the perceived failure of a trustee to meet the expectations of the trustor [35]. Pavlou and Gefen [34] have made a major initial contribution with the publication of their article on the antecedents, consequences and moderating role of psychological contract violation (PCV)¹ in the area of internet electronic auctions, a primarily consumer-to-consumer (C2C) environment. They conclude their article by calling for the examination of PCV and its role in other IT-intensive environments. The current study examines the effects of the characteristics of trust violation on intentions to repurchase from the offending seller, intentions to engage in negative word of mouth communications (WOM), and intentions to continue purchases in the internet retailing environment.

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¹ The terms *psychological contract violation*, *trust violation* and *service failure* are related terms. The distinctions between the three terms are made during concept development.

The rest of the article is organized as follows. The relevant concepts along with the hypotheses and theoretical model are developed in the next section. Following that, details of the research methodology are provided. Results of the data analysis are reported followed by a discussion section and a concluding section.

CONCEPTUAL DEVELOPMENT AND HYPOTHESES

Service Failure, Trust Violations and Psychological Contract Violations

Palmer et al. [32] define service failure as “any situation where something has gone wrong, irrespective of responsibility,” (p. 515). Defective products and delays in delivery of product are examples of service failures. Bies and Tripp [5] define “trust violations as *unmet expectations* [our italics] concerning *another’s* [our italics] behavior, or when the person does not act consistent with one’s values.” (p. 248). Robinson and Morrison [36] define *psychological contract violation* as an “. . . affective or emotional state that may or may not accompany the [psychological contract] breach.” (p. 532), where a psychological contract breach is the failure to meet expected obligations, attributed to the second party in the psychological contract. In short, service failure is an unmet expectation, where the responsibility is not known. Trust violation and psychological contract breach are also both unmet expectations, but where the responsibility for the failure is attributed to the trustee. Psychological contract violation is the affective response of the trustor to the trust violation. For an incident to qualify as a service failure or trust violation, it is sufficient if there is a *perception* of unmet expectation [37, 46]. Both real and perceived instances of unmet expectations will produce affective responses, i.e., psychological contract violation.

Characteristics of Trust Violation

Causal attribution: In the event of a service failure, any one of several agents (or a combination thereof) may be responsible for the unmet expectations. For instance, a defective product may be the fault of the manufacturer, or the fault of a retailer who knowingly shipped defective product. Customer response to the retailer depends on the extent to which the cause for the service failure is attributed to the retailer. Causal attribution is related to the concept of controllability, which addresses the extent to which the service provider (i.e., the retailer in the current context) could

have prevented the service failure. When the failure is attributed to the service provider (i.e., trustee), negative responses are higher [13] and there is a larger decline in trust [27]. Ruth, Brunel and Otnes [38] cite earlier researchers to conclude that when negative outcomes are attributed to the service provider, there is a higher likelihood of anger, which is associated with a greater expectation of a refund and apology.

Magnitude of negative outcome: The magnitude of damage from the trust violation may vary depending on the situation. "Service failures vary in gravity from being something serious . . . to something trivial . . ." [32, p. 515]. An example of a severe failure may be an essential product being delivered many days late in an unusable condition. In contrast, a trivial failure may be a non-essential product being delivered a few dates late, but in good condition. In general, it is accepted that more serious service failures lead to stronger customer responses. Bearden and Oliver [3] state: "The costs associated with an unsatisfactory purchase experience have been hypothesized as influencing public complaint behavior in several ways." (p. 227). Smith et al [42] found that greater loss led to more intensive negative emotions. Weun, Beatty and Jones [47] found that the severity of service failure, i.e., "customer's perceived intensity of a service problem" (p. 135), influenced trust, commitment and WOM. However, there are reported instances when the magnitude of negative outcome did not affect the response. For instance, Wang and Huff [46] found no correlation between magnitude of negative outcome and negative emotions generated.

Perceived fairness of response: Instances of service failure usually lead to expectations of responses from the service provider to correct the situation, i.e., service recovery process. "Service recovery processes are those activities in which a company engages to address a customer complaint regarding service failure [44]" (from [32, p. 515]). Smith and Bolton [43] have reported that service failures evoke emotional responses from customers, and that negative emotional responses can often color the evaluation of service recovery efforts. Nonetheless there is research to support the argument that perceived fairness in service recovery efforts is an important factor in determining customer satisfaction and subsequent decisions to continue patronage. For instance, Palmer et al [32] have shown that the perception of equity in service recovery efforts affects repurchase intentions. Lee and Lee [26] have shown that complaint management processes by online retailers leads to higher trust than when no complaint management processes exist. Thus, overall, it appears that a fair and equitable response by the seller to a service failure event softens any negative response of the customer, and may even result in a positive response.

Previous Experience with Internet Sellers

Sarel and Marmorstein [40] argue that "customers' prior experience with that service provider is critical. Contrary to much of the literature on expectations, customers who had frequently experienced delays in the past were even more angered by the current service failure." (p.195) In electronic commerce, primarily due to the newness of the channel, it has generally been believed that buyer perceptions of the internet in general will influence buyer perceptions of individual retailers. Studies in entitativity have shown that individuals view entities as belonging to a common group even when there is seemingly little relationship between them [28], suggesting that internet retailers in general may be clustered into a group in the

perceptions of the buyers. So, the possibility that prior experience with internet retailers will influence the responses of the buyer to service failure by a single internet retailer exists, and is worth exploring.

Trust Propensity

Propensity to trust (disposition to trust) has been considered an important individual characteristic in the study of trust in electronic commerce [e.g., 17]. The role of propensity to trust has received minimal attention in studies of trust violation. Wang and Huff [46] have shown that negative emotions following a trust violation is correlated to propensity to trust, but decline in trust, negative word of mouth or repurchase intentions are not. Pavlou and Gefen [34] have shown that propensity to trust affects trust in the community of sellers following experiences with service failures.

Trust Transfer

Entitativity, the extent to which a collection of entities is perceived as forming a group [8], is used to understand the transfer of trust from one source to another [8, 45]. In the context of the current study, entitativity is relevant in two ways. First, the possible effect of prior experiences with the community of retailers in the Internet environment influencing buyer response to trust violation by an individual seller has been raised (see subsection on Previous Experience with Internet Sellers). Second, the possibility that the actions of an individual retailer can affect the perception of the community of retailer also needs to be examined. Pavlou and Gefen [34] have shown that psychological contract violation of one member of C2C auction community affects PCV of the overall community and intention to buy from that community in general. This is an example of transference, in which the image of the community is influenced by the actions of an individual member of the community.

Cognition-based and Affect-based Trust in Seller

The distinction between cognition-based trust and affect-based trust was proposed by McAllister [30]. He built on arguments of earlier researchers who had suggested that trust has both cognitive and affective foundations. Cognition-based trust is "grounded in individual beliefs about peer reliability and dependability," while affect-based trust is "grounded in reciprocated interpersonal care and concern." (p. 25). McAllister states that "At times an individual's trust in others is centered more on how they make decisions that affect him or her than on how they behave: "Do they consider my interests and welfare?" This statement suggests that it is sufficient if the trustor believes that the trustee cares for his or her welfare. We argue that this would be particularly true in the case of buyer-seller relations, in which the buyer's trust in the seller is the primary issue of concern.

In the area of electronic commerce, Pavlou [33] has made references to the potential role of affect-based trust. However, we are unaware of any empirical evidence on the differential effects of affect-based and cognition-based trust. Since affect is considered an important trustor response in trust violation scenarios, it is meaningful to examine both the affect-based and cognition-based trust, and their effects on repurchase intentions and WOM.

Intentions to Repurchase from Store

In electronic commerce, some researchers have also shown that trust affects customer loyalty, one dimension of which is continued patronage or repurchase from a store [e.g., 12, 15]. Joo [22] enumerates a list of other factors that affect repurchase intentions in Internet shopping. More recent studies have shown that trust in an internet store enhances repurchase intentions [e.g., 29]. In the context of trust violations, Pavlou and Gefen [34] have shown that psychological contract violation of the community of sellers affects trust in the sellers, which in turn affects transaction intentions. Other researchers indicate that customers may continue patronage in spite of dissatisfaction. Rao and Lee [35] argue that even in the face of service failures, factors such as loyalty, availability of alternate suppliers, switching costs and so on may cause a customer to continue patronage of the offending supplier.

Negative Word of Mouth Communication

Early researchers defined word of mouth communication (WOM) as oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial regarding a brand, product or service [1]. More recent research recognizes the emergence of 'virtual' word of mouth such as electronic bulletin boards and blogs [7]. While WOM can influence decisions either positively or negatively, it seems that negative WOM has a greater effect than positive WOM [1]. Unhappy customers express their dissatisfaction to anywhere between 9 and 20 other people, who may in turn pass the story on further [10]. Also, Kramer [25] reports Slavic's assertion that "sources of bad (trust-destroying) news tend to be perceived as more credible than sources of good news" (p. 593), which makes negative WOM potentially more harmful to the retailer. In recent times, with the advent of internet, online sites sharing negative experiences have magnified the effects of WOM communications further.

Research indicates that the seriousness or severity of the

problem affects customer dissatisfaction which leads to negative WOM communication. Bearden and Oliver [3] say that "the more serious the problem associated with dissatisfaction, the more likely consumers are to tell others about it" (p. 227). Causal attribution to seller and perceived fairness of service recovery efforts have not been explicitly or directly linked to negative WOM communications. However, there is literature linking causal attribution and perceived fairness of service recovery efforts to customer dissatisfaction. Given the linkage from customer dissatisfaction to negative WOM communications, it can be argued that both causal attribution of failure to seller and the perceived fairness of recovery efforts will contribute to negative word of mouth behaviors.

There is research to suggest that the expression of dissatisfaction is not always correlated to changes in purchase behaviors of the persons expressing dissatisfaction. For instance, Semon [41] warns researchers to be alert to the possibility that customers do not change routine purchase behaviors despite expressing dissatisfaction. This suggests a need to examine effects of trust violation on both repurchase intention and negative word of mouth communication in each study.

Intentions to Shop Online (General)

Intentions to shop online refer to the intentions to use the internet channel to shop as opposed to the intentions to shop in the brick-and-mortar environment. Jarvenpaa and Todd [18] reported that risks associated with the Internet channel were barriers to shopping online. In the formative stages of internet retail channel, the virtual nature of the Internet stores raised doubts and fears of retailer opportunism [19]. Given such fears, researchers considered trust an essential ingredient to promote internet shopping [e.g., 4].

Hypotheses

The theoretical model that is being tested in the current study is shown in Figure 1. Support for individual relationships in the

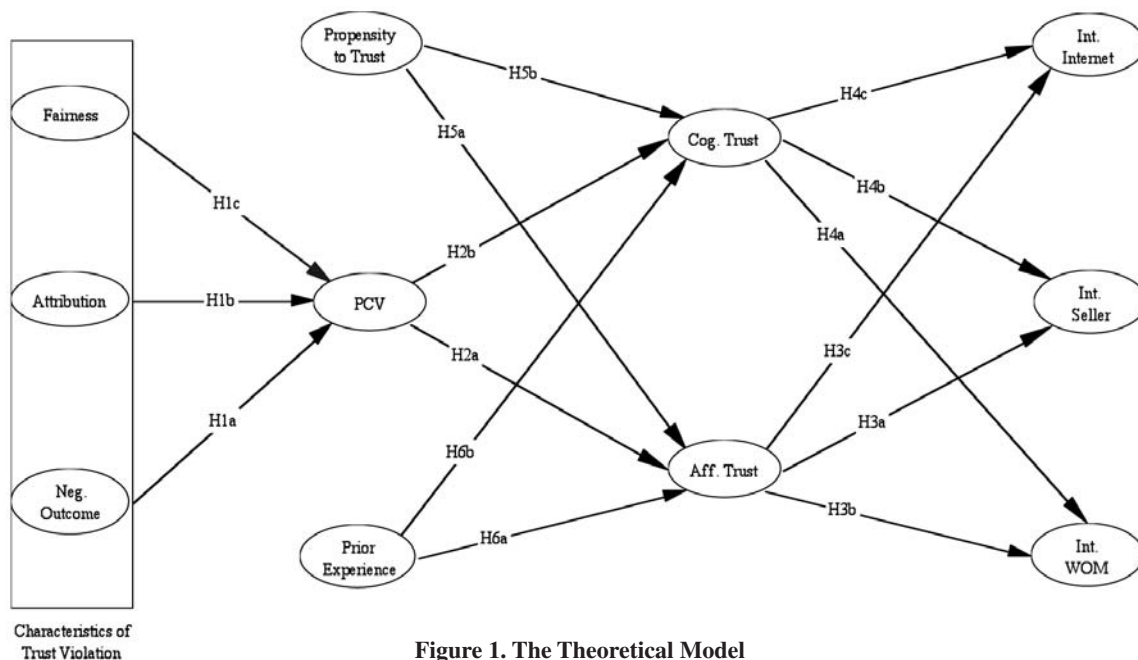


Figure 1. The Theoretical Model

model is based primarily on previous theories and empirical studies, much of which has been discussed in section 2. The hypotheses are listed in Table 1 along with brief summary arguments to support them.

RESEARCH METHODOLOGY

Subjects

Five hundred and eight (508) subjects were recruited from multiple sections of an upper-level class in the college of business of a large southern university in the U.S. providing four hundred and twenty-nine (429) usable responses. The average age of the participants was about 24 years (std. dev. 6.2 years) The subjects had been using the Internet for an average of more than 8 years, and 94% of them used the Internet at least once a day at the time of the study. About 50% of the subjects shopped on the Internet at least once a month, about 28% shopped on the Internet at least once in six months and the remainder at least once a year. The use of students as subjects is appropriate when their responses can be linked to their 'real world' experiences [39]. In the current context, the subjects, their experience with the Internet and

Internet shopping, and the purchase scenario collectively provide a good basis for a meaningful study in trust violation in electronic commerce.

Study Procedures

The study materials consisted of three parts. The first part required the subjects to complete a questionnaire that included items to measure propensity to trust and prior Internet shopping experience. In the second part, the subjects were provided a scenario, which described a service failure. Each subject was asked to imagine that he/she was the buyer in the scenario given to him/her and to respond to items based on his/her reaction to the situation. The use of scenarios or vignettes to manipulate independent variables of interest is a well established technique in the area of IS [e.g., 11, 20, 31] and marketing [e.g., 13, 46, 47]. The items in this segment were designed to measure psychological contract violation, affect-based trust, cognition-based trust, intentions to repurchase, likelihood of negative word of mouth communication, and likelihood of online purchases. The third part elicited demographic information from the subject.

Table 1. Hypotheses

Hypotheses	Rationale
H1a: Psychological contract violation (PCV) will be influenced by magnitude of negative outcome (Neg Outcome). H1b: Psychological contract violation will be influenced by causal attribution (Attribution). H1c: Psychological contract violation will be influenced by fairness of response (Fairness).	Responses to service failure are influenced by the characteristics of trust violation — magnitude of negative outcome [e.g., 42], casual attribution [e.g., 6] and fairness of response [e.g., 43].
H2a: Post-violation affect-based trust (Aff Trust) will be influenced by psychological contract violation. H2b: Post-violation cognition-based trust (Cog Trust) will be influenced by psychological contract violation.	PCV associated with a community of sellers on the Internet influences trust in the community of sellers [34]. By analogy, reasoning is applied to individual internet retailer.
H3a: Intentions to repurchase from offending seller (Int Seller) will be influenced by post-violation affect-based trust. H3b: Intentions to engage in negative word of mouth communications (Int WOM) will be influenced by post-violation affect-based trust. H3c: Intentions to continue purchases from Internet sellers (Int Internet) will be influenced by post-violation affect-based trust. H4a: Intentions to repurchase from offending seller will be influenced by post-violation cognition-based trust. H4b: Intentions to engage in negative word of mouth communications will be influenced by post-violation cognition-based trust. H4c: Intentions to continue purchases from Internet sellers will be influenced by post-violation cognition-based trust.	Extending argument that trust affects purchase intentions [14] for H3a and H4a. Service failure leads to negative WOM [3]. We argue it is mediated by PCV and post-violation trust. H3b and H4b address influence of post-violation trust on WOM. Negative experience with one seller affects attitudes and intentions towards other sellers in the community [34] for H3c and H4c.
H5a: Post-violation affect-based trust will be influenced by propensity to trust. H5b: Post-violation cognition-based trust will be influenced by propensity to trust.	Extending evidence that initial trust is influenced by propensity to trust [14].
H6a: Post-violation affect-based trust will be influenced by prior internet shopping experience. H6b: Post-violation cognition-based trust will be influenced by prior internet shopping experience.	Based on the argument that trust from prior experience will temper post-violation trust.

The scenario² involved the purchase from an Internet seller of items that students are familiar with, i.e., either a textbook, or a notebook computer. Three dichotomous variables were manipulated, resulting in eight (2 x 2 x 2) different versions of the scenario. There were two levels of magnitude of negative outcome: high negative outcome (significant problems in completing the student's assignments), and low negative outcome (little problem in completing the student's assignments). There were two levels of causal attribution: high level of causal attribution to seller (seller at fault), and low level of causal attribution to seller (delivery company at fault). Finally, there were two levels of perceived fairness: high fairness (seller resolves problem), and low fairness (seller is unhelpful in resolving problem.). The scenario in the current study incorporated two features that are commonly accepted as exemplars of service failure [52]: an unusable product, and a delay in delivery.

Only data from respondents (429 out of 508) who said that they were responding to purchases on the Internet Shopping were retained for data analysis. The subjects agreed that the scenario was believable, scoring a mean of 2.0 in response to the item, "The scenario was believable" (1 = Strongly Agree; 7 = Strongly Disagree).

Variables

Manipulation checks were included to test the success of the treatments. All three manipulations were successful. Subjects in the high negative outcome scenarios said they had more problems than subjects in the low negative outcome scenarios (2.69 vs. 4.96 $F_{(1, 427)} = 179.05, p < 0.001$) [1 = High negative outcome 7 = Low negative outcome.]. Similarly, subjects in high attribution scenarios held the seller more responsible for service failure than those in low attribution scenarios (1.95 vs. 5.11, $F_{(1, 427)} = 413.6, p < 0.001$). [1 = High attribution to seller 7 = Low attribution to seller]. Lastly, individual in high fairness scenarios found the seller to be more fair than those in low fairness scenarios (2.05 vs. 5.26, $F_{(1, 427)} = 1101.6, p < 0.001$). [1 = High

Fairness of response 7 = Low fairness of response]. All multi-item scales were either adapted from earlier studies, or generated for the current study³. Scale reliabilities are reported in the Results section (see Table 2).

RESULTS

Analysis

We use a structural equation modeling technique, Partial Least Squares (PLS), to analyze the data and test the hypotheses. Following the recommendation of Chin [9], bootstrap resampling was used, with the number of re-sampled cases set to 500. The fairness, causal attribution, and negative outcome variables were set as dichotomous indicators (low or high) depending on which scenario was used.

Measurement model: The measurement model was assessed by examining individual item reliability, internal consistency, convergent validity, and discriminant validity. All items used in the final analysis loaded on their respective constructs at 0.80 or above, exceeding the stringent threshold of 0.707 for loading coefficients [2, 9]⁴. The t-value of each measurement item's loading on its latent construct was significant at 0.05 alpha level or better, establishing convergent validity, as per the standards suggested by Gefen and Straub [23]. Threshold requirements for composite reliability is 0.70 and average variance extracted (AVE) is 0.5 [17], both of which are met [see Table 2], which further confirms convergent validity.

Discriminant validity was determined in two ways. First, measurement items loaded more highly on their associated

² Scenarios available on request from authors.

³ Scale items are not included because of page limitations, but are available from authors on request.

⁴ In the interest of brevity, the detailed results are not presented in this paper, but are available from the authors on request.

Table 2. Construct Correlations, Average Variance Extracted (AVE), and Composite Reliabilities

	Fairness	Attribution	Neg Outcome	Prior Experiences	Propensity to Trust	PCV	CogTrust	AffTrust	IntInternet	IntSell	WOM	Composite Reliability
Fairness	N/A											N/A
Attribution	0.011	N/A										N/A
Neg. Outcome	-0.023	0.015	N/A									N/A
Prior Experience	0.032	0.050	0.067	0.951								0.967
Propensity to Trust	0.011	0.016	0.051	0.479	0.862							0.896
PCV	-0.544	0.446	0.201	-0.024	-0.037	0.952						0.967
CogTrust	0.634	-0.354	-0.100	0.067	0.124	-0.778	0.859					0.894
AffTrust	0.718	-0.307	-0.083	0.054	0.099	-0.805	0.843	0.902				0.929
IntInternet	-0.229	0.058	0.177	-0.248	-0.193	0.401	-0.270	-0.269	0.924			0.946
IntSeller	-0.524	0.479	0.146	-0.033	-0.045	0.877	-0.785	-0.805	0.347	0.952		0.967
WOM	-0.513	0.500	0.132	-0.011	-0.029	0.897	-0.773	-0.807	0.327	0.929	0.973	0.981

construct than on other constructs (see footnote 4). Second, the variance shared by sets of measurement items with their associated construct was greater than the variance shared between that construct and the other constructs, using the criterion that the square root of AVE should exceed correlations among all other constructs [12]. This can be seen in Table 2. Taken together, these results indicate adequate discriminant validity.

Structural model: The structural model is shown in Figure 2. A combination of a path coefficient at 0.20 or above, along with a *t*-statistic showing a 0.05 level of significance, indicates the path is both statistically significant and substantive [9], indicated by an asterisk (*) in Figure 2. The *r*-squared value for each construct is also shown.

The results indicate that the model substantially accounts for variance associated with the key constructs of psychological contract violation (54%), cognition-based trust (62%), affect-based trust (65%), intentions to repurchase from offending seller (68%), and word-of-mouth communication (67%). The paths from causal attribution and fairness of response are meaningful and significant, supporting H1b and H1c. The path from negative outcome to psychological contract violation is statistically significant at the 0.001 level (*t*-value = 6.33), but falls slightly short of the suggested 0.20 threshold for substantiveness (path coefficient = 0.185). Thus there is marginal support for H1a. Both cognition-based trust and affect-based trust are significantly influenced by psychological trust violation (supports H2a and H2b). However, neither is influenced by prior experience or propensity to trust (reject H5a, H5b, H6a and H6b). Cognition-based trust and affect-based trust in turn strongly influence both intentions to repurchase from the seller and word of mouth (support H3a, H3b, H4a and H4b), but do not influence intentions to buy from other internet retailers (reject H3c and H4c). The implications of the results are discussed in the next section.

DISCUSSION

The Effects of the Three Characteristics of Trust Violation

Causal attribution and fairness of response influenced the customer's response to the service failure to a greater extent than did the magnitude of negative outcome resulting from the service failure. These are consistent with evidence from traditional marketing literature [e.g., 6, 43], confirming that these factors are comparably important in the electronic commerce arena. The preponderance of earlier research on the response to the magnitude of negative outcome generally indicates that customers react negatively [e.g., 47], although there are exceptions [46]. The absence of a meaningful effect in the current study is somewhat surprising. It could be argued that negative emotions result more from the sense of betrayal rather than the magnitude of loss. Hence, causal attribution and fairness of response, both of which suggest a betrayal by the seller, have a larger effect on psychological contract violation than magnitude of negative outcome. Overall, the results imply that customers understand and may be willing to accept that service failures will occur every so often. However, when the service failure is directly attributable to the seller, then customers feel that a psychological contract has been breached, and respond with negative affect, i.e., a psychological contract violation. The psychological contract violation may be further aggravated by insufficient or uncaring response to the breach event. Any unwillingness to redress the effects of service failure arguably leads to a sense of betrayal and significant negative emotional responses.

What is significant about these results is that one factor, perceived fairness, that has a significant impact on psychological trust violation is a factor over which the seller has the most control. By instituting procedures to enhance problem resolution

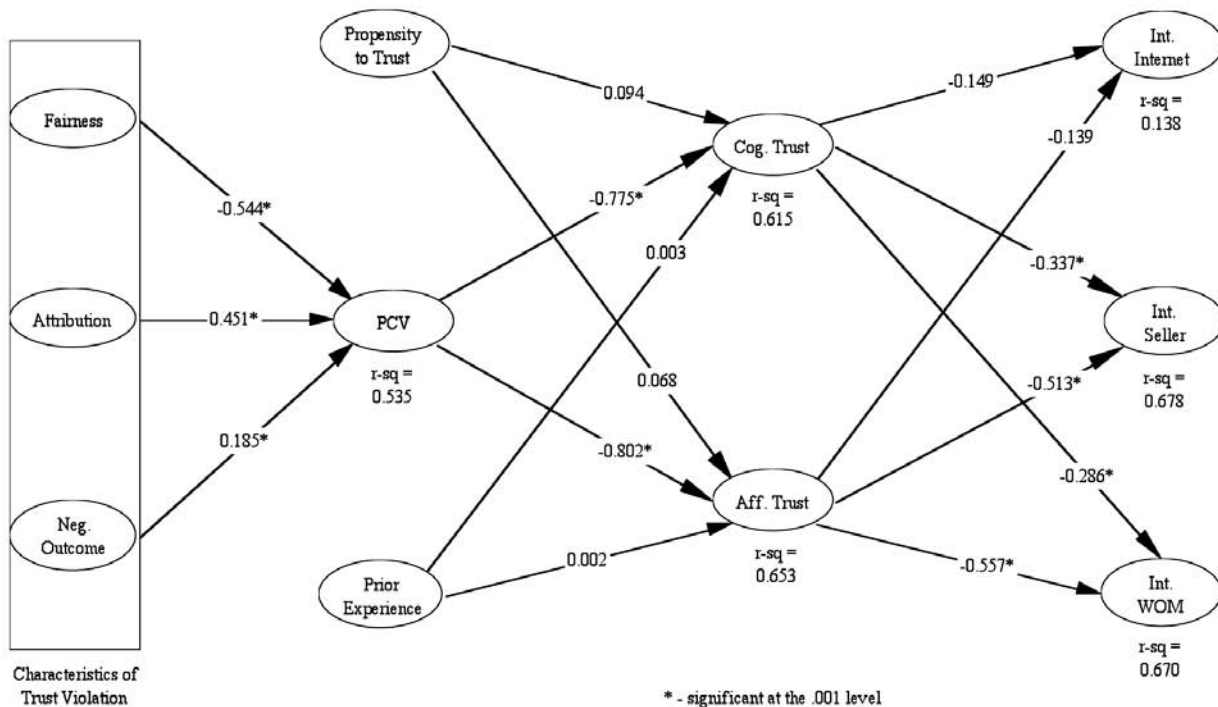


Figure 2. Research Model and Results

the seller can mitigate the extent of perceived violation, with a subsequent positive downstream effect on the other constructs.

The Effects of Post-violation Trust

The second major set of findings relates to the effects of post-violation trust levels on repurchase intentions and intentions to engage in negative word of mouth communication. Electronic commerce researchers have examined the effect of trust on intentions to purchase [e.g., 4, 21], but the effect on negative word of mouth communication has not been examined, nor has any attempt to differentiate between the effects of affect-based trust and cognition-based trust.

In the current study, the results indicate that the post-violation levels of both cognition-based trust and affect-based trust will influence repurchase intentions and intentions to engage in negative word of mouth communication. The effect on repurchase intentions is to be expected, and is consistent with literature [e.g., 12, 15]. There is no prior literature on the effect of trust on intended or actual negative word of mouth communication in electronic commerce. Hence, the results indicating the existence of relationships between affect-based trust and intended negative WOM communication, and, cognition-based trust and negative WOM are important empirical contributions.

Another significant contribution is that affect-based trust appears to have a stronger effect on repurchase intentions and negative WOM communications than cognition-based trust. The relationships between affect-based trust and repurchase intentions / intentions to engage in negative WOM communications have higher factor loadings in the PLS analysis than the relationships between cognition-based trust and repurchase intentions / intentions to engage in negative WOM, which suggests that affective responses to trust violations influence subsequent behaviors more than cognitive responses. Theoretically, this is significant, because no study has reported the differential effects of affect-based trust and cognition-based trust in electronic commerce.

The influence of affect-based trust raises interesting questions for the researcher and dilemmas for the seller. For the researcher, the question is whether the affect-based trust persists over time, or whether it declines with temporal distance from the event. If it does not decline of its own, the seller's dilemma is what steps need to be taken to regain the affect-based trust.

Transference Effects

The third set of results focus on transference effects. In the current study, two types of transference effects were possible. First, there is the possibility that previous experiences with shopping on the Internet may affect post-violation trust levels. Prior shopping experiences on the Internet did not affect post-violation trust levels towards the offending seller. This indicates that responses to trust violation are influenced by the characteristics of the violation and not by other factors. This is in contrast to studies of initial trust in individual internet sellers, in which institution-based trust, a construct which incorporates prior experiences with other internet sellers, influenced the trust in the new individual seller [e.g., 16].

Second, the possibility that post-violation trust levels in one offending online retailer may influence intentions to buy from the internet in general was examined. The results indicated that post-violation trust levels did not affect intention to buy from other Internet retailers. Lickel et al [28] have shown that individuals

cluster entities into a group when there is little relationship between the entities. By analogy one could argue that individuals may cluster all Internet retailers into a group even though the relationship between them is minimal at best. Even as trust in one retailer transfers to other members of the group, it is possible that the trust violations of one entity in a group may affect intentions towards the whole group. The evidence from our study shows that this is not occurring. Trust in the community of internet retailers was fragile in the formative days of electronic commerce. In the early days, there was concern that bad experiences with one Internet retailer would affect customer perception of the community of Internet retailers. Our results would suggest that perhaps the Internet as a retail channel has matured, and the trust in the institution of Internet retailers (B2C) is robust versus the perceived fragility of the trust in earlier years.

The lack of transference in the B2C environment is in contrast to the area of C2C studied by Pavlou and Gefen [34]. Their research indicated that psychological contract violation associated with a single vendor engenders a sense of violation encompassing the entire community of sellers, and thus has negative influences on further patronage of those sellers. The differences in the results between that study and this one can be attributed to two reasons. First, the Pavlou-Gefen study focused on the auction markets, in which many sellers are transient. The market itself lacks clear regulatory influences. In this less formal environment, the failure of an individual seller raises doubts about the whole environment. In contrast, retail establishments in the B2C environment are viewed as being more permanent and a part of the overall established commercial infrastructure, particularly in the United States. In this more institutionalized environment, buyers do not extrapolate the failure of one seller to the whole environment. Second, Pavlou and Gefen focused on multiple instances of failures from possibly multiple vendors, which produces a sense of psychological contract violation by the community. In our study, we were examining the effects of a single failure by a single store, and thus customer attribution of that failure to the larger community of sellers is not very strong. Overall, the results raise interesting questions about when the actions of individual retailers affect the community of sellers and when they do not.

Other Effects

Propensity to trust, an individual trait, has been shown to influence initial trust and ongoing trust in stores in B2C environment in earlier studies. In the current study, the propensity to trust does not affect either post-violation cognition-based trust or affect-based trust. It could be inferred that traits influence responses in the absence of experiential information. Once there is information, particularly negative information, from experience, then that influences responses more than traits, i.e., the trust levels immediately following a negative experience are influenced by the characteristics of the negative experience, and not by individual traits.

Psychological contract violation influences the post-violation affect-based trust and post-violation cognition-based trust. Psychological contract violation relates to affective responses resulting from the psychological contract breach or trust violation. Because of the affective nature of the psychological contract violation, it was anticipated that its relationship to affect-based trust would be stronger than its relationship to cognition-based trust. Contrary to expectation, PCV influences both

affect-based trust and cognition-based trust about equally. The results suggest that negative affective responses associated with psychological contract violations also challenge the buyer perception of the competence and integrity of the seller.

Implications for Practice

In general, it is known that trust violations by a seller have negative consequences for the seller. The current study provides further insights, which are of practical use. First, it suggests that the magnitude of negative outcome is less important than either causal attribution or fairness of response of the seller. Second, the affective responses to the trust violation have a stronger effect than the cognitive responses. In the current study, affect-based trust affected intentions to repurchase and intentions to engage in negative WOM communications more than cognition-based trust. Through experience and research, most customer service departments have learnt that it is best to let the customer vent his/her anger and frustration. Our study would indicate that this is an appropriate strategy.

Third, a trust violation leads to a likely reduction in intentions to buy from seller (for discussions on why they may continue to buy from the offending seller, see Rao and Lee [35]). Of significant importance to sellers is the finding that a trust violation also leads to intentions to engage in negative word of mouth, which can generate a multiplier effect that potentially transcends the individual buyer's intent to not engage in future transactions with that seller. Regardless of whether the offended buyers continue to patronize the same internet retailer, the buyers are likely to engage in negative word of mouth communication. This suggests that efforts must be made to mitigate the effects of possible negative word of mouth communications. In the field of electronic commerce, the Internet is both a means of spreading negative word of mouth communication, and a means for the retailer to respond. The Internet poses the danger that the negative word of mouth communication of an offended buyer will reach a much larger audience. The public nature of the Internet allows the retailer to become aware of negative views being spread, which permits the retailer to take countervailing measures.

Summary of Contributions

The study's overarching finding is that a trust violation results in negative consequences for the offending store. Needless to say, this high level view of the results is neither surprising nor new. The contributions of the study are in the detailed findings. These include: (a) the magnitude of the negative outcome affects psychological contract violation less than causal attribution of perceived fairness of response (b) psychological contract violation influences both post-violation affect-based trust and cognition-based trust more or less equally, (c) affect-based trust influences both repurchase intentions and intentions to engage in negative word of mouth communications more than cognition-based trust does, (d) post-violation trust levels in one store do not affect intentions to buy from the internet, and (e) neither propensity to trust nor prior experiences in Internet shopping affect the post-violation trust in an offending Internet store.

CONCLUSION

The area of responses to trust violations in electronic commerce is ripe for study. Other than the Pavlou and Gefen study [34],

no other major study has been published on the subject. The Pavlou-Gefen study used data from the primarily C2C arena of Internet auctions, while the current study simulates trust violation in a B2C environment. Both studies indicate the psychological contract violations lead to a lower likelihood of future transactions. However, differences are also seen. For instance, the Pavlou-Gefen study showed that propensity to trust influences post-violation trust, while the current study found no evidence to support that. Also, the Pavlou-Gefen study showed that there is transference from the individual offender to the community of sellers, while the current study found no support for that. The differences indicate that responses to trust violation in electronic commerce is a complex phenomenon, a phenomenon that needs further exploration and study. Over the past decade, information systems scholars have built a significant body of theoretical and empirical evidence to argue that trust is an important construct in the study of electronic commerce. We believe it is now necessary to understand the consequences of trust violation and the steps that e-businesses can take to recover from instances of trust violation.

REFERENCES

- [1] Arndt, J., "Role of Product-Related Conversations in the Diffusion of a New Product," *Journal of Marketing Research*, 4:3, 1967, pp. 291-295.
- [2] Barclay, D., Thompson, R., and Higgins, C., "The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use as an Illustration," *Technology Studies*, 2:2, 1995, pp. 285-309.
- [3] Bearden, W.O. and Oliver, R.L., "The Role of Public and Private Complaining in Satisfaction with Problem Resolution," *Journal of Consumer Affairs*, 19:2, 1985, pp. 222-240.
- [4] Bhattacharjee, A., "Individual Trust in Online Firms: Scale Development and Initial Test," *Journal of Management Information Systems*, 19:1, 2002, pp. 211-241.
- [5] Bies, R.J. and Tripp, T.M., "Beyond Distrust: "Getting Even" and the Need for Revenge," in R.M. Kramer and T. Tyler, ed., *Trust in Organizations*, Newbury Park: Sage Publications, 1996, pp. 246-260.
- [6] Bitner, M.J., Booms, B.M., and Tetreault, M.S., "The Service Encounter: Diagnosing Favorable and Unfavorable Incidents," *Journal of Marketing*, 54:January, 1990, pp. 71-85.
- [7] Buttle, F.A., "Word of Mouth: Understanding and Managing Referral Marketing," *Journal of Strategic Marketing*, 6:3, 1988, pp. 241-254.
- [8] Campbell, D.T., "Common Fate, Similarity and Other Indices of the Status of Aggregates of Persons as Social Entities," *Behavioral Science*, 3, 1958, pp. 14-25.
- [9] Chin, W., "Issues and Opinion on Structural Equation Modeling," *MIS Quarterly*, 22:1, 1998, pp. vii-xvi.
- [10] Desatnick, R.L., *Managing to Keep the Customer*, San Francisco, CA: Jossey-Bass, 1987.
- [11] Dutta, A., "Business Planning for Network Services: A Systems Thinking Approach," *Information Systems Research*, 12:3, 2001, pp. 260-286.
- [12] Flavian, C., Guinaliu, M., and Gurra, R., "The Role Played by Perceived Usability, Satisfaction and Consumer Trust on Website Loyalty," *Information and Management*, 43:1, 2006, pp. 1-14.

- [13] Folkes, V.S., "Consumer Reactions to Product Failure: An Attributional Approach," *Journal of Consumer Research*, 10:4, 1984, pp. 398-409.
- [14] Gefen, D., "E-Commerce: The Role of Familiarity and Trust," *Omega*, 28:6, 2000, pp. 725-737.
- [15] Gefen, D., "Customer Loyalty in E-Commerce," *Journal of the Association for Information Systems*, 3, 2002, pp. 27-51.
- [16] Gefen, D., Karahanna, E., and Straub, D.W., "Trust and TAM in Online Shopping: An Integrated Model," *MIS Quarterly*, 27:1, 2003, pp. 51-90.
- [17] Grazioli, S. and Jarvenpaa, S.L., "Perils of Internet Fraud: An Empirical Investigation of Deception and Trust with Experienced Internet Consumers," *IEEE Transactions on Systems, Man, and Cybernetics*, 30:4, 2000, pp. 395-410.
- [18] Jarvenpaa, S. and Todd, P., "Consumer Reactions to Electronic Shopping on the World Wide Web," *International Journal of Electronic Commerce*, 1:2, 1996/97, pp. 59-88.
- [19] Jarvenpaa, S.L. and Rao, V.S., "Trust in Online Consumer Exchanges: Emerging Conceptual and Theoretical Trends," in M. Shaw, ed., *Electronic Commerce and the Digital Economy*, 2005.
- [20] Jarvenpaa, S.L. and Staples, D., "Exploring Perceptions of Organizational Ownership of Information and Expertise," *Journal of Management Information Systems*, 18:1, 2001, pp. 151-183.
- [21] Jarvenpaa, S.L., Tractinsky, N., and Vitale, M., "Consumer Trust in an Internet Store," *Information Technology and Management*, 1:1-2, 2000, pp. 45-71.
- [22] Joo, J., "An Empirical Study on the Relationship between Customer Value and Repurchase Intention in Korean Internet Shopping Malls," *Journal of Computer Information Systems*, 48:1, 2007, pp. 53-62.
- [23] Kim, E. and Tadisina, S., "A Model of Customers' Trust in E-Business: Micro-Level Inter-Party Trust Formation," *Journal of Computer Information Systems*, 48:1, 2007, pp. 88-104.
- [24] Kim, M.-S. and Ahn, J.-H., "Comparison of Trust Sources of an Online Market-Maker in the E-Marketplace: Buyer's and Seller's Perspectives," *Journal of Computer Information Systems*, 47:1, 2006, pp. 84-94.
- [25] Kramer, R.M., "Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions," *Annual Review of Psychology*, 50, 1999, pp. 569-598.
- [26] Lee, S.M. and Lee, S.J., "Consumers' Initial Trust toward Second-Hand Products in the Electronic Market," *Journal of Computer Information Systems*, 46:2, 2005, pp. 85-98.
- [27] Lewicki, R.J. and Bunker, B.B., "Developing and Maintaining Trust in Work Relationships," in R.M. Kramer and T.R. Tyler, ed., *Trust in Organizations: Frontiers of Theory and Research*, Thousand Oaks, CA: Sage Publications, 1996, pp. 114-139.
- [28] Lickel, B.D., Hamilton, D.L., Wierzchowska, L., A., Sherman, S.J., and Uhles, A.N., "Varieties of Groups and the Perception of Entitativity," *Journal of Personality and Social Psychology*, 78, 2000, pp. 223-246.
- [29] Liu, B.Q. and Goodhue, D.L., "An Exploration of the Hygiene and Motivator Aspects of Webqual Constructs in Predicting Website Reuse," in *Proceedings of the 41st Hawaii International Conference on Information System Sciences*, Hawaii, HI, 2008.
- [30] McAllister, D.J., "Affect- and Cognition-Based Trust as Foundations for Interpersonal Co-operation in Organizations," *Academy of Management Journal*, 38:1, 1995, pp. 24-59.
- [31] Moores, T.T. and Chang, J.C., "Ethical Decision Making in Software Piracy: Initial Development and Test of a Four-Component Model," *MIS Quarterly*, 30:1, 2006, pp. 167-180.
- [32] Palmer, A., Beggs, R., and Keown-McMullan, C., "Equity and Repurchase Intention Following Service Failure," *Journal of Services Marketing*, 14:6, 2000, pp. 513-528.
- [33] Pavlou, P.A., "Institution-Based Trust in Interorganizational Exchange Relationships: The Role of Online B2B Marketplaces on Trust Formation," *Journal of Strategic Information Systems*, 11:3/4, 2002, pp. 215-243.
- [34] Pavlou, P.A. and Gefen, D., "Psychological Contract Violation in Online Marketplace: Antecedents, Consequences, and Moderating Role," *Information Systems Research*, 16:4, 2005, pp. 372-399.
- [35] Rao, V.S. and Lee, S.J., "Responses to Trust Violation: A Theoretical Framework," *Journal of Computer Information Systems*, 48:1, 2007, pp. 76-87.
- [36] Robinson, S.L. and Morrison, E.W., "The Development of Psychological Contract Breach and Violation: A Longitudinal Study," *Journal of Organizational Behavior*, 21:5, 2000, pp. 525-546.
- [37] Robinson, S.L. and Rousseau, D.M., "Violating the Psychological Contract: Not the Exception but the Norm," *Journal of Organizational Behavior*, 15, 1994, pp. 245-259.
- [38] Ruth, J.A., Brunel, F.F., and Otnes, C.C., "Linking Thoughts to Feelings: Investigating Cognitive Appraisals and Consumption Emotions in a Mixed-Emotions Context," *Academy of Marketing Science Journal*, 30:1, 2002, pp. 44-58.
- [39] Sambamurthy, V. and Chin, W., "The Effects of Group Attitudes toward Alternative GDSS Designs on the Decision-Making Performance of Computer-Supported Groups," *Decision Sciences*, 25:2, 1994, pp. 215-241.
- [40] Sarel, D. and Marmorstein, H., "Managing the Delayed Service Encounter: The Role of Employee Action and Customer Prior Experience," *Journal of Services Marketing*, 12:3, 1998, pp. 195-208.
- [41] Semon, T., "Inertia a Factor Not to Be Ignored in Research," *Marketing News*, 35:13, 2001, pp. 7.
- [42] Smith, A., Bolton, R., and Wagner, J., "A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery," *Journal of Marketing Research*, 36, 1999, pp. 356-372.
- [43] Smith, A.K. and Bolton, R.N., "The Effect of Customers' Emotional Responses to Service Failures on Their Recovery Effort Evaluations and Satisfaction Judgments," *Journal of the Academy of Marketing Science*, 30:1, 2002, pp. 5-23.
- [44] Spreng, R., Harrel, G., and Mackoy, R., "Service Recovery: Impact on Satisfaction and Intentions," *Journal of Services Marketing*, 9:1, 1995, pp. 15-23.
- [45] Stewart, K.J., "Trust Transfer on the World Wide Web," *Organization Science*, 14:1, 2003, pp. 5-17.
- [46] Wang, S. and Huff, L.C., "Explaining Buyers' Responses to Sellers' Violation of Trust," *European Journal of Marketing*, 41:9/10, 2007, pp. 1033-1052.
- [47] Weun, S., Beatty, S.E., and Jones, M.A., "The Impact of Service Failure Severity on Service Recovery Evaluations and Post-Recovery Relationships," *Journal of Services Marketing*, 18:2, 2004, pp. 133-146.