



Product returns on the Internet: A case of mixed signals?

Carolyn Bonifield ^{a,*}, Catherine Cole ^b, Randall L. Schultz ^b

^a School of Business Administration, University of Vermont, Kalkin Hall, Burlington, Vermont 05405-0157, United States

^b Tippie College of Business, University of Iowa, 108 Pappajohn Business Administration Building, Iowa City, Iowa, United States

ARTICLE INFO

Article history:

Received 1 September 2008

Received in revised form 1 October 2008

Accepted 1 December 2008

Keywords:

Internet
E-commerce
Signaling theory
Return policies
Perceived control
Trust

ABSTRACT

In two studies, we investigate the interrelationship between return policy leniency and retailer quality. In the first study, we content analyze the return policies of e-tailers randomly selected from those listed at BizRate.com. Then we relate the return policy characteristics to these quality ratings. Consistent with signaling theory, we find that as the ratings of e-tailer quality increase, return policy leniency increases in non-consumable product categories. However, the positive quality/return policy leniency relationship does not hold in consumable product categories. In a follow-up experiment, we investigate how consumers interpret the return policy signal. Specifically, we find that consumers' ability to control their shopping experience and their general trust of e-tailers moderate their reactions to return policies that differ in leniency. Finally, we discuss the theoretical and managerial implications of this research.

© 2009 Elsevier Inc. All rights reserved.

1. Introduction

Given the increasing interest in online purchase behavior, it is somewhat surprising that researchers have not extensively studied product returns. While traditional brick-and-mortar retailers have long had the procedures in place to handle returns, online retailers often overlook this important aspect of the customer experience. In general, e-tailers have not done enough to give customers the same confidence in their return policies as traditional merchants do and they have been slow to put in place effective systems for refunds and exchanges (Collier and Bienstock, 2006).

Yet the way in which retailers handle returns is, for many consumers, an important component of the buying process. In a recent survey conducted by PriceRunner, 40% of online shoppers indicated that they are unhappy with the processes for returning goods purchased online (Charlton, 2007). The online environment makes it especially easy for unhappy consumers to inform thousands of others about unresolved complaints (Tsang and Zhou, 2005; Ward and Ostrom, 2003).

Our research focuses on return policies, which can act as an important prepurchase signal to consumers. In our first study, we investigate whether and when variability in retailer quality underlies variability in return policy leniency. In our second study, we investigate the relationship between the return policy signal and the consumer.

Our research makes several contributions to theory and practice. Because we study return policies, we broaden prior research on what are known as default contingent-cost risking signals, which tend to emphasize warranties (Kirmani and Rao, 2000, but see Wood, 2001,

for a notable exception). The first study fills a gap in theory development and testing by investigating how characteristics—as opposed to the mere presence—of signals relate to quality. The second study builds on prior research by studying how two important moderator variables influence the quality inferences consumers make from return policy characteristics (Boulding and Kirmani, 1993; Wood, 2001). The moderators, perceived trustworthiness of the agent sending the signal and perceived control over the shopping experience, repeatedly enter into discussions about why online behavior is different than offline behavior (Childers et al., 2001).

From a managerial perspective, e-tailers face considerable uncertainty about how to set return policies. On the one hand, e-tailers may understand that lenient return policies signal that the firm stands behind the quality and delivery of their products and may generate incremental sales; on the other hand, they are also likely to realize that lenient return policies are expensive and difficult to manage (Heiman et al., 2001). Our research may help e-tailers sort out the advantages and disadvantages of different return policies.

We proceed as follows. First, we develop the hypothesis that guides the first study, and then we present the methodology and results. Next, we develop the hypotheses that guide the experiment, present the methodology, and discuss the results. Finally, we discuss implications of both studies for theory and practice.

2. Literature review

2.1. The e-tailers' perspective: the relationship between return policies and quality

Internet retailers realize that buyers and sellers possess asymmetric information. Buyers are unable to inspect goods prior to purchase and worry about the security of the transaction and the timeliness of

* Corresponding author.

E-mail addresses: bonifield@bsad.uvm.edu (C. Bonifield), cathy-cole@uiowa.edu (C. Cole), randall-schultz@uiowa.edu (R.L. Schultz).

the delivery. In contrast, sellers have information about these aspects of their business. In order to alert buyers to their competitive advantage, high-quality e-tailers may use signals to separate themselves from low-quality e-tailers. Interestingly, because of the absence of other significant cues, consumers may rely more on signals as diagnostic cues in online shopping environments than in in-store settings (Biswas and Biswas, 2004).

We predict that in order to attract consumers and to reveal the quality of their website, high-quality e-tailers will set lenient return policies, which are policies that facilitate returns by not only allowing refunds, exchanges, and merchandise credits, but also by imposing minimal restrictions on consumers making returns. These high-quality firms can offset the increased costs of honoring lenient return policies with increased revenues from consumers. Low-quality firms, though, will not use lenient return policies because they know that their low quality means that many orders will be returned and the costs of returned merchandise will be higher than any increased revenues from consumers attracted by lenient policies (see Heiman et al., 2001, Proposition 7a and 7b).

However, in some product categories, the threat of consumer cheating may deter e-tailers from using return policies as signals (Heiman et al., 2001). For example, dishonest consumers could order, consume the benefits of, copy and/or try to return for credit software, compact discs, videos, flowers or food products. Even high-quality e-tailers selling these product categories may realize that consumer cheating could raise the cost of honoring lenient return policies to an uneconomic level. As a result, we predict that e-tailers which primarily sell products with benefits that can be quickly consumed or copied (hereafter referred to as consumable) will set restrictive return policies regardless of their quality, so that whether the product category is easily consumed moderates the e-tailer quality/return policy leniency relationship.

H1. Type of product and e-tailer quality interact such that there is a positive relationship between e-tailers' quality and return policy leniency in non-consumable product categories, and no relationship between e-tailer quality and return policy leniency in consumable product categories.

3. Content analysis

3.1. Overview

The study obtained quality ratings and a list of e-tailers from BizRate.com (www.BizRate.com; 2008). Two coders independently randomly selected 141 of the e-tailers listed on BizRate.com and then coded the return policies. Because websites are listed under product categories (e.g., apparel), but the listed websites frequently handle multiple product categories, we instructed the coders to code the return policies for the product categories where the websites were listed. For example, Amazon.com was randomly selected from the Books and Magazines category. The coder ignored the return policy for non-book items (e.g., CDs) and only coded the return policy for books. Each coder also coded 40 sites done by the other coder so that we could calculate intercoder reliability.

3.2. Predictor, dependent, and moderator variables

3.2.1. E-tailer quality

As predictor variables in our analyses, we used quality ratings from BizRate.com (2008). The BizRate score is a weighted average calculated from scores customers assign to an e-tailer. The scored attributes include: ease of finding items, product selection, product information, price, overall design of site, on-time delivery, product met expectations, customer support, order tracking, shipping charges, variety of shipping options, product availability, charges stated clearly before order submission, overall rating, likelihood of shopping again at the site, and likelihood of recommending the site. We used this measure of quality because it is based on different

consumers' opinions, and it gives minimal attention to the characteristics of the return policy.

3.2.2. Lenience of e-tailer return policy

Based on the characteristics of each e-tailer's return policy, we created two measures of return policy leniency. To form one index (called REM for availability of refunds, exchanges, and merchandise credits), we judged whether the e-tailer issues refunds, makes exchanges or gives merchandise credits for returned items (see Table 1 in Appendix A). The index ranged from 9 (the merchant issues refunds, exchanges, and merchandise credits on all merchandise) to 3 (the merchant issues no refunds, no exchanges, and no merchandise credits). The intercoder reliability of the two judges' commonly coded websites was 87% (Perreault and Leigh, 1989).

To form the second index (called the Restrictions index), we counted the number of restrictions that the merchant imposed on consumers. These restrictions relate to how the following items are handled: the return label, time limits, return shipping, restocking fees, original shipping and handling, pre-authorization, and customer contact information. In this case, the Restrictions index varied from 0 (no restrictions) to 7 (restrictions), so that a higher number indicates more restrictions in the return policy (see Table 1 in Appendix A). The intercoder reliability on this index was 96%.

3.2.3. Category consumability

Two coders classified each category listed at BizRate.com as consumable or non-consumable. We instructed coders to consider a category consumable if a) product benefits could be consumed/copied in a short period of time, and/or b) if there was a low salvage value for returned merchandise (Davis et al., 1998). The judges agreed on 100% of the classifications so that consumable categories included: Food and Flowers, Gifts, Computer Software, Ink Cartridges (for printers, copiers), Vitamins and Nutrition, and Perfume and Cosmetics, and the non-consumable categories included: Jewelry, Furniture, Clothes, Electronics, Appliances, and Fitness Equipment.

3.3. Results

3.3.1. Descriptive statistics

The BizRate ratings varied from 6.0 to 9.4 with a mean of 8.6. Of the coded sites, 46.98% fell into a consumable category.

3.3.2. Hypothesis testing

We test the hypothesis using two regressions. In the first regression, we regress BizRate.com ratings, product consumability, and their interaction on the Restrictions index, finding a main effect for consumability and a significant interaction effect which is diagrammed in Fig. 1A (Intercept = $-.74$, $t = -.15$, $p < .88$, Quality Ratings Beta: $.70$, $t = 1.18$, $p < .23$, Consumability Beta: 11.28 , $t = 2.0$, $p < .05$, Interaction

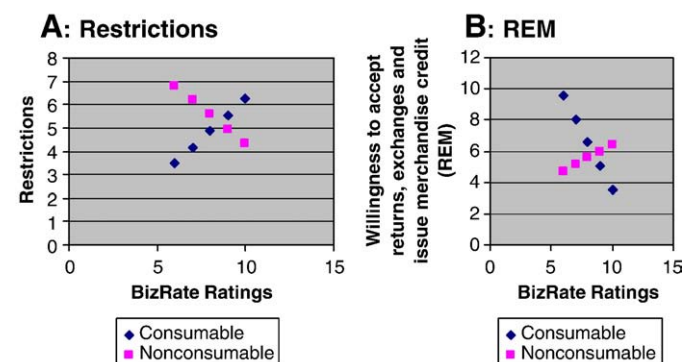


Fig. 1. Relationships between quality ratings and return policy leniency.

Beta: -1.32 , $t = -1.99$, $p < .05$). In the second regression on the REM index with the same independent variables (Fig. 1B), we obtain significant main effects for consumability and quality ratings and a significant interaction (Intercept = 18.71 , $t = 4.09$, $p < .01$, Quality Ratings Beta: -1.52 , $t = -2.82$, $p < .02$, Consumability Beta: -16.68 , $t = -3.11$, $p < .01$, Interaction Beta: 1.96 , $t = 3.10$, $p < .01$).

Because of the interactions, we discuss the relationships between e-tailers' quality and return policy leniency for non-consumable and consumable product categories separately. Consistent with H1, when products are not consumable, there is a negative significant relationship between the BizRate ratings and the number of restrictions imposed on returns ($-.62$, $t = -2.02$, $p < .05$) so that as the BizRate quality rating increases, the number of restrictions decreases. There is also a positive directionally consistent relationship between BizRate quality ratings and the REM index so that higher-quality e-tailers are more willing to issue refunds, merchandise credits, and make exchanges ($.44$, $t = 1.34$, $p < .18$).

Consistent with our reasoning for H1, consumable product categories have more restrictive return policies than non-consumable product categories when quality is high. Contrary to the hypothesis, when quality is low, consumable product e-tailers set more lenient return policies than non-consumable product e-tailers. Because of the low-quality e-tailers' behavior, there is a negative relationship between the BizRate ratings and REM (-1.52 , $t = -2.72$, $p < .01$) and a positive, but not statistically significant relationship between BizRate ratings and the number of restrictions ($.70$, $t = 1.32$, $p < .19$) for consumable product e-tailers. We explore reasons why low-quality consumable goods e-tailers might set such lenient return policies next.

3.4. Discussion

Using quality ratings, two measures of return policy leniency, and data from vendors in multiple product categories, we find that for non-consumable product categories, consistent with H1 and signaling theory, higher-quality websites are more likely to issue refunds, permit exchanges, give merchandise credits, and impose fewer restrictions on returns than lower-quality websites. Consistent with H1, we also find that high-quality firms in consumable product categories make product returns more difficult than high-quality firms in non-consumable product categories. However, inconsistent with H1, low-quality consumable goods vendors set relatively lenient return policies. Perhaps these e-tailers are emphasizing customer acquisition rather than customer retention. Alternatively, they may be trying to stay competitive by compensating for their low quality with a lenient return policy. The high-quality consumable goods vendors may not behave in these ways because they realize that the costs of returned goods are so high that they outweigh the benefits of attracting new customers. Future research might look more closely at the performance and objectives of the consumable goods firms to determine if goals such as attracting new customers vary by quality or if other factors such as breadth of items carried, presence of retail outlets, or length of time in business moderate the relationship between quality rating and return policy leniency.

An interesting theoretical question emerges: if web retailers in non-consumable product categories are using return policies as a signal of e-tailer quality, are consumers interpreting the signal as the sender intends?

4. Experiment

4.1. The consumers' perspective: the inference process

Consumers can interpret marketing signals such as warranties in a manner consistent with signaling theory, even though the underlying logic is fairly subtle (Wood, 2001), but individual characteristics, such as consumer knowledge (Srivastava and Mitra, 1998) and context variables, such as perceived price dispersion (Biswas et al., 2006), moderate consumers' use of signals. We extend this literature by proposing that

the web design moderates consumers' use of the return policy signal because it affects perceived control over the shopping experience (Novak et al., 2000). When consumers perceive that control over navigation at a website is low, they limit time spent searching at a site (Richard, 2005), express less shopping enjoyment (Childers et al., 2001), and report more negative evaluations of the products (Richard and Chandra, 2005). Given these reactions, we would not expect that even a lenient return policy could overcome consumers' negative evaluations of a website with low perceived control. In contrast, when consumers experience high levels of control over their shopping experience, they express more positive attitudes toward the e-tailer. But high levels of control do not reduce consumer uncertainty about e-tailer quality. As a result, we posit that consumers will be receptive to the signal information contained in the return policy when perceived control over navigation is high (Padmanabhan and Rao, 1993). Thus, we predict that:

H2. Perceived control and return policy characteristics interact such that when perceived control is high, consumers rate e-tailers with lenient return policies as higher quality than e-tailers with restrictive return policies, but when perceived control is low, consumers rate e-tailers equally poorly on quality regardless of the return policy.

H3. Perceived control of the website and return policy characteristics interact such that when perceived control is high, consumers express higher purchase intentions for e-tailers with lenient return policies than for e-tailers with restrictive return policies, but when perceived control is low, consumers are equally unlikely to purchase at the e-tailers regardless of their return policy.

One persistent problem e-tailers face is gaining consumer trust, where two types of trust have been studied: experience-based trust (consumers' faith that they can engage in online financial exchanges with reliable, secure, honest, and dependable merchants) and cue-based trust, which arises from cues presented in an initial encounter with an online e-tailer (Anthes, 2002). For example, Anthes (2002) reports that only 29% of surveyed Internet users said that they trust Web merchants, which represents a much lower level of experience-based trust than that expressed for offline retailers. This poses a problem for e-tailers because in an exchange, if one party doesn't trust the other party, the transaction is much less likely to occur.

We expect that return policy signals will operate weakly when experience-based trust is low because consumers may not believe that e-tailers honor return policies so that the bonding component of the signal may not be credible (Boulding and Kirmani, 1993). Also, these low (experience-based) trust consumers may limit their experiences with e-tailers and may not have the knowledge needed to interpret the return policy signal.

In contrast, return policy signals should operate well when consumers have high levels of experience-based trust of e-tailers. The knowledge explanation suggests that consumers who trust websites are likely to have shopped at multiple websites and will know whether a website return policy is lenient or restrictive. As a result, they have the cognitive framework to interpret the signal. Furthermore, they are likely to believe that the return policy is credible as a diagnostic cue about e-tailer quality. For these consumers, a restrictive return policy may not only signal a poor quality e-tailer, but may dampen purchase intentions. Thus, we predict that trust will qualify H2 and H3 so that the effects of return policy leniency on quality (H4) and purchase intentions (H5) are muted when experience-based trust is low and amplified when this type of trust is high.

4.2. Overview

In this 2 (control) $\times 2$ (return policy) $\times 2$ (trust) between subjects design, we randomly assigned 290 consumers to shop at an e-tail site that has either high or low levels of control, and to evaluate a Web

return policy that is either lenient or restrictive. The last factor, experience-based trust, is a measured variable and subjects were divided into two groups (median split) depending on their score on the trust scale. After shopping at a website and viewing a return policy, consumers completed a questionnaire at an online survey site.

4.3. Method

We recruited participants from a subject pool at a major Midwestern university. The participants completed the shopping study on individual computers. Appendix B outlines the technology for conducting experiments on actual websites. Before participants learned which e-tailer site they would visit, they began the online questionnaires, which included questions about their trust for e-tailers in general and for the specific e-tailers in the study. Then participants learned that they would shop at one of four preselected e-tailers for items totaling \$125. However, once they selected the items, they were instructed to return to the questionnaire without actually purchasing the items. Participants learned that four consumers in the study would actually receive the items selected, although in the final analysis they were sent checks for \$125. After shopping on their assigned websites, participants completed the online questionnaires.

4.4. Independent variables

4.4.1. Perceived control

Approximately half of the participants were randomly assigned to websites which gave the participants a feeling of high control over the transaction, while the other half were assigned to websites intended to give the participants a feeling of low control over the transaction. The high-control and low-control websites included those from the footwear and drugstore product categories. For the footwear category, the “high-control” website was Nordstrom’s shoe site (<http://www.nordstromshoes.com>) and the “low-control” website was Rockport (<http://www.rockport.com>). For the drugstore product category, the “high-control” website was Walgreen’s (<http://www.walgreens.com>) and the “low-control” website was CVS Pharmacy (<http://www.cvs.com>).

4.4.2. Return policy

Once the respondents selected their item(s), they began completing the questionnaires, which displayed either new lenient or restrictive return policies for the e-tailer. According to the lenient return policy, the e-tailer provides a return label, pays for return postage, does not charge a restocking fee, and issues refunds, exchanges, and merchandise credits. According to the restrictive return policy, the customer has to obtain a refund authorization number, write this number on the outside of the package, address the package, pay for return postage, and pay a 15% restocking fee. The e-tailer only issued a merchandise credit.

4.4.3. Experience-based trust

After the respondents learned what the study was about, but before they learned which website they would visit, they completed a five-item semantic differential scale to measure trust. This timing assures that the experience at a particular website does not affect the measure of trust. Respondents were split at the median score on the trust scale.

4.5. Dependent variables

As manipulation checks, we used a five-item scale to measure perceived control, a two-item scale to measure perceived return policy leniency, and a five-item scale to measure trust of specific websites. As dependent variables, we measured perceived quality with seven items and purchase intentions with five items. We also collected process measures on a three-item multiple choice test to measure attention to the website return policy, and a two-item scale measuring the per-

ceived likelihood that the return policy would be honored. Table 2 in Appendix A lists the wording.

For scales with more than two items, the table also lists coefficient alpha, a composite reliability index, and an estimate of variance extracted. These statistics are not available for the two-item measures (return policy leniency and return policy likelihood of being honored) because we did not include the two-item scales in our factor analysis (two-item factors exhibit problems with identification and convergence. Hatcher, 1994, page 260). Based on our factor analyses, we judged reliability to be adequate. Specifically, *t*-values for the items on the Perceived Control, Website Trust, Perceived Quality, and Purchase Intentions were all significant (above 4.85 and significant at the $p < .001$ level) and the standardized parameters ranged in values from .38 (with only four below .60) to .92, so that they were all at least moderately large. We tested for discriminant validity by constraining the covariance between each pair of factors equal to 1 (6 separate analyses). Then we calculated the chi-square difference between the standard measurement model and each constrained model, finding a significant deterioration in fit with the constraint at the .001 level. From our analysis, we conclude that the four measures also have adequate discriminant validity.

4.6. Results

4.6.1. Manipulation checks

To test whether the sites consumers shopped at affected their perceptions of control, we compared shoppers at the high- and low-control websites and found that, consistent with our prediction, consumers shopping at the high-control websites (20.19) had significantly higher perceived control scores than consumers shopping at the low-control websites (17.9, $F(1,201) = 24.63, p < .01$). Prior to pooling the two high-control and the two low-control websites, we tested for homogeneity of variances across the groups for the manipulation checks, process measures, and dependent variables using *F*-max tests (Winer, 1971). None of these statistics were significant at the .05 levels indicating that the variances were homogeneous across groups. As a result, we pooled the data from the websites, as planned.

Regarding experience-based trust, we split consumers at the median on the five-item website trust measure. Using a one way ANOVA with trust (High vs. Low) as a between subjects variable and total trust of the four different websites as a dependent variable, we obtained a significant main effect for trust indicating that the two groups differed significantly on the reported trust they felt in the four e-tailers used in the study, based on impressions prior to shopping at any specific e-tailer (66.66 vs. 77.85 $F(1,249) = 64.42, p < .01$).

To determine whether the return policy affected perceptions of leniency, we compared mean responses from shoppers who read the restrictive return policy with shoppers who read the lenient return policy and found significant differences in the predicted directions on our two-item leniency scale (7.5 vs. 5.5, $F(1,277) = 98.8, p < .01$).

4.6.2. Hypotheses testing

To test our hypotheses, we conducted a four way MANOVA with three between subjects factors (trust, control, and return policy leniency) and one within subjects factor (the perceived quality and the purchase intentions dependent variables) (see Table 1 for means and standard deviations). In the MANOVA, the control ($F(1,258) = 12.97, p < .01$) and the return policy ($F(1,258) = 19.98, p < .01$) main effects were significant, but were qualified by a significant two-way interaction between perceived control and the return policy ($F(1,258) = 4.34, p < .04$) and by a significant three-way interaction between control, trust, and the return policy ($F(1,258) = 4.23, p < .04$). No other effects were significant at the $p < .10$ level.

Consistent with Hypotheses H2 and H3, we found the predicted interaction between the effects of control and return policy leniency on perceived quality and purchase intentions. Consistent with these hypotheses, follow-up *t*-tests indicated that when consumers visit e-tail sites

Table 1
Means and standard deviations for experiment.

Conditions			Dependent variable	
Perceived control over shopping experience	Level of trust	Return policy	Perceived quality	Purchase intentions
Low	Low	Lenient	25.68 (4.069)	15.24 (5.16)
		Restrict.	23.27 (4.68)	13.35 (5.62)
	High	Lenient	25.98 (5.11)	14.30 (5.27)
		Restrict.	25.77 (5.25)	14.42 (5.51)
High	Low	Lenient	27.94 (4.24)	17.57 (3.99)
		Restrict.	26.07 (4.76)	13.97 (5.67)
	High	Lenient	30.16 (4.08)	18.24 (4.29)
		Restrict.	25.22 (5.90)	13.95 (6.26)

where control is low, the perceived leniency of the return policy does not have a significant effect on perceived e-tailer quality (25.82 vs. 24.52, $t = 1.5$, $p < .13$) or on purchase intentions (14.76 vs. 13.35, $t = 1.52$, $p < .13$). When consumers visit e-tail sites where control is high, consumers give e-tailers with lenient return policies better quality ratings and express higher purchase intentions than consumers visiting e-tailers with restrictive return policies (Quality: 29.05 vs. 25.65, $t = 4.10$, $p < .01$; Purchase Intentions: 17.91 vs. 13.96, $t = 4.55$, $p < .01$).

We next discuss the significant three-way interaction between control, return policy leniency, and trust which indicates that experience-based trust moderates the control–return policy interaction as predicted in H4 and H5. Looking first at the high-trust consumers, we observe a pattern of means consistent with the predicted control/return policy interactions: high-trust consumers who visit high-control websites are quite sensitive to the return policy signal, but high-trust consumers who visit low-control websites ignore the signal. Statistically, high-trust consumers who visit high-control websites assign higher-quality ratings and express higher purchase intentions when they visit websites with lenient rather than restrictive return policies (Quality: Lenient vs. Restrictive Return Policy, 30.16 vs. 25.21, $t = 4.48$, $p < .01$; Purchase Intentions: Lenient vs. Restrictive Return Policy, 18.24 vs. 13.95, $t = 3.73$, $p < .01$). But, at low-control websites, quality and purchase intentions ratings are the same regardless of the leniency of the return policy (Quality: 25.97 vs. 25.77, $t = .17$, $p < .86$; Purchase Intentions: 14.30 vs. 14.42, $t = .10$, $p < .92$). In other words, e-tailers with poorly designed Web pages cannot win over lucrative high-trust consumers with lenient return policies.

In contrast, perceived control at a website has relatively little influence on how low-trust consumers interpret the return policy signal. Unlike the high-trust consumers, return policy leniency does not influence how they rate website quality at either high- or low-control websites (High Control: 27.9 vs. 26.07, $t = 1.5$, $p < .13$; Low Control: 25.68 vs. 23.26, $t = 1.83$, $p < .07$), although it does affect their purchase intentions at both high- and low-control websites (Low Control: 15.24 vs. 12.30, $t = 2.09$, $p < .05$; High Control: 17.57 vs. 13.69, $t = 2.77$, $p < .05$).

To better understand why the signal effect on quality perceptions is weaker for low-trust than high-trust consumers, we look at supplemental information about the low-trust consumers. We can rule out differences in attention to the details of the return policy as an explanation because low-trust consumers did not differ significantly from high-trust consumers on their scores on a three-item multiple choice test designed to assess the accuracy with which they recalled the time limits, return postage rules, and restocking fees of the return policy (2.3 vs. 2.4, $t = 1.26$, $p < .28$). Also, differences in perceptions do not explain the results because the two groups of consumers did not differ from each other in their ratings of the leniency of either the lenient return policies (7.3 vs. 7.7, $t = 1.4$, $p < .14$) or the restrictive policies (5.7 vs. 5.3, $t = 1.3$, $p < .20$). However, when compared to high-trust consumers, low-trust consumers are less likely to believe that e-tailer return policies will be honored (6.82 vs. 7.25, $t = 2.09$, $p < .04$). This suggests that for low-trust consumers, the credibility of the bonding component of return policies is weaker than for high-trust consumers.

5. General discussion

In this section, we integrate the two studies and discuss managerial implications and future research directions. Because in the first study we find that high- and low-quality e-tailers use return policies in different ways, we develop separate managerial implications for the two groups. High-quality non-consumable product e-tailers could increase the clarity of their lenient return policy signals by investing in website designs that give customers maximum control. In our experiment, we found that perceived control especially affects how high-trust consumers interpret the return policy signal. The high-trust consumer has great value because they have spent more and purchased more often on the Internet than the low-trust consumer. For these sophisticated consumers, lenient return policies cannot compensate for poor website design. Additionally, high-quality e-tailers might explore new ways to communicate characteristics of their return policies to the target market. For example, they could post their return policies in pop-up windows or on direct links to their return policies from their home pages. In addition, these e-tailers might incorporate their return policy information into shopping agents' listings such as MySimon.com and Active Buyers' Guide (<http://www.activebuyersguide.com/>).

Results from the first study indicate that high-quality e-tailers selling consumable products—such as food, flowers, and software—are not using lenient return policies. As a result, they may be missing out on sales opportunities. Of course, the major barrier for such vendors considering lenient return policies is the cost of honoring such policies. These e-tailers might find that by encouraging customers who are returning merchandise to purchase different more profitable products (upselling or cross-selling), they can more than offset the costs of honoring lenient return policies. Additionally, our experiment indicates that these e-tailers could obtain the benefits of a lenient return policy by lifting some, but not all, restrictions (e.g., not charge a restocking fee, but set a relatively short time period for all returns). To discourage consumers from cheating, e-tailers might employ strategies such as offering lenient return policies to certain classes of consumers (e.g., subscription buyers instead of single transaction buyers).

Low-quality e-tailers face a different set of challenges. On the one hand, they must determine whether they want to maintain a low-quality position. The quality ratings of BizRate are based on multiple attributes and close inspection of the scores on each attribute could yield insights about specific ways to improve the quality position. On the other hand, some low-quality e-tailers may position themselves as a value provider and not want to change their quality. In the non-consumable goods area, these e-tailers may continue to maintain a restrictive return policy, but work to improve the clarity of the signal. In the consumable goods area, low-quality e-tailers may be setting too lenient return policies. From the experimental data, we know that high-trust consumers who see a lenient return policy expect relatively high quality. Thus, by using the wrong signal, low-quality e-tailers may create unrealistic expectations.

From a theoretical perspective, we contribute to the growing, but still small marketing literature on return policies as signals of quality (Davis et al., 1998; Kirmani and Rao, 2000; Wood, 2001). By showing that e-tailers in consumable and non-consumable product categories deploy the return policy signal in different ways, we extend previous signaling literature. By showing that a consumer characteristic (trust) and a website characteristic (perceived control) affect how consumers interpret the return policy signal, we also extend prior consumer-side research on signaling. Our limitations also suggest directions for future research. In the experiment, we used consumers (college students) as subjects. Given our interest, college students are an appropriate sample because they are likely to have had experience with the Internet and also likely to vary widely in their trust of e-tail sites. Future researchers may want to continue investigating return policy signals with other consumers. An advantage of our experiment is that we had consumers actually shop at different websites, so that we didn't have to verbally present information about control over the shopping experience.

However, we forced exposure to the return policy. If consumers do not routinely check return policies prior to purchase, then there may be additional interference between the signal and the consumer.

To conclude, e-tailers who use return policies as signals of quality would like to send unambiguous signals to their target markets. Our

results indicate that the return policy is a mixed signal, with some e-tailers using it to communicate quality and some consumers interpreting it as such a signal. However, it is clear that product category, perceived control over navigation at a website, and consumer trust of e-tailers all affect the fidelity of the signal.

Appendix A

Table 1

Measures for content analysis.

Scale name	Items
Refunds, exchanges and merchandise credits (REM)	Does the return policy state that the merchant will issue a refund (credit card or cash) for: 1. No merchandise 2. Some or most, but not all merchandise 3. All merchandise If the return policy makes a statement about merchandise credits, does the return policy state that the merchant will issue merchandise credit for: (response alternatives the same as above) If the return policy makes a statement about exchanges, does the return policy state that the merchant will make exchanges for: (response alternatives the same as above)
Restrictions imposed by return policy	Does the merchant: Include a pre-printed shipping label? 0—Yes, 1—No Impose a time limit on returns? 0—No, 1—Yes Pay for all return shipping costs? 0—Yes, 1—No Charge restocking fees? 0—No, 1—Yes Refund original shipping and handling fees? 0—Yes, 1—No Provide the customer service contact information? 0—Yes, 1—No Require pre-authorization? 0—No, 1—Yes

Table 2

Measures for experiment.

Scale name	Items	Reliability
Perceived control	The website that I just shopped on is: Difficult to navigate/easy to navigate Hard to control/easy to control Unrestrictive/restrictive While shopping on the website, I found it: Difficult to get my own way/easy to get my own way While shopping on the website, I found that I was: Unable to influence my shopping experience/able to influence my shopping experience	.80* .82*** .51****
Website trust	Retail websites are (offer): Undependable/dependable Dishonest/honest Unreliable/reliable Financially secure transactions/financially insecure transactions Trustworthy/untrustworthy	.85* .86*** .55****
Leniency of return policy	When compared to the typical return policy for most Internet businesses, this new return policy is (has): Very lenient/not at all lenient Many restrictions/few restrictions	.72**
Perceived quality	Please rate the following aspects of the website that you shopped on: Low overall quality/high overall quality Low-quality customer service/high-quality customer service Low-quality shipping and delivery/high-quality shipping and delivery Difficult to make purchase/easy to make purchase Small number of offerings/large number of offerings Small variety of offerings/large variety of offerings Low-quality offerings/high-quality offerings	.84* .84*** .56****
Purchase intentions	Please indicate the extent to which you agree/disagree with the following statements: I would shop on this website again. I intend to keep purchasing products sold at this website. I would be happy to choose from the same set of products from this website again. I would recommend this website to a friend. It is likely that I will at some point in the future shop at this website again.	.94* .94*** .77****
Return policy likelihood of being honored	Please rate the return policy on the following dimensions: Likely to be honored/unlikely to be honored Believable/unbelievable	.40**

* Coefficient alpha internal consistency reliability.

** Correlation coefficient.

*** Composite reliability index for each latent factor.

**** Variance extracted estimates.

Appendix B. Experiment

This study was conducted using actual websites of e-tailers. In addition, the study itself was based on a website created specifically for the research. This design allowed subjects to both complete the study and shop as seamlessly as possible.

Students first went to the study's URL, a subdirectory of a site owned by one of the authors. This page welcomed subjects and covered "What You Do," "What You Get" and "Your Privacy." Subjects then clicked on "Begin Study" and went to the second page, which was the Informed Consent document. The third page was the "Initial Questionnaire" and explained "Before beginning your shopping study, we would like you to complete an initial questionnaire about shopping sites in general." These instructions could not have been easily included on the initial survey page since that page was designed with a frame at the top of the page with the "Internet Shopping Study" logo and a link to return to the study. The frame at the bottom of the page (in actuality, most of the page) was the questionnaire titled "Website Experience Survey." By designing the initial (and subsequent) survey in web page frames, we were able to control the presentation of the survey and keep the study navigation bar visible to subjects while they completed the survey. Since all subjects completed the same initial survey, there was no randomization step.

After finishing the initial survey, subjects were directed to an exit page that served as a transition to the actual sites for shopping. This had to be a separate page to include the instructions "Now you are ready to learn about shopping at an actual store." (Again, separate pages are required to preserve the simplicity of the framed navigation bar. The smoothness of the clickstream was the primary determinant of the website design, not the number of clicks.)

We would like you to shop at **Nordstromshoes.com** for shoes you would consider buying totaling up to \$125.00. When you have selected these shoes (Don't buy them! You may win them!), you can complete the questionnaire. You might want to make a note about the shoes you select, because the questionnaire asks about them.

So there are just 3 easy steps:

- 1 First you will visit a shopping site.
- 2 Then you will fill out a questionnaire.
- 3 Third you will let us know that you are done with the study.

You will have a navigation bar on the top of your screen that guides you through the study's three steps. If you can't see the bar, please finish "shopping" and then just hit your browser's "back" button until you return to a screen that has the bar.

[Go to my shopping site.](#)

The next page said only "Continue" and was necessary to provide code for randomization of subjects to one of four groups (stores). This code included a JavaScript random link generator. Subjects then saw their store instructions page. We reproduce that page above to illustrate how the study steps were simplified and then carried forward on the actual shopping page.

After clicking "Go to my shopping site," subjects saw their site in the bottom frame and the study steps and navigation in the top frame. This design made it easy for subjects to shop on a real site and made intervention by a research assistant unnecessary. If the site were not designed with frames, subjects could get "lost" and perhaps not find their way back to the second questionnaire or the drawing registration page without assistance. In our experience with the study and its pretests, no subjects were unable to navigate the study pages and all subjects were able to complete the study as designed. The actual shopping page for Nordstrom's is reproduced below.

The screenshot shows the Nordstrom website interface. At the top, there is a navigation bar with links for "Internet Shopping Study" and three numbered steps: 1. Your store is Nordstromshoes.com. Please shop below. 2. After shopping, take the survey. 3. Click here when you are done with the survey. Below this is the Nordstrom logo and a shopping bag icon showing 0 items. The main navigation bar includes categories like women, men, kids, shoes, jewelry & accessories, beauty, teens, gifts, and sale. A search bar is present with the text "SEARCH keywords or item #". The main content area is divided into sections for "shop women's shoes", "shop men's shoes", and "shop kids' shoes". Each section lists various shoe types and brands. On the right side, there is a "shop by your size" section and a "LAUREN RALPH LAUREN" advertisement.

After shopping, subjects clicked on “2” and were directed to a page that had the top navigation frame, but only the word “Continue” in the bottom frame. This design was necessary to implement the second randomization, whereby half of the subjects had questionnaires with lenient and half with restricted return policies (note: both the initial questionnaire and main questionnaire were hosted on Zoomerang’s website). Similarly, subjects saw the questionnaire in the bottom frame and the study navigation in the top frame. After completing the second questionnaire, subjects clicked on “3” to finish the study. Registration for the drawing was handled separately. In summary, by designing the study website with frames that were kept focused on either simple instructions-navigation (top) or questionnaire/actual shopping site (bottom), the “Internet experience” of the subjects was made as seamless as possible. This design allows subjects to “shop” without interventions by research assistants. Of course, it also allows subjects to visit and interact with actual websites. Finally, the design facilitates the use of third-party data collection sites.

References

- Anthes G. E-retailing 2.0. *Computerworld* 2002;36:26–7 (June 17).
- Biswas D, Biswas A. The diagnostic role of signals in the context of perceived risks in online shopping: do signals matter more on the web? *J Interact Market* 2004;18(3):30–45.
- Biswas A, Dutta S, Pullig C. Low price guarantees as signals of lowest price: the moderating role of perceived price dispersion. *J Retail* 2006;82(3):245–57.
- BizRate.com 2008 Store ratings guide. [World Wide Web page]. Retrieved June 2008 from the World Wide Web: www.bizrate.com/ratings_guide.
- Boulding W, Kirmani A. A consumer-side experimental examination of signaling theory. *J Consum Res* 1993;20(1):111–23.
- Charlton G. Returning online purchases is too much hassle — survey. Posted March 15; 2007. www.e-consultancy.com.
- Childers TL, Carr C, Peck J, Carson S. Hedonic and utilitarian motivations for online retail shopping behavior. *J Retail* 2001;77(4):511–35.
- Collier JE, Bienstock CC. How do customers judge quality in an e-tailer? *Sloan Manag Rev* 2006;48(1):35–40.
- Davis S, Hagerty M, Gerstner E. Return policies and the optimal level of hassle. *J Econ Bus* 1998;50:445–60.
- Hatcher L. A step-by-step approach to using SAS for factor analysis and structural equation modeling. Cary, NC: SAS Institute; 1994.
- Heiman A, McWilliams B, Zilberman D. Demonstrations and money-back guarantees: market mechanisms to reduce uncertainty. *J Bus Res* 2001;54(1):71–84.
- Kirmani A, Rao A. No pain, no gain: a critical review of the literature on signaling unobservable product quality. *J Mark* 2000;64:66–79 (April).
- Novak TP, Hoffman DL, Yung YF. Measuring the customer experience in online environments: a structural modeling approach. *Mark Sci* 2000;19(1):22–42.
- Padmanabhan V, Rao RR. Warranty policy and extended service contracts: theory and an application to automobiles. *Mark Sci* 1993;12:230–47 (Summer).
- Perreault WD, Leigh LE. Reliability of nominal data based on qualitative judgments. *J Mark Res* 1989;26:135–48 (May).
- Richard MO. Modeling the impact of Internet atmospherics on surfer behavior. *J Bus Res* 2005;58:1632–42.
- Richard MO, Chandra R. A model of consumer web navigational behavior: conceptual development and application. *J Bus Res* 2005;58:1019–29.
- Srivastava J, Mitra A. Warranty as a signal of quality: the moderating effect of consumer knowledge on quality evaluations. *Mark Lett* 1998;9(4):327–36.
- Tsang ASL, Zhou N. Newsgroup participants as opinion leaders and seekers in online and offline communication environments. *J Bus Res* 2005;58:1186–93.
- Ward JC, Ostrom AL. The Internet as information minefield: an analysis of the source and content of brand information yielded by net searches. *J Bus Res* 2003;56:907–14.
- Winer BJ. Statistical principles in experimental design. New York: McGraw Hill Book Company; 1971.
- Wood SL. Remote purchase environments: the influence of return policy leniency on two-stage decision processes. *J Mark Res* 2001;38:157–69 (May).