Managing Internet Product Returns: A Focus on Effective Service Operations

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ABSTRACT

Product returns present one of the biggest operational challenges in the world of Internet retailing due to the sheer volume and cost of processing returns. But returns also represent an often-missed opportunity to manage customer relationships and build customer loyalty to the retailer. Based upon data from a survey of 464 customers of five different Internet retailers, this article explores how firms' returns management systems affect loyalty intentions. We draw upon extant literature in the fields of Internet retailing, service quality, supply chain management, and customer satisfaction/loyalty to develop a model and a set of hypotheses relating ten latent variables in the service returns offering area. Our resulting structural equation model provides evidence of the impact of the returns management system upon customer loyalty intentions. The model also identifies effects on loyalty intentions arising from customers' satisfaction with, and perceptions of, the value of the returns service offered. These findings will help inform managers' choices regarding investment in the returns management system as an element of service quality improvement and a potential means of improved profitability. In addition, this study's empirical exploration and testing of a returns management model in the Internet retailing environment is a contribution to the currently underrepresented body of academic literature linking marketing and supply chain management in the context of end consumers.

Subject Areas: Customer Loyalty, E-commerce, Internet Retailing, Returns Management, Service Operations, and Service Recovery.

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INTRODUCTION

Old View: *The Internet is a nearly perfect market because information is instan-*
taneous and buyers can compare the offerings of sellers worldwide.
The result is fierce price competition, dwindling product differentia-
tion, and vanishing brand loyalty.

(Kuttner, 1998)

New View: *e-tailing: It's All About Service.*

(Lacy, 2005)

Over a few short years, Internet retailing, or "e-tailing," has cycled through a range of highs and lows. Initially lauded as the future of commerce, Internet retailing lost favor in the business community after poor operations execution led to a catastrophic 1999 holiday season. The meltdown of the overhyped dot-com market a few years later seemed to signal the end, but instead Internet retailing continues to grow, from 7% of total retail sales in 2004 to a projected 12% of total retail sales by 2010, or $316 billion (*Chain Store Age*, 2004).

Despite this expected growth, Internet retailing remains a highly challenging segment of the service economy due to the entrance of established retailers seeking to supplement their traditional, in-store sales model, as well as to the emergence of new business models that have transformed many industries (e.g., Dell and Amazon.com). Processing returns can be expensive for Internet retailers, and effective management of returns can be complicated by the boundary-spanning nature of this process within a firm (Rogers, Lambert, Croxton, & Garcia-Dastugue, 2002). For customers, the return experience can affect their perceptions of the service they receive. In this study, we examine the impact of customers' perceptions of the service quality of the return transaction on their satisfaction with the experience and intention to repurchase from the same Internet retailer.

This focus on service is important because retail success on the Internet remains far from guaranteed. Competition often centers on price, as Internet retailers race for online market share. With fickle customers able to defect at the click of a mouse, price-based competition has dominated the Internet retailing industry (Kuttner, 1998), but Porter (2001) argues that such a competitive strategy proves detrimental to Internet-based competitors by shifting the focus away from such strategically important factors as service.

As the 1999 Christmas season proved, fulfillment service represents a critical weapon in an Internet retailer's strategic arsenal; these services not only contribute to customer satisfaction (Thirumalai & Sinha, 2005), but also generate loyalty (Boyer & Hult, 2005a) and opportunities for increased profitability (Rabinovich & Bailey, 2004). Provision of excellent service, however, relies upon a highly integrated value chain linking marketing, operational, and supply chain activities (Porter, 2001; Boyer, Frohlich, & Hult, 2005). In fact, Boyer, Frohlich, and Hult (2005) and Boyer and Hult (2005b) stress that the improvement of Internet retailers' operating efficiency in taking and fulfilling orders is crucial to the enhancement of the overall customer experience.

An important element of operational service excellence that is often underemphasized relates to the way that firms handle product returns. The separation

of Internet retailers from their customers—in both space and time—magnifies the importance of the fulfillment and return services. For all the immediateness of the Internet, online retailing customers must still wait to receive their product. Moreover, if the product fails to please the customer for some reason, a return and possibly an exchange induce further delay in the fulfillment of customer needs. In the worst case, a return may also create a dissatisfied customer. We make no distinction in our study among the reasons a customer might be dissatisfied with a product ordered over the Web. It could involve a company error (e.g., wrong item/size/color was shipped), in-transit damage, or even a change of mind on the part of the customer regarding product preferences, size, or styling once products are received and inspected.

This article contributes to the traditional service quality literature by investigating the importance of the returns management system to Internet-retailing customers. We build upon the existing literature by examining the specific issue of the impact of the returns management system on the overall service experience. In our approach, this is deemed to include a company's return policies, its Web interface, and the reverse logistics transactional flow of the product. Given the current rate of returns and the value that customers attach to returns services (Brohan, 2005), we expect that the management of returns greatly influences customer perceptions of Internet retailer service provision. Specifically, we investigate the impact of the returns management system upon customer loyalty intentions by decomposing the customer perception of the value of the returns offering and satisfaction with the return service, including the direct and indirect influence of prior service experience. Our findings will help inform decision makers' choices regarding investment in returns management as an element of service quality improvement and as a potential means of increased Internet-retailing profitability.

Of equal importance, this study contributes to the academic literature by empirically exploring an underrepresented body of literature linking marketing and supply chain management in the context of end consumers. The boundary spanning nature of returns management contributes to the lack of research in this area: supply chain research typically focuses on institutional-level issues, whereas marketing research, which regularly focuses on the consumer, tends to shortchange operational, supply chain issues. This research seeks to redress some of these shortcomings in the literature.

The next section, Background and Model Development, positions our research in the service, logistics, and operations-management literatures. The section also develops the theoretical foundation and hypotheses that articulate a framework for the impact of the return management system on customers' loyalty intentions. The third section, Research Methods, discusses methodological issues pertaining to the data collection and the operationalization of the constructs developed as part of the theoretical framework. We analyze the empirical results in the fourth section, Statistical Analyses and Results. Finally, we conclude in the fifth section, Discussion, with a presentation of findings, academic and practical contributions, limitations, and future research opportunities stemming from our study.

BACKGROUND AND MODEL DEVELOPMENT

Most research on electronic service quality has dealt with the Web site itself (Zeithaml, Parasuraman, & Malhotra, 2002), focusing on ease of use or usefulness of the information presented and other transaction-specific factors (Liu & Arnett, 2000; Yang, Peterson, & Huang, 2001). Some scales in this field of research have been developed to address a wider range of factors influencing a consumer's Web site shopping experience (Lociacono, Watson, & Goodhue, 2000; Wolfinbarger & Gilly, 2001), including fulfillment reliability. In fact, Zeithaml, Parasuraman, and Malhotra (2002) identify and document a fulfillment gap, which captures the discrepancy between a customer's requirements and subsequent experiences. This gap has multiple dimensions—a communication gap occurs because of inflated marketing promises that do not reflect the reality of the online offering, and a design gap arises due to deficiencies in the customer interface that frustrate the customer's ability to complete a purchase.

The notion of a fulfillment gap begins to tap into the domain of our research interest. However, that construct predominantly focuses on service issues relating to the front end of Internet retailing, in which the customer initiates the online purchase. Our research focus addresses the postpurchase events triggered by customer dissatisfaction with some facet of the product or order delivery.

When a customer initiates a return, this in effect presents a service recovery opportunity for the Internet retailer. How does this postpurchase service quality affect the consumer's perception of the organization and his/her propensity to repurchase from that Internet retailer in the future? Zeithaml, Parasuraman, and Malhotra (2002, p. 372) point out that "additional research is needed to empirically study the question of where to invest in electronic service quality improvement." Accordingly, we focus our attention on the return service aspect of an Internet retailer's relationship with its customers. Before discussing our research model further, we review other streams of literature germane to our study to inform the contextual setting of our work.

Relevant Literature Streams

In developing our theoretical model, we examined a variety of literature streams, including research on return policies; service recovery; functional integration; and customer value, satisfaction, and loyalty.

Return policies

While much of the literature on return policies originally focused on the manufacturer-retailer relationship (Kandel, 1996; Padmanabhan & Png, 1997), recent attention is shifting to the issue of returns in the retailer-consumer relationship. Much of this change in focus results from the advent of Internet-based retailing within the past decade. Online retailers offer return provisions for their customers for a variety of reasons. These provisions may reflect a desire to remain competitive in the face of rivals' liberal return policies, or they may be based on the belief that a satisfied customer is a valuable asset for a firm (Rogers & Tibben-Lembke, 1999).

From the consumer's perspective, an online purchase involves a significant level of risk (Yalabik, Petruzzi, & Chhajed, 2005) because the Internet retailing

model often precludes prepurchase examination of the product. Thus, the typical consumer remains uncertain as to the specific attributes or quality level of the product. In addition, after the purchase decision is made, the consumer must then wait for delivery to gain experiential information about the product that would normally already be present in a bricks-and-mortar purchase situation (Wood, 2001). Only at the experiential stage can a consumer determine his or her true preference for the product. Thus, online consumers expect a liberal returns policy (Rogers & Tibben-Lembke, 1999; Kirmani & Rao, 2000) as a measure of insurance against a negative experience relating to size, color, styling, and product quality (Padmanabhan & Png, 1995). Retailers find that clearly communicating their returns policy provides a signal to consumers about the more intangible aspects of the product and service quality provided (Kirmani & Rao, 2000), thus leading to increased sales (Padmanabhan & Png, 1995; Wood, 2001).

Service recovery

When a consumer avails him/herself of an Internet retailer's return policy, the Internet retailer faces a service recovery opportunity. While Gronroos (1988) defines service recovery as pertaining to activities in which a firm engages to address a customer complaint regarding a perceived service failure, we employ a broader view. We believe that any return presents a service recovery opportunity, even if the Internet retailer flawlessly delivers the requested product as promised, because the customer was not satisfied with the initial purchase experience. Such a return could be viewed as a structural failure of the medium of Internet retailing rather than an execution error. Either way, the ensuing service from the Internet retailer provides an opportunity to redress the dissatisfaction (Andreassen, 2000) and will be evaluated from the consumer's perspective as part of the ongoing service the customer receives during a particular purchase experience.

Much of the service recovery literature pre-dates the rise of online purchase activity or continues to deal with the broader notion of service issues beyond the Internet context (Tax, Brown, & Chandrashekaran, 1998; Zhu, Sivakumar, & Parasuraman, 2004). Yet there are many service situations that are particular to the online setting (Holloway & Beatty, 2003). These include fulfillment issues, especially related to delivery; Web site issues; customer service support issues; and security and risk issues related to customers' financial and personal data. Holloway and Beatty (2003) provide some preliminary indication that service failures and recovery efforts in these categories can influence a customer's future purchase intentions. Other service issues arise when customers return products because they are dissatisfied with them for a reason that is not the fault of the company. Regardless, each situation represents an opportunity to recover from a service lapse that could create a dissatisfied customer.

Other research in the service failure/recovery literature focuses on the severity of the service failure (Craighead, Karwan, & Miller, 2004) and the nature of the relationship between the customer and the service firm (Hess, Ganesan, & Klein, 2003; Craighead et al., 2004). Hess, Ganesan, and Klein (2003) focus on the relationship factors that mitigate or magnify a customer's response to service recovery attempts. Their findings suggest that strong relationships can shield a

service firm from the negative impact of a service failure on customer satisfaction. Their research, however, focuses on core service firms (hotels, restaurants), where the recovery process entails personal interaction with the customer. In contrast, online returns processes may not involve any direct personal interaction at all, raising a question about the impact of previous service experience and recovery efforts on online customers.

Functional integration

Internet retailers must ensure that their operations and logistical efforts can support the marketing message on the Web site. The notion of functional integration as a means for creating competitive advantage has received much attention over the past several decades across the marketing, logistics, and operations disciplines (Verma, Thompson, Moore, & Louviere, 2001; Gimenez & Ventura, 2005). From early on, researchers have focused on identifying firm benefits that accrue through enhanced functional integration. Additionally, the literature has shown that the need for, and benefits from, functional integration often depend upon a firm's strategy and competitive environment (Lawrence & Lorsch, 1967; O'Leary-Kelly & Flores, 2002).

Porter's (2001) value chain concept highlights the particular need for integration across operations, logistics, sales, and postsales support functions in an Internet-based business format. These functions require integration with respect to the customer order—specifically, appropriate demand generation through the marketing mix, including Web site design; accurate communication of inventory availability; and the processing, shipping, and billing of the order as promised, with complete accuracy. Integration proves equally critical for successful service experiences when consumers return products.

Yalabik, Petruzzi, and Chhajed (2005) explore some of these issues in an Internet retailing context and identify three components of an integrated returns-management system. First, the refund policy, as part of the marketing price strategy, acts as some level of insurance for the customer making the purchase. Second, the marketing promotion strategy should effectively target customers to enhance sales and also lessen the probability of a return. Third, the logistics process, involving the shipping and handling of the return, provides opportunities for both the retailer and the customer to incur expenses and hassle, but, if managed well, can serve to augment demand. The research of Yalabik, Petruzzi, and Chhajed (2005) focuses on the system-design level, whereas we also include the operational level of the return transaction in considering the returns management system.

Customer value, satisfaction, and loyalty

Service recovery clearly affects customer loyalty (Andreassen, 2000), and loyalty now ranks above satisfaction as a strategic goal in today's competitive business environment (Oliver, 1997, 1999). Internet retailers seeking loyal customers must understand how consumers evaluate the returns experience.

A returns service that is difficult or confusing for the consumer or a service poorly handled by the company can exacerbate the customer's negative perceptions of that firm. On the other hand, a well-handled service could enhance the

customer's affinity for the company. Indeed, research suggests that well-executed service recoveries enhance perceptions of customer value and satisfaction, build relationships, and prevent customer defections (Zeithaml, 1988; Keaveney, 1995), whereas poorly executed recoveries can diminish a customer's loyalty to a firm (Mattila, 2004).

Well-handled service recovery significantly and strongly enhances the association between customer satisfaction and both trust and commitment toward the service provider (Tax et al., 1998). Moreover, the relationship that a customer develops with a service provider develops and evolves over time, such that previous positive experiences with a company can mitigate a poorly executed service recovery to some extent. Additionally, good service recovery helps build ongoing relationships with customers dissatisfied with their initial encounter (Smith, Bolton, & Wagner, 1999; Maxham, 2001). Thus, the general satisfaction that a customer feels toward a company will be continually updated based on his/her most recent satisfaction level in a given service encounter (Oliver, 1997).

Model Development

Our model expands upon the previous streams of research to focus sharply on the impact of the returns management system on loyalty intentions in Internet retailing. As shown in Figure 1, our structural model posits relationships among latent variables to explain the critical dimensions of a customer's loyalty intentions regarding a particular Internet retailer. Specifically, we propose that three variables directly and positively influence loyalty intentions: perceived value of the returns offering, return satisfaction, and previous service experience. *Perceived value of the returns offering* measures the customer's perception of the entire returns management system, including both policy and process issues. The *return satisfaction* construct

Figure 1: Hypothesized model structure.
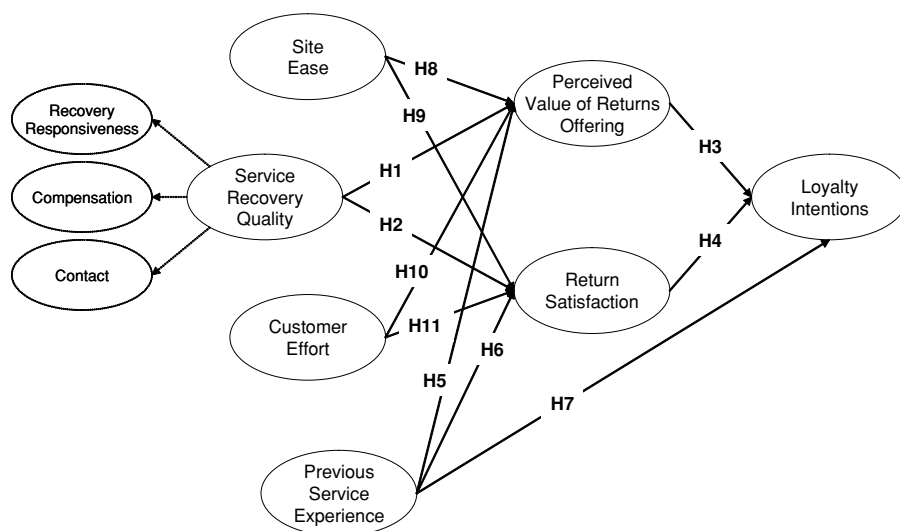
focuses more narrowly on the customer's experience with a specific return trans-action. *Previous service experience* captures the customer's view of past service encounters, whether or not a return was involved. In our hypothesized model, this latter construct affects loyalty intentions directly and also indirectly through the two returns-focused measures of perceived value of the returns offering and return satisfaction.

Perceived value of the returns offering and return satisfaction are also affected by *site ease*, which involves the returns-specific sections of the Web site, and by *customer effort*, which comprises the process of physically completing the return, including packing and shipping. Finally, the broader, second-order latent variable *service recovery quality* measures the customer's view of recovery responsiveness, compensation, and contact, which are first-order variables in our model. The spe-cific hypotheses and their theoretical foundation will be discussed in the following sections.

Service recovery quality

Our model draws upon the concept of *service recovery quality* (Parasuraman, Zei-thaml, & Malhotra, 2004), which includes scales for electronic service quality (E-S-QUAL). E-S-QUAL provides an e-commerce-specific measure building upon previous work that developed and refined the SERVQUAL scale, a more general measure of service quality (Parasuraman, Zeithaml, & Berry, 1988; Parasuraman, Berry, & Zeithaml, 1991). As part of their focus on electronic service quality, Parasuraman, Zeithaml, and Malhotra (2004) developed a three-dimension scale in which recovery responsiveness, compensation, and ease of contact constitute the construct of service recovery quality. *Recovery responsiveness* relates to how ef-fectively the company handles problems and returns; *compensation* deals with the extent and nature of compensation offered to customers in resolving their problems; and *ease of contact* addresses the availability of telephone and/or online assistance for dealing with problems. We extend the approach of Parasuraman, Zeithaml, and Malhotra (2004) to include the evaluation of the impact of service recovery quality triggered by a returns transaction with an Internet retailer on customer satisfaction and value perceptions.

The service literature is replete with discussions on the importance of service quality as an antecedent to customer value perceptions (Cronin, Brady, & Hult, 2000). Customer value is often defined as a trade-off between benefits and costs (Zeithaml, 1988). In a returns situation, customers may perceive that the cost of doing business with an Internet retailer has increased due to concerns over extended transaction time, delivery uncertainty, and potential return hassles. The Internet retailer's execution of the service recovery actions is thus expected to have a significant effect on the customer's perceptions of the cost/benefit relationship that defines the value drawn from Internet retailers' return offerings. This is summarized in Hypothesis 1.

> H1: *Service recovery quality is positively associated with perceived value of the returns offering.*

Service quality has also been linked to customer satisfaction. Satisfaction refers to a customer's postpurchase evaluation of a product/service offering, in which customer (dis)satisfaction arises when actual experience with an offering (falls below) exceeds the customer's expectations (Bolton & Drew, 1991). The importance of service recovery as a component of a firm's service strategy is well recognized (Smith et al., 1999; Cook, Bowen, Chase, Dasu, Stewart, & Tansik, 2002), but very little research has considered the impact of service recovery quality on a customer's satisfaction with the service encounter (Smith et al., 1999; Parasuraman et al., 2004). Andreassen (2000) found a positive relationship between service recovery quality and customer satisfaction. Devaraj, Fan, and Kohli (2002) found a positive relationship between service quality and satisfaction in a B2C-channel context. We extend these conclusions to the impact of service recovery quality on a consumer's return satisfaction within a B2C context:

H2: *Service recovery quality is positively associated with return satisfaction.*

Loyalty intentions

The service quality literature has not typically posited a direct relationship between service quality and behavioral intentions. Cronin, Brady, and Hult (2000) extended this literature by proposing a model in which service quality, customer value, and customer satisfaction each directly relate to customers' repurchase intentions. Within their study parameters, they empirically demonstrated a direct, positive relationship between service quality and behavioral intentions to repurchase. Our model provides finer detail on the role of services by examining customer value and customer satisfaction specifically with product returns. Moreover, consistent with the general model of Cronin, Brady, and Hult (2000), we also posit that both return satisfaction and perceived value of the returns offering positively influence customer loyalty intentions. This leads to our third and fourth hypotheses.

H3: *Perceived value of the returns offering is positively associated with loyalty intentions.*

H4: *Return satisfaction is positively associated with loyalty intentions.*

Previous service experience

The return experience does not occur in a vacuum. Previous purchase experiences are also likely to affect a customer's satisfaction, perception of value, and loyalty intentions. Consider the work of Craighead, Karwan, and Miller (2004), who studied several groups of consumers that had previous experience with a service firm. These researchers captured customer reactions to both the nature of the service failure and the company's recovery attempts. The reactions specifically showed that those customers who considered themselves loyal prior to the service failure were more likely to maintain their loyalty if the recovery attempt was successful.

Hess, Ganesan, and Klein (2003) and Tax, Brown, and Chandrashekaran (1998) also confirm the importance of previous service encounters within the context of a company-customer relationship. Customers with positive previous experiences were likely to be more forgiving of service failures and to respond more

positively to recovery efforts, and successful recovery efforts further enhanced their loyalty intentions.

Within the e-commerce context, Chen and Dubinsky (2003) focus on the online shopping experience as a precursor to customer value. They note that, as online shopping becomes increasingly accepted by consumers, their experience base develops and leads to changes in their value perceptions with respect to online shopping in general. We extend Chen and Dubinsky's discussion by investigating the role of a customer's previous experience with a particular Internet retailer in shaping his/her current value perceptions and future loyalty intentions. With respect to previous service experience, we hypothesize as follows:

> *H5: Previous service experience is positively associated with perceived value of the returns offering.*

> *H6: Previous service experience is positively associated with return satisfaction.*

> *H7: Previous service experience is positively associated with loyalty intentions.*

Site ease

Because of our focus on the e-tail shopping and returns experience, we incorporate two elements into our model that are unique to the Internet shopping domain and reflect the intersection of marketing, operations, and logistics considerations in the online shopping experience. Not only does the Internet retailer need to provide different types of operational and logistical support than the typical bricks-and-mortar retailer, but also the customer must be able to make the transition from store shopping to online shopping. A significant part of that transition rests on the consumer's ability to navigate and shop on the Internet retailer's Web site (Boyer & Olson, 2002; Boyer & Hult, 2005a). Because the consumer already faces a potentially negative situation in making a return to the Internet retailer, we predict that the ease of site interaction will go a long way toward minimizing the negative impact of the return, and thus it will enhance both satisfaction with the return process and the perceived value of the returns offering for the consumer.

> *H8: Site ease is positively associated with perceived value of the returns offering.*

> *H9: Site ease is positively associated with return satisfaction.*

Customer effort

The level of effort that the customer must go through to physically carry out the return presents another potential hassle factor. In a typical retail environment, consumers can potentially avoid some of the risk of returns by testing the product and deciding on the product's appropriateness (e.g., regarding fit, color, or style) as part of the purchase process. In the e-tail environment, however, the physical inspection of the product necessary to assess appropriateness generally must be delayed until receipt of the goods. Should the product not fit the customer's needs,

a return then entails some level of effort by the customer to enact an exchange or return. Such a service situation represents an example of a procedural justice issue, as discussed in the services literature (Goodwin & Ross, 1992).

Previous research has frequently addressed procedural justice as a precursor to satisfaction. We adapt this notion to the Internet context of our research. Within a returns context, procedural justice issues include ease of access to the recovery process, some level of control over the process, and a perception that the process occurs in a fair amount of time and/or at a fair speed and is adaptable to the customer's needs (Tax et al., 1998). Along these dimensions, we focus on the level of effort the customer must expend to prepare products for return and physically enter them into the Internet retailer's return system. We expect that increasing levels of customer effort to carry out the return will result in lower perceptions of value and lower levels of satisfaction with the return process.

> H10: *Customer effort is negatively associated with perceived value of the returns offering.*

> H11: *Customer effort is negatively associated with return satisfaction.*

RESEARCH METHODS

Our research design involved working closely with five Internet retailers that have significant online sales and have all been conducting business in this channel for three years or more. Four of the five Internet retailers operate only through the online channel. Three of these retailers have sales greater than $50 million per year, while the fourth retailer has sales exceeding $10 million per year. The fifth company is a multichannel retailer of office supplies, with more than $2 billion in online sales per year. In Table 1 we give an overview of the retailers' sales and types of products sold. In general, these retailers represent mainstream, medium to large Internet retailers, with return rates well within the extremes cited by Rogers and Tibben-Lembke (1999).

Research Design and Sample Characteristics

We collected the data for our research through the use of surveys that targeted a customer sample spanning all of the Internet retailers participating in our study. To assemble the sample, we collaborated with the retailers in our study to select customers who had experienced a product return in the prior 2–3 months.

Before collecting the data, we assessed the face and content validity of the survey's scale items and the general quality of the research design via a pretest involving four operations academics and four managers at participating companies. This pretest resulted in minor modifications to the wording of some of the items as well as revisions to parts of the instructions to the survey respondents.

We then contacted customers of each of the companies by means of an e-mail originating from the company and inviting them to fill out a survey by linking to a Web site at one of the universities supporting the study. As shown in Table 1, the overall response rate for the entire sample totaled 464 responses out of 4,460 customers contacted, or 10.4%. All of the data collection occurred in October and

Table 1: Overview of survey companies.

		Online Retailer				
		A	B	C	D	E
	Product Offering Description	Outdoor Clothing and Equipment	Animal Health Products/Supplies	Luggage, Handbags, etc.	Office Supplies and Equipment	Casual and Dress Shoes
Scale	Annual Online Sales[a]	>$50 million	>$50 million	>$50 million	>$2 billion	>$10 million
	Items Offered[b]	NA	750	19,000	200,000	NA
	Monthly Visits[c]	.775	1.131	3.200	9.121	NA
	Monthly Unique Visitors[d]	.625	1.051	.938	3.425	NA
	Average $ Value of Return[e]	$92.63	$54.40	$56.90[f]	NA	$71.04[f]
Returns Profile	Returns Transaction Period	8/1/05–10/1/05	9/1/05–10/15/05	7/25/05–8/25/05	08/01/05–10/15/05	7/15/05–8/15/05
	Returns Rate[g]	Medium (5%–20%)	Low (<5%)	Medium (5%–20%)	Medium (5%–20%)	High (20%–30%)
	Survey Response Period	10/25/05–11/2/05	11/7/05–11/14/05	10/13/05–10/27/05	10/25/05–11/2/05	10/31/05–11/07/05
	Sampled Customers[h]	500	500	2,000	960	500
	Response Rate[i]	13.8%	9.0%	10.7%	9.2%	9.8%
	Respondents[j]	69	45	213	88	49

[a] Annual 2003 sales in millions.
[b] Total number of SKUs on the Web site in 2005, according to data in *Internet Retailer Top 500 Guide* (Love & Peters, 2006).
[c] 2005 monthly average in millions (Love & Peters, 2006).
[d] Number of unique visitors per month in 2005 in millions (Love & Peters, 2006).
[e] Estimate obtained from data in Love and Peters, 2006.
[f] Approximations from discrete values provided in the survey.
[g] Author determination based on conversations with company executives.
[h] Total customers sampled: 4,460.
[i] Average response rate: 10.4%.
[j] Total number of respondents: 464.

November 2005. Data were based upon returns transactions completed between July and October 2005. While this suggests a somewhat low response rate compared to other surveys (Papke-Shields, Malhotra, & Grover, 2002; Rabinovich, forthcoming), the rate was not surprising because the need to return a product generally was not expected to be a positive experience for customers. Moreover, the need for customers to refer to a recent return experience to answer the survey was expected to deter some individuals from participating, due to privacy concerns and a lack of recollection of their specific return experiences. We believe, however, that the response rate is sufficiently high to support our research goals.

To assess nonresponse bias, we conducted chi-square tests on the number of online orders individual customers placed with each retailer in the past year. This test did not indicate the existence of nonresponse bias ($p > .05$ for all five retailers).

Scales and Measures

Where possible, we employed established measures to assess each construct. We also developed two new scales to measure customer effort and return satisfaction. The well-established work of Parasuraman, Zeithaml, and Berry (1988) on service quality, as well as the more recent e-service research of Parasuraman, Zeithaml, and Malhotra (2004), serve as the basis for several of the measures. In the Appendix, we list the questions used in the survey to capture the scales and their relationship to preestablished measures in the literature. In Table 2, we also provide the descriptive statistics we obtained for these measures from our survey responses across the Internet retailers.

Previous service experience, adapted from Hess, Ganesan, and Klein (2003), uses a four-item scale to measure customers' previous experiences with the Internet-retailing company. We note that a baseline measure of previous experience is very apropos in a returns situation. Based on the work of Boyer and Olson (2002), *site ease* employs a four-item scale to assess the ease of utilizing the Web site for transactions. Beyond addressing issues relating to a customer's interactions with a retailer's Web site, our focus in this study is to capture a broader view of the customer's involvement when dealing with online purchases. Therefore, c*ustomer effort,* a new seven-item scale, measures the amount of physical effort customers put into returning a product.

Recovery responsiveness, *contact,* and *compensation* represent first-level scales of the second-level variable, *service recovery quality*, as developed by Parasuraman, Zeithaml, and Malhotra (2004) to assess e-service quality. *Recovery responsiveness* includes four items measuring company response to return situations. *Contact* comprises five items assessing customers' ease of getting in contact with the company, while *compensation* includes three items measuring the degree to which the company provides financial compensation when returns occur.

Our outcome measures include three scales. *Perceived value of the returns offering* measures customer perceptions of the value of the returns offering and consists of six items based upon Parasuraman, Zeithaml, and Malhotra (2004) but modified to focus on returns rather than the overall service offering. The measures developed by Parasuraman, Zeithaml, and Malhotra (2004) focus primarily on the Web site as the enabler of returns, but there is a substantial logistical and operational

Table 2: Descriptive statistics by retailer. Mean responses and standard deviations on seven-point Likert scale.

		Retailer A		Retailer B		Retailer C		Retailer D		Retailer E	
		Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Previous Service	A01	5.97	1.29	6.04	1.04	5.95	1.42	5.78	1.39	5.96	1.35
Experience	A02	1.77	1.44	1.78	1.46	1.81	1.42	1.97	1.51	1.92	1.73
	A03	6.06	1.24	6.13	1.27	6.12	1.26	5.82	1.35	5.69	1.90
	A04	6.01	1.19	5.71	1.62	5.91	1.47	5.76	1.37	5.96	1.43
Recovery	B01	6.00	1.34	6.07	1.45	6.41	.94	6.16	1.13	5.94	1.49
Responsiveness	B02	6.06	1.27	6.11	1.47	6.30	1.25	6.11	1.18	6.04	1.35
	B03	6.12	1.12	6.13	1.12	6.33	1.00	6.08	1.25	6.12	1.52
	B04	5.93	1.36	6.38	1.11	6.24	1.19	5.99	1.31	5.69	2.04
Compensation	C01	5.03	1.70	5.58	1.79	4.89	1.93	5.16	1.79	4.37	2.25
	C02	4.63	1.42	5.10	1.68	4.70	1.56	4.46	1.87	4.59	1.44
	C03	4.03	1.96	5.20	1.74	4.26	2.20	6.00	1.32	3.98	2.16
Contact	D01	5.88	1.32	6.53	.69	5.66	1.60	6.02	1.22	5.22	1.92
	D02	5.76	1.33	6.07	1.09	4.95	2.12	5.58	1.42	4.94	1.92
	D03	5.99	1.37	6.43	.70	5.37	1.94	6.02	1.23	4.92	2.20
	D04	5.87	1.29	5.98	1.25	6.10	1.34	5.98	1.14	5.45	2.02
	D05	5.51	1.51	5.80	1.49	5.74	1.70	5.52	1.45	5.61	1.88
Perceived Value of	E01	5.77	1.29	5.76	1.05	5.23	1.50	5.89	1.25	5.96	1.70
the Returns	E02	5.86	1.10	5.98	1.45	6.20	1.33	5.93	1.15	6.00	1.34
Offering	E03	5.87	1.21	6.09	1.36	6.14	1.30	6.01	1.05	5.82	1.58
	E04	5.93	1.29	6.02	.84	6.01	1.21	5.76	1.28	5.63	1.73
	E05	5.70	1.30	5.91	1.43	5.90	1.54	5.52	1.35	5.92	1.32
	E06	6.07	1.10	6.18	1.30	6.17	1.14	5.87	1.18	6.10	1.29
Loyalty Intentions	F01	6.41	.97	6.29	1.18	6.46	.90	6.01	1.25	6.20	.98
	F02	6.43	1.00	6.48	1.02	6.46	.97	5.94	1.36	6.10	1.40
	F03	6.43	.99	6.40	1.19	6.39	1.11	5.95	1.35	6.06	1.41
	F04	5.96	1.22	6.36	1.23	6.21	1.29	5.68	1.73	5.37	1.75
	F05	6.25	1.18	6.23	1.27	6.36	.96	6.15	1.36	5.80	1.65
	F06	3.94	2.04	2.80	1.97	3.16	2.15	3.32	1.85	3.14	1.91
Site Ease	G01	5.52	1.39	5.70	1.34	6.04	1.21	5.30	1.65	5.63	1.52
	G02	5.61	1.29	5.88	1.42	6.10	1.27	5.09	1.70	5.59	1.61
	G03	5.68	1.27	6.02	1.39	6.07	1.26	5.12	1.67	5.90	1.31
	G04	5.68	1.37	6.05	1.40	6.23	1.15	5.04	1.72	5.96	1.29
Customer Effort	H01	5.62	1.18	5.90	1.34	6.17	1.25	5.03	1.55	5.94	1.27
	H02	5.75	1.34	5.95	1.12	5.92	1.40	5.68	1.44	5.82	1.55
	H03	6.06	.97	6.11	1.11	6.12	1.32	5.73	1.30	6.14	1.08
	H04	5.30	1.61	5.71	1.40	5.57	1.68	5.70	1.38	5.53	1.67
	H05	5.75	1.23	6.05	1.08	5.94	1.31	5.61	1.30	5.98	1.33
	H06	5.54	1.51	5.85	1.18	5.51	1.73	5.33	1.51	5.60	1.58
	H07	5.67	1.47	5.97	1.20	6.35	1.15	5.19	1.52	6.04	1.37
Return Satisfaction	S01	6.00	1.00	5.89	1.51	6.24	1.01	5.84	1.17	5.94	1.18
	S02	5.76	1.27	5.91	1.52	5.92	1.41	5.88	1.18	5.53	1.57
	S03	5.76	1.13	5.73	1.74	6.08	1.16	5.81	1.22	5.90	1.23
	S04	5.65	1.35	6.05	1.49	6.11	1.30	5.85	1.17	5.84	1.36

component to returning products. Thus, we also developed a new four-item scale, *return satisfaction*, as a complement, to capture the customer's perceptions of the specific process of making the return—the instructions, the return process itself, and the credit process. Finally, *loyalty intentions* consist of six items designed to measure the shopper's likelihood of purchasing from that retailer in the future. Loyalty intentions is a very well established scale in the marketing and operations literatures (Cronin et al., 2000).

STATISTICAL ANALYSES AND RESULTS

Our hypothesis testing relies on observations collected from groups of customers nested within retailers. Therefore, the analysis organizes these observations in a structure comprising customer and Internet-retailer covariation. Following research by Hox (1998, 2002), we considered both levels of covariation separately in a multilevel structural equation model (MSEM).

 We used maximum-likelihood estimation to generate the MSEM results, first analyzing the customer-level covariation of our observations. The MSEM evaluated for each observation the variance of all construct measures explained by each customer's responses with respect to the corresponding retailer mean and pooled across the entire sample of retailers. In particular, the MSEM at the customer level of covariation evaluated each covariance coefficient obtained for every pair of variable measurements within each retailer after averaging these coefficients across all retailers in our study.

 Subsequently, we analyzed the retailer-level covariation of our observations. For this level, the MSEM evaluated the variance of each measurement contributed by each of our retailers relative to the overall sample of observations. The retailer level of covariation also accounted for differences in the number of observations among the retailers in our sample through the use of a pseudobalanced scaling solution (McDonald, 1994). Specifically, at this level, the MSEM isolated each retailer's contribution to the divergence of each variable measurement with respect to the measurement's sample mean and then assessed the extent to which this divergence covaried with the divergence of each of the other variable measurements from the sample mean.

 In Table 3, we present the covariance coefficients at the customer level. (For conciseness, we do not report the Internet-retailer level coefficients, but they are available from the authors upon request.) In line with Anderson and Gerbing's (1988) two-step procedure and Hox's (2002) MSEM approach, the coefficients were used to assess a measurement model for the latent variables. These values then enabled us to test our hypotheses at the customer and Internet-retailer levels of covariation in a structural model that followed the hypothesized model structure initially introduced in Figure 1.

Measurement Model

The measurement model assesses whether the indicators chosen to reflect the latent variables yield a statistically reasonable representation of these variables. To that

Table 3: Customer-level covariance matrix.

	Previous Service Experience				Recovery Responsiveness				Compensation			Contact				
	A01	A02*	A03	A04	B01	B02	B03	B04	C01	C02	C03	D01	D02	D03	D04	D05
A01	1.50															
A02*	.71	2.29														
A03	1.24	.76	1.55													
A04	1.12	.74	1.27	1.93												
B01	.77	.45	.86	.84	1.52											
B02	.75	.48	.87	.84	1.34	1.64										
B03	.76	.43	.82	.77	1.14	1.15	1.33									
B04	.92	.69	.99	.99	1.08	1.22	1.05	1.64								
C01	.85	.46	1.05	1.03	1.02	1.07	.93	1.16	3.03							
C02	.68	.53	1.02	.91	.82	.89	.78	.92	2.30	2.93						
C03	.65	.48	.79	.69	1.02	1.10	.77	.86	1.62	1.80	3.08					
D01	.73	.40	.67	.69	.80	.76	.86	.79	.82	.65	.66	1.51				
D02	.72	.30	.75	.62	.72	.76	.77	.80	1.18	.96	.78	1.05	1.89			
D03	.63	.20	.83	.64	.72	.70	.75	.71	.97	.80	.61	1.16	1.27	1.63		
D04	.63	.42	.69	.56	.89	.91	.87	.86	.82	.89	.82	.93	1.04	1.01	1.47	
D05	.79	.46	.70	.65	.90	.95	.87	.99	1.23	1.26	1.06	1.01	1.26	1.15	1.35	2.20
E01	.65	.40	.91	.87	.44	.39	.47	.56	.65	.59	.43	.46	.44	.41	.42	.52
E02	.66	.63	.62	.73	.90	.98	.75	.79	.94	.89	.91	.60	.71	.59	.85	.95
E03	.69	.76	.77	.78	.91	.96	.74	.85	.96	.88	.94	.57	.66	.55	.80	.93
E04	.78	.75	.84	.80	.63	.61	.57	.72	.87	.84	.59	.56	.67	.56	.63	.87

E05	.77	.74	.85	.80	.82	.82	.68	.80	1.00	1.04	.91	.50	.72	.54	.80	1.04
E06	.70	.58	.73	.76	.86	.87	.77	.78	.82	.78	.73	.55	.67	.54	.70	.82
F01	.78	.66	.86	.85	.59	.62	.57	.78	.79	.75	.56	.52	.59	.44	.51	.62
F02	.73	.67	.82	.84	.59	.66	.55	.78	.82	.82	.55	.49	.63	.49	.50	.67
F03	.82	.67	.93	.90	.63	.65	.63	.81	.83	.75	.54	.54	.64	.48	.51	0.65
F04	.86	.64	.99	.97	.69	.70	.68	.80	.97	.92	.63	.62	.78	.61	.60	.72
F05	.77	.60	.83	.92	.60	.61	.56	.72	.84	.73	.54	.42	.53	.41	.41	.53
F06*	.69	.58	.72	.83	.73	.75	.67	.87	.98	.62	.67	.58	.77	.46	.51	.77
G01	.61	.51	.67	.60	.63	.62	.53	.62	.83	.92	.77	.59	.67	.57	.76	.88
G02	.68	.58	.79	.76	.87	.86	.66	.80	1.07	.99	.93	.56	.72	.53	.71	.90
G03	.74	.59	.82	.77	.91	.90	.68	.81	1.03	.95	.89	.59	.72	.54	.77	.93
G04	.74	.68	.83	.79	.95	.93	.70	.85	1.04	1.05	.96	.59	.70	.56	.81	1.00
H01*	-.66	-.59	-.68	-.76	-.73	-.69	-.51	-.62	-.90	-1.10	-.87	-.52	-.63	-.54	-.73	-.88
H02*	-.77	-.58	-.83	-.82	-.88	-.86	-.74	-.81	-.98	-1.00	-1.17	-.76	-.83	-.74	-.90	-1.01
H03*	-.76	-.45	-.77	-.77	-.75	-.76	-.67	-.68	-.84	-.75	-.74	-.64	-.70	-.65	-.69	-.78
H04*	-.73	-.56	-.80	-.88	-.80	-.76	-.61	-.71	-1.05	-1.18	-1.43	-.63	-.80	-.59	-.86	-.99
H05*	-.65	-.41	-.73	-.72	-.69	-.67	-.60	-.63	-.80	-.82	-.89	-.63	-.70	-.62	-.77	-.77
H06*	-.62	-.34	-.67	-.70	-.65	-.67	-.52	-.62	-.91	-1.02	-1.22	-.62	-.77	-.60	-.75	-.79
H07*	-.66	-.52	-.76	-.70	-.75	-.70	-.60	-.60	-.86	-.91	-.82	-.54	-.60	-.55	-.69	-.80
S01	.68	.65	.76	.72	.82	.83	.62	.75	.91	.93	.95	.54	.64	.48	.67	.77
S02	.63	.68	.70	.72	.90	.88	.64	.74	1.02	1.00	1.11	.50	.68	.43	.65	.80
S03	.66	.63	.77	.76	.84	.86	.62	.82	1.00	.96	1.04	.48	.67	.43	.63	.74
S04	.71	.64	.78	.77	.75	.83	.59	.83	1.00	.87	.87	.48	.64	.46	.56	.75

Continued

Table 3: (Continued)

	Perceived Value of the Returns Offering						Loyalty Intentions						Site Ease			
	E01	E02	E03	E04	E05	E06	F01	F02	F03	F04	F05	F06*	G01	G02	G03	G04
E01	1.57															
E02	.68	1.39														
E03	.63	1.16	1.36													
E04	.75	.91	.94	1.40												
E05	.74	1.19	1.19	1.14	1.63											
E06	.64	.97	1.11	.83	1.14	1.30										
F01	.59	.74	.74	.80	.84	.80	1.14									
F02	.56	.77	.78	.84	.88	.81	1.06	1.20								
F03	.62	.78	.78	.83	.87	.81	1.07	1.09	1.30							
F04	.69	.75	.80	.94	.90	.81	1.08	1.17	1.25	1.84						
F05	.65	.70	.73	.73	.74	.71	.94	.98	1.15	1.26	1.42					
F06*	.48	.77	.91	.71	.82	.88	.78	.83	.83	.86	.76	3.91				
G01	.42	.83	.84	.93	1.02	.77	.66	.65	.65	.79	.58	.45	1.98			
G02	.49	.96	1.04	.98	1.20	.99	.77	.81	.78	.85	.75	.76	1.47	1.92		
G03	.45	.97	1.06	.99	1.17	1.00	.82	.83	.83	.91	.77	.75	1.45	1.72	1.83	
G04	.45	1.04	1.14	1.02	1.23	1.04	.82	.88	.83	.90	.78	.80	1.42	1.74	1.75	1.88
H01*	-.51	-.88	-.92	-.84	-1.06	-.87	-.72	-.74	-.71	-.82	-.71	-.51	-1.25	-1.37	-1.36	-1.43
H02*	-.66	-.94	-.94	-.84	-.98	-.90	-.79	-.81	-.79	-.91	-.76	-.75	-1.02	-1.07	-1.12	-1.14
H03*	-.62	-.85	-.85	-.77	-.91	-.88	-.74	-.75	-.75	-.75	-.75	-.78	-.73	-.96	-.99	-.98
H04*	-.70	-.97	-1.03	-.85	-1.03	-.92	-.82	-.86	-.83	-1.02	-.87	-.73	-.98	-1.08	-1.10	-1.18
H05*	-.55	-.81	-.73	-.69	-.83	-.74	-.73	-.70	-.74	-.80	-.68	-.56	-.80	-.87	-.90	-.89
H06*	-.49	-.75	-.72	-.62	-.84	-.75	-.69	-.64	-.70	-.78	-.70	-.49	-.85	-.93	-.90	-.89
H07*	-.51	-.80	-.78	-.73	-.96	-.81	-.68	-.70	-.72	-.69	-.67	-.55	-.87	-1.07	-1.09	-1.15
S01	.48	.89	.97	.72	.98	.91	.79	.79	.85	.88	.80	.66	.97	1.09	1.13	1.13
S02	.50	.99	1.08	.77	1.05	.99	.76	.80	.82	.89	.81	.84	.94	1.13	1.13	1.18
S03	.54	.98	.99	.78	1.03	.93	.78	.80	.84	.86	.78	.83	.95	1.09	1.12	1.14
S04	.55	.90	.99	.79	1.03	.94	.76	.85	.88	.91	.82	.77	.86	1.12	1.07	1.11

Table 3: (Continued)

	Customer Effort							Return Satisfaction			
	H01*	H02*	H03*	H04*	H05*	H06*	H07*	S01	S02	S03	S04
H01*	1.64										
H02*	1.15	1.70									
H03*	.95	1.18	1.29								
H04*	1.13	1.56	1.11	2.24							
H05*	.95	1.35	1.03	1.41	1.54						
H06*	.96	1.33	.97	1.52	1.39	2.04					
H07*	1.03	1.14	.94	1.20	1.03	1.01	1.60				
S01	-1.09	-1.03	-.81	-1.09	-.91	-.91	-.86	1.41			
S02	-1.05	-1.14	-.87	-1.39	-1.01	-1.12	-.90	1.33	1.77		
S03	-1.03	-1.14	-.87	-1.24	-1.04	-1.05	-.94	1.28	1.51	1.59	
S04	-.93	-1.02	-.83	-1.06	-.86	-.88	-.85	1.16	1.24	1.28	1.61

*Reverse coded variables (changed to align with directionality of questions for other variables in the CFA and structural models).

end, we first conducted a confirmatory factor analysis (CFA) at the customer level of covariation. In Table 4, we show the results from the CFA utilizing the customer-level covariance coefficients in Table 3.

Next, we performed a CFA at the Internet-retailer level of covariation. We examined the latent variables, but in this instance we positioned the measures for the indicators reflected from the latent variables at the retailer level to obtain their covariance coefficients (Table 4).

These results suggest a statistically reliable level of predictability and measurement quality in the CFA across the customer and Internet-retailer levels of covariation. The fit indices obtained at the customer level of covariation suggest that the measurement model accurately reflects the underlying variance-covariance structure linking the indicator variables, according to the criteria set forth by Hu and Bentler (1999).

Moreover, at the customer level, all coefficient loadings are statistically different from zero ($p = .05$). In addition, none of the standardized residuals is above 2.0 or below -2.0. These results provide evidence of convergent validity (Anderson & Gerbing, 1988) and unidimensionality (Steenkamp & Van Trijp, 1991). Also, the composite reliability (CR) measures obtained independently for each of the latent variables provide evidence of convergent validity (Reines-Eudy, 2000). Furthermore, the values for the average variance extracted (AVE) obtained for each scale and their relationship to the shared variance values in the overall measurement model compare favorably with the criteria for discriminant validity prescribed by Fornell and Larcker (1981); all AVE values are greater than .5, and they also exceed their corresponding shared variance values by 10.9% or more.

We further assessed discriminant validity in the measurement model at the customer level of covariation by examining the chi-squared difference tests on the values obtained for 22 models (Anderson & Gerbing, 1988). In the first 21 models, we constrained the correlation parameter between each latent-variable pair to equal one. We considered all of the measurement model's latent variables in the assessment of these 21 models, including the second-order service recovery quality variable. In the remaining model, we allowed the correlation parameters to take on any value. Chi-squared difference tests between each of the first 21 (constrained) models and the 22nd (unconstrained) model ranged from a minimum of $\Delta\chi^2_{\text{constrained}-\text{unconstrained}} = 15.2$ to a maximum of $\Delta\chi^2_{\text{constrained}-\text{unconstrained}} = 1,642$ (each with one degree of freedom). These $\Delta\chi^2$ values suggest that the fit measure of each of the constrained models was significantly worse (at a $p = .05$ level) than the fit measure of the unconstrained model. Thus, a strong indication of discriminant validity was present in the measurement model, because the probability that all combinations of the latent variables adequately represent the same construct is less than 5%.

To assess the Internet-retailer level of covariation, we obtained factor loadings while imposing equality constraints with respect to the factor loadings obtained at the customer level of covariation (Table 4). All of these retailer-level loadings are statistically different from zero ($p = .05$), and none of the standardized residuals is above 2.0 or below -2.0. These results provide further evidence of convergent validity (Anderson & Gerbing, 1988) and unidimensionality (Steenkamp & Van Trijp, 1991). In Table 4 we also present the CR and AVE measures obtained independently

Table 4: Measurement model results at customer and retailer levels of covariation[a].

Latent Variable[b]	Scale	Non-Stand. Loadings[b]	Stand. Loadings[b]	Standard Error[b]
Previous Service Experience CR = .852 AVE = .605 [CR = .853 AVE = .606]	A01	1.053 [1.055]	.859 [.860]	.512 [.511]
	A02	.657 [.667]	.434 [.439]	.901 [.898]
	A03	1.177 [1.176]	.945 [.945]	.326 [.328]
	A04	1.075 [1.076]	.774 [.775]	.633 [.632]
Recovery Responsiveness CR = .936 AVE = .787 [CR = .936 AVE = .787]	B01	1.087 [1.095]	.883 [.886]	.469 [.464]
	B02	1.234 [1.229]	.965 [.962]	.264 [.272]
	B03	1.054 [1.055]	.916 [.915]	.402 [.402]
	B04	.990 [.993]	.773 [.775]	.634 [.632]
Compensation CR = .850 AVE = .657 [CR = .850 AVE = .657]	C01	1.436 [1.440]	.826 [.827]	.564 [.562]
	C02	1.605 [1.602]	.937 [.936]	.349 [.352]
	C03	1.124 [1.122]	.641 [.640]	.768 [.768]
Contact CR = .896 AVE = .633 [CR = .896 AVE = .634]	D01	.996 [1.000]	.811 [.813]	.585 [.583]
	D02	1.111 [1.115]	.807 [.808]	.59 [.586]
	D03	1.141 [1.143]	.895 [.895]	.446 [.446]
	D04	.910 [.909]	.752 [.751]	.659 [.660]
	D05	1.039 [1.037]	.700 [.699]	.714 [.715]
Perceived Value of the Returns Offering CR = .919 AVE = .661 [CR = .919 AVE = .661]	E01	.625 [.620]	.499 [.496]	.867 [.868]
	E02	1.043 [1.048]	.885 [.886]	.466 [.464]
	E03	1.092 [1.092]	.936 [.935]	.353 [.353]
	E04	.863 [.865]	.731 [.731]	.683 [.682]
	E05	1.118 [1.119]	.877 [.877]	.481 [.481]
	E06	.993 [.993]	.871 [.871]	.491 [.491]

Continued

Table 4: (Continued)

Latent Variable[b]	Scale	Non-Stand. Loadings[b]	Stand. Loadings[b]	Standard Error[b]
Loyalty Intentions	F01	.954	.894	.447
CR= .928 AVE= .694		[.954]	[.895]	[.447]
[CR= .928 AVE= .694]	F02	.981	.895	.447
		[.981]	[.895]	[.447]
	F03	1.107	.972	.234
		[1.108]	[.972]	[.234]
	F04	1.147	.847	.532
		[1.151]	[.847]	[.531]
	F05	1.035	.87	.493
		[1.036]	[.870]	[.493]
	F06	.761	.385	.923
		[.753]	[.382]	[.924]
Site Ease	G01	1.111	.789	.614
CR = .960 AVE = .850		[1.121]	[.792]	[.610]
[CR = .960 AVE = .851]	G02	1.312	.946	.324
		[1.311]	[.946]	[.325]
	G03	1.312	.971	.239
		[1.308]	[.971]	[.241]
	G04	1.330	.970	.243
		[1.333]	[.970]	[.241]
Customer Effort	H01	.935	.730	.684
CR = .936 AVE = .678		[.937]	[.730]	[.683]
[CR = .936 AVE = .678]	H02	1.234	.946	.324
		[1.234]	[.946]	[.324]
	H03	.948	.836	.549
		[.950]	[.836]	[.548]
	H04	1.257	.839	.544
		[1.256]	[.839]	[.545]
	H05	1.091	.880	.476
		[1.092]	[.880]	[.474]
	H06	1.086	.760	.650
		[1.087]	[.760]	[.650]
	H07	.951	.751	.660
		[.953]	[.752]	[.659]
Return Satisfaction	S01	1.111	.936	.352
CR = .952 AVE = .834		[1.114]	[.936]	[.353]
[CR = .953 AVE = .834]	S02	1.206	.907	.421
		[1.206]	[.908]	[.419]
	S03	1.250	.990	.138
		[1.246]	[.989]	[.147]
	S04	1.029	.810	.587
		[1.040]	[.813]	[.582]

[a]The measurement model's fit indices obtained at the customer level of covariation were as follows: Standardized Root-Mean Square Residual, .056; Comparative Fit Index, .901; and Root Mean-Square Error of Approximation, .076.

[b]All factor loadings and error terms are statistically different from zero ($p = .05$). Results obtained at the customer level of covariation are presented in Roman type, and results from the Internet-retailer level of covariation are shown in square brackets and italics.

for these loadings in each scale. While the CR measures provide additional evidence of convergent validity (Reines-Eudy, 2000), the AVE measures compare favorably with the criteria for discriminant validity set forth by Fornell and Larcker (1981).

With the exception of the loadings obtained for perceived value of the returns offering, results from LaGrange Multiplier (LM) tests showed that the loadings in Table 4 are not statistically different across the customer and Internet-retailer levels of covariation. Although the LM tests highlighted differences between one of the loadings obtained for perceived value of the returns offering across both levels of covariation, this loading was positive and statistically different from zero ($p = .05$) when a CFA with no equality constraints was independently considered at each of the two levels of covariation. In Table 4 we report the loadings obtained for perceived value of the returns offering, along with corresponding CR and AVE measures that offer support for the convergent and discriminant validity of the measurement model, in line with the guidelines established by Fornell and Larcker (1981) and Reines-Eudy (2000).

Structural Model

Having confirmed the adequacy of the measurement model, we now examine the hypotheses empirically at the customer level of covariation. We used the covariance coefficients among the variables in Table 3 to perform this testing in accordance with the model in Figure 1.

We present the results from the structural analysis at the customer level in Table 5, along with indices confirming a statistically sound and reliable fit of the model with respect to the data. We include nonstandardized and standardized coefficients for the causal paths corresponding to the hypotheses outlined in Figure 1, as well as nonstandardized and standardized coefficients corresponding to the covariance paths among the independent latent variables and between the disturbance terms corresponding to two dependent latent variables (perceived value of the returns offering and return satisfaction) in the structural model. These paths account for theoretical relationships articulated in much of the value- and satisfaction-based service research (Cronin et al., 2000). Finally, in Table 5, we also present the coefficients for the paths linking the second-order latent variable service recovery quality with its first-order factors, in agreement with our operationalization in the Research Methods section above.

We summarize below the statistical results of the hypothesis testing at the customer level of covariation (Table 5). The standardized causal path coefficients represent the strength of the relationships between constructs and allow us to test our hypotheses. LM test results showed that these coefficients (shown in Figure 2) did not vary significantly with respect to coefficients obtained from covariation at the Internet-retailer level.

The path coefficients from service recovery quality to perceived value of the returns offering and to return satisfaction are positive and statistically different from zero ($p = .05$), supporting Hypotheses 1 and 2, respectively. Thus, an increase in the quality of recovery that a customer experiences when returning a purchase to an Internet retailer is linked to improvement in customer perception of the value of the return offering and in customer return satisfaction.

Table 5: Structural model results at the customer level of covariation and comparison of path coefficients with respect to the Internet-retailer level of covariation.

Structural Path	Customer-Level Coefficients		LM Test χ² Value (p)[b]	Hypothesis	Empirical Support
	Nonstandardized[a]	Standardized[a]			
Causal					
Service Recovery Quality → Perceived Value of the Returns Offering	.268	.419	1.341 (.247)	1	Both levels
Service Recovery Quality → Return Satisfaction [c]	.139	.130	.003 (.954)	2	Both levels
Perceived Value of the Returns Offering → Loyalty Intentions	.310	.262	.034 (.853)	3	Both levels
Return Satisfaction → Loyalty Intentions	.216	.306	.040 (.841)	4	Both levels
Previous Service Experience → Perceived Value of the Returns Offering	.099	.115	.023 (.879)	5	Both levels
Previous Service Experience → Return Satisfaction	.136	.094	.195 (.658)	6	Both levels
Previous Service Experience → Loyalty Intentions	.472	.462	.183 (.669)	7	Both levels
Site Ease → Perceived Value of the Returns Offering	.125	.231	1.303 (.254)	8	Both levels
Site Ease → Return Satisfaction	.246	.272	.002 (.968)	9	Both levels
Customer Effort → Perceived Value of the Returns Offering	−.178	−.265	1.448 (.229)	10	Both levels
Customer Effort → Return Satisfaction	−.543	−.481	.069 (.792)	11	Both levels
Covariance					
Customer Effort ↔ Previous Service Experience	−.098	−.164			
Customer Effort ↔ Site Ease	−.683	−.713			
Service Recovery Quality ↔ Site Ease	.644	.658			

Service Recovery Quality ↔ Customer Effort	−.542	−.673
Disturbance$_{Perceived\ Value\ of\ Returns\ Offering}$ ↔ Disturbance$_{Satisfaction\ Return\ Process}$	.069	.364
2nd to 1st Order Factors		
Service Recovery Quality → Recovery Responsiveness	1.043	.903
Service Recovery Quality → Compensation	1.246	.872
Service Recovery Quality → Contact	.803	.850

Notes:

(1) A satisfactory variance fit was obtained in the structural model, since the model yielded R^2 values of .686, .663, and .585 at the customer level of covariation for the variables measuring perceived value of the returns offering, return satisfaction, and loyalty intentions, respectively (Shah & Goldstein, 2006). Overall covariance fit indices at the customer level of covariation included $\chi^2 = 2497.080$ (788 degrees of freedom), RMSEA = .06, CFI = .92, Non-Normed Fit Index = .910, and Root Mean Squared Residual = .10. The combination of these indices suggest an adequate fit between the model-implied covariance matrix and the data, according to benchmarks set forth by prior operations management research for structural equation models (Shah & Goldstein, 2006).

(2) To assess the validity of our model, we considered effects on return satisfaction and loyalty intentions caused by customer perceptions regarding the importance of the product return service. Although some of these perceptions displayed a significant covariation ($p = .005$) with the items corresponding to return satisfaction and loyalty intentions, a revised analysis of the structural model at the customer level controlling for this additional covariation resulted in essentially the same results as those presented above.

[a] $p < .05$ for all values in this column.

[b] This measures the probability that the difference in each path coefficient across the two covariation groups is equal to zero.

[c] Following research by Cronin, Brady, and Hult (2000), we applied the methodology set forth by Baron and Kenny (1986) to establish that return satisfaction fully mediates the relationship between service recovery quality and loyalty intentions in the structural model.

Figure 2: Standardized causal path coefficients.
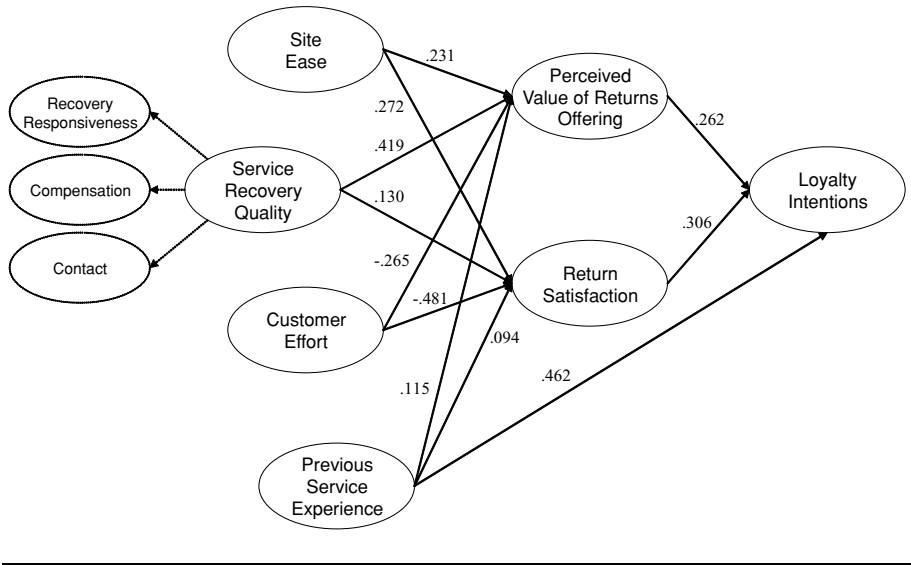
In addition, the empirical results in Table 5 show that customer loyalty intentions toward an Internet retailer link directly to their perceptions of value and satisfaction when they return purchased items to that retailer. The coefficient on the path linking perceived value of the returns offering to loyalty intentions is positive and statistically different from zero ($p = .05$), in agreement with Hypothesis 3. Moreover, the coefficient on the path connecting return satisfaction to loyalty intentions is positive and statistically different from zero ($p = .05$), thus providing support for Hypothesis 4.

The loyalty intentions construct also relates directly to customers' previous service experience with the Internet retailer. Furthermore, previous service experience has a compounded effect, proving relevant in defining both perceived value of the returns offering and return satisfaction. These findings support Hypotheses 5, 6, and 7. As shown in Table 5, the coefficients on the paths connecting previous service experience to value of the returns offering, to return satisfaction, and to loyalty intentions are positive and statistically different from zero ($p = .05$).

Finally, the results also show that the ease with which customers can use the Internet retailers' Web sites and the effort they must expend in physically preparing their returns to the Internet retailers influence their perception of the value of firms' returns offerings and their satisfaction with returns. The coefficients on the paths connecting site ease to perceived value of the returns offering and to return satisfaction are positive and statistically different from zero ($p = .05$), supporting Hypotheses 8 and 9 (Table 5). In turn, the path coefficients linking customer effort to perceived value of the returns offering and to return satisfaction are negative and statistically different from zero ($p = .05$) and provide evidence supporting Hypotheses 10 and 11.

DISCUSSION

This study contributes to both managerial insight and academic research development in the area of Internet-retailing return services. The results of this study encourage decision makers at Internet retailing firms to focus on the strategically important goal of creating perceptions of value, satisfaction, and loyalty among customers. Although the cost and operational challenges of returns processing may be well known in practice, it is important to understand the broader implications of returns for customer loyalty as well as the key drivers of return satisfaction and value perceptions. Our research highlights the need for firms to invest in this critical operations process and to thoughtfully craft returns policies that will positively influence consumers' perceptions and intention to repurchase. Moreover, our results provide a clearer picture of the importance of handling returns well and help managers identify the aspects of the returns management system that affect customers the most.

Decision makers can use these results to allocate resources based on the relative importance customers assign to key drivers of satisfaction with returns and the perceived value of the returns offering. Our results emphasize three critical observations. First, return processes that require high levels of customer effort can have a severely negative impact on a customer's satisfaction with the return transaction. This suggests that managers must critically evaluate their procedures for product returns. To make returns easier and more hassle-free for their customers, firms might offer an automated online self-service return form that is easy to find on the company's Web site; this would empower customers and provide them a greater sense of control during the return transaction. Additionally, companies could make sure that the requirements for returns are clear and made known to customers and employees in advance of a return transaction. This might have the added benefit of eliminating some returns altogether by ensuring that both the customers and the company have the same understanding of what constitutes an appropriate return and the procedures required for a return.

Another way to minimize hassle involves the pick-up or postal-drop options; firms can ensure that the return package either will be picked up by a third-party agent or can be easily returned via the postal system. Standing in line to pay for postage on a return product is sure to aggravate customers, but return labels that guarantee postage (which could be deducted from the customer's refund credit) would minimize the opportunity for dissatisfaction. Finally, companies should make certain that customers are promptly credited for the returned product. The quick processing of returns and updating of customer accounts is critical to the return process. While these efforts can help reduce operating expenses for Internet retailers, we would argue that efforts to improve customer satisfaction with the return transaction are equally important because of their significant impact on loyalty intentions, and thus future purchasing behavior.

Second, our results demonstrate the importance of consistent service quality in creating a loyal market base. Not only does previous service experience have a strong direct effect upon loyalty intentions, but it also indirectly affects customers' loyalty intentions through their satisfaction with, and the value they perceive from, the returns offerings. The implication is that customers' previous

service experiences shade—either positively or negatively—their perceptions of the current transaction. Therefore, managerial decisions that ensure a consistently superior service experience are likely to directly generate sustained loyalty intentions as well as to indirectly contribute to the reinforcement of those intentions through improvements in customer satisfaction with and value perceived from the returns offerings.

Third, managers should evaluate their firm's service recovery quality in terms of recovery responsiveness, compensation, and contact. The ability to respond promptly and appropriately to a customer's return situation, the manner in which customers are compensated for problems, and the accessibility of knowledgeable customer service representatives (live or through online chats) during the return process all have a strong influence on a customer's perceived value of the returns offering, which in turn affects the customer's loyalty intentions. Thus, managers must ensure that it is easy for customers to contact the company, both before and during a return transaction. Offering several options for return procedures and receipt of credit would enhance a customer's perception of service quality. By providing customers clarity and a sense of control, companies can enhance service recovery quality and strengthen customers' loyalty intentions.

From an academic research perspective, our study offers two important contributions. First, we empirically test a model of returns management in an e-tail environment, contributing to an underrepresented body of research in both the marketing and supply chain literatures. Our development of new scales and modification of existing scales help expand current knowledge in the areas of service quality in general, and service recovery in particular, through the application and extension of theoretical service-offering constructs to returns management and its influence on customer loyalty intentions. Given the double-digit product-return rates experienced by some of our study's retailers, returns management clearly warrants such rigorous attention.

In addition, this study contributes to the growing supply chain literature dealing with functional integration by bringing a consumer focus to the "last-mile" challenge. Though consumers are often seen as the ultimate objective of supply chain activity, very little supply chain research actually deals directly with the end customer. Our study brings consumers' perceptions of supply chain activity into sharp focus and provides evidence for the importance of the integration of operational and marketing activities.

Although a substantial contribution, our work faced some limitations that suggest opportunities for future research. First, we did not distinguish between company-induced returns (e.g., defective product, wrong product shipped, promised delivery date missed, in-transit damage) and consumer-induced returns (e.g., customer changed mind, did not like the product after seeing it, did not like styling). Further research into the causes could also address the issue of the perceived severity level of failures, as raised by Weun, Beattey, and Jones (2004). A possible behavioral issue on the part of the consumer who orders multiple sizes or styles of a product intending to keep only one also merits investigation as a third trigger for returns.

While we confirmed the validity of our model at both the customer and the retailer levels, we did not seek to identify other potential differences warranting further attention. Future research could examine the possibility for differentiated service based upon customer segmentation and prioritization. Return rates might be higher for some customers than others; different groups of customers might have different expectations of service quality; others might differ in their initial loyalty levels. Similarly, further research might examine the stated service policies of various Internet retailers to determine which features have the greatest effect on consumers' propensity to buy from the Internet retailer and on the customers' perception of ensuing service quality and value.

Research examining a broader sample of customers—including those not experiencing a return transaction—would provide a valuable test of the robustness of the perceived value of firms' returns service offerings independent of an actual return. Future studies should also address the risk mitigation impact of a company's returns policy or reputation for returns management, as well as their effect on a customer's propensity to (re)purchase. Our model, which establishes the importance of previous experience, highlights the potential value of future longitudinal studies that would investigate the changing perceptions of customers over time. Studies examining the differing returns motivations of online versus in-store customers would provide additional insight for managers regarding the development of return policies and the assessment of the requirements for reverse logistics within these two channels.

Finally, our use of data from only five firms is an acknowledged limitation of the present study. Although results at the retailer level of analysis showed no divergence from those at the customer level of analysis, this research should be replicated using a broader sample of Internet retailers to confirm the robustness of our findings. While a study the size of ours cannot provide the final word on Internet-retailing returns management, our results provide empirical validation of the importance of returns and offer guidance to managers on relative priorities in this area. We hope that future studies will build upon this foundation and increase our understanding of these issues, which are of vital importance to Internet retailers. [Received: March 2006. Accepted: February 2007.]

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APPENDIX: ITEMS AND SCALES

Previous Service Experience (Hess et al., 2003)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

A01. Previous experiences with this company have been exceptional.
A02. The quality of service from this company has typically been poor.
A03. This company has always provided a high level of service.
A04. The initial fulfillment service met my expectations.

Site Ease (Boyer & Olson, 2002)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

    G01. It is easy for me to remember how to perform return tasks using Company X's Web site.

    G02. It is easy to get Company X's Web site to do what I want it to do when I return products.

    G03. My interaction with Company X's Web site during the return process is clear and understandable.

    G04. Overall, I believe that Company X's Web site is easy to use during the return process.

Customer Effort (new scale)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

    H01. Filling out the online return forms to return the product(s) was easy.

    H02. Preparing the product(s) for return shipment or pickup was easy.

    H03. Company X's requirements on the condition of products returned are appropriate.

    H04. Getting the product(s) physically to the pickup/return point was easy.

    H05. The product was easy to repack so that it was properly packaged and ready to send.

    H06. Appropriate packing materials (carton, filler, tape) were easily available to me.

    H07. It was convenient to print out the Company X return label.

Recovery Responsiveness (Parasuraman et al., 2004)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

    B01. This company provides me with convenient options for returning items.

    B02. This company handles product returns well.

    B03. This company offers a meaningful guarantee.

    B04. This company takes care of problems promptly.

Compensation (Parasuraman et al., 2004)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

    C01. This company compensates me for problems that occur.

    C02. This company compensates me when what I ordered/returned doesn't arrive on time.

    C03. This company arranges for the pickup of items I want to return from my home or business.

Contact (Parasuraman et al., 2004)
Rated from 1 = Strongly Disagree to 7 = Strongly Agree

    D01. This site provides an easy-to-find telephone number(s) to reach the company.

D02. This site has customer service representatives available online.

D03. This site offers the ability to speak to a live person if there is a problem.

D04. This site provides an easy way to notify Company X of the forthcoming return.

D05. This site provides an easy way to track and monitor the return of products to Company X.

Perceived Value of the Returns Offering (Parasuraman et al., 2004)
Rated from 1 = Poor to 7 = Excellent

E01. The S&H prices and fees of the products and return services available at this site

E02. The overall convenience of Company X's return service

E03. The extent to which Company X's Web site gives you a feeling of being in control

E04. The overall value you get from Company X's Web site for your money and effort during the return service

E05. The satisfaction guarantees that Company X provides as part of its return service

E06. Company X's requirements on the conditions of products returned

Return Satisfaction (new scale)
Rated from 1 = Very Dissatisfied to 7 = Very Satisfied

S01. General return instructions

S02. The convenience of making the return

S03. The overall process of making your return

S04. The overall process of receiving credit for the returned merchandise

Loyalty Intentions (Parasuraman et al., 2004)
Rated from 1 = Very Unlikely to 7 = Very Likely

F01. Would you say positive things about Company X's Web site to other people?

F02. Would you recommend Company X's Web site to someone who seeks your advice?

F03. Would you encourage friends and others to do business with Company X?

F04. Do you consider Company X's Web site to be your first choice for transactions of this type?

F05. Will you do more business with Company X in the coming months?

F06. Would you shop with a Company X competitor to replace the item you return to Company X?

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