Building Customer Relationships in an Electronic Age: The Role of Interactivity of E-Commerce Web Sites

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ABSTRACT

This study examines the role of perceived interactivity and other marketing tactics in relationship building with customers in the online retail environment by applying a relationship investment model adapted from De Wulf, Odekerken-Schröder, and Iacobucci (2001). A proposed structure model was tested with data collected from an online survey of 571 respondents. In the model, three subdimensions of perceived interactivity and three marketing tactic variables were incorporated as the antecedents of perceived relationship investment that subsequently influenced perceived relationship quality and behavioral loyalty. Results suggest that two marketing tactics—direct mail (e-mail) and tangible rewards—and two dimensions of perceived interactivity—synchronicity and two-way communication—play as significant antecedents for the relationship-building process of online retail brands. In addition, the findings confirm the relationships among perceived relationship investment,
relationship quality, and behavioral loyalty, which indicates that the fundamental process of relationship building remains similar in the online environment. Reflecting the unique nature of the online retail environment, the model also clarifies the roles of interactivity as well as traditional relationship investment strategies in facilitating online retailers’ relationship building with customers. © 2008 Wiley Periodicals, Inc.

One widely shared prediction about the future of marketing communication is that it will become more conversational. Interactive communication technologies will allow marketers to carry on dialogue with customers.... (Deighton & Grayson, 1995, p. 660)

As a fast growing number of retailers engage in e-commerce and consumers increasingly shop online, the online marketplace is more competitive than ever. The amount of consumers’ dollars spent online is increasing exponentially. E-commerce sales are predicted to continue growing rapidly, reaching 21.1 billion dollars in revenue in 2005 (United States Department of Commerce, 2005). The roster of online retailers includes both dot-com companies, or “pure plays” whose presence is solely Web-based with no physical stores, and brick-and-mortar companies with an e-commerce site complementing their physical stores (Seminerio, 2000). One of the barriers to the growth of e-commerce is that without face-to-face or voice-to-voice interactions with salespeople, consumers tend to experience uncertainty or discomfort associated with making a purchase online (Choi & Rifon, 2002). Thus, irrespective of the form of retailers, the creation and maintenance of a strong consumer base is essential for the long-term development and continuation of e-commerce.

Perhaps the key to the success of online retailers lies in the concept of “Customer Relationship Management” (CRM) that has received growing attention from both academicians and practitioners (Palmatier et al., 2006; Jap & Ganesan, 2000). A number of studies have highlighted the importance of relationship building with customers in traditional retail environments due to retailers’ greater ability, compared with that of manufacturers, to monitor consumer purchase patterns and utilize such information to better serve customers (Sweeney, Soutar, & Johnson, 1999).

With its unprecedented ability to provide dialogue and transactions in an interactive and interesting manner, the World Wide Web (the Web hereafter) has opened up a new door for retailers. As online retailers continuously face the challenge of enhancing consumer trust and building relationships with customers, an understanding of what influences or facilitates relationship building in an online retail environment is imperative for them.

While academics and practitioners increasingly acknowledge the vital role of the Web in building relationships with customers, empirical research is scant regarding the nature of online relationship building and the impact of various marketing tactics on consumers’ perceived relationships with and loyalty toward the retailers (Heldal, Sjovold, & Heldal, 2004; Jo & Kim, 2003; Thorbjornsen et al., 2002). The current study, therefore, seeks to offer a baseline understanding of CRM in the online environment by developing and empirically testing a model of e-retailers’ relationship building with consumers, adapted from De Wulf, Odekerken-Schröder, and Iacobucci’s (2001) model of relationship investments in the traditional, offline retail environment.
Theoretically, findings of this study advance our knowledge of what determines consumer evaluations of e-retailers' investments in relationship building and consequent behavioral loyalty to those retailers. Reflecting the unique nature of the online retail environment, the model also clarifies the roles of interactivity as well as traditional relationship investment strategies in facilitating e-retailers' relationship building with customers. In practical terms, the implications of this study aid e-retailers in their strategic decisions about what to focus on in their marketing practices and Web site designs in order to effectively develop and enhance relationships with their customers in the online retail environment.

LITERATURE REVIEW

Relationship Marketing

Relationship marketing is defined as “all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges” (Morgan & Hunt, 1994, p. 22; Palmatier et al., 2006, p. 136). Over the past two decades, the concept of relationship marketing has received close attention as more and more companies recognize the importance of maintaining and enhancing their relationship with existing and future customers (Duncan & Moriarty, 1998; Lindenmann, 1998; Vavra, 1992). While a corporation’s relationship management embraces rapport or connections with a wide range of internal and external parties, such as employees, stakeholders, and government agencies, its relationship with consumers is said to be at the center of the company’s success (Buttle, 1996).

With its goal of building and enhancing relationships with customers, the major role of relationship marketing is to “ensure stimulation and motivate the consumer to action” (Bulgar, 1999, p. 54). Companies with a relationship marketing orientation deliver customized product or service offerings to the targeted individual consumer, not the masses, in order to create and maintain customer relationships and loyalty.

Once a positive relationship with a company is formed, consumers show their satisfaction with and loyalty to the product the company manufactures (Morris, Barnes, & Lynch, 1999). Furthermore, consumers with a long-term relationship with a brand are willing to pay premium prices, make referrals, and spend more money (Duncan & Moriarty, 1998; Reichheld, 1994). Because acquiring a new customer is six to nine times more costly than retaining a current customer (Peppers & Rogers, 1993), companies make every effort to understand consumers’ changing needs and wants and provide new or increased values to the consumers in the hope of achieving a long-term alliance with them (Morris, Barnes, & Lynch, 1999). An emerging, effective channel for relationship building is the Web, which provides an attractive opportunity for companies to get closer to consumers.

Theoretical Background of Relationship-Reciprocity

Described as “a key feature explaining the duration and stability of exchange relationships” (Larson, 1992), reciprocity has been employed as a fundamental construct in relationship research (De Wulf, Odekerken-Schröder, & Iacobucci, 2002).
Central to the theory of reciprocity is a psychological obligation or a feeling of guilt that one party experiences when it violates the reciprocity norm and does not reciprocate the other party's favorable action (Li & Dant, 1997). Applied to the context of customer relationship building, the principle of reciprocity suggests that, for example, a consumer expects better services from a company after having returned a registration card to the company. Such an act can be equally beneficial to the company since customer information is an excellent source for future relationship marketing practices. Several studies provide empirical evidence of such a reciprocal interaction in consumer-company relationships (Bagozzi, 1995; Kang & Ridgeway, 1996).

The Web and Relationship Building

Unlike traditional feedback channels such as a toll-free number, the Web enables companies to obtain “constant and up-to-date insights” into consumers’ responses to their offerings and quickly build a strong relationship with them (Abela & Sacconaghi, 1997). The Web also offers the opportunity for companies to accumulate a huge amount of consumer data that they can use to effectively build relationships with new consumers (Hanson, 2000), segment consumers (Jackson & Wang, 1994), retain existing customers (Campbell, 1997), and maintain customer loyalty (Forcht & Cochran, 1999). Overall, the literature suggests the Web is a powerful medium for customer relationship building and satisfaction enhancement (Krishnan et al., 1999; Peppers & Rogers, 1993; Schultz & Bailey, 2000; Thorbjornsen et al., 2002).

Interactivity is the key property of the Web that facilitates consumers’ active participation in communications and transactions in the online environment. In the traditional, offline environment, relationships between companies and consumers are often initiated by the companies through various promotional efforts such as advertising, direct mail, and sales promotions. The Web, however, offers consumers the initiative to establish and retain relationships with companies. Likewise, due to the interactive nature of the Web, consumers can engage in two-way, “self-driven” communication for obtaining product-related information and knowledge with greater control over the process of information search and acquisition (Bazjuan-Avery, Calder, & Iacobucci, 1998). Incipient research on interactivity suggests the promising role of interactivity and multimedia features of the Web in enhancing relationship building with customers in the online environment (Feinberg & Kadam, 2002; Fiore, Jin, & Kim, 2005; Heldal, Sjovold, & Heldal, 2004; Jo & Kim, 2003; Thorbjornsen et al., 2002).

These findings suggest that consumers’ attitudinal and behavioral responses, affected by the interactivity of the Web, should be included as crucial factors that may influence relationship building between a company and its customers in the online retail environment.

Proposed Model and Hypotheses

De Wulf, Odekerken-Schröder, and Iacobucci (2001) developed a model of relationship investments, in which the antecedents of perceived relationship investment of a retailer that influences perceived relationship quality and consumer loyalty are explicated. Empirical findings of the study suggest the relationship marketing
tactics—direct mail, preferential treatment, interpersonal communication, and tangible rewards—have differential impacts on consumer perceptions of a traditional retailer's relationship investment that subsequently affect relationship quality, ultimately leading to behavioral loyalty. The best point of their model is to use a global construct, relationship quality, by a combination of trust, commitment, and satisfaction, which “offers the best assessment of relationship strength” (Palmatier et al., 2006, p. 136). In line with the logic behind the De Wulf and colleagues model, the present study conceptualizes a model of relationship investment for explaining the e-retailers’ relationship-building process with their customers. This conceptual model explicates six antecedents—three interactivity dimensions as well as three traditional marketing tactics that have been modified to fit with the online context—that influence consumer perceptions of e-retailers' investment in customer relationship, which consequently influence relationship quality perception and behavioral loyalty. The hypothesized model is shown in Figure 1.

**Perceived Relationship Investment.** Perceived relationship investment refers to “a consumer’s perception of the extent to which a retailer devotes resources, efforts, and attention aimed at maintaining or enhancing relationships with regular customers that do not have outside value and cannot be recovered if these relationships are terminated” (De Wulf, Odekerken-Schröder, & Iacobucci, 2001, p. 35; Palmatier et al., 2006). Several studies on relationship marketing indicate the effect of a company’s investment in relationship building on the consumer’s general perception of the company. Baker, Simpson, and Siguaw (1999),
for instance, reported that consumers were more satisfied with sellers who made extra efforts toward them. Similarly, Ganesan (1994) found a positive relationship between a manufacturer's relationship investment and the audience's trust in the manufacturer. In another study, customers' perceptions of a seller's relationship building efforts were found to result in the customers' strong commitment to the company (Bennett, 1996).

Along the lines of the theoretical explications provided by De Wulf, Odekerken-Schröder and Iacobucci (2001), perceived relationship investment is conceptualized as a central focus of the proposed model, which plays a mediating role in the effects of interactivity and marketing tactics on relationship quality that subsequently influences behavioral loyalty.

**Perceived Interactivity.** For the past decade, the Internet has been perceived to be an ideal medium for building relationships with consumers thanks to its “interactive” capability. While a number of studies have tested the effects of interactivity on consumers’ various psychological outcomes including attitude, arousal, and involvement (e.g., Coyle & Thorson, 2001; Fortin & Dholakia, 2005; Sicilia, Ruiz, & Munuera, 2005), the role of interactivity in building relationships has been implicitly assumed, but not explicitly examined.

Interaction is a fundamental building block of a relationship. Building a dyadic relationship is dependent on each actor's perception of the other's commitment or investment to the relationship. In other words, one's motivation to build a relationship is contingent on how much commitment the partner is willing to make. Similarly, consumers may perceive a Web site's relationship investment through its interactivity; a Web site's relationship investment may be perceived as higher when the site is perceived as more responsive, providing more options to choose, and allowing instant feedback.

Liu (2003) defines interactivity as a construct consisting of three distinct dimensions: active control, two-way communication, and synchronicity. Previous studies have found that heightening the level of a user's control might make consumers more engaged and involved, which would lead to a positive evaluation of the site (e.g., Fortin & Dholakia, 2005). This positive feeling may, in turn, contribute to reinforcing one's perception of the company's (or the site's) relationship investment. In addition, allowing consumers to communicate bidirectionally may make consumers think of the sites as more accessible, which may also be beneficial for building and sustaining relationships. Finally, the Web sites that respond quickly and immediately to consumers' needs might be viewed as more concerned with building relationships with them.

As the three dimensions tap into different aspects of perceived interactivity and might yield different outcomes (Sohn & Lee, 2005), we have decided to examine each dimension of interactivity separately as antecedents of perceived relationship investment.

**H1a:** A higher level of perceived control leads to a higher level of perceived relationship investment.

**H1b:** A higher level of perceived two-way communication leads to a higher level of perceived relationship investment.

**H1c:** A higher level of perceived synchronicity leads to a higher level of perceived relationship investment.
Relationship Marketing Tactics

In their model, De Wulf, Odekerken-Schröder, and Iacobucci (2001) identified four marketing tactics as determinants of perceived relationship investment: (1) direct mail, (2) preferential treatment, (3) interpersonal communication, and (4) tangible rewards. Among those tactics, interpersonal communication is not deemed appropriate in the commercial brand Web sites in which face-to-face contact is absent. Although slightly modified to fit the context of this study, the remaining three marketing tactics are considered fitting as antecedents of relationship investment in the online retail environment.

Direct mail is defined here as consumer perception of the extent to which an e-retailer keeps its users informed through e-mails or online newsletters. Prior research suggests a company’s continuous efforts to communicate with consumers are likely to generate their positive response toward the company (De Wulf, Odekerken-Schröder, & Iacobucci, 2001; Doney & Cannon, 1997). Preferential treatment refers to consumer perception of the extent to which an e-retailer treats its regular customers better than infrequent shoppers. Previous research found that a company’s efforts to care for regular customers led to an increase in consumer retention (Hennig-Thurau & Klee, 1997). Tangible reward connotes consumer perception of the extent to which an e-retailer offers customers special or extra benefits such as discount coupons or prices. Consumers have been shown to maintain a loyalty to a brand if their loyalty is rewarded by the company (Berry, 1995). Similar to the De Wulf and colleagues (2001) model, direct mail, preferential treatment, and tangible rewards are conjectured to influence consumer perception of the relationship investment of an e-retailer as stated in the following hypotheses:

H2a: A higher level of direct mail perception leads to a higher level of perceived relationship investment.

H2b: A higher level of preferential treatment perception leads to a higher level of perceived relationship investment.

H2c: A higher level of tangible rewards perception leads to a higher level of perceived relationship investment.

Relationship Quality. While most studies revealed the mediating effects of the relational constructs of trust, satisfaction, and commitment, several studies have suggested using a global relationship construct, relationship quality (De Wulf, Odekerken-Schröder, & Iacobucci, 2001; De Wulf, Odekerken-Schröder, & Van Kenhove, 2003; Dorsch et al., 1998; Dwyer, Schurr, & Oh, 1987; Garbarino & Johnson, 1999; Hennig-Thurau & Klee, 1997; Palmatier et al., 2006; Smith, 1998). Key indicators of relationship quality, which is viewed as the most critical outcome of relationship building, are (1) relationship satisfaction, (2) trust, and (3) relationship commitment.

Defined as “the extent to which each party feels favorably toward the other because positive expectations about the relationship are reinforced” (Ward, 1998), relationship satisfaction has been measured to assess relationship effectiveness and has been found to play an important role in maintaining relationships between a firm and its customers in a number of studies (Anderson & Narus,

Trust in general refers to “one party’s level of confidence in and willingness to open oneself to the other party” (Ward, 1998), and is defined here as a consumer’s confidence in an e-retailer. Several studies have recognized the significance of trust as an indication of successful relationship marketing (Garbarino & Johnson, 1999; Gruen, Summers, & Acto, 2000; Hunt & Morgan, 1995). The third element of relationship quality, relationship commitment, is “an enduring desire to maintain a valued partnership” (Morris, Barnes, & Lynch, 1999, p. 659) and has been found to effectively reflect consumers’ perceptions of relationship quality (Dorsch et al., 1998; Hennig-Thurau & Klee, 1997). Accordingly, consistent with the De Wulf, Odekerken-Schröder, and Iacobucci (2001) model, the following hypothesis is formed to delve into the effect of relationship investment on relationship quality consisting of the three dimensions discussed above.

**H3:** A higher perceived level of relationship investment leads to a higher level of relationship quality.

**Behavioral Loyalty.** Behavioral loyalty refers to “a composite measure based on a consumer’s purchasing frequency and amount spent at a retailer compared with the amount spent at other retailers from which the consumer buys” (De Wulf, Odekerken-Schröder, & Iacobucci, 2001, p. 37). In most marketing and advertising studies, behavioral loyalty has been adopted to gauge the long-term effectiveness of marketing and advertising campaigns. Considering that behavioral loyalty often entails revisiting the store and repurchasing the brand, it reflects consumers’ satisfaction with the retailer through past experience. Relationship quality, therefore, may facilitate the formation and maintenance of behavioral loyalty to the retailer. Likewise, a consumer’s perception of good relationship quality with an e-retailer should encourage the revisitation of its e-commerce site for purchases. Along this line of reasoning, the following hypothesis is set forth to assess the impact of relationship quality on behavioral loyalty in the context of online retailing.

**H4:** A higher level of relationship quality leads to a higher level of behavioral loyalty.

**Method**
A self-administered, online survey was conducted to test the hypothesized relationships among the key variables in the proposed model of relationship building for e-retailers. Although built on the De Wulf, Odekerken-Schröder, and Iacobucci (2001) model for brick-and-mortar retail brands, the model presented in the current study is different because it relates to the company and to the consumer relationship building process in the online retail environment. Moreover, perceived interactivity has been incorporated as an additional antecedent of relationship building through e-commerce sites. Since e-retailers enjoy a unique opportunity not only to keep track of consumer visits and purchase patterns, but also to apply the accumulated information to customize their offerings to individual consumers, thereby building a long-term relationship with them in a cost-effective manner, the focus of this study on e-commerce and relationship building is deemed timely and necessary.
Sample and Procedure. Data were collected online from a panel of Web users operated by a southwestern university. Panel members were given the Web site address directing them to log onto the first page of the study site with general instructions. If they agreed to take part, respondents were then asked to indicate the name or URL of one e-commerce Web site they regularly visit for shopping and the product category they obtain information about and make purchases from at the site. In efforts to include both common types of e-retailers, half of the participants were asked to identify an e-retailer with a Web presence only, whereas the other half were told to indicate an e-retailer with both an online and offline presence. Examples of e-retailers in each category were also given to help the participants understand the instructions. The respondents were then instructed to fill out an online survey regarding their responses to the Web site they had listed.

A total of 586 adults participated, consisting of 312 who completed the Web-based e-retailer version and 274 adults who did the click-and-mortar retailer version. All participants were entered into a drawing for a cash prize of $150. After incomplete surveys were eliminated, 303 questionnaires from 120 males (39.6%) and 183 females (60.4%) comprised the sample for the Web-based e-retailer group. For the group of e-retailers with both an online and offline presence, 268 questionnaires from 103 males (38.4%) and 165 females (61.6%) were usable and included in the sample for analysis. No other significant differences were found in demographic characteristics between the two groups (average age = 44; more than 60% were full-time employees; and more than 90% had a greater level of education than some level of college).

Measures. Measures for most of the constructs were borrowed from the literature and adapted to fit the online retail environment, the context of this study. The online survey consisted of three main sections. All of the constructs except demographic characteristics were measured on a 7-point Likert scale. The first part of the questionnaire measured behavioral loyalty and purchase experience concerning the Web site respondents had indicated. The second section assessed how respondents perceived the features and activities of the Web site, including perceived relationship investment (three statements from De Wulf, Odekerken-Schröder, & Iacobucci, 2001; $M = 5.01, SD = 1.42; reliability = .85$); relationship quality (three statements each from De Wulf, Odekerken-Schröder, & Iacobucci, 2001); trust (three statements from De Wulf, Odekerken-Schröder, & Iacobucci, 2001; $M = 5.48, SD = 1.13; reliability = .90$), relationship commitment (three statements from De Wulf, Odekerken-Schröder, & Iacobucci, 2001; $M = 4.94, SD = 1.37; reliability = .90$), and relationship satisfaction (three statements from De Wulf, Odekerken-Schröder, & Iacobucci, 2001; $M = 5.17, SD = 1.18; reliability = .88$); relationship marketing tactics [three statements each from De Wulf, Odekerken-Schröder, & Iacobucci, 2001: rewards ($M = 4.25, SD = 1.78; reliability = .92$), direct mail ($M = 4.92, SD = 1.74; reliability = .93$), and preferential treatment ($M = 3.65, SD = 1.58; reliability = .88$)]; and perceived interactivity [three statements each from Liu, 2003: active control ($M = 5.76, SD = 1.00; reliability = .75$), twoway communication ($M = 4.82, SD = 1.45; reliability = .85$), and synchronicity ($M = 5.76, SD = 1.06; reliability = .83$)]. The third part measured respondents’ self-efficacy with the Web and demographic variables.

Results

Prior to model testing, preliminary analyses examined differences in the processing model between the pure Web-based retailer group and the click-and-mortar retailer
group. No differences were observed, and thus, the subsequent testing of the model was performed with the entire sample that merged both groups.

Before testing the hypothesized causal relationships, analyses assessed if the scales achieved satisfactory levels of reliability and whether factor loadings significantly related to their corresponding constructs. The proposed model was next tested and retested with AMOS 5, using the two-step model-building approach as specified by Anderson and Gerbing (1988); the measurement model including the latent constructs and their respective observed variables was first analyzed, and then the structural model with the hypothesized relationships was tested and refined through a series of tests in an attempt to better explain the data. A final, modified model was determined as a result.

**Measurement Model Evaluation.** Prior to the test of the full measurement model, a second-order factor model for relationship quality was assessed. Consistent with the literature, the first-order factors of relationship satisfaction, trust, and relationship commitment suitably explained the higher-order construct of relationship quality with high factor loadings (De Wulf, Odekerken-Schröder, & Iacobucci, 2001). All of the observed variables also significantly loaded on their respective first-order factors. Accordingly, the average scores for the first-order latent variables were obtained based on the three items of each factor and used as indicators of the higher-order construct of relationship quality, following the procedure testing the relationship investment model in De Wulf, Odekerken-Schröder, and Iacobucci’s (2001) study.

A confirmatory factor analysis of the full measurement model showed all of the indicators significantly loaded on their corresponding latent constructs ($p < .01$). With the use of existing scale items adapted from the literature for measuring the latent variables, the observed variables in the model were hypothesized to load on only one factor and the error terms were not allowed to co-vary. Table 1 presents correlations, covariances, and variances of the latent constructs in the measurement model used in the development and refinement of the structural model. Overall, the results indicated that the scales assessed what they were intended to measure and were reliable.

| Table 1. Correlation-Variance-Covariance Matrix for Latent Constructs. |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                         | 1               | 2               | 3               | 4               | 5               | 6               | 7               | 8               | 9               |
| No active control       | .804            | .923            | .644            | .352            | .159            | .290            | .493            | .722            | .471            |
| Synchronicity           | .734            | .785            | .748            | .370            | .153            | .294            | .532            | .762            | .418            |
| Two-way communication   | .710            | .816            | 1.513           | .372            | .316            | .363            | .599            | .749            | .226            |
| Direct mail             | .510            | .530            | .740            | 2.610           | .481            | .571            | .646            | .515            | .143            |
| Preferential treatment  | .215            | .205            | .588            | 1.175           | 2.290           | .832            | .712            | .454            | .011            |
| Rewards                 | .440            | .441            | .755            | 1.561           | 2.132           | 2.865           | .856            | .571            | .065            |
| Relationship investment | .635            | .678            | 1.060           | 1.500           | 1.548           | 2.084           | 2.067           | .780            | .197            |
| Relationship quality    | .715            | .746            | 1.019           | .921            | .760            | 1.069           | 1.239           | 1.222           | .350            |
| Behavioral loyalty      | .255            | .223            | .168            | .140            | .010            | .067            | .171            | .233            | .364            |

*Note:* Variances are on the diagonal. Correlations are in the upper triangle, and covariances are in the lower triangle.
**Structural Model Evaluation.** When the structural model was tested, the results showed that, of the eight hypothesized relationships between the latent constructs, six were statistically significant in the expected direction ($p < .05$). In examining the effects of perceived interactivity of the Web sites on perceived relationship investment, two-way communication ($B$ coefficient = .248) and synchronicity ($B$ coefficient = .221) appeared to have a significant, positive impact on consumer perceptions of the on- and offline brands' investment in relationship building with consumers, lending support for H1b and H1c. However, consumer perceptions of active control on the Web site were not found to significantly influence perceived relationship investment, disconfirming H1a.

In testing the relationships between marketing tactics and perceived relationship investment, direct mail ($B$ coefficient = .134) and tangible rewards ($B$ coefficient = .568) were found to have significant, positive effects on relationship investment, confirming H2a and H2c. Preferential treatment, however, did not significantly influence perceived relationship investment ($p > .05$), and thus H2b was not supported. As predicted, the perceived relationship investment had a positive effect on relationship quality ($B$ coefficient = .833) that in turn positively influenced behavioral loyalty ($B$ coefficient = .366), confirming both H3 and H4.

The goodness-of-fit indices suggest the model did not fit the data well; $\chi^2 = 1046.75$, d.f. = 301, $p < .001$; GFI = .87; AGFI = .84; NFI = .92; CFI = .94; RMSEA = .06. In order to refine the model and achieve parsimony, the non-significant relationships were tested in the second phase of the analysis by systematically relaxing a restriction and examining the resultant change in chi-square. That is, chi-square values of alternative models without the non-significant relationships were reestimated and compared to the proposed model. The paths from (1) preferential treatment and (2) perceived active control of the Web site to perceived relationship investment did not yield significant changes in chi-square of the model fit: (1) $\chi^2_{\text{difference}} = .21$, d.f. = 1, $p > .05$; (2) $\chi^2_{\text{difference}} = 0.19$, d.f. = 1, $p > .05$. As a result, both paths, which did not significantly contribute to the improvement of the model fit, were eliminated and subsequently the two latent constructs of preferential treatment and no delay of the Web site were removed because no other relationships between these factors and the remaining latent variables were hypothesized.

The modified model was chosen as the final model because it is more parsimonious without any nonsignificant linkages ($B_{\text{synchronicity-investment}} = .224$; $B_{\text{two-way-investment}} = .252$; $B_{\text{DM-investment}} = .134$; $B_{\text{rewards-investment}} = .592$; $B_{\text{investment-quality}} = .829$; $B_{\text{quality-loyalty}} = .336$). Overall, this final model accounts for the data better than the originally proposed model: $\chi^2 = 685.16$, d.f. = 177, $p = < .001$; GFI = .89; AGFI = .85; NFI = .84; CFI = .95; RMSEA = .07. While the model on the whole did not fit the data at the desired level, it demonstrates the significant relationships among the key variables in the relationship-building process in the online environment.

**DISCUSSION**

Relationship management is the key to the success of today's business, but it is not an easy task to formulate effective strategies for building and sustaining relationships with customers. With the realization of the rapid growth of
e-commerce, the current study examined the role of perceived interactivity as well as other relationship marketing tactics in e-retailers’ relationship building with their customers. Adapting a relationship investment model for a traditional retail environment (De Wulf, Odekerken-Schröder, Iacobucci, 2001), the model of online relationship building was constructed and tested. The results suggest that two marketing tactics—direct mail (hereafter e-mail) and tangible rewards—and two interactivity factors—perceived synchronicity and two-way communication—trigger relationship building efforts of e-retailers; and perceived relationship investment mediates the effects of these antecedents on relationship quality and behavioral loyalty.

The findings of this study contribute to our enhanced understanding of relationship building in the current retail environment. At the theoretical level, this study developed and assessed a relationship-building model for online retail brands built upon the literature on relationship building in the traditional environment and added to the universality of the model. The results of the study confirm the relationships among perceived relationship investment, relationship quality, and behavioral loyalty and show that the fundamental process of relationship building remains similar in the online environment. Further, the findings point to the significant role of perceived interactivity as an antecedent for the online relationship-building process. This is a noticeable difference between the online and offline relationship building models and thereby highlights the importance of contextuality in the model specifications.

The results of this study suggest that marketing tactics in relationship building, which have been successful in the offline environment, are also applicable to the online environment and e-retailers can employ them in a modified form. E-mail and tangible rewards in particular were found to be positively associated with perceived relationship investment. While Web users are likely to avoid spam mails from unidentified senders, they might be responsive to e-mails from identified or preferred e-retailers they are aware of and they might appreciate the information relevant to their shopping needs. Information via e-mail from e-retailers with whom consumers frequently shop, therefore, might help build and maintain a long-term relationship with their customers. Although tangible rewards evidenced a positive role as an antecedent for perceived relationship investment, the practice warrants caution (De Wulf, Odekerken-Schröder, & Iacobucci, 2001). Excessive tangible rewards such as discount price could damage brand image. Alternatively, Web users often purchase products online for convenience and lower prices, and they might expect e-retailers to provide better prices than physical retail outlets. Thus, Web users’ purchase experience with lower prices on the Web might lead to the revisitation of the retail Web sites for another purchase.

Interestingly, preferential treatment was found to be not effective in influencing Web users’ perception of the relationship investment of e-retailer brands. De Wulf, Odekerken-Schröder, and Iacobucci (2001) argued that preferential treatment might put customers in an uncomfortable position. From the reciprocity theory perspective, if one party feels uncomfortable with the other party’s treatment, reciprocity will not occur. Simply, if Web users feel the e-retailers’ preferential treatment is being used as pressure for purchasing, they might not respond to it in a positive way. An alternative explanation could be that perceived interactivity may explain the nonsignificant impact of preferential treatment. That is, preferential treatment might not be as important as
interactivity, which was found to play a significant role in determining relationship building in the online environment.

One of the most interesting findings of this study is that interactivity is an effective antecedent for the relationship building process online. Two perceived interactivity factors (i.e., synchronicity and two-way communication), which are the key elements in online communication (Bezjian-Avery, Calder, & Iacobucci, 1998), were positively associated with perceived relationship investment. Bezjian-Avery, Calder, and Iacobucci (1998) stated that Web users engage in two-way, active, and “self-driven” communication for obtaining information with control over their information search and acquisition. Therefore, providing real-time, interactive features such as chat rooms, simulation with virtual reality, and Q&A are helpful to Web users. While, in an offline environment, consumers engage in such communication with sales personnel physically present in the store, in the online environment, real-time interactivity allowing for two-way communication takes over the role of sales personnel and helps build positive relationships with them.

Perceived synchronicity, which is related to the speed of the interactivity features, was also significantly associated with perceived relationship investment. This finding might suggest that the technologies themselves affect Web users’ perception of e-retailers’ efforts to build relationships with their customers. With the rapid advancement of information technology and infrastructure, Web site loading time becomes shorter and immediate response from e-retailers becomes more important in the consumers’ evaluation of e-retailers.

Another key finding of this study is the mediating role of perceived relationship investment in driving consumer perception of relationship quality and behavioral loyalty that is the ultimate goal of e-retailers. As previously pointed out, according to research on the theory of reciprocity, Web users increase their loyalty to the online retail brands in return for the online brand’s investment in relationship building (Bagozzi, 1995; De Wulf, Odekerken-Schröder, & Iacobucci, 2001; Kang & Ridgeway, 1996). Thus, added values of the Web site also help customers revisit the site and maintain their loyalty. For example, Amazon.com provides consumer ratings of products for peer consumers, and the reviews are systematically monitored and organized to assist consumer use of such information. Such extra efforts made by a retailer can enhance consumer satisfaction with and loyalty to the retailer via increased quality perception of the relationship with the retailer.

Managerial Implications

The present study addresses the issue of CRM in the context of online shopping, and its findings provide managerial implications for e-retailers. Of note is that customers prefer more interactive and engaging Web sites, and such retail sites signal the amount of investments that the companies commit to customer relationships. When no physical store or face-to-face contact with sales representatives is available, the interactivity of retail Web sites, the sole channel of both communication and transaction, might serve as one of the most crucial factors that facilitate the initiation of relationship building with online customers. This finding should be equally useful for click-and-mortar retailers who have both online and offline outlets. Brick-and-mortar retailers often enjoy the benefits of established recognition and immediate trust in and traffic to their
online store, but their successful relationship management with online customers is dependent upon consumer response to and experience with their Web site and a well-designed site that serves as a starting point for effective customer retention in the electronic business.

The results of the study also point to the viability of traditional tactics of relationship marketing in the online shopping context. Like customized communication and offerings in traditional CRM campaigns, e-retailers’ e-mail, newsletters, and rewards for regular customers were found to positively influence consumer perception of investments in customer relationships made by the retailers. With advanced software programs and online technologies, it is cost effective for marketers to practice and track such programs with online customers. Additionally, those online programs enable companies to entice customers to their Web sites without switching the communication mode. That is, when a customer receives an electronic newsletter with useful information or special offers, the customer can immediately log on to the retail Web site by clicking on the link in the message. With little effort to travel to the store, the customer might find the shopping experience easy and relaxing, and the retailer benefits from immediate responses from the customer. Accumulated information on patterns of customer shopping and purchase at the Web site as well as responses to such customer retention programs then help the retailer to further improve communication with and rewards for regular customers.

In sum, the findings of this study aid marketers in formulating CRM strategies for online customers. In designing retail Web sites, careful efforts should be made to enhance consumers’ perceived interactivity of and satisfaction with the Web site. Features for trouble-free search for information, product presentations in a multimodal format, quick responses to inquiries and requests, and support for transaction decisions should be developed and incorporated into e-commerce Web sites. In essence, the results of this study highlight that companies’ investments in customer relationships are worthwhile efforts to retain their best customers as the customers reciprocate with continued loyalty.

FUTURE RESEARCH

This study made a further step toward understanding the impact of e-retailers’ practices on consumers’ perceptions of the relationship and future behavioral intent to continue visiting the retailers. More research is needed to fully comprehend the CRM activities and their effects in the online milieu. Theoretical and methodological limitations of this study merit discussion toward directions for future research. First, the model was developed to better understand the relationship-building process between consumers and e-retailers in particular. Next, the conceptualization of behavioral loyalty in the online environment needs further explication. Unlike the original relationship model by De Wulf, Odekerken-Schröder, and Iacobucci (2001), behavioral loyalty was conceptualized and measured as consumer intention to revisit the site in the future, not the amount or frequency of purchase. Although it was noted that many e-retailers sell diverse products, thereby making it difficult to compare them in a particular product category for purchase patterns, future research should assess the purchase-oriented brand loyalty.
The role of the three dimensions of perceived interactivity in relationship building also warrants further investigation. Interactivity is the most prominent characteristic of the online channels, which companies utilize for relationship building, and therefore, future research should continue to closely examine the effects of the individual dimensions of interactivity on relationship building. Besides, it is still a moot question whether the interactivity concept is unidimensional or multidimensional (Jensen, 1999).

Finally, the participants used in the study are highly involved in online purchasing, having experience with online shopping. In future research, Web users who do not have a relationship with the Web site should be included.

Future studies should refine the model presented here. Although the objective of testing the proposed relationships among the construct in a systematic and simultaneous manner was well fulfilled, the model fit did not achieve the desired levels suggested in the literature. Further specifications of the measures should be considered, and in this process, more variables could be identified as relevant variables.

REFERENCES


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