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Customer loyalty in e-commerce: an exploration of its antecedents and consequences

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Abstract

This paper investigates the antecedents and consequences of customer loyalty in an online business-to-consumer (B2C) context. We identify eight factors (the 8Cs—customization, contact interactivity, care, community, convenience, cultivation, choice, and character) that potentially impact e-loyalty and develop scales to measure these factors. Data collected from 1,211 online customers demonstrate that all these factors, except convenience, impact e-loyalty. The data also reveal that e-loyalty has an impact on two customer-related outcomes: word-of- mouth promotion and willingness to pay more. © 2002 by New York University. All rights reserved.

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Introduction

According to the U.S. Census Bureau's *Monthly Retail Trade Survey*, Internet retail sales for 2000 were $25.8 billion, or 49% higher than 1999 sales of $17.3 billion.[1] This rapid growth of e-retailing reflects the compelling advantages that it offers over conventional brick-and-mortar stores, including greater flexibility, enhanced market outreach, lower cost structures, faster transactions, broader product lines, greater convenience, and customization. However, e-retailing also comes with its own set of challenges. Competing businesses in the world of electronic commerce are only a few mouse clicks away. As a result, consumers are able to compare and contrast competing products and services with minimal expenditure of personal time or effort. According to Kuttner (1998, p. 20), "The Internet is a nearly perfect market because information is instantaneous and buyers can compare the offerings of sellers worldwide. The result is fierce price competition and vanishing brand loyalty." Given the reduction in information asymmetries between sellers and buyers, there is a growing interest in understanding the bases of customer loyalty in online environments.

From a seller's perspective, customer loyalty has been recognized as a key path to profitability. The high cost of acquiring customers renders many customer relationships unprofitable during early transactions (Reichheld & Sasser, 1990). Only during later transactions, when the cost of serving loyal customers falls, do relationships generate profits. With millions of web sites clamoring for attention, e-retailers have a tenuous hold at best on a large number of "eyeballs." In order to reap the benefits of a loyal customer base, e-retailers need to develop a thorough understanding of the antecedents of e-loyalty, that is, customer loyalty to a business that sells online. Such an understanding can help e-retailers gain a competitive advantage by devising strategies to increase e-loyalty. The main objectives of this research are to identify those managerially actionable factors that impact e-loyalty and investigate the nature of their impact.

This article is structured as follows. We first briefly discuss the concept of customer loyalty and introduce eight factors potentially influencing e-loyalty. We then discuss the consequences of e-loyalty. Next, we describe the methodology and discuss the results of an empirical study of the eight factors. We conclude by noting the managerial and research implications of the study's findings.

Customer loyalty

Early views of brand loyalty focused on repeat purchase behavior. For example, Brown (1952) classified loyalty into four categories, (1) Undivided loyalty, (2) Divided loyalty,

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(3) Unstable loyalty, and (4) No loyalty, based on the purchase patterns of consumers. Lipstein (1959) and Kuehn (1962) measured loyalty by the probability of product repurchase. Some researchers (e.g., Day, 1969; Jacoby & Chestnut, 1978) have suggested that a behavioral definition is insufficient because it does not distinguish between true loyalty and spurious loyalty that may result, for example, from a lack of available alternatives for the consumer. In response to these criticisms, researchers have proposed measuring loyalty by means of an attitudinal dimension in addition to a behavioral dimension. Engel & Blackwell (1982) defined brand loyalty as "the preferential, attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer." Jacoby (1971) expressed the view that loyalty is a biased behavioral purchase process that results from a psychological process. According to Assael (1992, p. 87), brand loyalty is "a favorable attitude toward a brand resulting in consistent purchase of the brand over time." This rationale was also supported by Keller (1993), who suggested that loyalty is present when favorable attitudes for a brand are manifested in repeat buying behavior. Gremler (1995) suggested that both the attitudinal and behavioral dimensions need to be incorporated in any measurement of loyalty. For our purpose, we define e-loyalty as a customer's favorable attitude toward the e-retailer that results in repeat buying behavior.

The antecedents of e-loyalty

To obtain a detailed perspective on the antecedents of e-loyalty, we first conducted interviews with forty-two individuals —fifteen customers who purchased online, fifteen executives in the e-commerce arena, and twelve professional e-commerce website designers. Each of the individuals was asked six general questions about online shopping behavior. Additional probing questions were asked depending on the responses obtained. Most interviews lasted between ninety minutes and two hours. Based on these in-depth interviews we identified eight e-business factors that appeared to impact e-loyalty: (1) customization, (2) contact interactivity, (3) cultivation, (4) care, (5) community, (6) choice, (7) convenience, and (8) character. For brevity, we refer to these factors as the 8Cs. Each is briefly discussed below.

Customization

Customization is the ability of an e-retailer to tailor products, services, and the transactional environment to individual customers. As noted by Schrage (1999, p. 20), customization offers great potential for e-retailers as "the web has clearly entered the phase where its value proposition is as contingent upon its abilities to permit customization as it is upon the variety of content it offers." Many e-retailers have already begun to incorporate some degree of customization into their practices. In the current study, customization is operationally defined as the extent to which an e-retailer's web site can recognize a customer and then tailor the choice of products, services, and shopping experience for that customer.

There are multiple reasons why customization is expected to affect e-loyalty. Customization increases the probability that customers will find something that they wish to buy. A survey by NetSmart Research indicated that 83% of Web surfers are frustrated or confused when navigating sites (Lidsky, 1999). By personalizing its site, an e-retailer can reduce this frustration. Customization also creates the perception of increased choice by enabling a quick focus on what the customer really wants (Shostak, 1987). In addition, customization can signal high quality and lead to a better real match between customer and product (Ostrom & Iacabucci, 1995). Finally, individuals are able to complete their transactions more efficiently when the site is customized. A large product selection can, in fact, irritate consumers and drive them to use simplistic decision rules to narrow down the alternatives (Kahn, 1998). If the company is able to accurately tailor or narrow choices for individual customers, it can minimize the time customers spend browsing through an entire product assortment to find precisely what they want. These advantages of customization make it appealing for customers to visit the site again in the future.

Contact interactivity

Contact interactivity refers to the dynamic nature of the engagement that occurs between an e-retailer and its customers through its web site. Several researchers have highlighted the significance of interactivity to customer loyalty in electronic commerce (e.g., Deighton, 1996; Watson, Akselsen, & Pitt, 1998). Lack of interactivity is a problem for a majority of web sites. They are often hard to navigate, provide insufficient product information, and answer inquiries via e-mail only after a delay of a day or two. According to Salvati (1999, p. 6), e-retailers will not be able to capture significant market share until they "muster the full measure of dedication needed to achieve and capitalize upon electronic interactivity."

For this study, contact interactivity is operationally defined as the availability and effectiveness of customer support tools on a website, and the degree to which two-way communication with customers is facilitated. Contact interactivity is expected to have a major impact on customer loyalty for multiple reasons. According to Alba et al. (1997), interactivity enables a search process that can quickly locate a desired product or service, thereby replacing dependence on detailed customer memory. By replacing a consumer's need for reliance on memory with an interactive search process, an e-retailer may be able to increase the perceived value that the consumer places on a business transaction. A second reason is that interactivity dramati-

cally increases the amount of information that can be presented to a customer (Deighton, 1996; Watson, Akselsen, & Pitt, 1998). For instance, a customer in a bookstore is generally limited to reading the dust cover to understand a book's content. However, the customer of an online bookseller cannot only read the dust cover but also read reviews written in leading periodicals as well as the opinions of other customers. The online customer can also receive recommendations regarding other books bought by people with similar reading tastes and preferences. This tailored information helps the customer choose the exact products desired. Interactivity helps build more refined knowledge on the part of the seller regarding the customer's tastes and preferences so that the customer has the incentive to return and gain from, and add to, this knowledge repository. Therefore, contact interactivity is expected to be positively related to e-loyalty (Alba et al., 1997). Finally, the navigational process facilitated by interactivity dramatically increases the freedom of choice and the level of control experienced by the customer (Hoffman & Novak, 1996).

Cultivation

Cultivation is the extent to which an e-retailer provides relevant information and incentives to its customers in order to extend the breath and depth of their purchases over time. As noted by Berger (1998), companies need to use their databases effectively to cultivate consumers. By proactively offering desired information, a company is inviting a customer to come back. It is relatively straightforward and inexpensive for an e-retailer to not only recognize a customer but also reach out to that customer (such as through email promotions) and coax him or her along the route to purchase.

In this study, cultivation is operationally defined as the frequency of desired information and cross-selling offers that an e-retailer provides to customers. By actively cross-selling its products, a firm can provide customers with useful information that would be cumbersome to obtain otherwise. For example, Amazon.com reaches out to its customers with offers on books related to their past purchases. Online men's apparel retailer Paul Frederick updates its customers by email whenever there is a discount sale on items of clothing that are similar to items previously purchased by them. An additional benefit of such cycles of stimuli and responses is that the retailer's knowledge base regarding the customer is continuously enhanced, lessening the customer's incentive to defect to another seller who has to build such knowledge from scratch. Further, with such initiatives, an e-retailer can proactively diminish the likelihood of additional search by customers.

Care

Care refers to the attention that an e-retailer pays to all the pre- and postpurchase customer interface activities designed to facilitate both immediate transactions and long-term customer relationships. Customer care is reflected in both the attention that the e-retailer pays to detail in order to ensure that there is no breakdown in service, and the concern that it shows in promptly resolving any breakdowns that do occur. According to Poleretzky (1999, p. 76), "In the physical world, if I make a customer unhappy, they'll tell five friends, on the Internet they'll tell 5,000." In addition, an online customer has virtually instant access to competitors, so switching to a competing seller is easy. E-retailers need, therefore, to ensure proper care of their customers.

In this study, care is operationally defined as the extent to which a customer is kept informed about the availability of preferred products and the status of orders, and the level of efforts expended to minimize disruptions in providing desired services. Service failures affect future business because they weaken customer-company bonds and lower perceptions of service quality (Bolton & Drew, 1992). Several researchers have established the negative impact of breakdowns in service on customers' repeat purchase behavior (e.g., Bitner, Booms, & Tetreault, 1990; Boulding, Kalra, Staelin, & Zeithml, 1993; Kelley, Hoffman, & Davis, 1993; Rust & Zahorik, 1993). Therefore, it is expected that the level of care that a company exercises to minimize disruptions in customer service will lead to higher e-loyalty.

Community

A virtual community can be described as an online social entity comprised of existing and potential customers that is organized and maintained by an e-retailer to facilitate the exchange of opinions and information regarding offered products and services. For example, customers of an online bookstore that supports a community can, before buying a particular book, access the opinions of other customers who have purchased it. Moreover, after reading the book themselves, they can add to this collection of opinions.

As noted by Balasubramanian & Mahajan (2001), the virtual community represents one of the most interesting developments of the information age. A number of diverse businesses, including booksellers, auction houses, information providers, flower vendors, and household appliance sellers, have formed virtual communities of customers because they recognize that these communities have the potential to increase customer loyalty (Conhaim, 1998; Strum, 1999; Donlon, 1999). In operational terms, we measure community-related initiatives in terms of the extent to which customers are provided with the opportunity and ability to share opinions among themselves through comment links, buying circles, and chat rooms sponsored by the e-retailer.

There are several reasons why a community could potentially affect customer loyalty. Hagel & Armstrong (1997) found that communities are highly effective in facilitating word-of-mouth. Frank (1997) discerned that the customer's ability to exchange information and compare product experiences can add to customer loyalty. Many consumers reg-

ularly turn to other consumers for advice and information regarding products and services that they wish to purchase (Punj & Staelin, 1983). By facilitating this informational exchange among customers through the community, an e-retailer can further increase e-loyalty among its customers. In particular, some customers may remain loyal because they value the input of other community members, and others may be loyal because they enjoy the process of providing such input to the community.

Communities also enable individual customers to identify with a larger group. According to Bhattacharya, Rao, & Glynn (1995, p. 47), identification is "the perception of belonging to a group with the result that a person identifies with that group." Customers who identify with a retailer or a brand within the context of a community can develop strong, lasting bonds with those entities (Mael & Ashforth, 1992). For instance, Harley Davidson customers, who call themselves "hogs," frequently develop bonds with their community members that act as strong deterrents to buying any other motorcycle brand.

Even random social interactions facilitated within virtual communities can be valuable to consumers. For example, Feinberg, Sheffler, Meoli, & Rummel (1989) noted that 25% of all interactions in a mall could be called social interactions. Communities also affect e-loyalty through their effect on social relationships that customers build among themselves, usually based on a shared interest (Oliva, 1998). For example, a retailer of recycled paper products can host a community that is focused on protecting the environment. Members of this community can be loyal because they value the social interaction and because the retailer's way of doing business is aligned with their own values. Balasubramanian & Mahajan (2001) provided a detailed analysis of how the social core of the virtual community can be leveraged to achieve economic objectives.

Choice

Compared with a conventional retailer, an e-retailer is typically able to offer a wider range of product categories and a greater variety of products within any given category. A store in a mall is constrained by the availability and cost of floor space, whereas its online counterpart does not have such limitations. E-retailers can also form alliances with other virtual suppliers to provide customers with greater choice. To illustrate, an e-retailer may keep only a limited assortment of a given product category in inventory but can form alliances with other suppliers and manufacturers that can ship products to customers of the e-retailer from their own, more extensive inventories. However, the customer has seamless access to the entire range of products carried by the alliance from the e-retailer's website.

Many consumers do not want to deal with multiple vendors when shopping. Bergen, Dutta, & Shugan (1996) noted that consumer search costs associated with shopping across retailers increase with the number of competing alternatives. In contrast, an increase in the number of available alternatives at a single e-retailer can greatly reduce the opportunity costs of time and the real costs of inconvenience and search expended in virtual store hopping. The e-retailer that offers greater choice can emerge as the dominant, top-of-mind destination for one-stop shopping, thereby engendering e-loyalty.

Convenience

Convenience refers to the extent to which a customer feels that the web site is simple, intuitive, and user friendly. Accessibility of information and simplicity of the transaction processes are important antecedents to the successful completion of transactions. The quality of the website is particularly important because, for e-retailers, it represents the central, or even the only interface with the marketplace (Palmer & Griffith, 1998).

According to Schaffer (2000), 30% of the consumers who leave a website without purchasing anything do so because they are unable to find their way through the site. Sinioukov (1999) suggested that enabling consumers to search for information easily and making the information readily accessible and visible is the key to creating a successful e-retailing business. Cameron (1999) pointed out that a number of factors render a website inconvenient from a user's perspective. In some cases, information may not be accessible because it is not in a logical place, or is buried too deeply within the website. In other cases, information may not be presented in a meaningful format. Finally, needed or desired information may be entirely absent.

Schaffer (2000) argued that a convenient website provides a short response time, facilitates fast completion of a transaction, and minimizes customer effort. Because of the nature of the medium itself, online customers have come to expect fast and efficient processing of their transactions. If customers are stymied and frustrated in their efforts to seek information or consummate transactions, they are less likely to come back (Cameron, 1999). A website that is logical and convenient to use will also minimize the likelihood that customers make mistakes and will make their shopping experience more satisfying. These outcomes will likely enhance customer e-loyalty.

Character

Creative website design can help an e-retailer build a positive reputation and characterization for itself in the minds of consumers. In this context, the website represents a medium that is potentially far more comprehensive and effective than a television or newspaper communication (Budman, 1998).

Character can be defined as an overall image or personality that the e-retailer projects to consumers through the use of inputs such as text, style, graphics, colors, logos, and slogans or themes on the website. Character is particularly

important because web sites can be rather impersonal and boring to deal with in the absence of the person-to-person interaction that pervades conventional brick-and-mortar marketplaces. Beyond general presentation and image, websites can use unique characters or personalities to enhance site recognition and recall. As noted by Henderson & Cote (1998), graphic symbols (e.g., logos) may invoke shared associations or meanings to create positive shopper attitudes toward a company. Such coded stimuli can positively impact customer attitudes (Hershenson & Haber, 1965). For example, Tiffany, the well-known jewelry retailer, has invested substantially in digital imaging technology to ensure that all images of jewelry on its web site are presented using high quality graphics. The overall impact of the website reinforces Tiffany's reputation as a prestigious, high-quality retailer (Neil, 1998).

In summary, we hypothesize that: The greater the (1) level of customization, (2) contact interactivity, (3) customer cultivation, (4) care, (5) community, (6) choice, (7) convenience, and (8) (positively perceived) character of the e-retailer, the greater the e-loyalty of its customers (H1).

Behavioral consequences of e-loyalty

Having discussed the antecedents of e-loyalty, we now focus on its behavioral consequences. According to Zeithaml, Berry, & Parasuraman (1996), loyal customers forge bonds with the company and behave differently from nonloyal customers. Customer loyalty impacts behavioral outcomes and, ultimately, the profitability of a company.

While loyal customers focus both on the economic aspects of the transaction and the relationship with the firm, less loyal customers focus mainly on the economic aspects (Jain, Pinson, & Malhotra, 1987). Research by Reichheld and Sasser (1990) reveals that loyal customers have lower price elasticities than nonloyal customers and they are willing to pay a premium to continue doing business with their preferred retailers rather than incur additional search costs. According to Sambandam & Lord (1995), loyalty to a business reduces the consideration set size and the amount of effort expended in searching for alternatives while increasing the individual's willingness to purchase from that e-business in the future.

Reichheld (1993) investigated the direct implications of loyalty on the revenue and profitability of a company whereas researchers such as Gremler (1995) and Dick & Basu (1994) have examined the impact of customer loyalty on customer behavior. One of the behavioral outcomes expected to result from e-loyalty is positive word-of-mouth—the extent to which an individual says positive things about the e-retailer to others. As noted by Dick & Basu (1994) and Hagel & Amstrong (1997), loyal customers are more likely to provide positive word-of-mouth.

Hence, we propose that: The e-loyalty of customers will be negatively related to their search for alternatives (H2a) and positively related to their (1) word-of-mouth behavior, and (2) willingness to pay more (H2b).

Methodology

An instrument with multiple-item scales for the constructs of interest was developed and pretested. Then, a random sample of 5,000 customers was drawn from a list of online customers maintained by a market research firm. An e-mail invitation, containing an embedded URL link to the website hosting the survey, was sent to each of the 5,000 potential respondents informing them that respondents would be automatically entered in a drawing for a prize of $500. A summary of survey results was also offered to those who requested it. This e-mail campaign produced 1,211 usable responses, representing an overall response rate of 24%. In order to assess the representativeness of the sample, we collected and compared demographic data about our respondents with those reported in a national study of online shoppers conducted by Greenfield Online. Our comparison revealed a close match between the samples.

Measurement

Scale items for the 8Cs were developed based on the guidelines suggested by Churchill (1979) and Gerbing & Anderson (1988). We first conducted in-depth discussions with thirty online shoppers, site administrators, and information technology professionals to generate the initial pool of scale items (these individuals were different from those who participated in the preliminary interviews). Six academic researchers then evaluated this pool of items for face validity. Based on their feedback, several items were deleted or modified. We then pretested the questionnaire with twenty-five online shoppers selected randomly by the market research firm. Respondents were explicitly asked to indicate any ambiguities or potential sources of error stemming from either the format or the wording of the questionnaire. Inputs from these respondents were used to further refine and modify the instrument.[2]

E-loyalty was measured using items adapted from Gremler (1995) and Zeithaml, Berry, & Parasuraman (1996). Measures for the search construct were adapted from items used by Urbany, Kalapurakal, & Dickson (1996). Willingness to pay more was defined as the willingness on the part of the customer to continue purchasing from the e-retailer despite an increase in price, and was measured by adapting relevant scale items from Zeithaml, Berry, & Parasuraman (1996).

Validation of measures

Validation of the measures was done in two stages. To avoid using the same set of responses to refine the scale items and evaluate the hypotheses, we randomly split the

Table 1
Correlation Matrix[a]

	Y	C1	C2	C3	C4	C5	C6	C7	C8
E-Loyalty (Y)	0.92								
Customization (C1)	0.48	0.80							
Contact interactivity (C2)	0.55	0.49	0.63						
Cultivation (C3)	0.44	0.49	0.44	0.79					
Care (C4)	0.47	0.30	0.42	0.43	0.76				
Community (C5)	0.23	0.23	0.22	0.19	0.01	0.68			
Choice (C6)	0.50	0.35	0.47	0.30	0.27	0.17	0.81		
Convenience (C7)	0.43	0.28	0.43	0.29	0.51	0.02	0.36	0.80	
Character (C8)	0.58	0.39	0.55	0.39	0.53	0.15	0.42	0.66	0.87

[a] Cronbach's Alphas for the constructs are given in the diagonal elements.

respondents (n = 1,211) into three separate data sets: (a) an exploratory data set (n = 180), (b) a confirmatory data set (n = 180), and (c) the model estimation data set (n = 851). We conducted an exploratory factor analysis (on the exploratory data set) to determine whether the scale items loaded as expected. We then calculated Cronbach's alphas for the scale items to ensure that they exhibited satisfactory levels of internal consistency. We refined the scales by deleting items that did not load meaningfully on the underlying constructs and those that did not highly correlate with other items measuring the same construct. Next, we tested these refined scale items for reliability and unidimensionality using the confirmatory data set. We estimated the LISREL measurement model for the 8Cs under two conditions: (1) an unrestricted model (resulting in a χ^2 value of 1165.02 with 674 degrees of freedom), and (2) a restricted model –restricting the correlation between the eight free latent variables to 1.0 (resulting in a χ^2 value of 2049.03 with 702 degrees of freedom). This led us to reject the restricted model in favor of the unrestricted model (χ^2 = 884.01, df. = 28; p<. 05). We also compared the unrestricted model to another restricted model where the correlations between the 8Cs were restricted to zero to determine whether these 8Cs were orthogonal factors. The LISREL model where the correlations between the 8Cs were set to zero was rejected in favor of the unrestricted model (χ^2 = 747.01, df. = 28; p<. 05). Although the goodness of fit index (GFI) was only 0.75, the unrestricted model fit the data well as the χ^2 /degrees of freedom ratio was less than the suggested value of 2 (see Challagalla & Shervani, 1996; Loehlin, 1987). Also, the path coefficients from latent constructs to their corresponding manifest indicators were significant at $p <$ .05, and a pairwise comparison of the correlations between the respective 8Cs indicated that all correlations were significantly different from 1.0.

The internal consistency estimates of all scales (based on the estimation data set) were above the cutoff point of 0.7 recommended by Nunnally & Bernstein (1994).[3] Following measure development and refinement, the model estimation data set was used to test the hypotheses.

Results

Hypothesis H1 refers to the impact of the 8Cs on e-loyalty. To parsimoniously capture the joint impact of the 8Cs, we used the following multiplicative model.[4]

$$LY = \gamma_0 * C_1^{\gamma_1} * C_2^{\gamma_2} * C_3^{\gamma_3} * C_4^{\gamma_4} * C_5^{\gamma_5} * C_6^{\gamma_6} * C_7^{\gamma_7} * C_8^{\gamma_8} \quad (1)$$

Where: LY = E-loyalty; C_1 = Customization; C_2 = Contact interactivity; C_3 = Cultivation; C_4 = Care; C_5 = Community; C_6 = Choice; C_7 = Convenience; C_8 = Character.

Eq (1) was linearized by logarithmic transformation and the log-transformed model was estimated using ordinary least squares (OLS). Correlations between the variables are reported in Table 1. Parameter γ_0 is the intercept, and parameters γ_1 to γ_8 capture the impact of the 8Cs on e-loyalty. Results of the regression analysis are presented in Table 2.[5]

A summary consideration of the results indicates that all the parameters estimated (except for convenience) are significant at $p < .05$ and in the predicted direction. The adjusted R^2 of the model is 0.52. We calculated the variance inflation factor to check for multicollinearity. The average VIF is 1.7 and ranges from 1.12 to 2.33 –well below the

Table 2
Impact of the E-business Characteristics on E-Loyalty - Results of the Regression Analysis

Independent Variables	Parameter Estimate	Standard Error	T Value[a]
Constant	−0.4982	0.0835	−5.961
Customization (C1)	0.1523	0.0305	4.987
Contact Inter. (C2)	0.1430	0.0469	3.049
Cultivation (C3)	0.0763	0.0294	2.599
Care (C4)	0.2464	0.0482	5.117
Community (C5)	0.0605	0.0234	2.583
Choice (C6)	0.1958	0.0265	7.394
Convenience (C7)	−0.0183	0.0590	−0.311[b]
Character (C8)	0.4292	0.0606	7.083

[a] Results are significant at <.05 confidence level unless specified otherwise

[b] Indicates not significant

Table 3
Impact of E-Loyalty on Behavioral Outcomes: Results of the Seemingly Unrelated Regressions

Dependent Variables	Parameter Estimate of E-Loyalty	Standard Error	T Value
Search	−0.0565	.0328	−1.72[a]
Word of mouth	0.5505	0.0242	22.75[b]
Willingness to pay more	0.4628	0.0273	16.95[b]

[a] Significant at $p < .10$
[b] Significant at $p < .05$

recommended cutoff of 10 (Neter, Wasserman, & Kutner, 1985).

Thus our hypothesis that customization, contact interactivity, cultivation, care, community, choice, and character are positively related to e-loyalty is supported. The elasticity of e-loyalty with respect to the 8Cs ranges from 0.06 for community to 0.43 for character.

H2a and H2b focus on the consequences of e-loyalty. To test the impact of e-loyalty on search, word of mouth, and willingness to pay, we estimated the following seemingly unrelated regressions (SUR),

$$SR_i = \beta_0 + \beta_1 L_i + \varepsilon_{1i} \quad (2)$$

$$WM_i = \beta_2 + \beta_3 L_i + \varepsilon_{2i} \quad (3)$$

$$WP_i = \beta_4 + \beta_5 L_i + \varepsilon_{3i} \quad (4)$$

where: SR_i = Search for alternatives by individual i; WM_i = Word-of-mouth of individual i; WP_{i} = Willingness to pay of individual i;

Eqs. (2–4) are estimated based on the responses from the same individuals. Therefore, SUR increases the efficiency of the parameter estimates (Pindyck & Rubinfeld, 1991). The results of the SUR are reported in Table 3.[6]

H2a posits that e-loyalty will be negatively related to customer search for alternatives. The parameter estimate for β_1 is negative and is significant at $p < .1$, indicating that this hypothesis is at best only weakly supported. H2b posits that e-loyalty will be positively related to word-of-mouth and willingness to pay more, respectively. The estimates for β_3 and β_5 are positive and significant at $p < .05$, supporting H2b.

Discussion and conclusion

The antecedents of customer loyalty in the traditional brick-and-mortar marketplace have been studied in detail (e.g., Sirohi, McLaughlin, & Wittink, 1998). Several researchers have suggested that initiatives such as improving the appearance of the storefront and the positive presentation of service personnel will increase the loyalty of customers in the traditional retail environment. However, there are several variables unique to e-retailing that have not been evaluated in the existing customer loyalty literature. The present research has identified eight factors that potentially affect e-loyalty. Of the 8Cs considered, customization, contact interactivity, cultivation, care, community, choice, convenience, and character, all but convenience, were found to have a significant impact on e-loyalty. E-loyalty demonstrated the highest elasticity with respect to character and care. Equally important, e-loyalty was found to have a positive impact on positive word-of-mouth and willingness to pay more.

Our findings have both managerial and research implications. From a managerial perspective, e-retailers can establish early warning systems based on continuously measuring customer perceptions for the 8Cs, so that management can take appropriate remedial action when any of these dimensions is perceived as falling below an acceptable level. Moreover, e-retailers can use the scale items developed in this research to benchmark their e-retailing activities vis-à-vis competitors to identify their comparative strengths and weakness from the standpoint of customers and consumers. From a research perspective, our analysis provides an early conceptualization of the relevant antecedents of e-loyalty. Our findings provide a basis for the further study of this important topic along both theoretical and empirical dimensions.

There are some limitations of this research that should be considered when interpreting its findings. Our model does not take into account individual-level variables that also may have an impact. Certain individual-level variables outside the control of the e-retailer (such as customer inertia) and other variables that are jointly determined by individual- and business- level factors (such as reposed trust and satisfaction) may also impact e-loyalty (Reinartz & Kumar, 2000). Based on our findings, more comprehensive models of e-loyalty can be developed and tested.

Also, the suitability of the Internet for e-retailing depends to a large extent on the characteristics of the products and services being marketed (Peterson, Balasubramanian, & Bronnenberg, 1997). This study does not control for such differences across product and service categories. Researchers can develop richer models that capture and explain these differences.

With the Internet and other telecommunications innovations drawing us ever closer to the economist's concept of a perfect market, many products and services will be increasingly perceived more like commodities. Consequently, as noted by Peterson (1997), electronic markets will lead to intense price competition resulting in lower profit margins. To compete successfully, e-retailers will need to develop and maintain customer loyalty. Toward this task, e-retailers must first thoroughly understand the antecedents and the consequences of e-loyalty. They must skillfully design the 7Cs to fit their specific offerings and their customers' demographic and psychographic profiles, and also systematically manage the subsequent behavioral outcomes of loyalty (Blattberg & Deighton, 1996). We hope that our findings will contribute to the accomplishment of these crucial tasks.

Notes

1. The Federal Government does not include online travel services, financial brokers and dealers, and ticket sales agencies as part of retail e-commerce sales. Therefore, the reported figures represent conservative estimates.
2. Items used in the final instrument are described in Appendix A.
3. Cronbach alphas for each of the 8Cs are shown in Table 1. Cronbach alphas for the behavioral items are: (a) search = 0.82, (b) word-of-mouth = 0.85, and (c) willingness to pay more = 0.77.
4. To capture the main effect and all the possible two-way, three-way, and higher order interactions among the 8Cs using a linear model, 260 parameters would be required (one intercept + 8 + ${}^{8}C_2$ + ${}^{8}C_3$ + ${}^{8}C_4$ + ${}^{8}C_5$ + ${}^{8}C_6$ + ${}^{8}C_7$ + ${}^{8}C_8$). The interpretation of these parameters would also be cumbersome. In contrast, the multiplicative model parsimoniously captures the interactions among the 8Cs. Parameters of this model, γ_1 to $\gamma_{8,}$ represent the elasticities of e-loyalty with respect to the 8Cs.
5. Parameter estimates obtained using the whole data set with 1,211 respondents followed a similar pattern, confirming the stability of the estimates.
6. Parameter estimates obtained using the whole data set with 1,211 respondents followed a similar pattern.

APPENDIX A—SCALE ITEMS[a]

Scale	Items
Customization	a. This website makes purchase recommendations that match my needs.
	b. This website enables me to order products that are tailor-made for me.
	c. The advertisements and promotions that this website sends to me are tailored to my situation.
	d. This website makes me feel that I am a unique customer.
	e. I believe that this website is customized to my needs.
Contact Interactivity	a. This website enables me to view the merchandise from different angles.
	b. This website has a search tool that enables me to locate products.
	c. This website does not have a tool that makes product comparisons easy.[b]
	d. I feel that this is a very engaging website.
	e. I believe that this website is not a very dynamic one.[b]
Cultivation	a. I do not receive reminders about making purchases from this website.[b]
	b. This website sends me information that is relevant to my purchases.
	c. I feel that this website appreciates my business.
	d. I feel that this website makes an effort to increase its share of my business.
	e. This website does not proactively cultivate its relationship with me.[b]
Care	a. I have experienced problems with billing with respect to my earlier purchases at this website.[b]
	b. The goods that I purchased in the past from this website have been delivered on time.
	c. I feel that this website is not responsive to any problems that I encounter.[b]
	d. The return policies laid out in this website are customer friendly.
	e. I believe that this website takes good care of its customers.
Community	a. Customers share experiences about the website/product online with other customers of the website.
	b. The customer community supported by this website is not useful for gathering product information.[b]
	c. Customers of this website benefit from the community sponsored by the website.
	d. Customers share a common bond with other members of the customer community sponsored by the website.
	e. Customers of this website are not strongly affiliated with one another.[b]
Choice	a. This website provides a “one-stop shop” for my shopping.
	b. This website does not satisfy a majority of my online shopping needs.[b]
	c. The choice of products at this website is limited.[b]
	d. This website does not carry a wide selection of products to choose from.[b]
Convenience	a. Navigation through this website is not very intuitive.[b]
	b. A first-time buyer can make a purchase from this website without much help.
	c. It takes a long time to shop at this website.[b]
	d. This website is a user-friendly site.
	e. This website is very convenient to use.
Character	a. This website design is attractive to me.
	b. For me, shopping at this website is fun.
	c. This website does not feel inviting to me.[b]
	d. I feel comfortable shopping at this website.
	e. This website does not look appealing to me.[b]

(continued on next page)

APPENDIX A *(continued)*

Scale	Items
E-Loyalty	a. I seldom consider switching to another website. b. As long as the present service continues, I doubt that I would switch websites. c. I try to use the website whenever I need to make a purchase. d. When I need to make a purchase, this website is my first choice. e. I like using this website. f. To me this website is the best retail website to do business with. g. I believe that this is my favorite retail website. (Based on Zeithaml, Berry, and Parasuraman 1996 and Gremler 1995)
Search	a. I regularly read/watch advertisements to compare competing websites. b. I decide on visiting competing websites for shopping on the basis of advertisements. c. I often talk to friends about their experiences with competing websites. d. I explored many competing websites in order to find an alternative to this site. e. I conducted an extensive search before making a purchase at this website. (Based on Urbany, Kalapurakal, and Dickson 1996)
Word-of-mouth	a. I say positive things about this website to other people. b. I recommend this website to anyone who seeks my advice. c. I do not encourage friends to do business with this website.[b] d. I hesitate to refer my acquaintances to this website.[b] (Based on Zeithaml, Berry, and Parasuraman 1996)
Willingness to pay more	a. Will you take some of your business to a competitor that offers better prices?[b] b. Will you continue to do business with this website if its prices increase somewhat? c. Will you pay a higher price at this website relative to the competition for the same benefit? d. Will you stop doing business with this website if its competitors' prices decrease somewhat?[b] (Based on Zeithaml, Berry, and Parasuraman 1996)

[a] Measures used either a 7-point Likert type (from strongly agree to strongly disagree) or a 7-point semantic differential scale (with anchors "not at all likely" and "very likely")

[b] Scale items are reverse coded.

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