E-Satisfaction – A Comprehensive Framework

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Abstract

As more and more e-retailers promise their customers that online experiences will be satisfying ones, understanding what creates a satisfying customer experience becomes crucial. Even though this understanding appears crucial, no studies have comprehensively examined the factors that make consumers satisfied with their-retailing experiences. To partly fill this void, the author examines the role that consumer perceptions of online convenience, merchandising, serviceability, site design, and financial security play in e- satisfaction assessment. And finds that convenience, site design, and security are the dominant factors in consumer assessments of e-satisfaction.

Keywords: e-satisfaction, e-tailing, cognitive computing, online consumer behaviour.

Introduction

The exponential increases in online shopping and the unprecedented rate of growth in the number of retailers selling online have created an extremely competitive marketplace where most e-retailers have yet to turn a profit. As a consequence, managers and academic researchers are increasingly turning to the field of cognitive computing for insights into making e-retailing sites more competitive. Cognitive computing is an emerging field of inquiry that draws on principles from the behavioral, cognitive, computer, and related sciences for insights into consumer shopping behaviors [1], [12], [27]. Succinctly, cognitive computing is a consumer-oriented approach to site design and management. It draws on consumer information processing styles, shopping patterns, storefront preferences, and related areas for insights into developing more attractive, user friendly, and successful Internet store fronts.

Although research in cognitive computing has potential for providing critical insights into best e- retailing practices, the field is in its infancy. As a result, many important research topics have not yet been studied. One is e-satisfaction. Satisfaction is generally defined as pleasurable fulfillment [19], [20]. E-Satisfaction, defined herein as satisfaction based on technology-mediated marketing relationships, has not surprisingly become an area of growing interest in the marketing literature. Although the antecedents to customer satisfaction are well documented in classical contexts [19], [26], [31], customer satisfaction in e-retailing has not been subjected to conceptual or empirical scrutiny. General levels of e-satisfaction have been reported, but no systematic research into the determinants of e- satisfaction has been conducted even though the findings from such studies would add value to strategies designed to augment e-satisfaction and guarantee that e-customers will be satisfied.

Against this backdrop, my objective is to provide the evidence for the determinants of e-satisfaction. The author examines and documents the role of online convenience, merchandising, site design, serviceability and security in consumer e-satisfaction assessments. And rely on literature evidence to develop the conceptual model for the investigation. The author then tests the model empirically across a broader group of online shoppers and closes the study by discussing implications of the findings.

Literature Review

While considerable research has investigated the drivers of service quality and satisfaction in the offline environment [33], a small, but growing body of research has examined the drivers in the online environment [7], [6], [16], [25], [32]. This is not surprising considering both the newness and importance of the field. One of the consequences of "newness" is that research on the basic questions - what drives online satisfaction and retention - is still in the exploratory stage as both theory and empirical investigations are emerging.

From a broad perspective, the Internet is a new technology and Web site satisfaction will

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be driven by ease of use and usefulness [5]. Davis [5] argued that these two concepts are predominant in predicting how much consumers will be using computer technologies. The ability to easily navigate a Web site and its perceived value (e.g. entertainment, convenience, community) will influence both usage level and satisfaction. By extension, satisfaction in the online environment may also be driven by consumer benefits in using self-service technologies. As noted by Van Riel [28], these benefits include convenience [18], [23], [32], saving time and money[18], avoiding interpersonal interaction [4], [18] and being in control [4], [32]. This implies that the drivers of Web satisfaction may include Web site characteristics (e.g. ease of use), the specific Web site's value (e.g. useful information), and its relative value (e.g. more convenient than offline shopping).

A variety of independent and dependent constructs and measures have been employed to identify the drivers of e-satisfaction. In short, there is no consensus on what drives online service quality and e-satisfaction [34]. However, the research does suggest that Web site characteristics, in particular ease of use and Web site content, will play key roles. While ease of use has various labels (e.g. site design, Web store functionality, ease of understanding, ease of navigation) and different measures (e.g. easy to use, easy to locate information, user friendly site) the underlying construct reflects the ease with which an individual can navigate the Web site. Similarly, Website content has various labels (e.g. product information, product attribute description, product selection, product uniqueness, informational fit-to- task) and different measures (e.g. product information meets my needs, extensive product selection, clearly describes products), and the underlying construct reflects the depth of and information on the products offered. A majority of the studies suggest a third driver, customer security (e.g. financial security, security/privacy) which reflects the Web site's information regarding its security policies.

Beyond these three, there were fewer consensuses on the remaining drivers either discussed or tested. These included customer service, convenience, ease of ordering, and efficiency. Of interest to this study was the role of customer service (e.g. care, responsiveness) which reflects the ability to respond to questions, problems and after sale service.

Research Model

Prior literature provides the author with a rich foundation to build a research framework for the study of online customer satisfaction. The extensive literature survey suggests that no prior India centric study has been attempted thus far to ascertain the determinants of e-satisfaction. So for developing an in-depth understanding of customer satisfaction toward e-tailing sites the author built up a framework (Figure 1) based on the literature review on online customer satisfaction. The model ties together eighteen factors representing five major contexts of e-satisfaction: 1) Convenience, 2) Merchandising, 3) Site Design, 4) Security and 5) Serviceability. Key elements of this framework are discussed below:
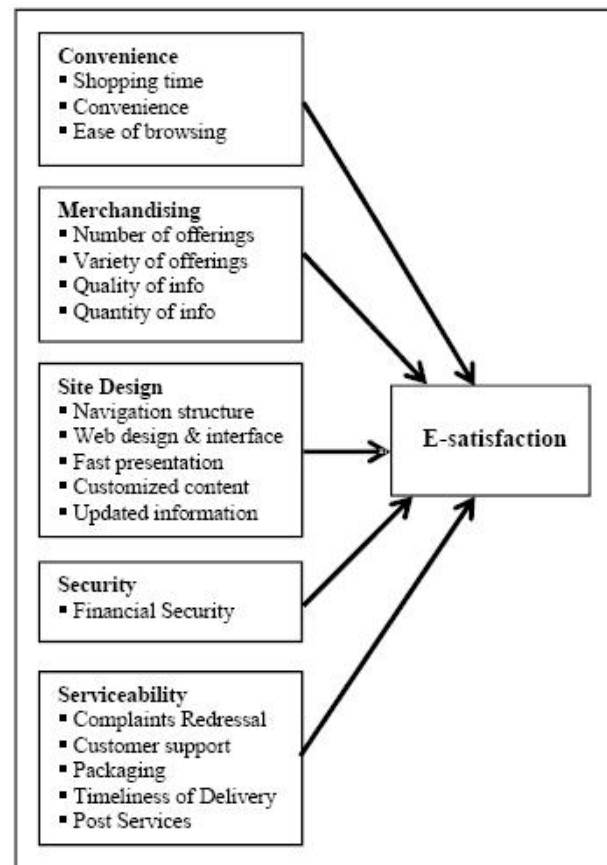

Figure 1. E-Satisfaction model

Convenience

Online shopping features can be either consumers' perceptions of functional and utilitarian dimensions, like "ease of use" and "usefulness", or their perceptions of emotional and hedonic dimensions like "enjoyment" [17]. E-tailing is promoted widely as a convenient avenue for shopping. Shopping online can economize on time and effort by making it easy to locate merchants, find items, and procure offerings.

Consumers do not have to leave their home nor travel to find and obtain merchandise online. They can also browse for items by category or online store. These time and browsing benefits of online shopping are likely to be manifested in more positive perceptions of convenience and e-satisfaction.

H1: Satisfaction with e-retailing increases as perceptions of convenience becomes more positive, all else equal.

Merchandising

Positive perceptions of online merchandising represent another set of elements that could positively impact e-satisfaction levels. This includes the product offerings and product information available online.

It seems reasonable to expect that e-satisfaction would be more positive when consumers perceive online stores to offer superior product assortments. For one, superior assortments can increase the probability that consumer needs will be met and satisfied. This is especially likely when consumers desire items not widely distributed (e.g., specialty goods), produced in limited quantities, or unavailable at brick-and-mortar stores because shelf space is limited. For example, a traditional book superstore may carry 150,000 titles, but an Amazon.com carries millions of titles. The probability of locating any one title, therefore, would be higher at the online store. The probability of consumers satisfying needs online would also be higher.

Second, the wider assortment of products can include items of better quality that may be attractive to consumers. The lower search costs traditionally associated with online shopping are thought to result in consumers buying better quality items [1]. Buying better quality items, in turn, can improve satisfaction by delimiting the costs of failed products. Finally, we expect richer information (more extensive and higher quality) available online to lead to better buying decisions and higher levels of e-satisfaction [22].

Together, rich data and wide product assortments would likely lead to consumer satisfaction with online retailing. Hence,

H2: Satisfaction with e-retailing increases as perceptions of online merchandising becomes more positive, all else equal.

Site Design

Recent surveys reveal that it's important for online retailers to make their sites simple, clear, and efficient [11]. Usability considerations should be of prime importance in the design of an e-tailing websites. "Site characteristics" like search functions, download speed and navigation also play a role in shaping "ease of use" of the website [34] thus affecting the success of e-tailing websites. A number of web specific factors including navigation [3], [15], interface [8] and accessibility [14] have been widely investigated in the aforementioned studies.

Shopping is thought to be pleasurable and satisfying to consumers when the retailing sites are fast, uncluttered, and easy-to-navigate [21]. Fast, uncluttered, and easy-to-navigate sites economize on shopping time. Uncluttered and easy-to-navigate sites also economize on the cognitive effort consumers expend figuring out how to shop effectively online. Hence,

H3: Satisfaction with e-retailing increases as perceptions of site design becomes more positive, all else equal.

Security

Lack of trust is one of the most frequently cited reasons for consumers not shopping on

the internet [13]. Security and privacy have an impact on consumer trust in shopping on the internet [13]. The apprehensions of the customers regarding the security for online transactions and authenticity of goods are curtailing the success of the e-tailing model. The key reason for its low acceptance is the unwillingness of people to use credit cards for online purchases [9]. More and more sophisticated online customers would rather pay a higher price to e-tailers who provide high quality e-service [24]. Bruskin/Goldberg Research, for example, reports that 75% of Internet shoppers emphasize credit-card security as a major consideration when deciding whether or not to buy items online [2]. Hence,

H4: Satisfaction with e-retailing increases as perceptions of online financial security becomes more positive, all else equal.

Serviceability

General feedback on the web site design, competitive price of the product, merchandise availability, merchandise condition, on-time delivery, merchandise return policy, customer support, e-mail confirmation on customer order, promotion activities are the factors affecting the e-satisfaction and thereby the overall success of the e-tailing site [29]. The level of e-satisfaction is also determined by the quality of e-services, the price level and the purchase process [30]. Product delivery has the strongest influence on customers' satisfaction and future purchase intentions [10]. Hence,

H5: Satisfaction with e-retailing increases as services offered by e-tailor becomes more positive, all else equal

Research Methodology

With the literature findings as a foundation, the quantitative phase of research reported next, focuses on gathering survey data to empirically test this e- satisfaction model. An online methodology was chosen over a mail survey, random digit dialing, or mall intercept for several reasons. First, an online survey is consistent with the context of our investigation. Second, an online approach can be more effective for identifying and reaching online shoppers. In total, 957 shoppers were identified and subsequently e-mailed the satisfaction survey. Usable responses to the satisfaction survey were obtained from 351 shoppers (37%).

Respondents

The respondents to the satisfaction survey are similar to those in other Web-based studies. The offerings purchased most by our subjects (books, CDs, computers, and travel) also tend to be the offerings purchased most frequently by online shoppers. The respondents come from 20 provinces of India. Respondents included 73% males and 27% females. Finally, our subjects were mostly young people. In addition, 43.3% of the respondents were under the age of 25; 35.9% were ages 25–35; 16.5% were ages 35–45; 4.3% were over age 46. All respondents are Internet user and the most of them are intensive users. 32.2% of them access the Internet less than 7 hours per week, 54.6% of them access the Internet between 7 and 35 hours per week, and 23.12% of them access the Internet over 35 hours per week.

Data Analysis

As most of the scales are new, an exploratory factor analysis using SPSS 14.0 (principle components analysis with varimax rotation) was performed on the five-factor measurement model. The five factors explain 78% of the variance in the data, all eigen values are near one, all items load heavily onto one of the factors, and all five factors are easily interpreted (see Table 1). They are convenience, site design, financial security, merchandising and serviceability. The relative effects of each of the five factors on e-satisfaction are discussed next.

Table 1. Factors Loading for Scale Items.

Item	Conveni ence	Merch and ising	Site Des ign	Securit y	Service abili ity
Shopping time	0.83	-	-	-	-
Convenience	0.80	-	-	-	-
Ease of Browsing	0.62	-	-	-	-
Number of offerings	-	0.95	-	-	-
Variety of offerings	-	0.94	-	-	-
Quality of information	-	0.92	-	-	-
Quantity of info.	-	0.93	-	-	-
Navigation structure	-	-	0.84	-	-
Web design & interface	-	-	0.84	-	-
Fast presentation	-	-	0.68	-	-
Customized content	-	-	0.73	-	-
Updated information	-	-	0.86	-	-
Financial Security	-	-	-	.99	-
Complaints Redressal	-	-	-	-	0.98
Customer Support	-	-	-	-	0.83
Packaging	-	-	-	-	0.98
Timeliness of Delivery	-	-	-	-	0.94
Post Services	-	-	-	-	0.84
Initial Eigen Values	1.31	1.17	1.95	.98	1.67

Regression was used to estimate the unique effect of convenience, merchandising, site design, financial security and serviceability concerns on consumers' e- satisfaction levels. The correlations among the predictor and criterion variables are presented in Table 2, Panel A. The regression coefficients are presented in Table 2, Panel B.

Table 2. Correlation Matrix and Regression Coefficients for Predictors of e-satisfaction

Panel A: Correlation Matrix.

	e-Sati sfac tion	Con veni enc e	Mer cha ndis ing	Ser vice abili ty	Site Des ign	Se cur ity
e-Satisfaction	1.00					
Convenience	0.41	1.00				
Merchandising	0.18	0.28	1.00			
Serviceability	0.30	0.37	0.30	1.00		
Site Design	0.36	0.34	0.15	0.21	1.00	
Security	0.34	0.23	0.18	0.27	0.22	1.0

All Correlations are statistically significant at p<=0.05

Panel B: Regression Findings for the e-Satisfaction Model.

Predictor Variable	Propos ed Effect	Standardized Coefficient (SE)	t-value (p-level)
Convenience	+	0.24 (0.02)	7.91 (<.05)
Merchandising	+	0.01 (0.02)	0.31 (.78)
Serviceability	+	0.11 (0.03)	3.57 (<.05)
Site Design	+	0.21 (0.03)	7.10 (<.05)
Security	+	0.21 (0.05)	7.23 (<.05)
F_{model} (p-level)		76.36 (<.05)	
R^2 (R^2 adjusted)		.28 (.27)	

The data in Table 2, Panel B, show the regression coefficient for merchandising is not statistically significant. However, the coefficients for convenience, serviceability, site design, and financial security are statistically significant. Their signs are also in the direction as expected. Moreover, we find that convenience has the greatest impact on e- satisfaction levels (beta = 0.24). The data also demonstrate that positive perceptions of site design (beta = 0.21) are important to e-satisfaction assessments. On average, site design is

the second most important element driving satisfaction levels. In fact, site design is tied with perceptions of financial security (beta = 0.21) as the next most important predictor of online satisfaction. Finally, the data indicate that serviceability (beta = 0.11) is of less practical significance to e-satisfaction assessments.

Discussion

Even though satisfaction is central to the marketing concept and relevant to the field of cognitive computing, no research has comprehensively examined the determinants of e-satisfaction. One objective in this study was to begin to fill this gap in the literature. To this end, the author documents that convenience, serviceability, site design, and security have a statistically significant influence on e-satisfaction levels. And further documents the relative magnitude of these effects. The relevance of the findings to current thinking and practice are discussed next.

A popular topic of discussion in e-commerce is the financial security of onlinetransactions. However, financial security is not the primary predictor of e-satisfaction among e-buyers. Of the five factors in our regression model, the coefficient for financial security is tied for second in terms of its relative impact on e-satisfaction. The author documents that, on average, perceptions of merchandising do not have a dramatic impact on e- satisfaction among e-buyers. And finds that the size of the estimated coefficient is relatively small. In fact, it was the smallest of the four statistically significant factors in our model. What does appear to occupy a more prominent role in consumer e- satisfaction assessments are site design and convenience (in addition to financial security). All told, these findings imply that giving special attention to convenience, site design, and financial security may produce the most positive outcomes pertaining to e-satisfaction.

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