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Chapter XIV

Framework for User Perception of Effective E-Tail Web Sites

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Executive Summary

This study presents the development of an empirically validated framework for users' perception of effective Web sites for retail e-commerce (E-tail). In particular, we attempted to answer the main research questions: What are the major designs determining E-tail Web site effectiveness? How do these designs support Web users' objectives in using the Web? Based on the concept of "fitness for use" and the reasons that consumers use the Web, we proposed that "effective designs for E-tail Web sites should support Web customers for their (a) information search, (b) pleasure and (c) business transactions." Then, data were collected from a survey on 427 potential Web customers. An exploratory analysis was conducted to refine the proposed framework and to provide structure of the constructs in the framework to be validated by a following confirmatory analysis. Results suggest that the major designs determining E-tail Web site effectiveness include 16 factors, with 64 Web designs supporting the three major reasons for customers to use the Web.

Introduction

Despite the demise of many dot-coms, the number of E-tail sales are still promising; that is, the U.S. retail e-commerce sales for the third quarter of 2003 were $13.291 billion, an increase of 6.6% from the second quarter 2003 and 27.0% from the third quarter 2002. Meanwhile, total U.S. retail sales for the third quarter 2003 were estimated at $872.5 billion, an increase of only 6.1% from the same period in 2002 (Census Bureau of the Department of Commerce).

Successful E-tail Web sites must emphasize the importance of their design (Barnes & Vidgen, 2000), as this factor determines the ability of businesses to reap the full benefits of Internet commerce (Schubert & Selz, 2000). Thus, much has been written about effective designs for E-tail Web sites. For instance, Web presentation must be broken down into modules or information units (Conger & Mason, 1998); consistent and sufficient navigation mechanisms must be provided (Lynch & Horton, 1999); any disclaimers that the company will not honor some or all implied liabilities must be stated conspicuously (Schneider & Perry, 2000); and conceptual design guidelines and their related practical contents or features proposed (Katerattanakul, 2002). However, there have been few, if any, empirical attempts to validate these suggested Web design ideas.

As very little is known about the factors that make using the Web a compelling experience for its users (Novak, Hoffman, & Yung, 2000), researchers have conducted many studies to explore the factors affecting online customers. These include customer loyalty (Hoffman & Novak, 2000), customer experience beyond the online shopping navigation experience (Novak et al., 2000), effects of perceived usefulness and satisfaction on online customers' channel preference (Bhattacherjee, 2001), willingness to shop online (Liao & Cheung, 2001), antecedents of online customers' channel satisfaction (Devaraj, Fan, & Kohli, 2002) and factors that influence Internet commerce success (Torkzadeh & Dhillon, 2002). In most of these previous studies, effective Web design was used as one of the constructs. Thus, an empirical attempt to develop and validate a framework of effective designs for E-tail Web sites would provide important value, as metrics are required for Internet commerce to continue to make progress (Devaraj et al., 2002).

This study attempts to develop an empirically validated framework of user perception of effective designs for E-tail Web sites. In particular, this framework will help answer the main research questions: *What are the major designs determining E-tail Web site effectiveness? How do these designs support Web users' objectives in using the Web?* The study particularly focuses on E-tail Web sites that involve *"the buying and selling of goods and the associated and related information provision and gathering between companies and their customers over the Web."* In this study, the terms: "user," "customer," and "consumer" are used interchangeably and as synonyms.