tems

ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT

JERRY FJERMESTAD
NICHOLAS C. ROMANO, JR.
EDITORS

ADVANCES IN MANAGEMENT
INFORMATION SYSTEMS
VLADIMIR ZWASS SERIES EDITOR

Copyright © 2006 by M.E. Sharpe, Inc.

All rights reserved. No part of this book may be reproduced in any form
without written permission from the publisher, M.E. Sharpe, Inc.,
80 Business Park Drive, Armonk, New York 10504.

References to the AMIS papers should be as follows:

Bartolacci, M.R. and Meixell, M. Success Factors in online supply chain management and e-customer relationship management. J. Fjermestad and N.C. Romano Jr., eds., *Electronic Customer Relationship Management. Advances in Information Management Systems,* Volume 3 (Armonk, NY: M.E. Sharpe, 2006), 21–33.

ISBN 0-7656-1327-1
ISSN 1554-6152

Printed in the United States of America

The paper used in this publication meets the minimum requirements of
American National Standard for Information Sciences
Permanence of Paper for Printed Library Materials,
ANSI Z 39.48-1984.

∞

BM (c) 10 9 8 7 6 5 4 3 2 1

**ADVANCES IN
MANAGEMENT INFORMATION SYSTEMS**

AMIS Vol. 1: Richard Y. Wang, Elizabeth M. Pierce, Stuart E. Madnick, and Craig W. Fisher
Information Quality
ISBN 0-7656-1133-3

AMIS Vol. 2: Sergio deCesare, Mark Lycett, Robert D. Macredie
Development of Component-Based Information Systems
ISBN 0-7656-1248-1

AMIS Vol. 3: Jerry Fjermestad and Nicholas C. Romano, Jr.
Electronic Customer Relationship Management
ISBN 0-7656-1327-1

Forthcoming volumes of this series can be found on the series homepage.
www.mesharpe.com/amis.htm

Editor-in-Chief
Vladimir Zwass
zwass@fdu.edu

CHAPTER 9

WHAT MAKES CUSTOMERS SHOP ONLINE?

NA LI AND PING ZHANG

Abstract: *Electronic commerce customer relationship management (e-CRM) has become a fundamental research area, as business-to-customer e-commerce (B2C) is growing at a phenomenal rate. Among the many issues eCRM addresses, one question is often asked: "What makes customers shop online?" Thorough understanding of this issue will help an electronic store become more competitive. A good number of studies have been conducted to answer this question. These studies seem to take diverse perspectives and investigate various aspects of the phenomenon, yet few have drawn coherent pictures of the dynamics. The objective of this chapter is to draw such a picture. To fit the theme of advances in MIS, we conduct an analytical review of the IS literature on B2C online shopping behavior at the level of the individual. We develop a classification of research variables and a framework to provide an overview of the state of the art of this area and to point out limitations and directions for future research. The results show that one's online shopping intention, behavior, and satisfaction are significantly associated with one's beliefs about and affective reactions to e-commerce/e-stores and one's attitudes toward online shopping. In addition, external environment, demographics, personal characteristics, and e-store characteristics have significant effects on customers' shopping intention, behavior, and satisfaction, either directly or mediated by beliefs, affect, and attitudes. Needed for future research are a common theoretical framework, widely accepted instruments, and consistency in terminology to allow comparing results across studies and to accumulate knowledge. We also call for more research effort in customer satisfaction and affective reactions, which have not received adequate attention despite their fundamental roles in customers' online shopping.*

Keywords: *Electronic Commerce Customer Relationship Management, eCRM, Online Shopping, Internet Shopping, Consumer Belief, Affective Reaction, Consumer Attitude, Consumer Intention, Consumer Behavior, Satisfaction, Empirical Study.*

INTRODUCTION

Business-to-consumer (B2C) electronic commerce has emerged in recent years as an important way of doing business. According to ePayments Resource Center (2004), the total B2C e-commerce revenues for the United States increased from $75 million in 1999 to $750 million in 2003. Similarly, Europe's B2C revenues grew from U.S. $25 to $60 million and Japan's from $25 to $250 million between 1999 and 2003. However, online shopping is far from being a popular act, even among people who are experienced Internet users and spend long hours online. For example, according to the USC Annenberg School Center for the Digital Future, 75.9 percent of

Americans were Internet users in 2003. They spent an average of 12.5 hours/week online. And 96.7 percent of them had more than one year of Internet experience (USC Annenberg School Center for the Digital Future 2004). However, only 43 percent of American adults purchased online in 2003, spending an average of $95.14 per month (USC Annenberg School Center for the Digital Future 2004). While B2C e-commerce has not been widely accepted in the broad sense, there is significant room for its growth, once the B2C shareholders find effective ways to attract and sustain more customers to conduct more transactions online. The question is: What factors lead customers to shop online?

This is a key question to be answered in the e-commerce customer relationship management (e-CRM) area. Abundant studies have been conducted in recent years to investigate customers' online shopping behaviors. Most of them have attempted to reveal factors influencing or contributing to online shopping beliefs, attitudes, intentions, and behaviors. Romano and Fjermestad (2003) have identified five major perspectives that researchers may adopt to approach various issues surrounding e-CRM. These include e-CRM markets, e-CRM business models, e-CRM knowledge management, e-CRM technology, and e-CRM human factors. These areas are not mutually exclusive and may influence one another directly or indirectly. Generally each study of customers' online shopping behaviors takes one or more of the five perspectives. As a result, these studies investigate various factors in diverse ways and reveal different aspects of the phenomenon. For example, Case, Burns, and Dick (2001, p. 873) suggested that "Internet knowledge, income, and education level are especially powerful predictors of Internet purchases among university students" according to an online survey of 425 U.S. undergraduate and MBA students. Ho and Wu (1999) discovered positive relationships between online shopping behavior and five categories of factors: e-stores' logistical support, product characteristics, Web sites' technological features, information characters, and home page presentation. Jarvenpaa et al. (2000) empirically revealed positive associations between consumer trust in Internet stores and perceived store reputation and size. Higher consumer trust reduces perceived risks associated with Internet shopping and generates more favorable attitudes toward shopping at a particular store, which in turn increases one's willingness to patronize that store.

These studies have all made important contributions to our understanding of the dynamics of the online shopping phenomenon. However, there is a lack of coherent understanding of the impact of most, if not all, possible factors related to online shopping behaviors. This makes comparisons of different studies difficult, applications of research findings limited, and the prospect of synthesizing and integrating the empirical literature elusive.

This chapter synthesizes the representative studies of consumer online shopping behavior based on an analytical literature review. To be consistent with the theme of advances in MIS, we focus on the IS literature. To draw validated results, we emphasize empirical studies, especially those using quantitative methods. In doing so, we attempt to provide a comprehensive picture of the state of the art of this area and point out limitations and directions for future research. We approach the research question mainly from the e-CRM human factors perspective, since what interests us here is human behavior. Variables related to e-CRM markets, business models, and technology are also investigated, because they influence (potential) customers' perceptions, attitudes, and behaviors in various ways.

RESEARCH METHOD

Journal and Article Selection

Published research articles were selected from nine journals for the period of January 1998 to December 2003: *Communications of the ACM* (CACM), *Decision Support Systems* (DSS), *Inter-*

Table 9.1

Quantitative I

ID	Method Na
1	Experiment independer in controlle under stud
2	Field study experiment the natural
3	Survey: In an experir

national Jour
Studies (IJHC
Systems (JAIS
Information a
commonly c
Theoharakis
many journal
unique positi
(AIS), and its
al. 2004). IJI
commerce (N
this type of r

We condu
the following
in our framev

Alavi and
study for its
Zhang and I
strategies are
cal methods
ments are no
different cor
ships among

Research F

A research f
sense of the
of a framew
proaches an
that in gene
examinatior
level that ca

Table 9.1

Quantitative Empirical Research Method

ID	Method Name and Description	Examples
1	Experiment: Includes lab and field experiments; manipulates independent variable; controls for intervening variables; conducted in controlled settings or in a natural setting of the phenomenon under study	Chau et al. (2002); Devaraj et al. (2002)
2	Field study: No manipulation of independent variables, involves experimental design but no experimental controls, is carried out in the natural settings of the phenomenon of interest.	Gefen et al. (2003); Huang (2003)
3	Survey: Involves large numbers of observations; the research uses an experimental design but no controls.	Bhattacherjee (2001); Lee et al. (2003)

national Journal of Electronic Commerce (IJEC), *International Journal of Human–Computer Studies* (IJHCS), *Information Systems Research* (ISR), *Journal of the Association for Information Systems* (JAIS), Journal of Management Information Systems (JMIS), *MIS Quarterly* (MISQ), and *Information and Management* (IM). Six of them (CACM, ISR, JMIS, MISQ, DSS, and IM) are commonly considered top or outstanding journals in the IS discipline (Mylonopoulos and Theoharakis 2001; Whitman et al. 1999; Hardgrave and Walstrom 1997). Although not ranked in many journal assessments due to its recent inception, JAIS is included in this study owing to its unique position as the flagship research journal for the Association for Information Systems (AIS), and its perceived high quality and rising status in recent journal rankings studies (Lowry et al. 2004). IJEC is included because it is the only journal specifically dedicated to electronic commerce (Ngai and Wat 2002). The coverage of a six-year period is considered well suited for this type of research (Vessey et al. 2002).

We conducted an exhaustive search in the nine journals to identify research articles that satisfy the following criteria: (1) examines the relationship of at least one of the customer factors identified in our framework (see below) with other factors; and (2) employs quantitative empirical method.

Alavi and Carlson's research method framework (Alavi and Carlson 1992) is used in this study for its wide acceptance in the IS community (Pervan 1998; Romano and Fjermestad 2001; Zhang and Li 2004). Owing to the objective of the current study, only quantitative empirical strategies are adapted. Table 9.1 excerpts the descriptions and examples for quantitative empirical methods from Alavi and Carlson (1992). Studies focusing purely on development of instruments are not included in this paper, because they usually do not investigate relationships among different constructs, while studies developing/validating instruments and investigating relationships among constructs at the same time are included.

Research Framework

A research framework can be very useful for synthesizing existing studies, and thus for making sense of the empirical evidence and demonstrating gaps and future directions. The development of a framework may take both top-down (theory-driven) and bottom-up (evidence-driven) approaches and several iterations. In this study, we first present a theoretically driven framework that in general agrees with the empirical evidence at a higher level. Then we conduct an in-depth examination of the selected empirical papers to enhance and refine the framework to a detailed level that can guide our understanding and future research directions.

Figure 9.1 **Research Framework of Online Customer Behavior**

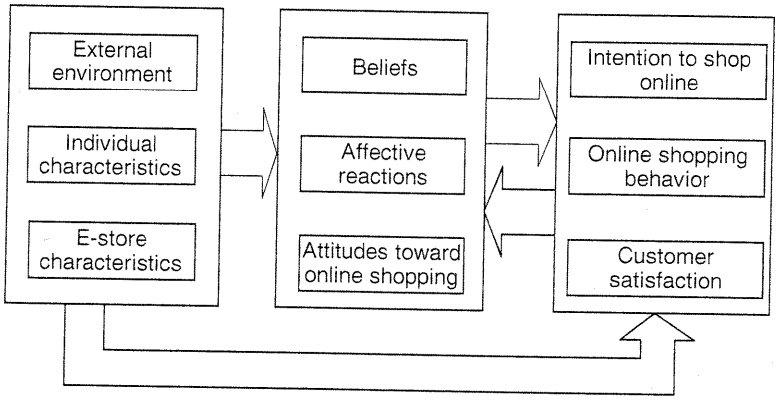


Figure 9.1 shows the research framework for this study. It is developed based on theoretical work in individual psychology, IS, and an abstract-level examination of the collected studies. The framework resembles the key components and relationships in the theory of reasoned action (TRA) (Fishbein and Ajzen 1975), theory of planned behavior (TPB) (Ajzen 1991), and many studies on technology acceptance and individual reactions and behavior toward technology. This makes sense, because consumer online behavior is human behavior in a particular context.

The box on the far right in Figure 9.1 includes three outcome variables: intention to shop online, online shopping behavior, and customer satisfaction. Broadly speaking, online shopping behavior refers to consumers' actions of visiting/revisiting e-stores, placing orders to buy products, or signing contracts to accept and use services via the Internet. Products are anything tangible, such as software, hardware, books, clothing, food, and so on (Liang and Lai 2002; Bellman et al. 1999; USC Annenberg School Center for the Digital Future 2004), while banking/financial service, insurance, brokerage, and electronic newspapers are typical examples of B2C e-commerce service (Bhattacherjee 2001a; Bhattacherjee 2001b; Kim et al. 2002; Liao and Cheung 2002; Lu and Li, 2002). Intention is the cognitive representation of a person's readiness to conduct a specified behavior (Fishbein and Ajzen 1975). In the B2C commerce context, it refers to the strength of one's willingness to perform consuming behavior online. Intention is considered to be the immediate antecedent of behavior (Fishbein and Ajzen 1975). Abundant studies on both technology acceptance and consumer online shopping have employed behavioral intention instead of actual behavior as (one of) the final dependent variable(s) (e.g., Gefen et al. 2003; Liang and Lai 2002). Satisfaction was originally defined by Locke (1976, p. 1300) in the job performance context as "a pleasurable or positive emotional state resulting from the appraisal of one's job." Later the definition was extended by Oliver (1981, p. 29) to the consumption context as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience." Both definitions emphasize a "psychological or affective state related to and resulting from a cognitive appraisal of the expectation–performance discrepancy" (Bhattacherjee 2001b, p. 353).

Within the middle box are the customers' evaluative reactions (also referred to as beliefs), affective reactions, and attitudes toward online shopping phenomena. Theories (such as TRA and

TPB) and empirical evidence show that these reactions and attitudes are strong predictors of the outcome variables (e.g., Liang and Huang, 1998; Koufaris 2002; Henderson and Divett 2003; Bhattacherjee 2001b; Lee et al. 2003). A belief refers to a person's subjective evaluation of an object. It links a given object to an attribute (Fishbein and Ajzen 1975). In the B2C context, we define it as a (potential) customer's subjective evaluation of a relevant object such as the Internet as a shopping channel, a specific e-store or online shopping experience. Beliefs are expected to impact a (potential) customer's shopping intention, behavior, and satisfaction (Devaraj et al. 2003; Liang and Huang 1998; Han and Noh 1999–2000; Vellido et al. 2000, Lee et al. 2003).

Triandis (1980) proposed a model where affect impacts intention. Affect refers to "the feelings of joy, elation, or pleasure, or depression, disgust, displeasure, or hate associated by an individual with a particular act" (Triandis 1980, p. 211). Russell (2003) proposed a construct called perception of affective quality (PAQ), which refers to a person's "perception of the pleasant-unpleasant and activating-deactivating qualities of stimuli" (p. 148). Russell (2003) described an emotional episode to illustrate how PAQ changes one's affect and in turn impacts his or her perceptual-cognitive appraisal of an object that results in certain actions. Empirical studies provide evidence for the influence of affective reactions toward stimuli on intention/behavior (e.g., Griffith et al. 2001; Koufaris 2002). It is therefore reasonable to include customers' affective reactions as an antecedent of online shopping outcome. Affective reactions can be toward the Internet shopping channel, a specific e-store, or online shopping experience.

Attitude has been defined and measured very differently in various studies. In one definition, attitude "represents a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likable-dislikable" (Ajzen 2001, p. 28). Attitude has also shown mixed impact on behavior and intention. TPB states that only specific attitudes toward the behavior in question can be expected to predict that behavior. Empirical studies in IS and online consumer behavior support this assertion (e.g., Karahanna et al. 1999; Khalifa and Limayem 2003; Tan and Teo 2000). Therefore we include attitude toward online shopping behavior in the middle box and expect it to predict the outcome variables. In the B2C e-commerce context, attitude refers to an individual's positive or negative feelings about performing online shopping behavior, including using the EC channel generally and using a specific e-store (e.g., Chen et al. 2002; Khalifa and Limayem 2003). According to the classic tripartite model of attitude structure, attitudes consist of affective, cognitive, and behavioral components (Breckler and Berman 1991). Based on this view, attitudes are assumed to be influenced by cognition as well as affect (Ajzen 2001). This indicates that within the middle box, beliefs and affective reactions could impact attitudes.

According to its definitions, satisfaction could be influenced by beliefs and affective reactions, since satisfaction results from a cognitive appraisal of the difference between expectation (in terms of beliefs and affective reactions) and performance (reflected by beliefs and affective reactions). This is supported by a number of empirical studies (e.g., Han and Noh 1999–2000; Lee et al. 2003). On the other hand, satisfaction may help to form or change a person's beliefs or intentions (e.g., Bhattacherjee 2001a; Bhattacherjee 2001b; Devaraj et al. 2002; Kim et al. 2002; Pavlou 2003). . This is represented by the arrow from the right box to the middle box.

The box on the left contains "external variables" (Ajzen and Fishbein 1980) that influence the outcome variables directly or indirectly through beliefs, affective reactions, and attitudes. External environment refers to those contextual factors that may impact online consumers' behavior but are not under the control of either the consumers or the e-store vendors. For example, the existing legal framework is an external environment factor that protects consumers from financial loss in online transactions. Other examples would be network speed, government support for

e-commerce, offline competitors' performance, etc. (Liao et al. 2001; Khalifa and Limayem 2003; Ramaswami et al. 2000–2001). Individual characteristics include demographics and personality/trait, propensity, lifestyle, etc. Electronic store characteristics refer to the objective features of e-stores, including the characters of electronic vendors, product/service on sale, services supporting transactions, and e-stores' Web sites. Theoretical and empirical evidence has been found to support the impacts of these external variables on those in the middle and right boxes (e.g., Borchers 2001; Lee et al. 2000; Bellman et al. 1999; Bhatnagar et al. 2000; Li et al. 1999; Koufaris et al. 2002; Kimery and McCord 2002; Liang and Lai 2000; Kim et al. 2001; Cho et al. 2001, 2002, 2003; Cho and Fjermestad 2006).

Classification of Variables

Variables in each selected paper were classified according to a scheme developed by the authors—a refinement of the constructs in the research framework in Figure 9.1. The scheme was pretested with a small set of papers and evolved and refined during the rest of the coding process. The final coding scheme includes ten categories: external environment, consumer demographics, personal characteristics, e-store characteristics, beliefs about online shopping phenomena, affective reactions, attitudes toward online shopping behavior, intentions to shop online, shopping behavior, and satisfaction. Most categories consist of subcategories. For example, beliefs about online shopping (ID: 5) includes two types, beliefs about the Internet as a general shopping channel (5.1) and beliefs about a specific e-store or a specific online shopping experience (5.2). The latter subcategory (5.2) is further classified into six types: beliefs about e-store vendor, offerings (products and services), supporting service, Web site/technology, e-store as a whole, and online shopping experience. Table 9.2 shows descriptions and examples for each category and subcategory.

Noteworthy is the inconsistency of terminologies in the existing studies. Sometimes one term was used to refer to several constructs by different researchers. At other times one construct was referred to by several different terms. During our coding process, a variable was assigned to a category according to its nature instead of the name used in the original study. For example, Luo and Seyedian (2003–2004) treated "site value" as users' attitude toward Internet storefront sites. However, they defined it as the "extent to which users perceive a web site as useful, important, and valuable" and measured it in a corresponding way. This indicates that "site value" is consistent with beliefs about the Internet as a shopping channel. Therefore we assigned it into 5.1, "Beliefs about EC channel."

RESULTS

A total of 44 quantitative empirical papers focusing on online consumers' evaluative and affective reactions, attitudes, behaviors, and satisfaction issues were published over the period of 1998 to 2003 in the nine selected IS journals. Each paper is described briefly in the Appendix. Two such papers were published in 1998, two in 1999, eight in 2000, seven in 2001, 14 in 2002, and 11 in 2003. A few papers were published in issues comprising two years; they were treated as if published in the earlier year. For example, a paper from Han and Noh (1999–2000) was considered published in 1999. Though the collection basket size is fairly small, the increasing publication trend over the recent years indicates a growing interest in this research area.

About 68 percent of the selected studies (30 studies) employed survey methods. Surveys were conducted through telephone interviews, Web-based surveys, paper–and-pencil surveys, mail surveys, etc. Nine studies (20 percent) utilized experimental methods (including lab controlled

Table
Class
ID
1
2
3
4
4.1
4.2
4.3
4.4
4.5

Table 9.2

Classification Scheme for Variables

ID	Category	Description	Examples
1	External environment	Contextual factors that may impact online consumers' behavior but are not under the control of either the consumers or the e-store vendors, e.g., the existing legal framework, network features, government support for e-commerce, off-line competitors' performance, etc.	Network speed (Liao et al., 2001)
2	Consumer demographics	Demographic information about customers, including age, gender, education, income, household size, region, nationality, knowledge, experience, etc.	Age, gender, household income, occupation (Chen and Hitt, 2002)
3	Personal characteristics	Personality/trait, propensities, product involvement, lifestyle, purpose of Internet use, need specificity, etc.	Need specificity, product involvement (Koufaris et al., 2001–2002); Trust propensity (Lee and Turban, 2001)
4	E-store characteristics	Objective features of e-stores, including characteristics about the vendors, products/service for sale, supporting services, and websites/technologies.	See below.
4.1	Vendor characteristics	Features of an e-store's vendor.	None.
4.2	Offering (product, service on sale) characteristics	Features of the products or services sold by e-stores, e.g., product variety, value (price, quality), technological complexity, ego-related level, expenditure level, etc.	Product price and quality (Devaraj et al., 2003)
4.3	Supporting service characteristics	Features of the service e-stores offer to support the B2C transaction process, including during-sale and after-sale service such as network externality, return process, facilitating conditions (transaction efficiency), etc.	Return process (quick/simple) (Devaraj et al., 2003)
4.4	Website/ Technology characteristics	Features of the websites/technologies of e-stores, including website structure, information presentation, navigation/searching mechanisms, decision making aids, efficiency, security, accessibility, etc.	Content presentation (Griffith et al., 2001); Ease of access of product information (measured by number of clicks to get certain information) (Shim et al., 2002)
4.5	E-store characteristics	Features of an e-store as a whole, such as loyalty incentives' availability, cost, reputation, etc.	Minimum deposit required to open an account, specific retention strategy controlled by e-stores (Chen and Hitt, 2002); Store reputation (Devaraj et al., 2003)

(continued)

Table 9.2 *(continued)*

ID	Category	Description	Examples
5	Beliefs about online shopping	An individual's subjective evaluation of objects in B2C e-commerce context. It could be subjective evaluation of the Internet as a shopping channel or of a specific e-store or a specific online shopping experience.	See below.
5.1	Beliefs about EC channel	An individual's subjective evaluation of the Internet as a shopping channel in terms of its usefulness, ease of use, convenience, security, risk, trust, uncertainty, transaction cost, time saving, technical features, etc.	Perceived risk (behavioral uncertainty; environmental uncertainty) (Pavlou, 2003); Perceived convenience of Internet shopping, perceived financial risk of Internet shopping (providing credit card information through the web) (Bhatnagar et al., 2000)
5.2	Beliefs about an e-store/online shopping experience	An individual's subjective evaluation of a specific e-store or an online shopping experience.	See below.
5.2.1	Beliefs about vendor	An individual's subjective evaluation of an electronic vendor. Includes customer's trust toward vendor, perceived risk with vendor, perception of cost to switch vendors, empathy, reliability, responsiveness, assurance, familiarity with vendor, etc.	Perceived risk with vendor, empathy (customer perceptions that the service provider is giving them individualized attention and has their best interests at heart) (Gefen, 2002)
5.2.2	Beliefs about offering (product, service on sale)	An individual's subjective evaluation of the products or services for sale in an e-store, e.g., perceived usefulness of products, perceived performance of the service, etc.	Perceived performance of online knowledge community at adoption (Khalifa and Liu, 2003); Product quality (Lee et al., 2003)
5.2.3	Beliefs about supporting service	An individual's subjective evaluation of the service an e-store offers to support the B2C transaction process, including during-sale and after-sale service, etc.	Time to receive product (Lee et al., 2003)
5.2.4	Beliefs about website/ technology	An individual's subjective evaluation of an e-store's website or relevant technologies, e.g., perceived usefulness, perceived ease of use, tangibility, convenience, firmness, challenges, website design quality, etc.	Perceived firmness (including internal stability and external security) (Kim et al., 2002)
5.2.5	Beliefs about an e-store as a whole	An individual's overall subjective evaluation of an e-store that mixes beliefs about vendor, product, supporting service, and website/technology associated with this store.	Motivator of consumer purchases in terms of electronic store design quality (Liang and Lai, 2002)
5.2.6	Belief speci shop expe		
6	Affec react		
6.1	Affec reac char		
6.2	Affe reac e-st shoj expe		
6.2.1	Affe reac ven		
6.2.2	Affe rea offe pro on		
6.2.3	Affe rea sup ser		
6.2.4	Aff rea we tec		
6.2.5	Aff rea e-s wh		
6.2.6	Af re sp sh e>		
7	A o b		

5.2.6	Beliefs about specific online shopping experience	An individual's overall subjective evaluation of a specific online shopping experience at a specific e-store	Cost reduction, convenience in purchasing (Lee et al., 2003)
6	Affective reactions	An individual's primitive emotional reactions toward objects in B2C e-commerce context, e.g., the Internet as a shopping channel, a specific e-store or online shopping experience. It contains three dimensions, arousal, pleasure, and dominance.	See below.
6.1	Affective reactions to EC channel	It refers to an individual's primitive emotional reactions toward the Internet as a shopping channel.	Shopping enjoyment as a type of sociopsychological value (Lee et al., 2003)
6.2	Affective reactions to an e-store/online shopping experience	An individual's primitive emotional reactions toward a specific e-store or a specific online shopping experience.	See below.
6.2.1	Affective reactions to vendor	An individual's primitive emotional reactions toward an electronic vendor.	None.
6.2.2	Affective reactions to offering (e.g., product, service on sale)	An individual's primitive emotional reactions toward the products or services for sale in an e-store.	Consumer involvement with retailers' offerings (exciting, neat, appealing, fun, interesting) (Griffith et al., 2001)
6.2.3	Affective reactions to supporting service	An individual's primitive emotional reactions toward the service an e-store offers to support the B2C transaction process, including during-sale and after-sale service, etc.	None.
6.2.4	Affective reactions to website/ technology	An individual's primitive emotional reactions toward an e-store's website or relevant technologies.	Entertainment (perceived entertainment value of the site) (O'Keefe et al., 2000)
6.2.5	Affective reactions to an e-store as a whole	An individual's primitive emotional reactions toward an e-store as a whole.	Emotions experienced in a virtual shopping environment (including 3 dimensions: arousal, pleasure, and dominance) (Huang, 2003)
6.2.6	Affective reactions to specific online shopping experience	An individual's primitive emotional reactions toward a specific shopping experience at a specific e-store	Shopping enjoyment (reflects the customer experience at the video store: interesting, fun) (Koufaris, 2002)
7	Attitudes to online shopping behavior	An individual's positive or negative feelings about performing online shopping behavior, including using the EC channel generally and using a specific e-store.	See below.

Table 9.2 *(continued)*

ID	Category	Description	Examples
7.1	Attitudes to using EC channel generally	An individual's positive or negative feelings about using the Internet as a shopping channel	Attitude toward using online banking generally (Tan and Teo, 2000)
7.2	Attitudes to using a specific e-store	An individual's positive or negative feelings about performing online shopping behavior at a specific e-store.	Customer attitude toward the e-publishing site (operationalized as students' positive feelings toward repetitive use of the site) (Lu and Lin, 2002)
8	Intention to shop online	Consumers' willingness to shop online in general or at a specific e-store.	See below.
8.1	Intention to shop online generally	Consumers' willingness to use the Internet as a shopping channel in general, not limited to a specific e-store.	Acceptance of electronic channel (intention to purchase a particular product electronically) (Liang and Huang, 1998)
8.2	Intention to shop at a specific e-store	Consumers' willingness to re/visit or re/purchases at a specific e-store.	Willingness to purchase/ visit again/purchase again at a specific store (Liang and Lai, 2002); Customer loyalty (Lu and Lin, 2002)
9	Shopping behavior	Consumers' actions of visiting/revisiting e-stores, placing orders to buy products, or signing contracts to accept and use services.	See below.
9.1	Shopping online generally	Consumers' actions of visiting/revisiting e-stores, placing orders to buy products or signing contract to accept services via the Internet. Not limited to a specific e-store.	Frequency of e-commerce experience (Han and Noh, 1999–2000); Frequency of purchasing financial products online (not limited to a financial agent specifically) (Ramaswami et al., 2000–2001)
9.2	Shopping at a specific e-store	Consumers' visiting/revisiting e-stores, placing orders to buy products or signing contracts to accept and use services at a specific e-store.	Frequency of using a virtual store (Chen et al., 2002); Switching (a change of the major brokerage firm by a customer) (Chen and Hitt, 2002)
10	Satisfaction	Summary of the psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience (Oliver, 1981)	See below.

10.1	Satisfaction with EC channel	Summary of psychological state resulting from disconfirmation/confirmation of a customer's expectations about the Internet as a shopping channel by his/her evaluation of online shopping experience.	Satisfaction with general EC experience (Han and Noh, 1999–2000)
10.2	Satisfaction with an e-store/online shopping experience	Summary of psychological state resulting from the extent to which a consumers' evaluation of an overall online shopping experience/e-store confirms his/her expectations.	See below.
10.2.1	Satisfaction with vendor	Customer satisfaction with an e-store's owner.	None.
10.2.2	Satisfaction with offering (product, service on sale)	Customer satisfaction with the products or services for sale in an e-store	Price satisfaction (Cao et al., 2003–2004)
10.2.3	Satisfaction with supporting service	Customer satisfaction with the service supporting the transactions offered by an e-store, e.g., delivery process, return process, etc.	Satisfaction with fulfillment process (Cao et al., 2003–2004)
10.2.4	Satisfaction with website/ technology	Customer satisfaction with the characters of an e-store's website or other features related to technology	Satisfaction with ordering process (Cao et al., 2003–2004)
10.2.5	Satisfaction with an e-store as a whole	Customer satisfaction with an e-store as a whole, not with a specific aspect such as product or website	Customer satisfaction with a specific Internet business (e-store) (Kim et al., 2002)
10.2.6	Satisfaction with a specific online shopping experience	Customer satisfaction with overall experience of patronizing an e-store	Satisfaction with overall experience of using an online banking division of one of the largest national banks in the US (Bhattacherjee, 2001b)

experiments and field experiments). Four were field studies. One study (Shim et al. 2002) combined both qualitative and quantitative methods, while quantitative methods including logistic regression were employed to explore the findings from existential phenomenology.

Results of Topical Coverage

Variables belonging to external environment, demographics, personal characteristics, and e-store characteristics were examined as independent variables in most studies. That is, these variables are proposed as predictors of or variables significantly correlated with constructs capturing consumers' cognitive and affective reactions and behaviors in B2C e-commerce context. These four factors fall into the left box in Figure 9.1. Intentions, behaviors, and satisfaction are treated as dependent variables in most studies. These three factors appear in the right box in Figure 9.1. They serve as the outcomes in most online customer behavior models. Occasionally, the influ-

ences of intentions on behaviors and impacts of satisfaction on intentions, behaviors, and beliefs are examined in such models. The other factors—online shopping beliefs, affective reactions, and attitudes—are treated as either dependent or independent variables in the 44 studies. Often such a variable is considered as a mediator in SEM or PLS models, thus it is both an IV and a DV. For example, Gefen and Straub (2000) hypothesized and confirmed that perceived ease of use of an e-store's Web site (belief) affected its perceived usefulness (belief), which in turn affected an individual's intention to buy books at this site. Beliefs, affective reactions, and attitudes fall into the middle box in Figure 9.1.

Table 9.3 summarizes the distribution of the variables investigated in the article collection. Note that the number of papers examining a certain type of variables may be less than the sum of its subcategories, because one paper may investigate multiple subcategories of one type of variables.

As Table 9.3 indicates, three out of the four factors in the left box in Figure 9.1—demographics, personal characteristics, and e-store characteristics—have been investigated in 15, 12, and 13 studies, respectively, while another IV factor, external environment, has been examined in seven studies.

Among the three factors in the middle box in Figure 9.1, consumer beliefs have received extraordinary attention. This type of variable has been studied in 38 papers. Beliefs about both the Internet as a shopping channel in general and a particular e-store or specific online shopping experience have been widely investigated. In contrast, affective reactions and attitudes toward online shopping behavior are less represented. They have been explored in only ten and five studies, respectively. Consumers' affective reactions to e-stores' vendors or supporting service haven't been touched upon yet by the collection of studies.

Among the three factors in the right box of Figure 9.1, intention to shop online has been studied by 26 papers. In most studies intentions were treated as the ultimate outcome in consumer online shopping models. Fourteen studies managed to measure consumers' actual shopping behaviors. Customer satisfaction has drawn the attention of 12 studies.

A detailed presentation of variables examined in each article is shown in Table 9.4.

Results of Significant Relationships

This section summarizes the significant relationships among the ten types of variables empirically supported by the 44 studies. We are particularly interested in findings that attempted to reveal factors predicting or significantly correlating with the variables in the right and middle boxes in Figure 9.1. Since we focus here on the direct and primary factors, we do not present moderators or moderating relationships in this section but rather in the discussion section.

Intention to Shop Online. Twenty-six out of the 44 empirical studies confirmed significant relationships between an individual's intention to shop online and other constructs. As expected, intention has been found to be a good predictor of online shopping behavior (e.g., Khalifa and Limayem 2003; Suh and Han 2003; Pavlou 2003).

Many studies in the collection attempted to identify antecedents of behavioral intentions. A number of studies found that a prospective consumer's subjective beliefs about the Internet as a shopping channel in general significantly impact one's intention to shop online (Devaraj et al. 2003; Khalifa and Limayem 2003; Liang and Huang 1998; Liao and Cheung 2001). These beliefs pertain to many aspects of the EC channel, such as efficiency, time saving, security/risks associated with transaction, uncertainty, price, transaction cost, customer service, comparative shop-

Table 9.3

Variables

ID	Ca
1	Ex
2	De
3	Pe
4	E-
4.1	Ve
4.2	Of
4.3	Su
4.4	W
4.5	E-
5	Be
5.1	Be
5.2	Be
5.2.1	Be
5.2.2	Be
5.2.3	Be
5.2.4	Be
5.2.5	Be
5.2.6	Be
6	Af
6.1	Af
6.2	Af ex
6.2.1	Af
6.2.2	Af
6.2.3	Af
6.2.4	Af
6.2.5	Af
6.2.6	Af e>
7	At
7.1	At
7.2	At
8	In
8.1	In
8.2	In
9	S
9.1	S
9.2	S
10	S
10.1	S
10.2	S
10.2.1	S
10.2.2	S
10.2.3	S
10.2.4	S
10.2.5	S
10.2.6	S

Notes:
IV–Ind
Total n

Table 9.3

Variables Investigated in the Collection

ID	Category	Variable Type	No. of Papers Examining this Variable
1	External environment	IV	7
2	Demographics	IV	15
3	Personal characteristics	IV	12
4	E-store characteristics	IV	13
4.1	Vendor characteristics		0
4.2	Offering (product, service on sale) characteristics		6
4.3	Supporting service characteristics		2
4.4	Website/technology characteristics		7
4.5	E-store characteristics		6
5	Beliefs about online shopping	IV/DV	38
5.1	Beliefs about EC channel		13
5.2	Beliefs about an e-store / online shopping experience		30
5.2.1	Beliefs about vendor		8
5.2.2	Beliefs about offering (product, service on sale)		8
5.2.3	Beliefs about supporting service		0
5.2.4	Beliefs about website/technology		15
5.2.5	Beliefs about an e-store as a whole		8
5.2.6	Beliefs about an online shopping experience		5
6	Affective reactions	IV/DV	10
6.1	Affective reactions to EC channel		1
6.2	Affective reactions to an e-store/online shopping experience		9
6.2.1	Affective reactions to vendor		0
6.2.2	Affective reactions to offering (product, service on sale)		1
6.2.3	Affective reactions to supporting service		0
6.2.4	Affective reactions to website/technology		3
6.2.5	Affective reactions to an e-store as a whole		2
6.2.6	Affective reactions to a specific online shopping experience		3
7	Attitudes to online shopping behavior	IV/DV	5
7.1	Attitudes to using EC channel generally		2
7.2	Attitudes to using a specific e-store		3
8	Intention to shop online	DV/IV	26
8.1	Intention to shop online generally		7
8.2	Intention to shop at a specific e-store		19
9	Shopping behavior	DV	14
9.1	Shopping online generally		9
9.2	Shopping at a specific e-store		7
10	Satisfaction	DV/IV	12
10.1	Satisfaction with EC channel		4
10.2	Satisfaction with an e-store / online shopping experience		9
10.2.1	Satisfaction with vendor		0
10.2.2	Satisfaction with offering (e.g. product, service on sale)		1
10.2.3	Satisfaction with supporting service		0
10.2.4	Satisfaction with website/technology		1
10.2.5	Satisfaction with an e-store as a whole		1
10.2.6	Satisfaction with a specific online shopping experience		8

Notes:
IV–Independent variable; DV–Dependent variable.
Total number of papers in the collection: 44.

Table 9.4

Variables Investigated in Each Study

Authors (Year)	1 External environment	2 Demographics	3 Personal characteristics/ disposition	4.1 Vendor characteristics	4.2 Offering characteristics	4.3 Supporting service characteristics	4.4 Website/Technology characteristics	4.5 E-store characteristics	5.1 Beliefs about EC channel	5.2 Beliefs about an e-store/shopping experience	6.1 Affective reactions to EC channel	6.2 Affective reactions to an e-store/ shopping experience	7.1 Attitude to using EC channel generally	7.2 Attitude to using a specific e-store	8.1 Intention to shop online generally	8.2 Intention to shop at a specific e-store	9.1 Purchasing online generally	9.2 Shopping at a specific e-store	10.1 Satisfaction with EC channel	10.2 Satisfaction with an e-store/shopping experience
Bellman et al. (1999)		X	X							X							X			
Bhatnagar et al. (2000)		X			X				X	X							X			
Bhattacherjee (2001a)								X		X						X				X
Bhattacherjee (2001b)										X				X						X
Cao et al. (2003–2004)					X															X
Chau et al. (2002)	X		X							X		X								
Chen and Hitt (2002)		X	X		X		X	X				X						X		
Chen et al. (2002)										X				X		X		X		
Devaraj et al. (2002)									X	X					X				X	
Devaraj et al. (2003)		X			X	X	X	X	X						X					
Featherman et al. (2003)										X				X						
Gefen and Straub (2000)										X				X						
Gefen (2002)										X				X						
Gefen et al. (2003)										X				X						
Griffith et al. (2001)		X					X					X				X				
[illegible]	X	X							X				X						X	X

Gefen and Straub (2000)										X				X							
Gefen (2002)										X				X							

Gefen et al. (2003)										X				X							
Griffith et al. (2001)		X					X					X				X					
Han and Noh (1999–2000)	X	X							X				X							X	X
Henderson and Divett (2003)										X				X							
Huang (2003)			X					X				X				X					
Khalifa and Liu (2003)										X				X							
Khalifa and Liu (2002–2003)										X				X							
Khalifa and Limayem (2003)	X					X		X	X				X		X		X				
Kim et al. (2000)							X			X		X									
Kim et al. (2002)							X			X		X				X				X	
Koufaris (2002)		X	X							X		X				X		X			
Koufaris et al. (2001–2002)		X	X							X		X				X					
Lee and Turban (2001)			X					X													
Lee et al. (2003)									X		X									X	
Liang and Huang (1998)		X					X								X						
Liang and Lai (2002)			X		X			X		X						X		X			
Liao and Cheung (2001)	X	X			X				X	X				X							
Liao and Cheung (2002)										X		X				X					
Lu and Lin (2002)										X				X		X					
Luo and Seyedian (2003–2004)			X					X												X	
O'Keefe et al. (2000)	X	X	X					X				X									
Parthasarathy and Bhattacherjee (1998)	X	X				X				X							X				
Pavlou (2003)									X	X						X	X	X		X	
Ramaswami et al. (2000–2001)	X	X	X					X									X				
Ranganathan and Ganapathy (2002)										X				X							
Salam et al. (2003)									X	X											
Shim et al. (2002)							X	X												X	
Slyke et al. (2002)		X					X								X						
Suh and Han (2003)										X				X		X		X			
Tan and Teo (2000)		X	X						X				X		X						
Vellido et al. (2000)										X				X							

ping, relative life content, asset specificity, etc. Attitude toward online shopping behavior has been confirmed to be another antecedent of Internet shopping intention (Khalifa and Limayem 2003; Tan and Teo 2000). Objective e-store features such as product price and Web site design factors (e.g., information content, download time, safety) are significantly associated with shopping intention (Devaraj et al. 2003; Liao and Cheung 2001). In addition, external environment (e.g., social influences from family, media, etc.), personal needs, as well as Internet experience would enhance one's intention to adopt online shopping (Devaraj et al. 2003; Khalifa and Limayem 2003; Tan and Teo 2000).

Similarly, a prospective customer's willingness to patronize a specific Internet store is significantly associated with one's beliefs about this store in terms of its vendor, offering, supporting service, Web site, and one's overall shopping experience in the store. This has been verified by a good number of studies (e.g, Bhattacherjee 2001a; Bhattacherjee 2001b; Chen et al. 2002; Gefen 2002; Liao and Cheung 2002). Perceived usefulness of the product/service offered for sale is an important motivator of shopping intention (Bhattacherjee 2001a; Bhattacherjee 2001b). The intention could be damaged by perceived risks related to e-store performance, finance, time, psychology, social image, and privacy (Featherman et al., 2003). Customer trust toward the vendor or store may enhance shopping intention directly or indirectly by reducing perceived risk (Gefen 2002). Perceived e-store/Web site design quality (e.g., PU, PEOU, transaction accuracy, security, tangibles, etc.) is another fundamental factor users consider when deciding which e-store to shop (Chen et al. 2002; Gefen and Straub 2000; Gefen 2002; Liang and Lai, 2002; Liao and Cheung 2002). Affective reactions toward an e-store also predict a customer's shopping intention. Positive shopping enjoyment, emotions experienced in a virtual shopping environment, and perceived control may increase shopping intentions (Huang 2003; Koufaris 2002; Koufaris et al. 2001–2002). Besides beliefs and affective reactions, researchers discovered that customer attitude toward patronizing a certain e-store is a strong antecedent of shopping intention (Lu and Lin 2002; Chen et al. 2002).

Both general and specific online shopping intention might be enhanced due to higher customer satisfaction (e.g., Bhattacherjee 2001a; Bhattacherjee 2001b; Devaraj et al, 2002; Kim et al. 2002). For example, Devaraj et al. (2002) found that consumer satisfaction with EC channel had a positive impact on one's EC channel preference, which was measured through four items pertaining to one's intentions to shop online and one's recommendation of an EC shopping channel to others. According to its nature, EC channel preference is considered as online shopping intention.

Online Shopping Behavior. Fourteen empirical studies have identified antecedents of or variables significantly correlated with customers' online shopping behavior. Generally, whether one buys products or service online is influenced by external environment, demographics, personal characteristics, e-store features, beliefs about online shopping, and behavioral intention. People who have a wired lifestyle and those who have more experience with the Internet and online shopping are more open to purchasing on the Internet (Bellman et al. 1999; Bhatnagar et al. 2000). Further, people who like being first to use new technologies and who agree that the Internet improves productivity are more likely to shop online (Bellman et al. 1999). Chen and Hitt (2002) revealed that product variety is significantly correlated with reduced switching and attrition behaviors in the online brokerage industry. Better facilitating conditions such as transaction efficiency would attract more customers to patronize e-stores (Khalifa and Limayem 2003). Beliefs about the Internet as a shopping channel in terms of security, risk, trust, convenience, control, Web site features (e.g., ease of use), and customer service have been confirmed to be strong predictors of shopping

behaviors (Han and Noh 1999–2000; Vellido et al. 2000). Of course, intention to shop online is another predictor (Khalifa and Limayem 2003) of shopping behavior. In addition, competitors' performance, which is an external environment factor, plays an important role in predicting consumers' online shopping behavior. For example, Ramaswami et al. (2000–2001) confirmed that less satisfaction with the performance of an offline financial service agent would lead to greater disagreement between consumer and the agent, which in turn would encourage the customer to buy financial products online.

Customers still have many decisions to make, even if they have decided to buy a certain product or service online. Which specific store to shop? How much to spend? How often to shop? As expected, behavioral intention is a good predictor of shopping behavior at a specific e-store (Suh and Han 2003, Pavlou 2003). Despite that, Liang and Lai (2002) proposed and validated that better e-store features such as lower product price, better Web site design, and better store reputation motivate customer shopping behavior at a specific store. Similarly, Parthasarathy and Bhattacherjee (1998) found that network externality (i.e., providing a manual, a tutorial, a user guide to help purchasers use the product) attracts customers. Moreover, empirical studies confirmed that customer beliefs about a store Web site (e.g., PU, PEOU) and product attributes (e.g., usefulness and compatibility) have significant impact on one's shopping behavior (Henderson and Divett 2003; Parthasarathy and Bhattacherjee 1998). Personal factors such as special needs and external/interpersonal influence (e.g., influence from mass media, advertising, friends, colleagues, etc.) would motivate one to buy products or service at a particular e-store (Liang and Lai 2002, Parthasarathy and Bhattacherjee 1998). Sometimes certain shopping behavior could be predicted by other types of shopping behavior. For instance, Parthasarathy and Bhattacherjee (1998) conducted a study to understand consumers' postadoption behavior in the context of online communication service. They found that discontinuers use the service less extensively during their initial adoption period than continuing adopters; while those who turn to other similar service providers later adopt the service earlier and use it more extensively than those who stop using this type of service completely.

Customer Satisfaction. The results of 12 out of the 44 empirical studies illustrate significant relationships between online customer satisfaction and other constructs. Most studies treated satisfaction as a dependent variable and tried to identify its antecedents. It has been verified that customers' satisfaction with general B2C e-commerce channel is influenced by one's general beliefs about the Internet as a shopping channel (e.g., perceived ease of use, transaction cost, time saved, etc.) (Devaraj et al. 2002; Han and Noh 1999–2000; Lee et al. 2003), affective reaction toward the EC channel (Lee et al. 2003), and personal disposition such as perceived importance of contextual marketing, and perception of the importance of customer-orientation strategy (Luo and Seyedian 2003–2004).

Customer satisfaction with shopping experience at a specific e-store has been found to be significantly associated with product price (Cao et al. 2003–2004), Web site/technology features or other e-store characteristics (Shim et al. 2002), one's beliefs about this e-store or shopping experience obtained at this site (Bhattacherjee 2001a; Bhattacherjee 2001b), affective reactions to the e-store website/technology (Kim et al. 2002), and satisfaction with price and ordering process (Cao et al. 2003–2004). Beliefs about an e-store/shopping experience include evaluative perceptions about the product, Web site, expectation disconfirmation, and desire disconfirmation (Khalifa and Liu 2002–2003). For instance, Bhattacherjee (2001b) verified that customer satisfaction with one's overall experience of an online banking division (OBD) was positively associated with the perceived usefulness of this OBD and the extent of confirmation of one's expectation.

On the other hand, satisfaction has been found to have significant influences on customers' shopping intention as discussed in the preceding section (e.g., Bhattacherjee 2001a; Bhattacherjee 2001b; Devaraj et al. 2002; Kim et al. 2002). Furthermore, customer satisfaction with past transactions could even impact one's beliefs about an e-store, such as trust in the retailer (Pavlou 2003).

Beliefs about Online Shopping Phenomenon. Several studies observed that beliefs about both the Internet as a shopping channel and a specific e-store or shopping experience are associated with external environment (e.g., social disturbance factor), demographics (e.g., e-commerce experience), personal characteristics (e.g., purpose of Internet use), product characteristics (e.g., technological complexity, ego-related level, expenditure level, etc.), and satisfaction with shopping experience (Han and Noh 1999–2000; Luo and Seyedian 2003–2004; O'Keefe et al. 2000; Bhatnagar et al. 2000; Chau et al. 2002; Pavlou 2003).

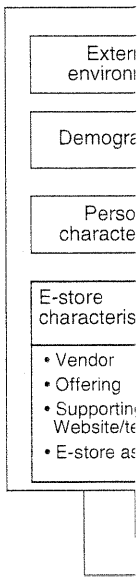
Different aspects of beliefs about the Internet as a shopping channel are significantly related. Four studies found this type of connection (Devaraj et al. 2002; Han and Noh 1999–2000; Liang and Huang 1998; Salam et al. 2003). For example, perceived online transaction cost is significantly associated with perceived uncertainty (including product uncertainty and process uncertainty) and asset specificity (including site specificity, physical asset specificity, human asset specificity, brand name specificity, and temporal specificity) (Liang and Huang 1998). Perceived inconvenience of online shopping reduces the expectation of e-commerce usefulness (Han and Noh 1999–2000).

Similarly, ten studies support the strong relationship between different aspects of beliefs about a specific e-store or shopping experience (e.g., Bhattacherjee 2001b; Chen et al. 2002; Gefen and Straub, 2000). For instance, perceived usefulness is positively predicted by perceived ease of use of an e-store or its website (Gefen and Straub 2000). Customer trust toward an e-store vendor is significantly associated with perceived risk of conducting transactions with this vendor and perceived reputation of the vendor, negatively and positively, respectively (Gefen 2002; Pavlou 2003). A customer's desires before adopting an electronic service and one's perceived performance of the service at adoption together predict his/her desire disconfirmation (Khalifa and Liu, 2002–2003).

Affective reactions to online shopping phenomenon

Traditionally, affective reaction consists of three dimensions: arousal, pleasure, and dominance (Russell and Pratt 1980; Mehrabian and Russell 1974; Huang 2003). In this collection of studies, all three are studied to some extent, yet few studies cover all three at the same time except Huang (2003). Pleasure received more attention than the other two dimensions. It has been called perceived entertainment value (Chau et al. 2002; O'Keefe et al. 2000) and shopping enjoyment (Koufaris et al. 2001–2002; Koufaris 2002). Empirical studies confirmed that it is associated with personal characteristics (e.g., purpose of Internet use and product involvement) and beliefs about e-stores (e.g., perceived information load and positive challenges of the website) (Chau et al. 2002; O'Keefe et al. 2000; Koufaris et al. 2001–2002; Koufaris 2002; Huang 2003). Huang (2003) observed that arousal (measured as stimulated-relaxed, excited-calm, frenzied-sluggish) experienced in a virtual shopping environment is associated with an individual's arousal-seeking tendency (i.e., liking arousal by change or by new stimuli). He also demonstrated that dominance (controlling-controlled, dominant-submissive, autonomous-guided) is significantly related to perceived information load of an e-store's website.

Figure 9.2



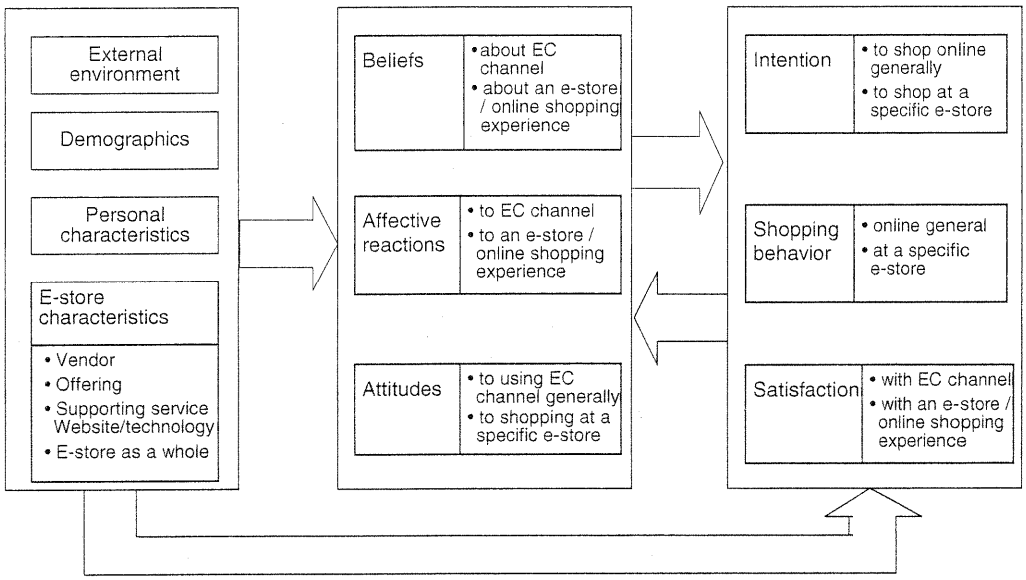
Attitudes To
attitudes tow
and Han 20(
shopping ex
e-store and
ence a poten
beliefs abou
effectivenes
assets) of an
and Han (2(
toward usin

A Refined

The finding
examination
is shown in

As discu
teristics, anc
Significant
satisfaction
(potential) c
impacts of b
out touchin
not deny th
box, such a

Figure 9.2 **A Refined Model**



Attitudes Toward Online Shopping Behavior. Three studies discovered antecedents of customers' attitudes toward using or purchasing at a specific e-store (Chen et al. 2002; Lu and Lin 2002; Suh and Han 2003). All these antecedents fall into the subcategory of beliefs about an e-store/online shopping experience. Chen et al. (2002) observed that perceived usefulness and ease of use of an e-store and the compatibility of its use with existing values, beliefs, and needs positively influence a potential customer's attitude toward using this store. Lu and Lin (2002) found that a user's beliefs about the content (referring to the product/service offered by an e-store), context (i.e., effectiveness of the Web site's interface), and infrastructure (i.e., efficiency of a collection of assets) of an electronic newspaper site positively impact one's attitude toward using this site. Suh and Han (2003) validated that a customer's trust in an e-store would predict positive attitude toward using this store.

A Refined Model

The findings of this study support the research framework depicted in Figure 9.1. The foregoing examination of the existing studies provides more details for the research model. A refined model is shown in Figure 9.2.

As discussed in the preceding section, external environment, demographics, personal characteristics, and e-store characteristics have been examined as independent variables in most studies. Significant impacts of these factors on individual's online shopping intentions, behaviors, and satisfaction are confirmed by these studies. These influences are either direct or mediated by (potential) customers' beliefs, affective reactions, and attitudes. Some studies explore only the impacts of beliefs, affective reactions, and attitudes on intention, behavior, and satisfaction without touching those variables in the left box (e.g., Khalifa and Liu 2002–2003). However, this does not deny the external factors' input roles. In the other direction, outcome variables in the right box, such as satisfaction, could have fundamental impacts on a customer's beliefs about online

shopping. In addition, significant associations exist between variables within the same box. For example, intention to shop online is a good predictor of shopping at a specific e-store.

DISCUSSION

Before we discuss the implications of this study and the future directions of this research area, it is important to acknowledge the study's limitations.

The first limitation is the source of the selected papers, which may introduce bias into the study results. Due to the nature of B2C e-commerce research, relevant studies are published across various journals in multiple disciplines, such as information systems, marketing, management, advertising, etc. Including all the studies in this area is close to infeasible. To focus on the information systems perspective and still have a good set of representative studies, we used a journal basket approach and did an exhaustive search of nine primary IS journals for publications in most recent years, yielding a total of 44 quantitative empirical papers. Selection of this basket of papers might introduce bias into analysis due to its limited coverage and disciplinary perspectives. The second limitation of the current study is the omission of moderating variables and relationships in the analysis. As a first attempt to draw an overview of the research area and to control the scope of the study, we tried to focus on the main factors and their relationships. Moderators are important and give the picture richness that warrants future investigation.

Despite the limitations, we believe that the findings presented in this chapter, representing one of the few studies that synthesize existing work on consumer online shopping behavior, do offer interesting insight into the state of the art of this research stream and have several important implications that may guide future research in this area.

Moderating Effects

A few studies in the collection explored moderating effects. All significant moderators belong to "external factors" that fall into the left box in Figures 9.1 and 9.2 (Liang and Huang 1998; Luo and Seyedian 2003–2004; Koufaris et al. 2001–2002; Lee and Turban 2001). Shopping experience, online customer tenure (i.e., new vs. repeat), and trust propensity are good examples of such moderators. For example, Koufaris et al. (2001–2002) discovered that customer tenure moderates the positive impact of the perceived control one has experienced in an e-store on his/her intention to return to this e-store. Lee and Turban (2001) revealed that one's trust propensity positively moderates the relationship between one's perceived integrity of Internet merchants and his/her trust in online shopping. Though not included in analysis of the current study, moderators serve an important role in understanding the dynamics of online customer behaviors. Therefore we call for future examination in this direction.

Theoretical Models

The collected studies took different perspectives and utilized different theoretical models. There is little consensus on consistent theoretical models to describe and predict online shopping intention, behavior, satisfaction, and other relevant constructs. This lack of a common theoretical framework suggests the need to develop an integrative model of the phenomenon in order to promote systematic investigation of its components and the online shopping process. By identifying common elements and developing our model based on IS literature, we hope to have taken a step toward promoting this type of integration and synthesis of relevant literature.

Terminology

Terminology usage in the existing studies is inconsistent. Sometimes a single term is used to refer to several different constructs by different researchers. At other times, one construct could be referred to by several different terms. For example, pleasure experienced in a virtual shopping environment (Huang 2003), perceived entertainment value (Chau et al. 2002; O'Keefe et al. 2000), and shopping enjoyment (Koufaris et al. 2001–2002; Koufaris 2002) all refer to the valence dimension of affective reaction toward an e-store. In contrast, the same term, compatibility, has been used to stand for different constructs. In Chen et al. (2002) and Parthasarathy and Bhattacherjee (1998) it refers to the degree to which using a virtual store/service is consistent with the customer's existing values, beliefs, ideas, experience, and needs, while in Vellido et al. (2000) it represents control and convenience of shopping experience. This phenomenon indicates that research in online customer behavior is still fairly new and developing. Unification of terminologies is needed.

Instruments

The ten factors and the diverse instruments to measure these variables used by different studies indicate that online shopping is a multidimensional and multidisciplinary phenomenon. Our examination shows that various studies have different ways of operationalizing seemingly identical constructs. This methodological issue needs to be addressed in future research, so that widely accepted and validated instruments can be employed for measuring consumer online shopping behavior and other relevant constructs. Addressing this issue will make comparing and synthesizing results across studies more feasible and easy.

Student Subjects

A good number of studies have, for convenience, employed university students as subjects (e.g., Gefen 2002; Lee and Turban 2001). These papers do provide important and interesting evidence to help us understand online shopping behaviors. However, the use of student subjects might introduce bias into the studies. University students belong to a specific population that typically has more Internet/computer experience, better Internet/computer skills, and higher education levels than "normal" people, yet they may not be financially established, or have the same purchasing power as those with full-time jobs. Further, demographic variables such as Internet experience, Web skills, education, and household income are significantly associated with a (potential) customer's reactions, attitudes, intentions, and behaviors in B2C e-commerce (Devaraj et al. 2003; Koufaris 2002; Liao and Cheung 2001). Therefore it might be questionable to generalize the results from a study using student sample in e-commerce context. Realizing this problem, some researchers have employed "normal" customers as subjects (e.g., Cao et al. 2003–2004; Koufaris 2002). We call for more such studies.

Affective Constructs

Affect, mood, and emotion are fundamental aspects of human beings. Many psychologists argue that it is impossible for a person to have a thought or perform an action without engaging, at least unconsciously, his or her emotional systems. Especially in the marketing and consumer behavior area, neglecting the role of affective constructs may leave the picture incomplete or ignore "normal" online shopping behavior, in line with the psychologists' argument that neglecting affect in

behavior studies means not looking at the normal behavior people have. Compared with cognitive beliefs (38 empirical studies examined belief variables in the collection), affective reactions have been paid less attention (10 studies). Therefore we call for more research effort in investigating the role affect-related constructs play in customers' online shopping behaviors.

Impacts and Antecedents of Customer Satisfaction

Satisfaction could significantly improve customers' trust in and loyalty to an e-store and thus bring this store more transactions and profit (Bhattacherjee 2001a; Bhattacherjee 2001b; Devaraj et al. 2002; Kim et al. 2002; Pavlou 2003). While a number of papers attempt to reveal antecedents of online customer satisfaction (e.g., Bhattacherjee 2001a; Bhattacherjee 2001b), more studies are needed to further explore the impacts and antecedents of this construct.

CONCLUSION

In an effort to provide a comprehensive and coherent understanding of customers' online shopping behavior, which is a key issue of e-CRM, this study has investigated and synthesized representative quantitative empirical studies in the IS literature over the period from 1998 to 2003. In this chapter, we first present a theoretically driven framework to describe customers' online shopping behavior, which agrees with the collection of the 44 empirical papers at a higher level. Ten categories of factors are identified: external environment, consumer demographics, personal characteristics, e-store characteristics, beliefs about online shopping phenomena, affective reactions, attitudes toward online shopping behavior, intentions to shop online, shopping behavior, and satisfaction. Through an analytical review of the 44 papers, we develop a classification scheme of these factors and assign the variables investigated in the empirical studies to corresponding categories. Further, based on the significant relationships amongst the variables verified in the empirical studies, the original framework is refined and a more detailed one is proposed (see Figure 9.2).

This research framework helps us get a broader view of customers' online shopping behavior. It has significant implications for both practitioners and academic researchers. Important "external" factors and psychological constructs that may directly or indirectly impact customers' intention, behavior, and satisfaction are revealed in this chapter. These findings would help the electronic store owners, e-commerce Web site designers, and other EC shareholders to target more appropriate consumer groups, to improve product and service quality, and to design better e-commerce Web sites. Thus they could attract more online transactions and establish more successful e-CRM.

This study also identifies where there might be gaps in the research stream and potential opportunities in future research. By analyzing the variables under investigation in the empirical studies, we discover that customer satisfaction and affective reactions toward EC channel or specific e-stores have not been given enough attention, though they play fundamental roles in our understanding of customers' online shopping behavior. In addition, we recognize important methodological issues in this research area. A common theoretical framework, widely accepted instruments, and consistency in terminology are much needed to compare results across studies and to accumulate knowledge in this subfield.

In summary, we believe that the current study provides beneficial implications for both academic research and industry practice based on an insightful review of the existing work on consumer online shopping phenomena.

APPENDIX 9.1

FORTY-FOUR PAPERS EXAMINED IN THIS STUDY

Authors (Year)	Journal	Type	Description of study
Bellman et al. (1999)	CACM	Survey	Using 1997's WVTM data; 10,180 respondents
Bhatnagar et al. (2000)	CACM	Survey	Using 1997's GVU data; 645 respondents
Bhattacherjee (2001a)	DSS	Survey	Online brokerage OLB user; 122 usable responses
Bhattacherjee (2001b)	MISQ	Survey	122 online banking users
Cao et al. (2003–2004)	IJEC	Survey	Using data about 9 book e-retailers from BizRate.com (weekly average ratings of customer satisfaction) and a databases of market-basket prices
Chau et al. (2002)	CACM	Experiment	2 identical experiments in U.S. (119 subjects) and HK (150 subjects)
Chen and Hitt (2002)	ISR	Field study	Using web site traffic data to measure switching costs for online service providers; using "clickstream" data on over 2,000 individuals who utilize the 11 largest online broker sites provided by Media Metrix; also use additional data from Gomez Advisors, an online market research firm, to determine the attributes of the sites studied
Chen et al. (2002)	IM	Survey	Online survey, 253 responses
Devaraj et al. (2002)	ISR	Experiment	134 subjects; subjects purchased similar products through conventional as well as EC channels and reported their experiences in a survey after each transaction
Devaraj et al. (2003)	CACM	Experiment	134 respondents
Featherman et al. (2003)	IJHCS	Experiment	Two computer lab usability tests utilizing vendors shopping trial demonstration software; 214 and 181 subjects respectively
Gefen and Straub (2000)	JAIS	Experiment	202 MBA students at a U.S. university
Gefen (2002)	JAIS	Survey	Online book purchase; 160 students subjects
Gefen et al. (2003)	MISQ	Field study	213 responses; experienced online shoppers who were undergraduate and graduate business students at a leading business school in the mid-Atlantic region of the United States
Griffith et al. (2001)	IJEC	Experiment	Between-subjects research design; 3 treatment conditions: (1) Print content presentation vs. physical medium interface: n = 103; (2) Online replication content presentation vs. Web-based physical-medium interface: n = 112; (3) Media vivid content presentation vs. Web-based physical-medium interface: n = 121.
Han and Noh (1999–2000)	IJEC	Survey	Survey using questionnaire; regular mail, e-mail, f2f interview; simple random sampling from a finite population in Korea; 325 subjects, who were business owners, employees, students, homemakers, and others; people's opinions about general EC
Henderson and Divett (2003)	IJHCS	Field study	247 participants completed the survey; electronically recorded indicators of use in the form of deliveries, purchase value, and number of log-ons to the system; recorded for the month the participants completed the questionnaire and 6 further months.
Huang (2003)	IM	Field study	115 web users including students, staff, and faculty from a large university
Khalifa and Liu (2003)	JAIS	Survey	Online service-online knowledge community; two stages: at adoption, 131 responses; post-adoption, 107 responses

(continued)

APPENDIX 9.1 *(continued)*

Authors (Year)	Journal	Type	Description of study
Khalifa and Liu (2002–2003)	IJEC	Survey	2 rounds: (1) 356 new members of an online knowledge community for electronic business practitioners; (2) 131 respondents of the first survey a week after their membership registration
Khalifa and Limayem (2003)	CACM	Survey	Longitudinal study consisting of 2 online surveys: 1,410 and 705 responses, respectively
Kim et al. (2000)	IJHCS	Experiment	2 consecutive experiments; compare subjects' reactions in different shopping sites with different link structure; 172 and 67 subjects for each, respectively
Kim et al. (2002)	ISR	Survey	In Korea; 4 domains: virtual mall (4,644 subjects), stock brokerage (6,582 subjects), search portal (3,462 subjects), online game (1,991 subjects); 30 trained subjects to assess objective features of architectural quality
Koufaris (2002)	ISR	Survey	An online bookstore; 280 responses who were all new customers of the bookstore
Koufaris et al. (2001–2002)	IJEC	Survey	An e-commerce company; 332 customers
Lee and Turban (2001)	IJEC	Survey	405 subjects who were undergraduate students in Hong Kong
Lee et al. (2003)	JAIS	Survey	65 responses; undergraduate students in Hong Kong
Liang and Huang (1998)	DSS	Survey	5 products; 85 subjects familiar with the Internet
Liang and Lai (2002)	IM	Experiment	3 e-bookstores in Taiwan; 3 experts; 30 student subjects
Liao and Cheung (2001)	IM	Survey	Internet users in Singapore, 312 responses
Liao and Cheung (2002)	IM	Survey	323 responses; Singapore; e-retail banking
Lu and Lin (2002)	IM	Survey	145 undergraduate students in Taipei; e-publishing web site
Luo and Seyedian (2003–2004)	IJEC	Survey	Northeastern United States; 180 useful responses
O'Keefe et al. (2000)	IJHCS	Experiment	3 experiments in 3 countries: U.S. (122 subjects), HK (150 subjects), UK (44 subjects)
Parthasarathy and Bhattacherjee (1998)	ISR	Survey	443 responses from randomly selected subscribers of a mailing list
Pavlou (2003)	IJEC	Survey	2 studies: 1. three experiential exploratory surveys, 103 students subjects; 2. online survey using online consumers as population, 155 responses
Ramaswami et al. (2000–2001)	IJEC	Survey	154 respondents; financial service
Ranganathan and Ganapathy (2002)	IM	Survey	214 online shoppers in Illinois
Salam et al. (2003)	CACM	Survey	Using 2 separate data sets of the 1997 GVU Center's Web Survey data, 3,987 and 5,048 respondents, respectively
Shim et al. (2002)	JAIS	Mixed	2 phases: (1) existential phenomenology (23 respondents); (2) Logistic regression (89 individual firms). Findings from Phase 1 were explored with quantitative methods in Phase 2.
Slyke et al. (2002)	CACM	Survey	511 subjects ranging in age from 17 to 48 years
Suh and Han (2003)	IJEC	Survey	Internet banking adoption in Korea; 2001; 502 responses
Tan and Teo (2000)	JAIS	Survey	Internet banking adoption; online questionnaire survey, Singapore, 454 responses
Vellido et al. (2000)	IJEC	Survey	Using data from the GVU's ninth WWW user survey, "Internet Shopping (Part 1) Questionnaire"; 2,180 subjects

REFERENCES

Ajzen, I. Nature and operation of attitudes. *Annual Review of Psychology*, 52 (2001), 27–58.

Ajzen, I. The theory of planned behavior. *Organizational Behavior and Human Decision Process*, 50 (1991), 179–211.

Ajzen, I. and Fishbein, M. *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice-Hall, 1980.

Alavi, M. and Carlson, P. A review of MIS research and disciplinary development. *Journal of Management Information Systems*, 8, 4 (1992), 45–62.

Bellman, S.; Lohse, G.; and Johnson, E. Predictors of online buying behavior. *Communications of the ACM*, 42, 12 (1999), 32–38.

Bhatnagar, A.; Misra, S.; and Rao, H.R. Online risk, convenience, and Internet shopping behavior. *Communications of the ACM*, 43, 11 (2000), 98–105.

Bhattacherjee, A. An empirical analysis of the antecedents of electronic commerce service continuance. *Decision Support Systems*, 32 (2001a), 201–214.

Bhattacherjee, A. Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25, 3 (2001b), 351–370.

Borchers, A. Trust in Internet shopping: A test of a measurement instrument. In *Proceedings of the 7th Americas Conference on Information Systems*, 2001, 799–803.

Breckler, S.J. and Berman, J.S. Affective responses to attitude objects: Measurement and validation. *Journal of Social Behavior and Personality*, 6, 3 (1991), 529–544.

Cao, Y.; Gruca, T.S.; and Klemz, B.R. Internet pricing, price satisfaction, and customer satisfaction. *International Journal of Electronic Commerce*, 8, 2 (2003–2004), 31–50.

Case, T.; Burns, O.M.; and Dick, G.N. Drivers of on-line purchasing among U.S. university students. In *Proceedings of the 7th Americas Conference on Information Systems*. 2001, 873–878.

Chau, P.Y.K.; Cole, M.; Massey, A.P.; Montoya-Weiss, M.; and O'Keefe, R.M. Cultural differences in the online behavior of consumers. *Communications of the ACM*, 45, 10 (2002), 138–143.

Chen, L.; Gillenson, M.L.; and Sherrell, D.L. Enticing online consumers: An extended technology acceptance perspective. *Information and Management*, 39 (2002), 705–719.

Chen, P. and Hitt, L. Measuring switching costs and the determinants of customer retention in Internet-enabled businesses: A study of the online brokerage industry. *Information Systems Research*, 13, 3 (2002), 255–274.

Cho, Y. and Fjermestad, J. Using electronic customer relationship management to maximize/minimize customer satisfaction/dissatisfaction. In N.C. Romano Jr. and J. Fjermestad, (eds.), *Advances in Management Information Systems: Special Issue on Customer Relationship Management*, 2006.

Cho, Y.; Im, I.; Hiltz, S.R., and Fjermestad, J. The effects of post-purchase evaluation factors on online vs. offline customer complaining behavior: implications for customer loyalty. *Advances in Consumer Research*, 29 (2002), 318–326.

Cho, Y., Im, I.; Fjermestad, J.; and Hiltz, S.R. The impact of product category on customer dissatisfaction in cyberspace. *Business Process Management Journal*, 9, 5 (2003), 635–651.

Cho, Y.; Im, I.; Hiltz, R.; and Fjermestad, J. Causes and outcomes of online customer complaining behavior: Implications for customer relationship management (CRM). In *Proceedings of the 7th Americas Conference on Information Systems*, 2001, 900–907.

Davis, F.D.; Bagozzi, R.P.; and Warshaw, P.R. User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35, 8 (1989), 982–1003.

DeLone, W.H. and McLean, E.R. Information systems success: The quest for the dependent variable. *Information Systems Research*, 3, 1 (1992), 60–95.

Devaraj, S.; Fan, M.; and Kohli, R. Antecedents of B2C channel satisfaction and preference: Validating e-commerce metrics. *Information Systems Research*, 13, 3 (2002), 316–333.

Devaraj, S.; Fan, M.; and Kohli, R. E-loyalty—elusive ideal or competitive edge? *Communications of the ACM*, 46, 9 (2003), 184–191.

ePayments Resource Center. Electronic transactions statistics (available at www.epaynews.com/statistics/, accessed on August 8, 2004).

Featherman, M.S. and Pavlou, P.A. Predicting e-services adoption: A perceived risk facets perspective. *International Journal of Human-Computer Studies*, 59 (2003), 451–474.

Fishbein, M. and Ajzen, I. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley, 1975.

Gefen, D. and Straub, D. The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. *Journal of the Association for Information Systems*, 1, 8 (2000), 1–28.

Gefen, D. Customer loyalty in e-commerce. *Journal of the Association for Information Systems*, 3 (2002), 27–51.

Gefen, D.; Karahanna, E.; and Straub, D.W. Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27, 1 (2003), 51–90.

Griffith, D.A.; Krampf, R.F.; and Palmer, J.W. The role of interface in electronic commerce: Consumer involvement with print versus on-line catalogs. *International Journal of Electronic Commerce*, 5, 4 (2001), 135–153.

Han, K.S. and Noh, M.H. Critical failure factors that discourage the growth of electronic commerce. *International Journal of Electronic Commerce*, 4, 2 (1999–2000), 25–43.

Hardgrave, B. and Walstrom, K. Forums for MIS scholars. *Communications of the ACM*, 40, 11 (1997), 119–124.

Henderson, R. and Divett, M.J. Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human-Computer Studies*, 59 (2003), 383–395.

Ho, C. and Wu, W. Antecedents of consumer satisfaction on the Internet: An empirical study of online shopping. In *Proceedings of the 32nd Hawaii International Conference on System Sciences*, 1999.

Huang, M.H. Modeling virtual exploratory and shopping dynamics: An environmental psychology approach. *Information and Management*, 41 (2003), 39–47.

Jarvenpaa, S.L.; Tractinsky, N.; and Vitale, M. Consumer trust in an Internet store. *Information Technology and Management*, 1 (2000), 45–71.

Karahanna, E.; Straub, D.W.; and Chervan N. L. Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 23, 2 (1999), 183–213.

Khalifa, M. and Liu, V. Determinants of satisfaction at different adoption stages of Internet-based services. *Journal of the Association for Information Systems*, 4, 5 (2003), 206–232.

Khalifa, M. and Liu, V. Satisfaction with Internet-based services: The role of expectations and desires. *International Journal of Electronic Commerce*, 7, 2 (2002–2003), 31–49.

Khalifa, M. and Limayem, M. Drivers of Internet shopping. *Communications of the ACM*, 46, 12 (2003), 233–239.

Khalifa, M.; Limayem, M.; and Liu, V. Online consumer stickiness: A longitudinal study. *Journal of Global Information Management*, 10, 3 (2002), 1–15.

Kim, E.B.; Eom, S.B.; and Yoo, S. Effective user interface design for online stores in the Asia Pacific region: A survey study. In *Proceedings of the 7th Americas Conference on Information Systems*, 2001, 867–872.

Kim, J.; Lee, J.; Han, K.; and Lee, M. Businesses as buildings: Metrics for the architectural quality of internet businesses. *Information Systems Research*, 13, 3 (2002), 239–254.

Kim, J. and Yoo, B. Toward the optimal link structure of the cyber shopping mall. *International Journal of Human-Computer Studies*, 52 (2000), 531–551.

Kimery, K.M. and McCord, M. Third-party assurances: The road to trust in online retailing. In *Proceedings of the 35th Hawaii International Conference on System Sciences*, 2002.

Koufaris, M.; Kambil, A.; and LaBarbera, P.A. Consumer behavior in Web-based commerce: An empirical study. *International Journal of Electronic Commerce*, 6, 2 (2001–2002), 115–138.

Koufaris, M. Applying the technology acceptance model and flow theory to online consumer behavior. *Information Systems Research*, 13, 2 (2002), 205–223.

Lee, J.; Pi, S; Kwok, R.C.; and Huynh, M.Q. The contribution of commitment value in internet commerce: An empirical investigation. *Journal of the Association for Information Systems*, 4 (2003), 39–64.

Lee, K.O. and Turban, E. A trust model for consumer Internet shopping. *International Journal of Electronic Commerce*, 6, 1 (2001), 75–91.

Li, H.; Kuo, C.; and Russell, M.G. The impact of perceived channel utilities, shopping orientations, and demographics on the consumer's online buying behavior. *Journal of Computer-Mediated Communication*, 5, 2 (1999).

Liang, T. and Huang, J. An empirical study on consumer acceptance of products in electronic markets: A transaction cost model. *Decision Support Systems*, 24 (1998), 29–43.

Liang, T. and Lai, H. Effect of store design on consumer purchases: An empirical study of on-line bookstores. *Information and Management*, 39 (2002), 431–444.

Liao, Z. and Cheung, M.T. Internet-based e-banking and consumer attitudes: An empirical study. *Information and Management*, 39 (2002), 283–295.

Liao, Z. and Cheung, M.T. Internet-based e-shopping and consumer attitudes: An empirical study. *Information and Management*, 38 (2001), 299–306.

Locke, E.A. The nature and causes of job satisfaction. In M.D. Dunnette, ed., *Handbook of Industrial and Organizational Psychology* (New York: Holt, Reinhart and Winston, 1976), 1297–1349.

Lowry, P.B.; Romans, D.; and Curtis, A. Global journal prestige and supporting disciplines: A scientometric study of information systems journals. *Journal of Association for Information Systems*, 5, 2 (2004), 29–77.

Lu, H. and Lin, J.C. Predicting customer behavior in the market-space: A study of Rayport and Sviokla's framework. *Information and Management*, 40 (2002), 1–10.

Luo, X. and Seyedian, M. Conceptual marketing and customer-orientation strategy for e-commerce: An empirical analysis. *International Journal of Electronic Commerce*, 8, 2 (2003–2004), 95–118.

Mehrabian, A. and Russell, J. A. *An Approach to Environmental Psychology* (Cambridge, MA: MIT Press, 1974).

Mylonopoulos, N. and Theoharakis, V. On-site: Global perceptions of IS journals. *Communications of the ACM*, 44, 9 (2001), 29–33.

Ngai, E.W.T. and Wat, F.K.T. A literature review and classification of electronic commerce research. *Information and Management*, 39 (2002), 415–429.

Novak, T.P.; Joffman, D. L.; and Yung, Y. F. Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science*, 19, 1 (2000), 22–42.

O'Keefe, R.M.; Cole, M.; Chau, P.Y.K.; Massey, A.; Montoya-Weiss, M.; and Perry, M. From the user interface to the consumer interface: Results from a global experiment. *International Journal of Human-Computer Studies*, 53 (2000), 611–628.

Oliver, R.L. Measurement and evaluation of satisfaction processes in retail settings. *Journal of Retailing*, 57, 3 (1981), 25–48.

Parthasarathy, M. and Bhattacherhee, A. Understanding post-adoption behavior in the context of online services. *Information Systems Research*, 9, 4 (1998), 362–379.

Pavlou, P. Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7, 3 (2003), 101–134.

Pedersen, P.E. Behavioral effects of using software agents for product and merchant brokering. *International Journal of Electronic Commerce*, 5, 1 (2000), 125–141.

Pervan, G.P. A review of research in group support systems: Leaders, approaches and directions. *Decision Support Systems*, 23 (1998), 149–159.

Picard, R.W. Does HAL cry digital tears? Emotions and computers. In D. G. Stork, ed., *Hal's Legacy: 2001's Computer as Dream and Reality*. Cambridge, MA: MIT Press, 1997, 279–303.

Ramaswami, S.N.; Strader, T.J.; and Brett, K. Determinants of on-line channel use for purchasing financial products. *International Journal of Electronic Commerce*, 5, 2 (2000–2001), 95–118.

Ranganathan, C. and Ganapathy, S. Key dimensions of business-to-consumer web sites. *Information and Management*, 39 (2002), 457–465.

Ratchford, B.T.; Talukdar, D.; and Lee, M. A model of consumer choice of the Internet as an information source. *International Journal of Electronic Commerce*, 5, 3 (2001), 7–21.

Romano, N.C. and Fjermestad, J. Electronic commerce customer relationship management: A research agenda. *Information Technology and Management*, 4 (2003), 233–258.

Romano, N.C. and Fjermestad, J. Electronic commerce customer relationship management: An assessment of research. *International Journal of Electronic Commerce*, 6, 2 (2001), 61–113.

Russell, J. A. Core affect and the psychological construction of emotion. *Psychological Review*, 110, 1 (2003), 145–172.

Russell, J.A. and Pratt, G. A description of the affective quality attributed to environments. *Journal of Personality and Social Psychology*, 38 (1980), 311–322.

Salam, A.F.; Rao, H.R.; and Pegels, C.C. Consumer-perceived risk in e-commerce transactions. *Communications of the ACM*, 46, 12 (2003), 325–331.

Shim, J.P.; Shin, Y.B.; and Nottingham, L. Retailer web site influence on customer shopping: An exploratory study on key factors of customer satisfaction. *Journal of Association for Information System*, 3 (2002), 53–76.

Slyke, C.V.; Comunale, C.L.; and Belanger, F. Gender differences in perceptions of web-based shopping. *Communications of the ACM*, 45, 7 (2002), 82–86.

Suh, B. and Han, I. The impact of customer trust and perception of security control on the acceptance of electronic commerce. *International Journal of Electronic Commerce*, 7, 3 (2003), 135–161.

Tan, M. and Teo, T.S.H. Factors influencing the adoption of Internet banking. *Journal of the Association for Information Systems*, 1, 5 (2000).

Te'eni, D. and Feldman, R. "Performance and satisfaction in adaptive websites: An experiment on searches within a task-adapted website." *Journal of the Association for Information Systems*, 2, 3 (2001).

Triandis, H.C. Values, attitudes, and interpersonal behavior. In H.E. Howe, ed., *Nebraska Symposium on Motivation, 1979: Beliefs, Attitudes and Values*. Lincoln: University of Nebraska Press, 1980, 195–259.

USC Annenberg School, Center for the Digital Future. The digital future report: Surveying the digital future—Year four: ten years, ten trends. 2004 (available at http://www.digitalcenter.org/downloads/DigitalFutureReport-Year4–2004.pdf, accessed on August 10, 2004).

Vellido, A.; Lisboa, P.J.G.; and Meehan, K. Quantitative characterization and prediction of on-line purchasing behavior: A latent variable approach. *International Journal of Electronic Commerce*, 4, 4 (2000), 83–104.

Vessey, I.; Ramesh, V.; and Glass, R.L. Research in information systems: An empirical study of diversity in the discipline and its journals. *Journal of Management Information Systems*, 19, 2 (2002), 129.

Whitman, M.; Hendrickson, A.; and Townsend, A. Research commentary. Academic rewards for teaching, research and service: Data and discourse. *Information Systems Research*, 10, 2 (1999), 99–109.

Zhang, P. and Li, N. An assessment of HCI research in MIS: Topics and methods. *Computers in Human Behavior*, 20, 2 (2004), 125–147.

TOWA

Abstract: *(important loyalty ana formance c chapter em created for online groc eral expect satisfactio countries c*

Keywords: *Assessmen*

INTROD

The advan persed geo ping has b 1998, Mor few years sumers ca ered to or grocers ar grocery sh Fjermesta

Online convenien 2003). Co shopping, come and