

E-LOYALTY IS NOT ALL ABOUT TRUST, PRICE ALSO MATTERS: EXTENDING EXPECTATION-CONFIRMATION THEORY IN BOOKSELLING WEBSITES

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ABSTRACT

Identifying factors that influence customers' e-loyalty is paramount for practitioners and academics to develop successful marketing strategies and behavioral models. Online bookselling is a rapid growing industry in the UK, where e-loyalty models have yet to reach a conclusive argument. This paper aims to explore factors influencing customers' e-loyalty to five online bookselling websites in the UK by testing a theoretical model, based on expectation-confirmation theory. A quantitative approach was employed using questionnaires; the sample consisted of 290 respondents (50% males, age range: 18 to over 54). The questionnaire was pretested and confirmatory factor analysis was performed to assess the measurement model. Structural equation modeling and MANOVA were employed to examine the association between latent constructs. Eleven hypotheses were formulated examining different independent variables in the theoretical model; results showed a significant direct and positive association between satisfaction and e-loyalty. Web design affected e-loyalty significantly on all bookselling websites, perceived value was a significant predictor of satisfaction while price notably influenced e-trust development. E-trust was not associated with e-loyalty. This study introduces new variables that affect e-loyalty as well as illuminates new associations between existing factors – perceived value, price, and trust are new aspects which practitioners and academics should take into account for marketing strategies and behavioral models, respectively. Hence, managers will likely increase customer satisfaction and loyalty by improving web design and balancing quality with price, predisposing positively customer's attitudes towards the website.

Keywords: e-loyalty, satisfaction, trust, price, structural equation modeling

1. Introduction

Building and maintaining brand loyalty has been a central theme of marketing theory and practice in traditional consumer marketing for over 30 years. Reichheld and Sasser [1990] have gone so far as to suggest that increasing a business's loyal customers by five percent can result in a 30 to 85% increase in profitability. It is, therefore, not surprising that the creation of customer loyalty underpins marketing strategies for many traditional and online businesses [Ching & Ellis 2004; Wilson et al. 2008]. Several studies have examined customers' loyalty and have identified the need to 'delight' customers [Oliver 1999] and to deliver superior value originating from excellent services and quality products [Zeithaml et al. 2002] as key elements in success. Nevertheless, the identification of factors that might affect online loyalty (commonly termed as 'e-loyalty') has yet to be identified [Taylor & Strutton 2010] and this study makes a contribution to this by introducing several important and relevant new variables, as well as illustrating new associations between existing factors. The paper seeks to provide a general model of e-loyalty's drivers by addressing and empirically testing the widely accepted factors influencing e-loyalty in combination with a number of new factors, namely: trust, perceived value, dissatisfaction, inertia, convenience motivation, psychological factors, price, web design and computer knowledge.

E-loyalty has largely been understood in the context of expectation-confirmation theory (ECT) [Oliver 1999; Bhattacharjee 2001b]. ECT states that consumers firstly form an initial expectation prior to purchase, and then build

perceptions about the performance of the consumed product/service after a period of initial consumption. Next, consumers decide on their level of satisfaction based upon the extent to which their expectation is confirmed through comparing the performance of the product/service against the initial expectation. When deeper explanation of customer loyalty is desired, it allows other factors to be incorporated easily into this basic model [Hong et al. 2006].

The paper begins with a description of the constructs that provide the foundation to the proposed theoretical model beginning with satisfaction and dissatisfaction. For an indicative number of influential papers in the field, see Table 1. The following sections include the methodology and design of the present study, which has chosen to investigate the suggested model in UK bookselling websites, the results, along with discussion and interpretation of the findings. The study contributes to the development and evolution of a theoretical and conceptual model for examining determinants of e-loyalty by building on the basic ECT model. Also, the direction of relationships between different variables is not always clear, with contradicting results arising from different studies. As such, the present study seeks to address this with a comprehensive assessment of direction. Hence, the present study seeks to answer the following research questions:

- 1) Can ECT provide the necessary components for explaining e-loyalty under the present study research conditions (i.e. bookselling websites)?
- 2) Is this model universal across different websites and which additional factors provide a satisfactory model that explains discrepancies?

2. Antecedents of Loyalty

2.1. Primary Factors

Satisfaction and Dissatisfaction

Satisfaction has been recognized as the most researched factor in relation to e-loyalty [Chen et al. 2008; Taylor & Strutton 2010]. The noteworthy findings of Fournier and Mick [1999] show that satisfaction is an active and dynamic process with a strong social dimension, integrating meaning and emotion as well as contextual factors. In terms of e-loyalty, a positive relationship with satisfaction has been proven. It is generally held that satisfaction is positively related to loyalty, with the effect moderated by inertia, convenience motivation and purchase size [Flavián et al. 2006]. These observations have been constant over various countries and cultures [Christodoulides & Michaelidou 2010]. However, a minority of researchers have found weaker associations between satisfaction and loyalty [Taylor & Hunter 2003]. For example, Dai, Salam and King [2008] observed that satisfaction had a weak impact on customer loyalty, but was significantly associated with word-of-mouth communication. Thus, the following hypotheses are offered:

H1. Satisfaction is likely to have a positive and direct association with E-Loyalty.

H2. Dissatisfaction is likely to affect E-Loyalty negatively and directly.

E-Trust

Trust has also been found to be a significant factor affecting customer's intention to purchase or repurchase from the same online vendor [Milne & Boza 1999; Singh & Sirdeshmukh 2000]. Overall it has been argued that while beliefs are necessary, they are not sufficient for the existence of trust, given that beliefs do not always lead to intentions [Schlosser et al. 2006]. Conversely, Morgan and Hunt [1994] noted that trusting beliefs are valid measures, defining it as the "confidence in the exchange partner's reliability and integrity."

Many e-loyalty studies have shown a positive association between the two concepts [Chiou 2004; Becerra & Korgaonkar 2011; Zheng et al. 2012]. For instance, Lee, Kim, and Moon [2000], identified the key design factors for customer loyalty finding a strong impact of trust on customer loyalty, while another study signified customers' experiences with online shopping affects the level of trust [Kim et al. 2009]. On the other hand, there are researchers who have found no association between trust and loyalty [Herington & Weaven 2007], illustrating in a way that trust is a complex concept and demands caution when being studied. Hence:

H3. E-Trust is likely to have a positive and direct association with E-Loyalty.

Web Design

A range of studies have shown a positive direct or indirect association through satisfaction or trust between service quality dimensions and customer loyalty, with website design and associated usability factors being the most frequent features reported [Goode & Harris 2007; Caruana & Ewing 2010]. Cho and Park [2001] examined a consumer satisfaction index for Internet shopping and found that customer satisfaction strongly depends on the quality of website design. Similarly, Wolfinbarger and Gilly [2003] noted that website design factors are strong predictors of customer quality judgments, satisfaction, and loyalty for Internet retailers. Overall, the time needed for a webpage to load, graphical and textual features affecting users' convenience with the website and aesthetics of a website should be considered in website design, since loyalty has been shown to result from positive attitudes towards the website [Verhagen & van Dolen 2009; Ha & Im 2012; Lu et al. 2012]. In this study, website design is

Table 1: The Fifteen Most Influential Empirical Studies on E-Loyalty [Valvi & Fragkos 2012]

References	Scope	N	Main positively supported results from E-loyalty hypotheses
Gefen and Straub [2000]	To examine the relative importance of perceived ease of use in Information Systems adoption	202	<ul style="list-style-type: none"> Perceived ease of use does not affect intended use when a Web site is used for a purchasing task Perceived usefulness affects intended use when a website is used for a purchasing task
Bhattacharjee [2001a]	To identify the antecedents of consumers' continuance intentions from a customer relationship management standpoint, and the interrelationships among these antecedents	172	<ul style="list-style-type: none"> Satisfaction + Perceived usefulness → continuance intention
Bhattacharjee [2001b]	To examine the difference between acceptance and continuance behaviors	122	<ul style="list-style-type: none"> Satisfaction → Continuance Intention
Gefen [2002]	To examine the potential influence of service quality on trust and loyalty	160	<ul style="list-style-type: none"> E-Trust → E-Loyalty Perceived switching costs to another online vendor → ↑E-Loyalty Tangibles Service Quality → ↑E-Loyalty
Koufaris [2002]	To examine how emotional and cognitive responses to visiting a Web-based store for the first time can influence online consumers' intention to return	280	<ul style="list-style-type: none"> Shopping Enjoyment → Intention to Return Perceived usefulness of the Web store → Intention to return
Srinivasan et al. [2002]	Identification of those managerially actionable factors that impact e-loyalty and investigation of the nature of their impact	1211 [Exploratory dataset (n=180); Confirmatory dataset (n=180); Model estimation dataset (n=851)]	<ul style="list-style-type: none"> ↑Customization, Contact interactivity, Customer cultivation, Care, Community, Choice, and Character of the e-retailer → ↑E-Loyalty
Anderson and Srinivasan [2003]	To investigate the impact of satisfaction on loyalty in the context of electronic commerce	1211	<ul style="list-style-type: none"> ↑E-Satisfaction → ↑E-Loyalty Satisfaction → Convenience Motivation → E-Loyalty Satisfaction → Perceived Value → E-Loyalty
Shankar, Smith, and Rangaswamy [2003]	To examine customer satisfaction and loyalty in online and offline environments	Data set 1: N=144; Data set 2 (online sample): N=190; Data set 2 (offline sample unmatched): N=403	<ul style="list-style-type: none"> The positive effect of loyalty on overall satisfaction with that service provider is greater for customers who choose online than it is for those who choose offline
Wolfenbarger and Gilly [2003]	To examine the online retail quality and its effects on satisfaction, customer loyalty and attitudes toward the website	9 focus groups of online buyers (64 consumers); Online survey: 1013 answers from Harris Poll Online Panel	<ul style="list-style-type: none"> Website Design → Customer Loyalty Customer Service → Customer Loyalty (Weak)
Harris and Goode [2004]	To identify the four levels of loyalty and the pivotal role of trust by examining online purchasers of books and flights	498	<ul style="list-style-type: none"> Books.com: Trust, Perceived Value, Satisfaction → Loyalty Flights.com: Trust, Perceived Value → Loyalty
Yang and Peterson [2004]	To examine the moderating effects of switching costs on customer loyalty through satisfaction and perceived-value	235	<ul style="list-style-type: none"> Customer Perceived Value → Customer loyalty Customer Satisfaction → Customer loyalty
Parasuraman et al. [2005]	To describe the development, refinement, psychometric evaluation, properties, and potential applications for measuring e-service quality	1407 (549 Internet users; 653 customers of Amazon.com; 205 customers of Walmart.com)	<ul style="list-style-type: none"> Most critical & important: Efficiency and Fulfillment → loyalty intentions Critical: System availability → loyalty intentions Least critical: privacy → loyalty intentions
Flavián et al. [2006]	To determine the influence of perceived usability, satisfaction and trust on website loyalty	351	<ul style="list-style-type: none"> ↑Trust → ↑Loyalty ↑Satisfaction → ↑Loyalty
Cyr [2008]	To examine the relationship of Web site design to trust, satisfaction, and loyalty across cultures	571 (230 in Canada, 118 in Germany and 223 in China)	<ul style="list-style-type: none"> Satisfaction → Loyalty
Wetzels et al. [2009]	To construct a model for e-loyalty in online book and CD retailing	190	<ul style="list-style-type: none"> Online experiential value → attitudinal/behavioral e-loyalty

categorized as the visual presentation of the website (such as graphics and colors) as well pleasure and attractiveness of design. Thus, the following are offered:

H4a. Web Design usability factors are likely to affect E-Loyalty positively and directly.

H4b. Web Design usability factors are likely to affect E-Trust positively and directly.

H4c. Web Design usability factors are likely to affect Satisfaction positively and directly.

H4d. Web Design usability factors are likely to be negatively associated with Dissatisfaction.

2.2. Secondary Factors

Psychological Factors (Personality)

Psychological factors comprise constant variables in a customer's profile, in the sense that a commercial agent cannot alter them, and instead has no alternative other than to take them into account [Rose & Samouel 2009]. Therefore, it is not surprising that Mitchell [2000] examined hundreds of documents that provide advice on building effective and user-friendly websites and found that less than five documents mentioned the term 'personality'. Nevertheless, the literature search revealed several studies examining the effect of demographic variables on e-loyalty and noting that the way in which users interact with computers is influenced by their personalities [Isbister & Nass 2000; von der Pütten et al. 2010; Leung et al. 2012]. Demographics broadly include the type of online buyer and his/her personal attitude, online buying habits and general demographic characteristics, such as gender, age, income and education. Important factors in a person's personality that affect his/her interaction with new technologies are his/her sense of optimism and security; his/her interests in obtaining information from friends as well as his/her perceptions of free time. Hamburger and Ben-Artzi [2000] found that people with high degrees of extraversion and neuroticism exhibit different patterns of behavior when accessing the Internet, which suggests that the Internet should not be perceived as a general and undifferentiated medium. Geissler and Edison [2005] found that dispositional optimism, need for cognition and self-efficacy, are positively associated with both electronic expertise (mavenism) and affinity for technology. Walsh and Mitchell [2010] confirmed the previous results, stressing the importance of information seeking desire and the sense of optimism for developing a strong electronic presence and expertise. Based on the above and taking into account that e-commerce customer behavior occurs in an electronic environment, it is hypothesized that:

H5a. Psychological factors are likely to affect Satisfaction positively and directly.

H5b. Psychological factors are likely to be negatively associated with Dissatisfaction.

Perceived Value

Perceived value contributes to loyalty toward an e-business by reducing an individual's need to seek alternative service providers [Chang et al. 2009]. Zeithaml [1988, p. 14] defines value as "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given". Characteristically, when customers feel that they are not getting the best value for their money, they will begin searching for alternatives, which means that their loyalty often declines dramatically.

The association between perceived value and customers' loyalty/intention to purchase-repurchase has been proven to be positive by many studies [Dai et al. 2008; Chang & Wang 2011]. Luarn and Lin [2003] investigated the main antecedent influences on loyalty for the e-service context in a sample of 180 customers and found that perceived value is associated with loyalty both positively and directly. Yang and Peterson [2004] as well as Quan [2010] showed a strong significant relationship of perceived value with loyalty, which led to increased loyalty behaviors after increased e-satisfaction. A recent meta-analysis verified this association as well [Taylor & Strutton 2010]. Hence, based on the above, the following are offered:

H6a. Perceived Value is likely to affect Satisfaction positively and directly.

H6b. Perceived Value is likely to be negatively associated with Dissatisfaction.

H6c. Perceived Value is likely to affect E-Trust positively and directly.

Inertia

Marketing and consumer behavior studies suggest inertia as a facilitator of loyalty [Oliver 1999]. Campbell [1997] defines inertia as a condition where "repeat purchases occur on the basis of situational cues rather than on strong partner commitment". The majority of consumers choose the same online small group of websites to make purchases out of habit [Beatty & Smith 1987]. Such consumer visits to websites do not make a conscious determination on the basis of perceived benefits and costs offered by the e-business. In other words, such customers' repeat purchase behaviors are the result of a lack of goal-directed behaviors [Zeelenberg & Pieters 2004; Han et al. 2011]. The concepts of inertia have been extended to e-commerce settings by Anderson and Srinivasan [2003], who found that inertia is a strong mediator of e-loyalty. Therefore, when a customer has a high level of inertia the sensitivity of e-loyalty to e-satisfaction is likely to be lower. On the other hand, when the inertia of a customer is low, the impact of e-satisfaction on e-loyalty is likely to be higher. Thus:

H7a. Inertia is likely to affect Satisfaction positively and directly.

H7b. Inertia is likely to be negatively associated with Dissatisfaction.

H7c. Inertia is likely to affect E-Trust positively and directly.

Convenience Motivation

'Convenience motivation' is difficult process to conceptualize, as it depends on customers' motivations, which can vary widely. Online customers are considered to be driven by the need for convenience rather than gathering

information and saving money [Jarvenpaa & Todd 1997]. The notion of convenience motivation has been discussed broadly in the marketing and e-commerce literature as it is regarded as a contributing factor that leads to their growth [Romani 1999; Valvi & Fragkos 2012]. The relationship between convenience motivation and loyalty was found to be either direct or indirect in the literature. Anderson and Srinivasan [2003] considered the mediating role of convenience motivation on loyalty. The parameter estimate for the main effect of convenience motivation on e-loyalty was insignificant, but the parameter estimate for the interaction aspect of e-satisfaction with convenience motivation showed $p < 0.05$. This confirmed the hypothesis that convenience motivation does indeed positively moderate the impact of e-satisfaction on e-loyalty. Wang et al. [2009] measured the dimension of convenience in their model, and they found that convenience is directly and positively associated with loyalty. They suggested that retailers can take advantage of customization and contact interactivity to enhance customers' convenience and satisfaction, driving users to visit the website again. Hence:

H8a. Convenience Motivation is likely to affect Satisfaction positively and directly

H8b. Convenience Motivation is likely to be negatively associated with Dissatisfaction.

Computer Knowledge - Experience

Customers' computer literacy, knowledge and skills are necessary for carrying out online purchases, and this factor will likely increase satisfaction and/or loyalty. Most studies measuring computer skills took into account customers' Internet and online buying experience along with knowledge and skills. According to Dinev and Hart [2005], computer literacy is defined as the ability to use an Internet-connected computer and Internet applications to accomplish practical tasks. Consumers with high levels of positive feelings about computers and online shopping had higher levels of computer affinity than consumers who "can do without their computer for several days and would not miss them if they were broken" [Stafford & Stern 2002, p. 139]. For instance, Zhang et al. [2006] investigated the factors that affect e-service satisfaction. The results showed a direct influence of the user's computer skills and Internet experiences on his or her intention to use. Furthermore, Lee et al. [2009] studied the influence of computer self-efficiency and computer anxiety on repurchase intention. Their results indicated that the effect of website information satisfaction on efficiency is stronger for those with lower computer self-efficacy than for those with higher computer self-efficacy. Thus:

H9a. Computer Knowledge is likely to affect Satisfaction positively and directly.

H9b. Computer Knowledge is likely to be negatively associated with Dissatisfaction.

Price

Price appears to affect e-loyalty in an unclear way despite playing an obvious role in customers' decisions to be loyal to an online vendor or not [Chiang & Dholakia 2003; Chiou et al. 2010]. For instance, Jiang and Rosenbloom [2005] examined the role of price on customer retention and found a positive direct, albeit weak, association between favorable price perceptions and customer intention to return. Swaid and Wigand [2009] consider price an important internal parameter of loyalty behaviors and defined an aspect of it, which they named price tolerance. They noted a positive association of price tolerance with certain service quality factors.

Could price be an influencing antecedent of loyalty rather than affecting loyalty directly? Due to inherent variability and uncertainty in product/service performance across different consumption experiences, price often serves as a cue in evaluating their experiences with a product/service and in shaping their attitude toward a provider [Han & Ryu 2009]. For customers, the price advantage of some Internet retailers may be compensating for poorer service quality, since service quality is often positively related to price [Pan et al. 2002]. Hence, the larger the price difference between vendors, the less e-trust could be expected to play a role in maintaining loyalty [Li et al. 2012]. Therefore, the role of price in customers' decisions to trust online bookselling websites will be investigated in the proposed model.

H10. Price is likely to affect E-Trust positively and directly.

Website Features

Various website features could present differing aspects of the suggested antecedents of e-loyalty. Web sites are clearly a key component of Internet strategy for any organization. The relative importance of different website features in affecting customers varies depending on the website's domain [Mithas et al. 2007]. For example, brand strength, functionality and website content influence customer loyalty differently for information-oriented, government and transaction-oriented websites, affecting also post-purchase behaviors such as word-of-mouth. In addition to this, determinants of e-trust also seem to be influenced across site categories [Bart et al. 2005]. Thus, it has been hypothesized that customer behavior diverges significantly between different e-commerce domains.

H11. Constructs leading to E-Loyalty are likely to be dependent on e-commerce website features.

Based on the constructs discussed above, the hypothesized model is presented in Figure 1.

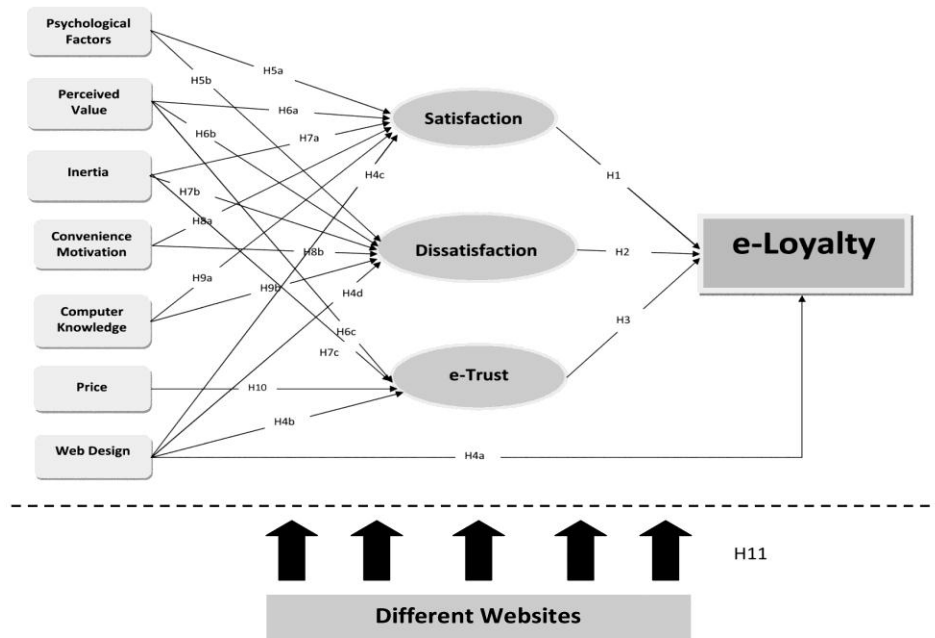


Figure 1: Hypothesized Model Leading to E-Loyalty

3. Methods

3.1. Questionnaire Characteristics and Measurement

A questionnaire was used in the current study consisting of four parts. At first, nine items were used to measure respondents' computer knowledge in conjunction with their previous experience in online shopping. Then the next section presented seven items measuring the influence of psychological factors in respondents' decision to purchase or to re-purchase a book from a specific online website. This was followed by the e-loyalty instrument, examining the antecedents of loyalty from an e-commerce site. It comprised of nine different sub-parts: three items measuring satisfaction, three items measuring dissatisfaction, seven items measuring e-loyalty, three items measuring inertia, four items measuring perceived value, four items measuring trust, four items measuring convenience motivation, five items measuring web design and three items measuring price. All, these variables were measured by using five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Finally, the fourth part consisted of ten items on respondents' demographic and socio-economic characteristics such as gender, age, marital status, ethnicity, education and income. This information was asked at the end of the questionnaire because of its private and personal nature. All items in this questionnaire were adapted by previous studies except those of computer knowledge, psychological factors and demographics scales, which were self-defined (Table 2) (the questionnaire can be provided by the authors upon request).

Table 2: Questionnaire Scales

Construct(No. of items)	Source
Satisfaction (3)	Oliver [1980]
E-Loyalty (7)	Gremler [1995], Zeithaml et al. [1996]
Inertia (3)	Gremler [1995]
Perceived Value (4)	Dodds et al. [1991]
Trust (4)	Anderson and Srinivasan [2003]
Convenience Motivation (4)	Moorman [1998]
Price (3)	Gefen and Devine [2001]
Dissatisfaction (3), Web Design (5), Computer Knowledge (9), Psychological Factors (7), Demographics (10)	Self-defined

3.2. Data Collection

A paper-based questionnaire was employed in the study. The study's sample consisted of undergraduate and postgraduate students from a leading higher education institution in central London. Walczuch and Lundgren [2004] advocate the use of students for e-retailing research because they have the greatest opportunity to use the Internet for

communication and commercial transactions, and are a representative and appropriate sample for such studies. Moreover, students are characterized by their experience and familiarity with the Internet and online purchases [Laroche et al. 2005].

Before data distribution and collection from students, the questionnaire was pretested, using a convenience sample of 27 students, who were selected randomly at the university's public facilities. The purpose of the pre-test was to ensure integrity, readability and a logical arrangement of the data collection instruments from a qualitative point of view [Hair Jr et al. 2006]; after, changes were incorporated into the final questionnaire and distributed randomly to students.

In the present study, UK bookselling websites were chosen to measure customers' loyalty. This choice fits well with the sample (university students), who have to purchase books to meet their academic obligations. Five leading UK bookselling websites were deemed (based on a previous test of their awareness amongst students) appropriate to examine customer behavior in popular and also less mainstream online bookselling websites. Three popular online bookselling websites, Amazon.co.uk, ebaY.co.uk and AbeBooks.co.uk and two websites of very popular traditional bookshops, Waterstones.com and Blackwell.co.uk, were chosen (general information on the websites can be found in Table A3, Appendix). This allows comparison of online bookselling websites *per se* with websites of bookshops, identifying possible differences and similarities in their approach to e-commerce. This will be examined with a multivariate general linear model (MANOVA), explained below.

3.3. Sample Size and Characteristics

The cross-sectional sample survey was conducted between February 2011 and April 2011 among a random sample of university students from a leading higher education institution in central London. Sampling was based on the techniques suggested by Bartlett et al. [2001]. Questionnaires were distributed and completed with face-to-face interviews. The sample size chosen was approximately one and half times the allowed sample size for representativeness (suggested sample size for 95% confidence level, tolerated margin error 5% and response rate over 80% is 246). Therefore, 347 questionnaires were distributed. Two hundred and ninety were valid for analysis, due to incomplete answers. Hair Jr et al. [2006] suggest carefully checking significant results with samples 200-400, for a significance level under 0.05 and power 80%. The characteristics of the sample are shown in Table 3. Fifty percent of the students were female and just under 55 percent were between 18 and 30 years old (range: 18–over 54). The majority of students were married or lived with their partners (48%) while nearly a third lived alone. About 70% of the students were full time-employees, with a monthly salary between £1,500 and £2,500 (42.1%).

3.4. Instrument Validity and Reliability

Content validity ensures construct items are representative and drawn from a universal pool. Items for trust, satisfaction, and e-loyalty come from existing literature and already exhibit strong content validity; also the questionnaire was pre-tested in a sample of 27 students. Construct reliability was assessed using Cronbach's alpha.

3.5. Statistical Analysis

First, descriptive analyses (frequencies and percentages) were conducted. Confirmatory factor analysis was performed to assess the validity of the instrument measuring e-loyalty for each website. After that, structural equation modeling was executed assessing the hypothesized model and examining which hypotheses are correct. Finally, MANOVA was performed to assess the effect of gender, age, ethnicity, income level, employment status and the website on the instrument's latent structures of customer behavior. All analyses were done with PASW 18.0 and Amos 18.0.

4. Results

4.1. Measurement Model

Confirmatory Factor Analysis (CFA) was used to test dimensionality of the measurement model for each online bookselling website (Amazon.co.uk, ebaY.co.uk, Waterstones.com, Blackwell.co.uk and AbeBooks.co.uk). Measurement of convergent validity can be achieved by examining the factor loadings of the measured variables [Anderson & Gerbing 1988]. Factor loadings were very significant for each online bookselling website as they exceeded 0.5 with only minor exceptions. None of the correlations between latent constructs for each of the five bookselling websites CFA models reached 1. The smallest Average Variance Extracted exceeds the squared correlation between each pair of the constructs in both service contexts. This indicates a satisfactory level of discriminant validity. Composite reliability coefficients of all variables in the study were acceptable, ranging from 0.540 to 0.984 for the CFA for cognitive affective factors and 0.665 to 0.965 for experience factors, being larger than or close to 0.6 [Bagozzi & Yi 1988; Hair Jr et al. 2006]. The same applied for Cronbach's alpha which ranged from 0.573 to 0.954 for the cognitive affective factors and 0.617 to 0.876 for experience factors (Tables 4 and 5).

Table 3: Sample Demographics

Variable	Frequencies (%)
Gender	
Female	145 (50.0)
Male	145 (50.0)
Age	
18-24	53 (18.2)
25-30	106 (36.6)
31-36	69 (23.8)
37-42	22 (7.6)
43-48	22 (7.6)
49-54	7 (2.4)
Over 54	7 (2.4)
NA*	4 (1.4)
Personal Marital Status	
I live alone	90 (31.0)
I live with my parents	36 (12.4)
I live with my partner, without being married	57 (19.7)
Married	82 (28.3)
Engaged	6 (2.1)
Divorced	8 (2.8)
I live with my friends	5 (1.7)
House sharing	2 (0.6)
NA*	4 (1.4)
Current level of Education	
Undergraduate	162 (55.9)
Taught Postgraduate	96 (33.1)
Research Postgraduate	11 (3.8)
Other studies (Continuing Studies, General courses, etc.)	16 (5.5)
NA*	5 (1.7)
Employment Status	
Full-time employee	213 (73.4)
Part-time employee	25 (8.6)
Self-employed	19 (6.6)
Unemployed	27 (9.3)
NA*	6 (2.1)
What is your monthly income?	
£0- £500	27 (9.3)
£500- £1000	32 (11.0)
£1000- £1500	36 (12.4)
£1500- £2000	60 (20.7)
£2000- £2500	62 (21.4)
£3000- £4000	21 (7.3)
Over £4000	31 (10.7)
NA*	21 (7.2)

NA: Not answered

Assessing the CFA fit indices for cognitive affective factors, Amazon.co.uk had the best fit shown by acceptable comparative fit indices, the parsimony adjusted measure root mean-square error of approximation (RMSEA) and the standardized χ^2 (χ^2/df). ebaY.co.uk and Waterstones.com had the second best fit, with adequate standardized χ^2 and RMSEA but the model didn't fit at all well for Blackwell.co.uk and AbeBooks.co.uk (Tables A4-A10, Appendix). For experience factors, the CFA model had acceptable comparative fit indices [Comparative fit index (CFI), Normed fit index (NFI)] for all websites, except Abebooks.co.uk. RMSEA was borderline acceptable for the four first websites, while the standardized χ^2 was above limits for all websites. Overall, all websites appear to perform acceptably, apart from AbeBooks.co.uk.

Table 4: (c)Factor Loadings from CFA of all Online Book Selling Websites and Scale Reliability for Cognitive Affective Factors

	Amazon.co.uk				ebaY.co.uk				Waterstones.com				Blackwell.co.uk				AbeBooks.co.uk			
	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha
Items																				
Satisfaction		0.61	0.837	0.820		0.71	0.897	0.875		0.71	0.900	0.890		0.62	0.914	0.855		0.55	0.891	0.820
S1 I am satisfied with my decision to purchase from this web site	0.84				0.78				0.81				0.80				0.64			
S3 My choice to purchase from this web site was a wise one	0.74				0.86				0.82				0.70				0.80			
S5 I think I did the right thing by buying from this web site	0.76				0.89				0.90				0.86				0.77			
Dissatisfaction		0.440	0.540	0.617		0.45	0.628	0.573		0.53	0.728	0.716		0.57	0.896	0.749		0.55	0.885	0.710
DS2 If I had to purchase again, I would feel differently about buying from this Web site	0.35				0.29				0.52				0.84				0.52			
DS4 I feel badly regarding my decision to buy from this Web site	0.96				1.05				0.99				0.73				0.98			
DS6 I am unhappy that I purchased from this Web site	0.52				0.43				0.58				0.67				0.65			
E-Loyalty		0.49	0.814	0.829		0.47	0.857	0.816		0.48	0.880	0.847		0.50	0.931	0.802		0.37	0.897	0.785
L1 I seldom consider switching to another Web site	0.24				0.22				0.37				0.37				0.45			
L2 As long as the present service continues, I doubt that I would switch Web sites	0.61				0.49				0.63				0.55				0.66			
L3 I try to use the Web site whenever I need to make a purchase	0.76				0.77				0.82				0.79				0.72			
L4 When I need to make a purchase, this Web site is my first choice	0.79				0.77				0.75				0.76				0.66			
L5 I like using this Web site	0.82				0.76				0.71				0.76				0.72			
L6 To me this site is the best retail Web site to do business with	0.82				0.83				0.80				0.89				0.58			
L7 I believe that this is my favourite retail Web site	0.69				0.74				0.67				0.68				0.39			
Inertia		0.40	0.537	0.645		0.47	0.692	0.709		0.43	0.705	0.654		0.53	0.873	0.744		0.42	0.818	0.698
I1 Unless I became very dissatisfied with this Web site, changing to a new one would be a bother	0.69				0.67				0.68				0.63				0.49			
I2 I would find it difficult to stop using this Web site.	0.76				0.85				0.81				0.72				0.70			
I3 For me the cost in time, money, and effort to change Web sites is high	0.39				0.48				0.40				0.82				0.73			
Perceived Value		0.65	0.900	0.888		0.64	0.889	0.888		0.66	0.904	0.891		0.71	0.962	0.901		0.67	0.954	0.877
PV1 I believe that books I purchased at this website are value for my money	0.80				0.76				0.77				0.93				0.93			
PV2 Products purchased at this Web site are considered to be a good buy	0.84				0.83				0.84				0.82				0.72			
PV3 You get what you pay for at this Web site	0.71				0.71				0.76				0.70				0.76			
PV4 Products purchased at this Web site are worth the money paid	0.87				0.89				0.87				0.91				0.85			

Table 4: (continued)

	Amazon.co.uk				ebaY.co.uk				Waterstones.com				Blackwell.co.uk				AbeBooks.co.uk			
	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha
Items																				
Trust	0.77	0.943	0.931		0.67	0.900	0.896		0.70	0.924	0.904		0.70	0.963	0.903		0.85	0.984	0.954	
T1 The performance of this web-site meets my expectations	0.85				0.82				0.90				0.80				0.89			
T2 This Web site can be counted on to successfully complete the transaction	0.88				0.78				0.83				0.90				0.94			
T3 I can trust the performance of this Web site to be good	0.92				0.88				0.87				0.88				0.92			
T4 This Web site is reliable for online shopping	0.85				0.81				0.76				0.76				0.94			
Convenience Motivation	0.70	0.912	0.908		0.69	0.899	0.906		0.73	0.929	0.924		0.66	0.935	0.882		0.64	0.929	0.881	
CM1 I want the convenience that online shopping offers	0.89				0.86				0.92				0.80				0.95			
CM2 I enjoy the flexibility of shopping online	0.86				0.85				0.92				0.74				0.83			
CM3 I am interested in taking advantage of the ease of online shopping	0.85				0.84				0.84				0.89				0.68			
CM4 I would like to shop at my own pace while shopping online	0.74				0.79				0.73				0.80				0.72			

AVE: Average Variance Extracted; CR: Composite Reliability

Table 5: Factor Loadings from CFA of all Online Book Selling Websites and Scale Reliability for Experience Factors

	Amazon.co.uk				ebaY.co.uk				Waterstones.com				Blackwell.co.uk				AbeBooks.co.uk			
	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha	Factor Loadings	AVE	CR	Cronbach's alpha
Items																				
Web Design	0.56	0.867	0.853		0.60	0.880	0.876		0.57	0.909	0.870		0.65	0.965	0.873		0.55	0.944	0.814	
WD1 The website design is attractive to me	0.59				0.74				0.69				0.80				0.50			
WD2 For me, shopping books from this website is fun	0.48				0.53				0.5				0.59				0.78			
WD3 The website is very convenient to use	0.88				0.88				0.77				0.91				0.90			
WD4 The website is user-friendly	0.91				0.91				0.89				0.91				0.82			
WD5 The website is easy for anyone who wants to sign up	0.79				0.75				0.87				0.78				0.66			
Price	0.52	0.734	0.741		0.49	0.768	0.707		0.39	0.665	0.617		0.39	0.804	0.667		0.41	0.824	0.671	
P1 In my experience, books prices are generally cheaper in this website	0.71				0.76				0.33				0.58				0.74			
P2 When I have a need of books I only buy from:	0.62				0.57				0.63				0.55				0.45			
P3 This website has a good reputation	0.82				0.75				0.82				0.80				0.70			

AVE: Average Variance Extracted; CR: Composite Reliability

4.2. Sample Characteristics

Computer Knowledge and Book Buying Behaviors

Around 90% of the sample had above average computer and Internet knowledge, while 95% had been using the Internet for over 4 years. 81 percent had bought before a book online, with the majority buying university textbooks (70%). The times of purchase over the last six months varied from none (19%) to over six times. The most frequently used website is Amazon.co.uk as a first choice, followed by ebaY.co.uk and Waterstones.com as preferred second choices (Tables A1 and A2, Appendix).

Personality Characteristics

The majority of the sample agreed that they acquired information through friends (72%) and considered that they are optimistic (82%), despite limited free time. The sample's opinion on the sense of security and loneliness trended around neutral with the majority preferring the most positive (more secure and less lonely). Their mood seemed not to be dependent on weather conditions (Table 6).

4.3. Structural Equation Modeling

Model Fit

Structural Equation Modeling (SEM) was used in order to test the hypothesized relations in the research model. The fit results for all five models according to website are shown in Table 7. The models with the best fit were those for Amazon.co.uk, ebaY.co.uk and Waterstones.com, because χ^2/df was under three and RMSEA under 0.08; the CFIs were relatively weak since they were under 0.9 in all three cases with $CFI_{Amazon.co.uk}$ being the highest (0.863). The proposed model did not fit well with Blackwell.co.uk and AbeBooks.co.uk. In the test of hypotheses, the models of Blackwell.co.uk and Abebooks.co.uk should be treated with caution due to their weak model fit.

For Amazon.co.uk, the model explained approximately 80% ($SMC = 0.797$) of the variance in e-loyalty, 75% in e-trust, 51% in satisfaction and 25% in dissatisfaction (Table 7). This shows that the model accounts for a great deal of variance in e-loyalty and explains it well. For the other websites the variance explained in e-loyalty was lower, except for Abebooks.co.uk, for which the model explained 94% of the variance. The model for ebaY.co.uk explained approximately 52% of the variance in e-loyalty but interestingly it explained 91% of the variance in e-satisfaction, indicating that the model explained satisfaction for ebaY.co.uk. This was similar with Blackwell.co.uk. For Waterstones.com, the model explained 60% of the variance in e-loyalty and approximately 72% in satisfaction and trust. These differences between websites are explored with Repeated Measures Multivariate Analysis of Variance (MANOVA), which explores the effect of the website on consumer behavior concepts.

Test of Hypotheses

All results are shown in Table 8 and the SEM path diagrams are shown in Figures A1 to A5 of the Appendix. The precursors of e-loyalty were examined with hypotheses H1-H4a. For all websites, H1 (satisfaction \rightarrow e-loyalty) was confirmed since the path coefficient was statistically different from zero and indicated a moderate or strong positive association [Standardized coefficient (SC) = 0.327 for ebaY.co.uk to 0.873 for AbeBooks.co.uk]. E-trust generally was not found to lead to e-loyalty, except for a borderline weak positive association in ebaY.co.uk (SC = 0.282, $p=0.080$). Web design showed a moderate to strong positive association with e-loyalty in all websites confirming hypothesis H4a. For Blackwell.co.uk, there were two spurious results: e-trust is associated negatively with e-loyalty and dissatisfaction is associated positively. The spurious result with e-trust was observed also with AbeBooks.co.uk.

In the present study, the precursors of satisfaction and dissatisfaction were examined with hypotheses H4b,c,d to H9a,b. Web Design was not significantly associated with satisfaction or dissatisfaction, except for AbeBooks.co.uk, where a positive association was noted with satisfaction. Psychological factors were generally not proven to be predictive of satisfaction or dissatisfaction, except for Blackwell.co.uk, where Psychological Factors were negatively associated with dissatisfaction (SC = -0.403, $p < 0.05$). Perceived value was strongly and positively associated with satisfaction (e.g. for Amazon.co.uk SC=0.422 and for ebaY.co.uk SC=0.760), while it was strongly and negatively associated with dissatisfaction for all websites, thus proving hypotheses H6a and H6b. Inertia didn't have any significant associations with satisfaction, but interestingly it showed significant but moderate positive associations with dissatisfaction for ebaY.co.uk, Waterstones.com, Blackwell.co.uk and Abebooks.co.uk. Convenience motivation was associated positively with satisfaction, albeit weakly, for Amazon.co.uk, Waterstones.com and Blackwell.co.uk, thus substantiating hypothesis H8a. Hypothesis H8b, postulating that convenience motivation has a negative relationship to dissatisfaction, was true for all websites, but significantly different from zero only for Blackwell.co.uk and AbeBooks.co.uk. Finally, computer knowledge was significantly associated with satisfaction for Amazon.co.uk and ebaY.co.uk, demonstrating a weak positive correlation ($SC_{Amazon.co.uk}=0.141$, $SC_{ebaY.co.uk}=0.196$); hence, supporting H9a.

Regarding the hypotheses of factors affecting e-trust, perceived value was noted as a significant predictor of e-trust for Waterstones.com and AbeBooks.co.uk, showing a strong positive relationship ($SC_{Waterstones.com}=0.559$,

Table 6: Personality and Lifestyle Characteristics

	N (%)							
	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree	Missing
I acquire new information through friends	5 (1.7)	7(2.4)	12(4.1)	55(19.0)	87(30.0)	77(26.6)	44(15.2)	3(1.0)
I am an optimistic	5(1.7)	7(2.4)	4(1.4)	33(11.4)	77(26.6)	100(34.5)	63(21.7)	1(0.3)
I am someone who needs to feel secure	10(3.4)	17(5.9)	15 5.2)	64(22.1)	63(21.7)	74(25.5)	41(14.1)	6(2.1)
I like to be alone	20(6.9)	41(14.1)	44(15.1)	84(29.0)	65(22.4)	24(8.3)	8(2.8)	4(1.4)
I have limited free time	6(2.1)	10(3.4)	10(3.4)	31(10.7)	60(20.7)	92(31.7)	77(26.6)	4(1.4)
My mood depends on weather conditions	35(12.1)	52(17.9)	24(8.3)	60(20.7)	68(23.4)	27(9.3)	22(7.6)	2(0.7)
I like buying books from a specific vendor each time	21(7.2)	34(11.7)	30(10.3)	106(36.6)	46(15.9)	33(11.4)	17(5.9)	3(1.0)

Table 7: SEM Fit Statistics and Square Multiple Correlations

	Results				
	Amazon.co.uk	ebaY.co.uk	Watersones.com	Blackwell.co.uk	AbeBooks.co.uk
Model Fit indices					
χ^2/df	1.940 ($\chi^2_{(992)} = 1924.748$, p<0.001)	1.877 ($\chi^2_{(992)} = 1862.470$, p<0.001)	2.283 ($\chi^2_{(992)} = 2264.673$, p<0.001)	3.462 ($\chi^2_{(992)} = 3433.884$, p<0.001)	3.516 ($\chi^2_{(992)} = 3488.210$, p<0.001)
CFI	0.863	0.814	0.759	0.587	0.577
RMSEA	0.057	0.055	0.067	0.092	0.093
Square Multiple Correlations					
E-Loyalty	0.797	0.517	0.606	0.730	0.943
E-Trust	0.750	0.908	0.712	0.456	0.768
Satisfaction	0.511	0.539	0.724	0.840	0.758
Dissatisfaction	0.252	0.385	0.485	0.449	0.506

SC_{AbeBooks.co.uk}=0.718). Also, price was a very significant predictor of e-trust for all websites except AbeBooks.co.uk, with path coefficients ranging from 0.385 to 0.888. Web Design and Inertia were not significantly associated with e-trust for any website.

4.4. Repeated Measures Multivariate Analysis of Variance

Repeated Measures Multivariate Analysis of Variance (MANOVA) was employed to assess the differences of the e-loyalty instrument constructs between different websites and across age, gender, nationality employment status, and monthly income (Hypothesis H11). An initial MANOVA examined the nine latent constructs of the e-loyalty instrument as dependent variables (DVs), website as a within-subject independent variable (IV) and age, gender, nationality, employment status, and monthly income as between-subject factors and gender of body in survey and gender of participant as between-subject IVs. After excluding nationality and employment status as non-significant, a follow-up MANOVA examined associations between the DVs and IVs described above. Because of the large number of IVs and DVs, the consequent number of significance tests, and the increased likelihood of making a Type I error, only results significant at the p<0.001 level were reported, according to the Bonferroni adjustment [Hair Jr et al. 2006].

Results showed a statistically significant multivariate effect for age, monthly income, website, the interaction of age with website and the interaction of website, age and monthly income (Table 9). Eta-squared was positive in all relationships and was particularly strong for website (0.859). Observed power was acceptable (>0.80) in all calculations. Given the significance of the overall test, the univariate main effects were examined. None of between-subject variables was significantly under p<0.001 (results not shown). The sphericity assumption was not met so the Huynh-Feldt correction was applied. Among the remaining variables from the within-subject factor, the interaction factors Website*Age, Website*Age*MonthlyIncome were not considered significant because no p-value was under 0.001. Only website presented significant univariate effects with all dependent variables, except for Inertia (Table 10).

Table 8: Standardized Regression Coefficients from Structural Equation Modeling

Path	Expected sign	Amazon.co.uk		eBay.co.uk		Waterstones.com		Blackwell.co.uk		AbeBooks.co.uk	
		SC	CR	SC	CR	SC	CR	SC	CR	SC	CR
H1 Satisfaction→e-Loyalty	+	0.698	3279***	0.327	1972*	0.490	3.053***	0.797	3.770***	0.947	3.528***
H2 Dissatisfaction→e-Loyalty	-	0.116	1.494	0.065	0.563	-0.078	-0.933	0.211	2.066*	0.180	1.463
H3 E-Trust→e-Loyalty	+	-0.025	-0.331	0.282	1749*	-0.224	-1.508	-0.307	-2.059*	-0.521	-3.262***
H4a Web Design→e-Loyalty	+	0.391	2921**	0.264	1694**	0.460	2.364**	0.430	3.032**	0.364	2.212*
H4b Web Design→e-Trust	+	0.106	0.910	-0.179	-0982	0.269	1.183	-1.498	-0.978	-0.077	-0.241
H4c Web Design→Satisfaction	+	0.107	0.937	0.132	1.018	0.308	1.562	-0.351	-2.703**	0.400	2.455**
H4d Web Design→Dissatisfaction	-	-0.108	-0.871	-0.229	-1588	-0.258	-1.116	0.536	2.363*	0.197	0.986
H5a Psychological factors→Satisfaction	+	0.188	1.284	0.087	0.802	-0.147	-1.723*	0.062	0.604	-0.251	-2.034*
H5b Psychological factors→Dissatisfaction	-	-0.033	-0.282	-0.144	-1083	-0.119	-1.059	-0.494	-2.297*	-0.283	-1.790§
H6a Perceived Value→Satisfaction	+	0.378	3644***	0.704	4725***	0.657	4.701***	0.781	8.790***	0.592	3.947***
H6b Perceived Value→Dissatisfaction	-	-0.399	-2840**	-0.384	-2245*	-0.535	-3.141**	-0.340	-2.510*	-0.272	-1.641
H6c Perceived Value→e-Trust	+	-0.011	0.092	0.027	0.133	0.466	3.033**	-0.419	-0.716	0.665	5.554***
H7a Inertia→Satisfaction	+	0.048	0.468	-0.166	-1521	-0.133	-1.549	0.117	1.199	0.031	0.277
H7b Inertia→Dissatisfaction	-	0.165	1.451	0.326	2244*	0.274	2.676**	0.341	1.997*	0.290	1.789§
H7c Inertia→e-Trust	+	-0.116	-1.558	-0.003	-0030	-0.075	-0.888	-0.832	-1.147	0.057	0.557
H8a Convenience Motivation→Satisfaction	+	0.125	1.263	-0.072	-0533	-0.011	-0.086	0.450	3.943***	-0.215	-1.691**
H8b Convenience Motivation→Dissatisfaction	-	-0.097	-0.866	-0.134	-0857	0.028	0.193	-0.683	-3.451***	-0.666	-3.416***
H9a Computer Knowledge→Satisfaction	+	0.141	2.193*	0.196	2339**	-0.059	-0.883	0.069	1.046	0.188	2.358**
H9b Computer Knowledge→Dissatisfaction	-	-0.044	-0.625	-0.038	-0463	-0.070	-0.944	0.226	1.912*	0.084	0.814
H10 Price→e-Trust	+	0.827	4194***	0.955	3574***	0.234	1.232	0.910	1.394	0.288	0.748

SC: Standardized coefficient, CR: Critical Ratio, H: Hypothesis; *p<0.05, **p<0.01, ***p<0.001, §p=0.080, ¶p=0.090, §p=0.074

Table 9: Significant Multivariate Effects (at p<0.001 level)

	Wilks' λ	F	Hypothesis df	Error df	p-value	Partial η ²	Observed Power
Age	0.239	1.943	63	422.880	0.0001	0.185	1.000
Monthly income	0.316	1.794	54	381.922	0.001	0.175	0.999
Website	0.141	7.927 ^a	36	47.000	<0.0001	0.859	1.000
Website*Age	0.001	2.261	252	336.221	<0.0001	0.623	1.000
Website*Age*Monthly income	0.000	1.249	720	927.905	0.0008	0.447	1.000

Table 10: Univariate Tests of Website with E-Loyalty Latent Variables (df=4)

	F	p-value	Partial η ²	Observed Power
Satisfaction	20.312	<0.0001	0.199	1.000
Dissatisfaction	13.802	<0.0001	0.144	1.000
Loyalty	15.910	<0.0001	0.162	1.000
Inertia	4.208	0.002	0.049	0.922
Perceived Value	11.880	<0.0001	0.127	1.000
Trust	26.988	<0.0001	0.248	1.000
Convenience Motivation	24.801	<0.0001	0.232	1.000
Web Design	19.702	<0.0001	0.194	1.000
Price	23.312	<0.0001	0.221	1.000

Observed power was acceptable (>0.80) in all calculations. In general, latent constructs from the e-loyalty instrument were higher for Amazon.co.uk website compared to the others. The means and standard errors of the latent constructs and their pairwise differences are shown in Tables A11 and A12, Appendix.

5. Discussion

The main contribution of this study concerns the positive and direct association of satisfaction with e-loyalty for websites. This finding fits with the pivotal role of the customer's attitude towards the online vendor [Luarn & Lin 2003]. That dissatisfaction would lead to disloyal behaviors has been proven, but no significant relationship was noted for any specific website. Taking into account the results, it can be seen that satisfaction was found to be a precursor to loyalty, but a dissatisfied customer does not necessarily imply disloyal behavior [Oliver 1999]. There can be no loyalty development without early or concurrent satisfying episodes, since satisfaction is a necessary prerequisite of e-loyalty. This is rational for online environments, since there are no exit barriers for consumers; nothing other than a click of the mouse prevents people from choosing another website. However, satisfaction is also dependent on its own antecedents (e.g. Psychological factors, Perceived value, Inertia, Convenience motivation, and Computer knowledge), which should be taken into account when considering its relationship to loyalty.

The second contribution is that the results show that trust does not play a pivotal role in customer loyalty online. This result is in contradiction to a number of studies [Harris & Goode 2004]. This may occur due to customers' fear of online fraud, as the act of buying under impersonal conditions always raises some concern [Hoffman et al. 1999]. As a result, online customers have difficulty trusting an online environment compared to offline, where they can have direct contact and communication with salespeople.

Another finding was that there is a moderate to strong direct and positive association between website design and e-loyalty. Website design, along with other factors (e.g. assurance, usability, product information and quality), belongs to the category of service quality. This result fits with several other studies on Web Design [Caruana & Ewing 2010; Jin & Kim 2010] and it is considered to play a powerful role in customers' satisfaction. According to Bai et al. [2008], website quality based upon factor usability (measured by language, layout, and graphs) influences customers' purchase intentions via their satisfaction with website functionality and usability features. Therefore, the more attractive, convenient and friendly an online bookselling website is the more loyal customers will be created.

Furthermore, perceived value was proven to have direct positive association with satisfaction, while its association with dissatisfaction was negative. Taking into consideration this finding, the value of customers' money is an important reason for their continuance to purchase from the same online website. For convenience motivation, none of the hypotheses were supported. As well, inertia did not have any association with satisfaction, thus supporting Campbell's [1997] definition of inertia. Indeed, a customer who constantly purchases from the same online website – due to their inertia – is not necessarily satisfied or loyal with it, but might be doing so purely out of habit.

When it comes to customers' computer knowledge, this was found to have a positive and direct association with satisfaction. The more computer knowledge consumers have, the more they feel satisfied with their online purchases and transactions. Finally, psychological factors were found to have hardly any association with satisfaction or dissatisfaction at all. This finding has significant implications as previous investigations of the link between psychological factors and satisfaction/dissatisfaction have been limited in scope. It suggests that psychological conditions like loneliness, optimism, and weather conditions, do not affect customers' satisfaction and ultimately loyalty for a website.

The study suggests the association between perceived value and trust depends upon purchasing power. When customers feel that the value of money spent on an online website is genuine and not fraudulent, then they trust it for future purchases. The relationship may be enhanced by familiar presence (e.g. Waterstones) given they have access to it not only online but can visit one of their bookstores.

The other new finding of note was that price is a determinant factor of e-trust. Customers' choice to make purchases from an online websites may be due not only to the quality of services offered by the e-retailer, but also the price. For example, a low-price from a website can lead to customers' e-trust, independently of convenience or service quality offered.

The present study was limited by its sample and context for the analysis of ECT. Comparing the present study's results with other studies, similarities in the basic structure of ECT can be observed (i.e. satisfaction leads to loyalty), with differences only noticed in extensions attempted by other research groups. For instance, Lee and Kwon [2011] investigated the factors influencing users' continued intention to use web-based services by adding the factors intimacy and familiarity to the existing ECT. Their results showed that there was a significant association between satisfaction and continuance intention. Also, Kim [2012] and Halilovic and Cicic [2011] proposed a framework examining the effect of online consumer trust on expectation, satisfaction, and post-expectation with the

combination of three theories: social exchange theory, ECT, and post-acceptance model of IS continuance. Alike, their results demonstrated a statistically significant association between satisfaction and repurchase intention. So, it seems that ECT is replicated satisfactorily in similar online settings, with no great deviation. Moreover, its dynamic definition allows for extensions depending on the field of investigation, without hindering generalizability.

6. Managerial Implications

Managers are advised to focus on satisfaction and perceived value as precursors to e-trust. Furthermore, managers will likely increase customer satisfaction by improving web design and assurance policies, necessitating communications to remind customers of the website's security [Bart et al. 2005]. In addition, customers' desire for online purchasing may be maintained only when websites are convenient and offer value. Finally, price has been found to have an immediate impact on e-trust. Never before has this been examined in the marketing field. Overall, gaining customer's trust in the online environment is more difficult than in offline due to the impersonal nature of the relationships. As a result, e-retailers should balance quality with price, predisposing positively customer's attitudes towards the website.

7. Limitations and Further Research Directions

The present study has a number of limitations. First, the data was collected only from university students, who represent a portion of the online shopping population in the UK, even if they are good proxies of general online shoppers (they are a younger and more educated portion of the population). Thus, a study of selecting a larger general online shopping population will increase generalizability and also the validity of the study [Ribbink et al. 2004]. Lastly, this study was cross-sectional in nature and did not measure the endurance of customers' behaviors, for which a longitudinal approach would be more appropriate.

Acknowledgment

Aikaterini Valvi's research is supported by a scholarship from the School of Business, Economics and Informatics, Birkbeck, University of London, United Kingdom.

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APPENDIX

Table A1: Computer and Internet Use – Online book-buying habits

Variable	Frequencies	Percentages
Computer Knowledge		
No knowledge	1	0.3
Low knowledge	7	2.4
Moderate knowledge	30	10.3
Good knowledge	191	65.9
Excellent knowledge	59	20.4
Not answered	2	0.7
Computer Knowledge Certificate		
No	200	69.0
Yes	87	30.0
Not answered	3	1.0
Internet Knowledge		
No knowledge	1	0.3
Low knowledge	2	0.6
Moderate knowledge	25	8.6
Good knowledge	190	65.6
Excellent knowledge	70	24.2
Not answered	2	0.7
Years of using the Internet		
Less than 1	3	1.0
2-3	1	0.3
3-4	6	2.1
More than 4	278	95.9
Not answered	2	0.7
Kind of books buying from online book-selling websites		
University Textbooks	204	70.3
Poetry, Drama & Criticism	4	1.4
Science Fiction & Fantasy	8	2.8
Romance	3	1.0
Health, Family & Lifestyle	8	2.8
History	5	1.7
Business, Finance & Law	7	2.4
Computing & Internet	2	0.7
Languages	1	0.3
Sports, Hobbies & Games	3	1.0
Science & Nature	2	0.7
Other	13	4.5
Not answered	30	10.4
How many times have you bought books online in the last six months?		
None	56	19.3
Once	31	10.6

Table A1: (continued)

Variable	Frequencies	Percentages
Twice	51	17.6
Three times	40	13.8
Four to six times	64	22.1
Over six times	42	14.5
Not answered	6	2.1
Which book purchasing websites do you frequently use?		
Amazon	237	81.8
ebaY	7	2.5
Waterstones	8	2.8
WHSmith	1	0.3
Play.com	1	0.3
Abebooks	1	0.3
Pearson	1	0.3
IBS. IT	1	0.3
Christ Embassy Online Store.org	1	0.3
Not answered	32	11.1

Table A2: Second and third choice in customer's preference of online book-selling websites

2 nd choice			3 rd choice		
Website	N	%	Website	N	%
Waterstones	43	14.9	Google	1	0.3
ebaY	43	14.9	ebaY	13	4.6
Play	9	3.2	WHSmith	1	0.3
Pearson	3	1.0	Amazon	1	0.3
Cambridge online	1	0.3	Abebooks	1	0.3
Kindle stone	2	0.7	Foyles	4	1.5
Pen & Sword	1	0.3	Kauqummi	1	0.3
WHSmith	1	0.3	Waterstones	14	4.9
Amazon	14	4.9	Miau.PT	1	0.3
Abebooks	5	1.8	Blackwell	2	0.7
NIEVES	1	0.3	Casa Del Libro	1	0.3
The book depository	3	1.0	I Books	1	0.3
Hungarian websites	1	0.3	Play	5	1.8
Blackwell	2	0.7	Greener Books	1	0.3
Gumtree	1	0.3	The book depository	1	0.3
Foyles	1	0.3	Bookoff	1	0.3
Alibris	2	0.7	Harrods	1	0.3
Megashopbot	1	0.3	Collins	1	0.3
The book people	1	0.3	Bol	1	0.3
NA*	155	53.5	Not answered	238	82.2

Table A3: The main characteristics of the selected websites

Amazon.co.uk: Its mission is “to be earth’s most customer centric company and to build a place where people can come to find and discover anything they might want to buy online”. Amazon.co.uk has attracted people’s interest, due to its wide range of products (e.g. video games, electronics, computer software, CDs, DVDs, MP3s, apparel, furniture etc.) and its low and competitive prices.
ebaY.co.uk: An online auction and shopping website in which people and businesses buy and sell a variety of goods and services worldwide. Its mission is “to provide a global trading platform where practically anyone can trade practically anything”. Similar to Amazon.com, ebaY offers millions of selling products.
Waterstones.com: Its mission is “to be the leading Bookseller on the High Street and online, providing customers the widest choice, great value and expert advice from a team passionate about Bookselling. Waterstone’s aims to interest and excite its customers and continually inspire people to read and engage in books”. Waterstone’s sells only books either through traditional bookstores or online.
Blackwell.co.uk: Blackwell, a national chain of bookshops, online retail, mail order and library supply services in the United Kingdom.
AbeBooks.co.uk: AbeBooks (Advanced Book Exchange) is an online marketplace for books that was founded in 1995. Its mission is “to help people find and buy any book from any bookseller anywhere and our business stretches around the world with six international sites”.

Additional Confirmatory Factor Analysis (CFA) Results

Table A4: Correlation Coefficients between Constructs for Amazon.co.uk

		1	2	3	4	5	6	7	8	9
1	Convenience Motivation	0.837								
2	Trust	0.738	0.877							
3	Perceived Value	0.380	0.717	0.806						
4	Inertia	0.376	0.399	0.503	0.632					
5	E-Loyalty	0.565	0.620	0.686	0.656	0.700				
6	Satisfaction	0.510	0.569	0.593	0.327	0.801	0.781			
7	Dissatisfaction	-0.370	-0.424	-0.459	-0.142	-0.471	-0.620	0.663		
8	Web Design								0.748	
9	Price								0.841	0.721

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Table A5: Correlation Coefficients between Constructs for ebaY.co.uk

		1	2	3	4	5	6	7	8	9
1	Convenience Motivation	0.831								
2	Trust	0.869	0.819							
3	Perceived Value	0.719	0.793	0.800						
4	Inertia	0.391	0.348	0.525	0.686					
5	E-Loyalty	0.544	0.637	0.746	0.603	0.686				
6	Satisfaction	0.529	0.607	0.649	0.188	0.582	0.843			
7	Dissatisfaction	-0.438	-0.473	-0.445	-0.046	-0.402	-0.571	0.671		
8	Web Design								0.775	
9	Price								0.792	0.700

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Table A6: Correlation Coefficients between Constructs for Waterstones.com

		1	2	3	4	5	6	7	8	9
1	Convenience Motivation	0.854								
2	Trust	0.729	0.837							
3	Perceived Value	0.571	0.796	0.812						
4	Inertia	0.206	0.394	0.479	0.656					
5	E-Loyalty	0.482	0.498	0.715	0.616	0.693				
6	Satisfaction	0.589	0.632	0.811	0.268	0.739	0.843			
7	Dissatisfaction	-0.453	-0.607	-0.619	-0.135	-0.538	-0.670	0.723		
8	Web Design								0.755	
9	Price								0.745	0.625

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Table A7: Correlation Coefficients between Constructs for Blackwell.co.uk

		1	2	3	4	5	6	7	8	9
1	Convenience Motivation	0.812								
2	Trust	0.764	0.837							
3	Perceived Value	0.473	0.601	0.843						
4	Inertia	0.344	0.516	0.540	0.728					
5	E-Loyalty	0.493	0.506	0.707	0.705	0.707				
6	Satisfaction	0.599	0.751	0.855	0.393	0.705	0.787			
7	Dissatisfaction	-0.296	-0.019	-0.172	0.141	0.053	-0.200	0.755		
8	Web Design								0.806	
9	Price								0.931	0.625

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Table A8: Correlation Coefficients between Constructs for Abebooks.Co.Uk

		1	2	3	4	5	6	7	8	9
1	Convenience Motivation	0.800								
2	Trust	0.616	0.922							
3	Perceived Value	0.677	0.840	0.819						
4	Inertia	0.242	0.469	0.431	0.648					
5	E-Loyalty	0.332	0.487	0.552	0.565	0.608				
6	Satisfaction	0.593	0.769	0.852	0.308	0.881	0.742			
7	Dissatisfaction	-0.565	-0.338	-0.440	0.050	-0.296	-0.494	0.742		
8	Web Design								0.742	
9	Price								0.965	0.640

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE)

Table A9: Fit Indices of the CFA for Cognitive Affective Factors

Model Fit indices	Recommended Value	Results				
		Amazon.co.uk	eBaY.co.uk	Watersones.com	Blackwell.co.uk	AbeBooks.co.uk
χ^2/df	≤ 3.0	1.988 ($\chi^2_{(329)} = 654.207$, $p < 0.0001$)	2.233 ($\chi^2_{(329)} = 734.607$, $p < 0.0001$)	2.686 ($\chi^2_{(329)} = 883.812$, $p < 0.0001$)	4.633 ($\chi^2_{(329)} = 1524.303$, $p < 0.0001$)	4.701 ($\chi^2_{(329)} = 1546.560$, $p < 0.0001$)
CFI	≥ 0.9	0.928	0.844	0.844	0.670	0.668
TLI	≥ 0.9	0.912	0.838	0.807	0.593	0.590
NFI	≥ 0.9	0.868	0.789	0.777	0.622	0.620
RMSEA (90% CI)	≤ 0.08	0.058 (0.052-0.065)	0.065 (0.059-0.072)	0.076 (0.070-0.082)	0.113 (0.106-0.118)	0.113 (0.108-0.119)

Table A10: Fit Indices of the CFA for Experience Factors

Model Fit indices	Recommended Value	Results				
		Amazon.co.uk	eBaY.co.uk	Watersones.com	Blackwell.co.uk	Abebooks.co.uk
χ^2/df	≤ 3.0	4.103 ($\chi^2_{(19)} = 77.953$, $p < 0.0001$)	4.192 ($\chi^2_{(19)} = 79.651$, $p < 0.0001$)	3.030 ($\chi^2_{(19)} = 57.575$, $p < 0.0001$)	3.647 ($\chi^2_{(19)} = 69.296$, $p < 0.0001$)	6.669 ($\chi^2_{(19)} = 126.703$, $p < 0.0001$)
CFI	≥ 0.9	0.945	0.916	0.934	0.925	0.823
TLI	≥ 0.9	0.895	0.841	0.874	0.858	0.664
NFI	≥ 0.9	0.929	0.895	0.907	0.902	0.803
RMSEA (90% CI)	≤ 0.08	0.104 (0.080-0.128)	0.105 (0.082-0.129)	0.084 (0.060-0.109)	0.096 (0.072-0.120)	0.140 (0.117-0.164)

Structural Equation Models

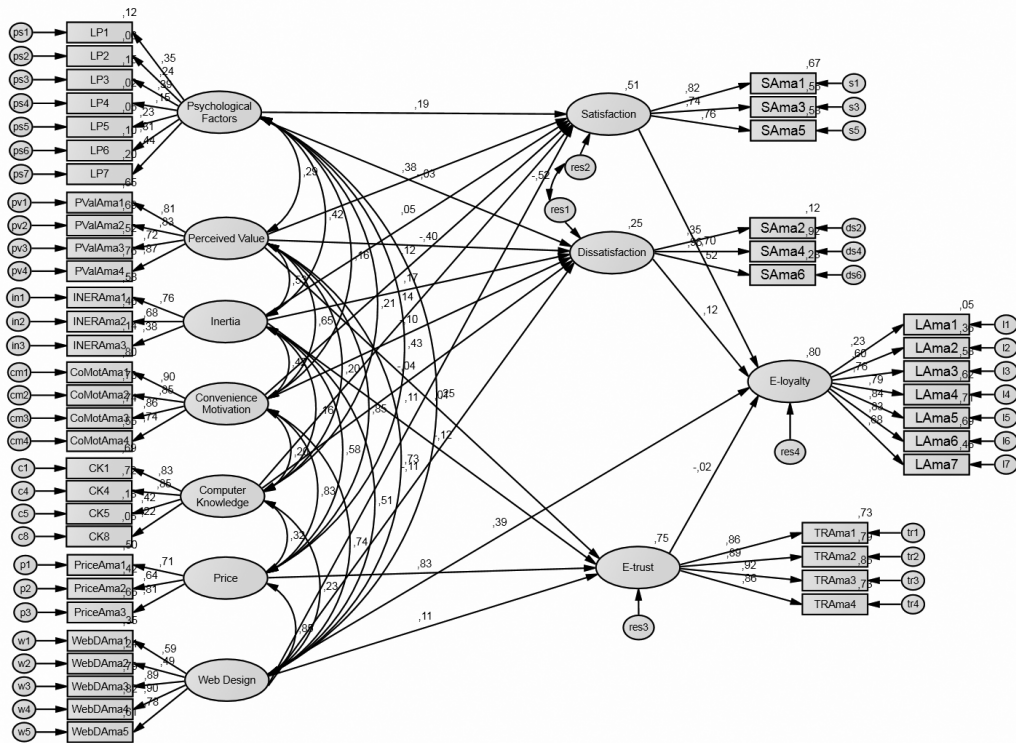


Figure A1: Path Diagram for Amazon.co.uk

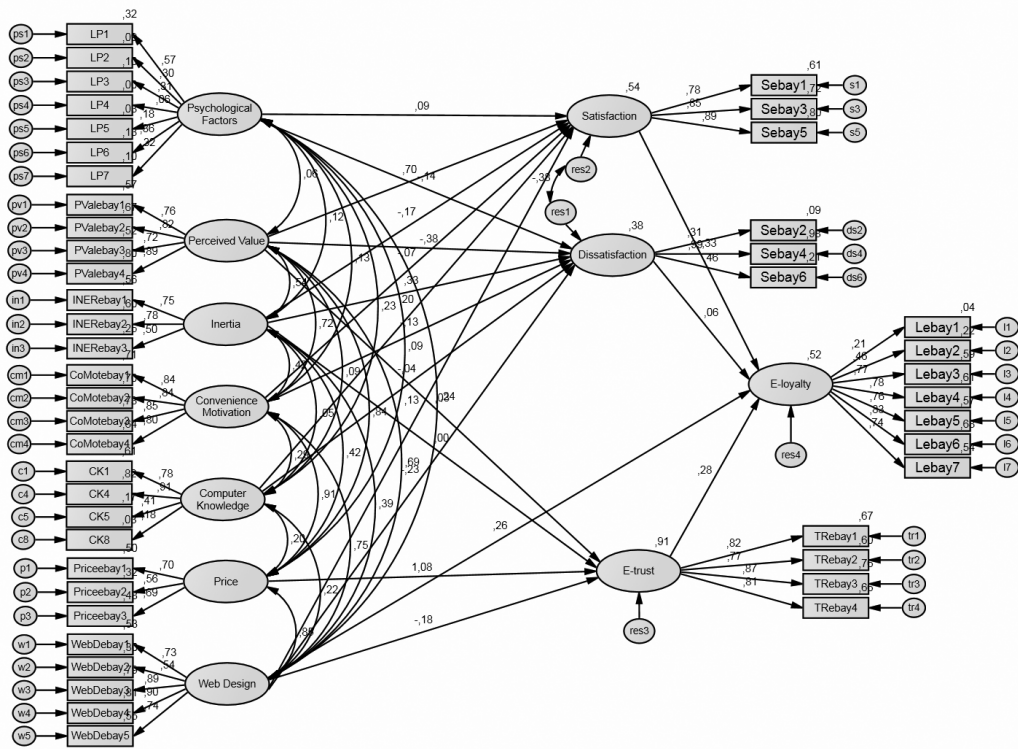


Figure A2: Path Diagram for ebaY.co.uk

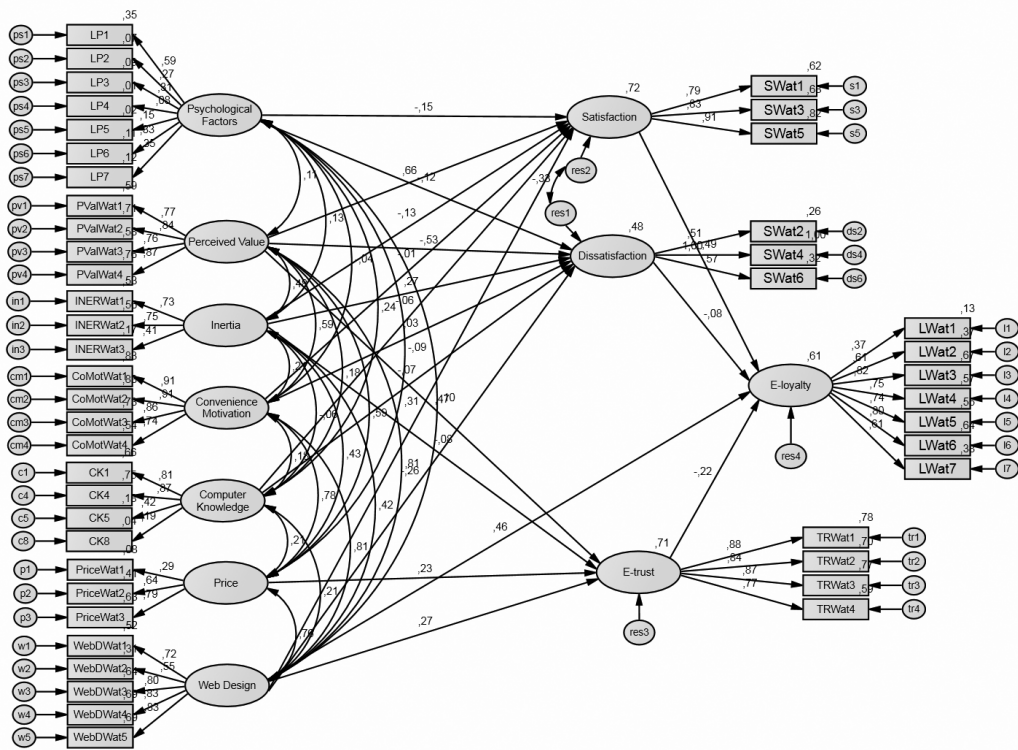


Figure A3: Path Diagram for Waterstones.com

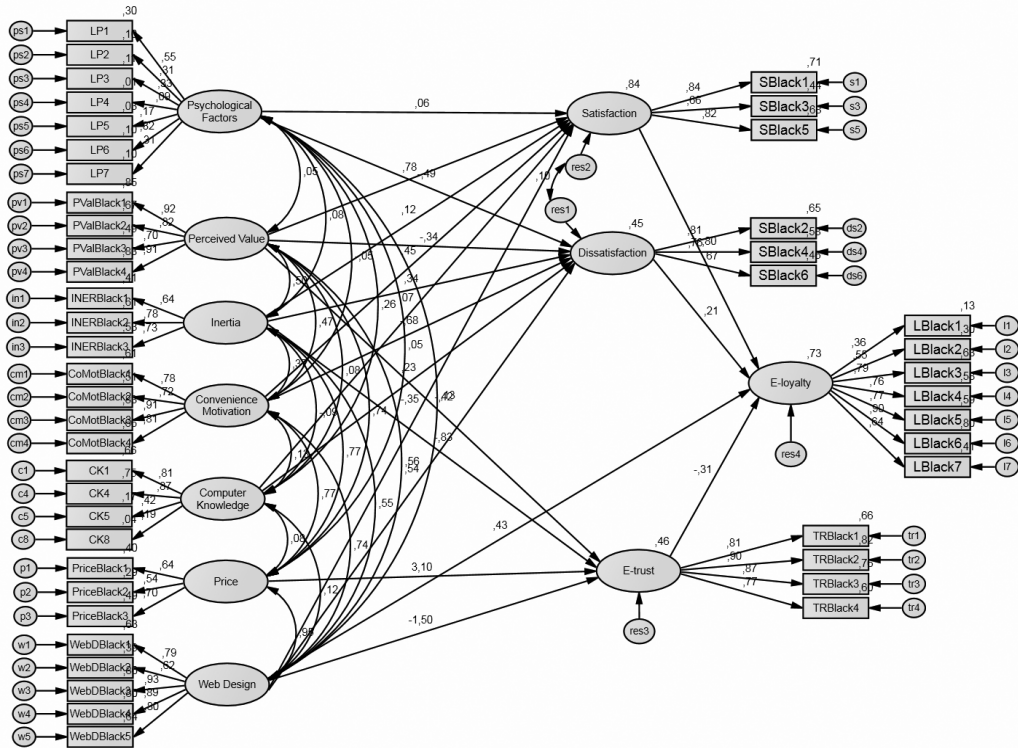


Figure A4: Path Diagram for Blackwell.co.uk

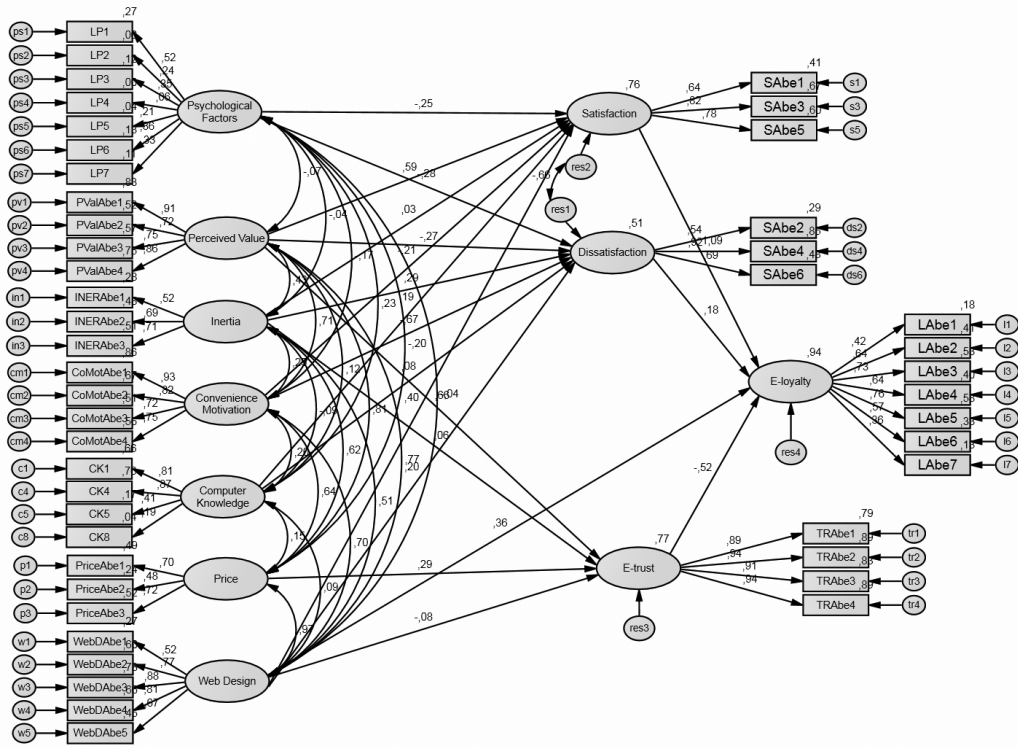


Figure A5: Path Diagram for AbeBooks.co.uk

Additional Multivariate Analysis of Variance (MANOVA) Results

Table A11: Mean Values and Standard Errors (S.E.) of all Latent Constructs of the E-Loyalty Instrument for Each Website

	Amazon.co.uk		ebaY.co.uk		Watersones.com		Blackwell.co.uk		AbeBooks.co.uk	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Satisfaction	12.4 ^a	0.2	10.1 ^a	0.3	10.0 ^a	0.3	8.8 ^a	0.2	8.8 ^a	0.2
Dissatisfaction	6.1 ^a	0.3	7.5 ^a	0.2	7.8 ^a	0.2	8.6 ^a	0.2	8.5 ^a	0.2
Loyalty	25.7 ^a	0.5	21.4 ^a	0.5	21.6 ^a	0.6	20.0 ^a	0.4	20.1 ^a	0.4
Inertia	9.1 ^a	0.3	8.3 ^a	0.3	8.2 ^a	0.2	8.3 ^a	0.2	8.2 ^a	0.2
Perceived Value	14.9 ^a	0.3	12.7 ^a	0.3	12.5 ^a	0.3	11.6 ^a	0.2	11.4 ^a	0.2
Trust	16.2 ^a	0.3	13.8 ^a	0.3	12.9	0.3	11.7 ^a	0.2	11.6 ^a	0.2
Convenience Motivation	16.2 ^a	0.3	14.3 ^a	0.3	13.5 ^a	0.3	12.2 ^a	0.3	12.3 ^a	0.2
Web Design	18.6 ^a	0.4	16.3 ^a	0.4	15.7 ^a	0.3	14.5 ^a	0.3	14.6 ^a	0.3
Price	11.8 ^a	0.3	10.0 ^a	0.2	9.2 ^a	0.2	8.6 ^a	0.2	8.7 ^a	0.2

a. Based on modified population marginal mean.

Table A12: Mean Differences (I-J) of the E-Loyalty Instrument Latent Constructs between the Various Websites

	(J) Website	(I) Website			
		Amazon.co.uk	ebaY.co.uk	Watersones.com	Blackwell.co.uk
Satisfaction	ebaY.co.uk	2.3 ^{*,a}			
	Watersones.com	2.4 ^{*,a}	0.02 ^a		
	Blackwell.co.uk	3.6 ^{*,a}	1.3 ^{*,a}	1.3 ^{*,a}	
	Abebooks.co.uk	3.6 ^{*,a}	1.3 ^{*,a}	1.2 ^{*,a}	-0.04 ^a
Dissatisfaction	ebaY.co.uk	-1.4 ^{*,a}			
	Watersones.com	-1.7 ^{*,a}	-0.3 ^a		
	Blackwell.co.uk	-2.5 ^{*,a}	-1.1 ^{*,a}	-0.8 ^{*,a}	
	Abebooks.co.uk	-2.5 ^{*,a}	-1.0 ^{*,a}	-0.7 ^{*,a}	0.03 ^a
Loyalty	ebaY.co.uk	4.3 ^{*,a}			
	Watersones.com	4.1 ^{*,a}	-0.2 ^a		
	Blackwell.co.uk	5.8 ^{*,a}	1.5 ^{*,a}	1.6 ^{*,a}	
	Abebooks.co.uk	5.6 ^{*,a}	1.3 ^{*,a}	1.5 ^{*,a}	-0.2 ^a
Inertia	ebaY.co.uk	0.8 ^{*,a}			
	Watersones.com	0.9 ^{*,a}	0.1 ^a		
	Blackwell.co.uk	0.9 ^{*,a}	0.03 ^a	-0.04 ^a	
	Abebooks.co.uk	1.0 ^{*,a}	0.2 ^a	0.1 ^a	0.1 ^a
Perceived Value	ebaY.co.uk	2.2 ^{*,a}			
	Watersones.com	2.5 ^{*,a}	0.3 ^a		
	Blackwell.co.uk	3.4 ^{*,a}	1.2 ^{*,a}	0.9 ^{*,a}	
	Abebooks.co.uk	3.6 ^{*,a}	1.4 ^{*,a}	1.1 ^{*,a}	0.2 ^a
Trust	ebaY.co.uk	2.4 ^{*,a}			
	Watersones.com	3.3 ^{*,a}	0.9 ^{*,a}		
	Blackwell.co.uk	4.5 ^{*,a}	2.1 ^{*,a}	1.2 ^{*,a}	
	Abebooks.co.uk	4.5 ^{*,a}	2.1 ^{*,a}	1.3 ^{*,a}	0.1 ^a
Convenience Motivation	ebaY.co.uk	2.0 ^{*,a}			
	Watersones.com	2.7 ^{*,a}	0.8 ^{*,a}		
	Blackwell.co.uk	4.0 ^{*,a}	2.1 ^{*,a}	1.3 ^{*,a}	
	Abebooks.co.uk	3.9 ^{*,a}	1.9 ^{*,a}	1.2 ^{*,a}	-0.1 ^a
Web Design	ebaY.co.uk	2.2 ^{*,a}			
	Watersones.com	2.9 ^{*,a}	0.7 ^a		
	Blackwell.co.uk	4.1 ^{*,a}	1.9 ^{*,a}	1.2 ^{*,a}	
	Abebooks.co.uk	3.9 ^{*,a}	1.7 ^{*,a}	1.0 ^a	-0.2 ^a
Price	ebaY.co.uk	1.8 ^{*,a}			
	Watersones.com	2.5 ^{*,a}	0.8 ^{*,a}		
	Blackwell.co.uk	3.2 ^{*,a}	1.4 ^{*,a}	0.7 ^{*,a}	
	Abebooks.co.uk	3.1 ^{*,a}	1.3 ^{*,a}	0.6 ^{*,a}	-0.1 ^a

Based on estimated marginal means

*. The mean difference is significant at the 0.05 level.

a. Based on modified population marginal mean.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).