THE PREDICTORS AND OUTCOMES OF CUSTOMER LOYALTY
IN B2C E-COMMERCE

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Loyalty is considered to be one of the key factors of e-commerce, and many studies have been conducted to focus on the loyalty in e-commerce. One problem with these previous studies is the lack of a concrete definition of loyalty which might have led to inconsistent findings of the predictors and outcomes of loyalty. This study defines loyalty in terms of attitude and explores the predictors and outcomes of customer loyalty in the context of business-to-customer (B2C) e-commerce.

To define loyalty and identify its predictors and outcomes, we first reviewed previous studies of loyalty. Second, the framework by Fishbein and Ajzen (1975) was utilized to define loyalty in terms of attitude. With loyalty defined in this way, clear identification of the factors of loyalty was presented, which resulted in a model of the predictors and outcomes of loyalty.

The model presents five hypotheses, and controlled experimental surveys were used to test the model (i.e., for panel analysis). This was necessary because longitudinal analysis was appropriate to test causal effects among the variables. The data was screened and checked for validity (using the measurement model of
structural equation modeling) and reliability (using Cronbach’s alpha and composite reliability). The latent variables that passed the validity test were used in the final research model.

Structural equation modeling was also used to evaluate the research model (structural model) for the hypothesis test, and the results support three of the five proposed hypotheses. First, beneficial and trustworthy websites are likely to affect customer loyalty (Hypotheses 1 and 3). Second, loyalty is positively related to word of mouth (Hypothesis 5). Due to validity problems, two constructs (i.e., satisfaction and purchase intention) were not tested (Hypotheses 2 and 4), and these are discussed along with implications, limitations, and a conclusion.

Accepted by:

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Finally, I wish to thank the respondents of my study (who remain anonymous for confidentiality purposes). Without their support, this thesis might not have been possible.
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CHAPTER 1: INTRODUCTION

The pattern of customer behavior has changed dramatically over the past decades. Previously, customers only had the option to shop in physical stores, but in modern times customers can also choose to shop online, which has made electronic commerce (e-commerce) more important to customers. In e-commerce, customers use the Internet (especially the World Wide Web) to exchange products. In today's competitive world, increasing accessibility in the online market is a more important demand than ever before. This is mainly because the Internet and computer networks have been creating convenient ways of fulfilling transactions, leading to the enterprise of e-commerce.

E-commerce, in a broad sense, is the use of computer networks to improve organizational performance. Increasing profitability, gaining market share, improving customer service, and delivering products faster are examples of the organizational performance gains possible with e-commerce. E-commerce is more than just the ordering of goods from an online catalog. It involves all aspects of an organization's electronic interactions with the people who determine the future of the organization (i.e., its stakeholders). In brief, e-commerce involves the use of information technology to enhance communications and transactions with all of an organization's stakeholders. Such stakeholders include customers, suppliers, government regulators, financial institutions, managers, employees, and the public at large (Watson, Berthon, Pitt, & Zinkhan, 2008). There are two common types of e-commerce: business-to-business (B2B) and business-to-customer (B2C). B2C refers to the transactions between business
organizations and individual customers while B2B refers to the transactions between
business organizations and other business organizations.

In the development of B2C e-commerce, the high cost of attracting new customers
on the Internet and the relative difficulty in retaining them make customer loyalty an
absolute asset for many online vendors. In non-Internet marketplaces, customer loyalty
is primarily the product of superior service quality and the trust that such service entails
(Gefen, 2002). From a seller’s perspective, customer loyalty is recognized as a key path
to profitability. This is also true in the online marketplace, and is even more important.
In order to reap the benefits of a loyal customer base, online retailers (e-tailers) need to
develop a thorough understanding of the antecedents of online loyalty (e-loyalty); that is,
customer loyalty to a business that sells online (Srinivasan, Anderson & Ponnavolu,
2002).

The development of e-commerce has motivated a number of researchers and
practitioners to search for online business success factors by discovering more advanced
business strategies. Customer loyalty is definitely an efficient strategy that all e-
commerce companies pursue. As Peterson, Balasubramanian, & Bronnenberg (1997)
state in their research, electronic markets will bring about low profit margins as a result of
intense price competition. One way to overcome this difficulty is for e-commerce
companies to develop and maintain customer loyalty.
Scope of the Study

In this paper, business-to-customer (B2C) e-commerce is considered because the percentage of online shopping is increasing daily (Srinivasan, Anderson & Ponnavolu, 2002). B2C e-commerce requires more emotional attachments between e-commerce companies and their customers because the ultimate goal of B2C e-commerce is to attract as many customers as possible and keep them buying products consistently. An interesting aspect of B2C e-commerce is that many companies have realized the importance of loyalty. They can get a winning combination with great customer service (Murphy, 2007).

Loyalty is formed in diverse contexts and domains—loyalty to a person, to a family, to an employer, to a country, as well as loyalty to a company or a brand. In this paper, we consider the loyalty to a company. Consequently, loyalty refers to the customer's affective commitment towards particular companies which is likely to result in repeat purchases.

Statement of the Problem and Research Objectives

Loyalty in the context of e-commerce has been defined in many ways. In previous research papers, loyalty is defined in some circles as repeat purchase behavior frequency or relative volume of same-brand purchasing (Oliver, 1999; Agustin & Singh, 2005). These definitions may not be useful because they make it difficult to identify other factors that are related to loyalty. To understand the problems, for instance, we can
ask, "How do the customers identify themselves as loyal customers?" or "What are the valid predictors of customer loyalty in e-commerce?"

In addition, switching costs have been identified as a factor that impacts loyalty (Kim & Son, 2009). Switching costs tend to reduce the number of alternatives (Heide & Weiss, 1995), "force" customers to stay with the current company, and decrease the willingness to find other alternatives (Zauberman, 2003). Nonetheless, switching costs do not generate customer loyalty because the attitudes forced by switching costs are unwillingly formed agreements.

There is clearly a need to study how loyalty would be developed in e-commerce along with the predictors and outcomes of loyalty. This paper starts with the analysis of the existing conceptualizations of loyalty. Based on the analysis, the factors that would impact loyalty and the corresponding outcomes that loyalty may generate will be investigated.

To deal with these issues, we present the following research questions: (1) What is the appropriate definition of loyalty in the context of B2C e-commerce? (2) What are the predictors of loyalty? (3) What are the outcome behaviors that customer loyalty generates?

Expected Contributions

This study will be beneficial to both researchers and practitioners. The results are expected to provide empirical support to the existing studies that highlight the
impacting factors such as website quality, benefit, satisfaction, and trust, as well as outcome behaviors such as purchase intention and word of mouth.

From a research perspective, this study proposes the relevant definitions and antecedents of loyalty. The findings will help extend the study of the key elements related to online customer loyalty along with both empirical and theoretical dimensions. This study also improves the basic understanding of how the impacting factors and outcome behaviors link to loyalty.

From a practitioner's viewpoint, the results from this study are expected to enrich the context regarding the aspects that may greatly affect customer loyalty. Ensuring customer benefit, satisfaction and trust level in B2C transactions appears to be of high importance. Without treating those as an essential foundation, practitioners are unlikely to maintain consumer loyalty. Based on these findings, managers may fix their attention to these factors, and adjust the investments in each construct.

Limitations of the Study

There are some limitations of this study that should be recognized. First, our study focuses on the loyalty between business organizations and customers, and loyalty in other contexts (e.g., person to person, business to business, etc.) is not considered in this paper. Second, this study is about loyalty in the context of e-commerce, and loyalty in the context of traditional commerce is not covered.
Organization of the Study

This paper is structured in the following way: Chapter 2 provides a literature review that includes an overview of the concepts of website quality, benefit, trust, satisfaction, and loyalty. A model that explains how loyalty is developed and how loyalty and its outcome behaviors interact is proposed along with the hypotheses in Chapter 2. In Chapter 3, the methodology and measurement are described, along with the data collection process and analysis in Chapter 4. After presenting the results and evaluating the framework, we present discussions (Chapter 5) with implications, limitations, and conclusion.
CHAPTER 2: LITERATURE REVIEW

This chapter begins with the review of the empirical definitions of loyalty to find the appropriate definition for the current research. Next, previous studies of factors affecting loyalty are discussed, followed by the investigation of the factors that loyalty would affect. These relationships are explained in a research model with the proposed hypotheses.

Definitions of Loyalty

In previous research, loyalty has been studied in different perspectives and can be summarized as attitudinal and behavioral. Previous views of loyalty focus on customer behaviors to testify the existence of loyalty. Jacoby (1971) defined loyalty as a biased behavioral purchase process based on psychological processes. Oliver (1997) created a framework that categorizes loyalty into four phases: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. This last phase (action loyalty) represents behavioral dimension. Oliver (1999) later defined loyalty as “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior (p.34).” Agustin and Singh (2005) expressed the view that loyalty intentions are implied by a motivational signal to perform the pursuant behaviors which include more purchasing and repurchasing.
In response to these perspectives, other researchers have proposed another dimension over behavioral, which is based on attitude. Gremler (1995) presented an innovative thought of measuring customer loyalty with attitude and behavior. Engel, Kollat, and Blackwell (1982) defined loyalty as “the preferential, attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer (p.52).” Kim and Son (2009) stated that loyalty refers to the affective commitment of a company. It may be considered that loyalty has been formed, as long as the customers are holding the affection. Loyalty was presented by Srinivasan, Anderson and Ponnvolu (2002) as “a customer’s favorable attitude toward the e-retailer that results in repeat buying behavior (p.42).” This rationale was also supported by Kim, Ferrin and Rao (2009), who conceptualized customer loyalty as a three-dimensional intention with a positive attitude: website retention, purchase intention, and recommendation intention.

Table 2.1 is the select summary of the previous definitions of loyalty; two types (attitudinal or behavioral) of loyalty were included based on a categorization of loyalty from the related studies.
### Table 2.1

**Definitions of loyalty**

<table>
<thead>
<tr>
<th>Author</th>
<th>Definition</th>
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<tr>
<td>Oliver (1999)</td>
<td>In a modification of Oliver's (1997) definition, to include the act of consuming, loyalty is described here as “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (p.392).</td>
<td>Behavioral</td>
</tr>
<tr>
<td>Reichheld &amp; Schefter (2000)</td>
<td>Loyalty is still about earning the trust of the right kinds of customers—customers for whom you can deliver such a consistently superior experience that they will want to do all their business with you.</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Chaudhuri &amp; Holbrook (2001)</td>
<td>Chaudhuri and Holbrook referred to the definition from Oliver (1999) who defines brand loyalty as a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior.</td>
<td>Behavioral</td>
</tr>
<tr>
<td>Srinivasan, Anderson, &amp; Ponnvol (2002)</td>
<td>Srinivasan, Anderson and Ponnvol agreed with Engel, Kollat, &amp; Blackwell (1982) that defined brand loyalty as “the preferential, attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer” (p.52). Jacoby (1971) expressed the view that loyalty is a biased behavioral purchase process that results from a psychological process. According to Assael (1992), brand loyalty is “a favorable attitude toward a brand resulting in consistent purchase of the brand over time” (p.87). This rationale was also supported by Keller (1993), who suggested that loyalty is present when favorable attitudes for a brand are manifested in repeat buying behavior. Gremler (1995) suggested that both the attitudinal and behavioral dimensions need to be incorporated in any measurement of loyalty. For our purpose, we define e-loyalty as a customer's favorable attitude toward the e-retailer that results in repeat buying behavior.</td>
<td>Attitudinal</td>
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### Table 2.1

**Definitions of loyalty (Continued)**

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<th>Author</th>
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<tr>
<td>Harris &amp; Goode (2004)</td>
<td>Harris and Goode who forwards a taxonomy of customer loyalty that classifies loyalty into undivided, divided, unstable, and no loyalty. By building upon and extending earlier work in conceptualizing loyalty, and the definition from Oliver (1997) who forwards a detailed framework of loyalty that presents loyalty as comprising four distinct, sequential phases. 1. cognitive loyalty, 2. affective loyalty, 3. conative loyalty, 4. action loyalty</td>
<td>Behavioral</td>
</tr>
<tr>
<td>Agustin &amp; Singh (2005)</td>
<td>Loyalty intentions are indicated by an inclination to perform a diverse set of behaviors that signal a motivation to enhance an ongoing relationship with the service provider, including repeat buying and greater share of wallet.</td>
<td>Behavioral</td>
</tr>
<tr>
<td>Johnson, Andreas Herrmann, &amp; Huber (2006)</td>
<td>The authors demonstrate that loyalty intentions are a function of perceived value early in the life cycle.</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Cyr (2008)</td>
<td>Online loyalty, or e-loyalty, has been conceived as a “consumer’s intention to buy” from a Web site, and that consumers will not change to another Web site. In a study in which Web site design was investigated as a precursor to e-loyalty across cultures, Cyr et al. J(2005) define e-loyalty as intention to revisit a Web site, or to consider purchasing from it in the future. Consistent with the preceding, in the current investigation, e-loyalty is defined as perceived intention to visit or use a Web site in the future and to consider purchasing from it in the future</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Kim, Ferrin, &amp; Rao (2009)</td>
<td>The ultimate endogenous construct of this study, consumer e-loyalty has its roots in the consumer behavior literature. In this study, we conceptualize consumer e-loyalty as a positive attitude reflecting three concepts (Rowley and Dawes 1999): retention (i.e., repeated patronage) to the e-tailer website, intention to repurchase from the e-tailer website, and willingness to recommend the website to friends.</td>
<td>Attitudinal</td>
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Table 2.1

Definitions of loyalty (Continued)

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<th>Author</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Kim &amp; Son (2009)</td>
<td>Loyalty refers to the individual's deeply held affective commitment toward the service (Oliver 1999).</td>
<td>Attitudinal</td>
</tr>
<tr>
<td>Melnyk, Van Osselacr, &amp; Bijmolt (2009)</td>
<td>Despite substantial disagreement about the exact definition or nature of the loyalty concept, common elements among many of the loyalty definitions are that there is a relationship of some sort (i.e., ranging from very shallow to very strong) between an actor and another entity and that the actor displays behavioral or psychological allegiance to that entity in the presence of alternative entities.</td>
<td>Behavioral</td>
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In this study, loyalty is defined as an attitudinal construct, and refers to the customer's affective commitment towards particular companies which is likely to result in repeat purchases or other positive activities (e.g., word of mouth). This definition of loyalty is backed by previous studies and is also useful in identifying the predictors and outcomes of loyalty.

Factors that Affect Loyalty

Previous studies of loyalty identify key factors that would affect loyalty, and they can be grouped in three main constructs: benefit, satisfaction, and trust. In B2C e-commerce, customers visit websites to purchase products online, and the experience of visiting websites is likely to lead to loyalty. Therefore, in the B2C e-commerce setting, customers' perceptions about benefit, satisfaction, and trust are developed through website experience.
Benefit and loyalty. Perceived benefit is one of the critical aspects of consumer decision-making (Peter & Tarpey, 1975). According to previous research, the motivation of traditional shopping can be tested by functional and non-functional motives. Functional motives include (but not limited to) quality, variety, and price; non-functional motives include emotional satisfaction and enjoyments of the shopping experience (Sheth, 1983; Bhatnagar & Ghose, 2004; Childers, Carr, Peck, & Carson, 2001; Menon & Kahn, 2002). In the e-commerce environment, prior research on functional benefits of non-store shopping has been focused on convenience, unique merchandise selection (Janusz, 1983), and better prices (Korgaonkar, 1984). Given the importance of non-functional benefits of in-store shopping, it seems that the non-functional attraction can also be examined for online customers’ sake. Thus, both functional and non-functional benefits are important predictors of the customers’ attitudes in the context of e-commerce (Childers et al., 2001). In this study, however, benefit is examined as functional benefit because satisfaction will be discussed as another dimension.

Forsythe, Liu, Shannon, and Gardner (2006) studied the theoretical background of benefit and developed a four-factor scale on perceived benefits of online shopping. They defined perceived benefits of shopping online as “the consumer’s subjective perception of gain from shopping online” (p.59). In their research, the four dimensions of testing perceived benefits of online shopping are shopping convenience, product
selection, ease/comfort of shopping, and hedonic/enjoyment.

A number of previous studies support the perceived benefit as a significant predictor that determines loyalty (Oliver, 1999). Kim and Son (2009) examined the effect of perceived benefits on loyalty by creating a two-factor scale consisting of perceived usefulness and satisfaction. Both of these two factors were found to have positive effects on loyalty directly.

Kim, Ferrin and Rao (2009) stated that perceived benefits motivate customers to increase recognition of the positive utility of products. They also mentioned that perceived benefits refer to “a consumer’s subjective perceptions about the potential positive values from the online transaction with a certain website (p.241).” Here, benefit is defined as “belief (i.e., perceptions)” if the Fishbein and Ajzen’s framework is applied, and is thus supposed to affect loyalty that is defined as attitude. Therefore, it is postulated that:

**Hypothesis 1: Customers’ perceived benefit is positively related to loyalty.**

**Satisfaction and loyalty.** Satisfaction has been frequently discussed in the context of e-commerce, but the definitions of satisfaction are not consistent from one study to another. For example, Oliver (1980) defined satisfaction as an “evaluation of the perceived discrepancy between prior expectations and the actual performance of the product,” and later Oliver (1997) defined satisfaction as pleasurable fulfillment, that is, a situation in which the consumption fulfillment is pleasing. McKinney, Yoon, and Zahedi (2002)
argued that “Satisfaction is the consequence of the customer's experiences during various purchasing stages: (a) need arousal, (b) information search, (c) alternatives evaluation, (d) purchase decision, and (e) post-purchase behavior (p.297).” These activities related to website quality by which satisfaction is usually developed. They separated website quality into Information quality (IQ) and system quality (SQ) and claimed that website quality generates valuable constructs for customer satisfaction. Gustafsson, Johnson, and Roos (2005) defined satisfaction as the evaluation of the fulfillment performance of an offering to date. This overall satisfaction positively affects customer loyalty towards products and services. Customer satisfaction can also refer to a customer’s cognitive and affective attachment of the purchasing fulfillment (Oliver, 1997).

Based on previous studies, satisfaction is conceptualized as consumers’ overall emotional perceptions of an affective state to the online products and services, including access to information, positive perception on navigation, and agreement with web-design (McKinney et al. 2002, Cyr, 2008).

Agustin and Singh (2005) developed an empirical study about satisfaction and loyalty, mentioning that the relationship between satisfaction and loyalty is complex and important. In general, the empirical studies claim a direct, positive, linear effect of satisfaction on customer loyalty. In other words, satisfaction results in loyalty to a company when it reaches a certain level. Oliver (1997) supported this perspective by mentioning that frequent or cumulative satisfaction is necessary to lead to aggregated or
blended individual's loyalty. Anderson and Srinivasan (2003) stated that trust is a moderating variable between satisfaction and loyalty. However, in most past studies, satisfaction was found to directly influence customer loyalty (Oliver, 1999; Harris & Goode, 2004; Cyr, 2008). In addition, according to the Fishbein and Ajzen's framework, belief (satisfaction) affects attitude (loyalty). Therefore, the logic leads to the following hypothesis:

_Hypothesis 2: Customers' satisfaction is positively related to loyalty._

**Trust and loyalty.** In both online and in-store markets, trust is a crucial factor for business success. In the context of B2C e-commerce, trust is also an important factor that is likely to affect loyalty.

Trust has been studied by a large number of researchers for decades (e.g., Mayer, Davis, & Schoorman, 1995; McKnight, Cummings, & Chervany, 1998; Gefen, 2000; Das & Teng, 2001; Koufaris & Hampton-Sosa, 2004), and the dimensional scales of trust vary. Mayer, Davis, and Schoorman (1995) defined trust in terms of intention and proposed three factors (i.e., ability, benevolence, and integrity) that would affect trust. They defined trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (p.712)”.

McKnight, Cummings, and Chervany (1998) extended the Mayer et al.'s model to integrate the three factors as well as trust defined as intention, resulting in a
comprehensive multi-dimensional model of trust. In their model, trust was measured by trusting beliefs (i.e. benevolence belief, competence belief, honesty belief, and predictability belief) and trusting intention separately. Three research streams (personality-based trust, institution-based trust, and cognition-based trust) were also selected to explain trust. Additionally, trust is understood in two dimensions: competence trust and goodwill trust (Das & Teng, 2001). According to them, trust refers to positive expectations in relation to risks (referring to Boon & Holmes, 1991).

Even though these characteristics of trust are important factors and related to loyalty, in this study a one dimensional model of trust (trusting belief) is used because a one-dimension model suffices to capture the nature of trust. For instance, Gefen (2000) defined trust as the confidence of achieving one’s expectation that a person would generate based on previous interactions. In his study, the positive impact of trust from familiarity was supported.

One important source of trust is website quality. Website quality reflects the overall perceptions of customers on how much better a website is compared to others by evaluating the appearance and efficiency (McKnight, Choudhury, & Kacmar, 2002). Ha and Perks (2005) supported this perspective as they concluded that the increasing tendency of customers to trust a website was generated from the experience with an effectively designed website. Lowry, Vance, Moody, Beckman, and Read (2008) proposed website quality as a formative construct that contains different elements and
explained that positive impressions of website quality enhance trust by enabling customers to place faith in the website whilst it encourages feelings of trust from customers towards that company.

Consistent with the studies above, many researchers have proposed that trust affects online customer loyalty. Sirdeshmukh, Singh, and Sabol (2002) developed a theoretical review that included intrinsic and instrumental mechanisms of trust. In both intrinsic mechanism and instrumental mechanism, trust enhances loyalty intentions by corresponding to the direct and mediated effects on loyalty. Trust has been treated as a direct factor that affects loyalty (Sirdeshmukh et al, 2002), and a positive correlation between a consumer's trust in a brand or company and customer loyalty was discovered by Lau and Lee (1999). Chaudhuri and Holbrook (2001) also found that trust is positively related to attitudinal loyalty. Moreover, Reichheld and Schefter (2000) illustrated the significant role of trust in establishing and maintaining loyalty. Applying the Fishbein and Ajzen's framework, trust (belief) is likely to affect loyalty (attitude). Therefore, based on the aforementioned discussion and arguments, it is postulated that:

**Hypothesis 3: Customer trust level is positively related to loyalty.**

**Factors that are Affected by Loyalty**

Among the outcome variables of customer loyalty in previous studies, repurchase (or purchase) intention and word of mouth are two of the most frequently mentioned outcomes of loyalty, and these factors are explained in this section.
Purchase intention and loyalty. Purchase intention and repurchase intention have been frequently used to conceptualize, measure, and model loyalty. Purchase intention has been taken as a manifestation of customer loyalty (Zhang, Fang, Wei, Ramsey, McCole, & Chen, 2011). Assael (1992) proposed purchase of one brand as an outcome of loyalty; loyalty was defined as a favorable attitude that would lead to consistent purchase of one brand. This definition was also supported by Keller (1993), who proposed that loyalty refers to favorable attitudes for a brand which are demonstrated in purchase behavior.

As previously discussed, Oliver (1997) built a four-step loyalty framework: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. The last step (action loyalty) refers to the procedure from intentions to action along with the willingness to fulfill such action. Loyalty was measured by the probability of product repurchase (Lipstein, 1959; Kuehn, 1962). Su, Shao, and Ye (2011) proposed that two factors need to be considered to measure customer loyalty: purchase intention and attitudinal loyalty intention. They defined repurchase intention and attitudinal loyalty as two distinct constructs. However, in the postpurchase phase, based on the level of customer satisfaction, repurchase intention would be generated by the customer loyalty to the products or service (Kim, Ferrin, & Rao, 2009). Moreover, in their study, loyalty was conceptualized as a positive attitude reflecting three concepts: website retention, purchase intention, and recommendation willingness.
The measurement between attitudinal loyalty and purchase intention as an outcome factor has not been discussed enough. In this study, since loyalty is defined as an attitudinal construct, purchase intention is considered to be generated after loyalty forms. Based on the Fishben and Ajzen's framework, loyalty (attitude) is likely to affect purchase intention (intention). Therefore, based on the above discussion and arguments, it is postulated that:

Hypothesis 4: Customer loyalty is positively associated with purchase intention.

Word of mouth and loyalty. Word of mouth has been studied both in traditional marketing and online shopping (Bowman & Narayandas, 2001). In the context of traditional marketing, word of mouth is interpersonal communication with the group of people whom consumers have connections (e.g. family and friends). However, in the context of online shopping, the source of this interpersonal communication is not only from family and friends, but also from other unrelated consumers. Some researchers have mentioned that trust and satisfaction, the two predictors of customer loyalty, were involved in discussing word of mouth in online shopping (Kim, Kim, & Hwang, 2009; Salam, Iyer, Palvia, & Singh, 2005).

Word of mouth was defined as a customer's positive intention to recommend the product or service to others (Reichheld, 2003). It was also defined as "oral, person-to-person communication between a receiver and a communicator" (Arndt, 1967, p. 189). Word of mouth was accepted as one of the important outcome variables when its
relationship with satisfaction, loyalty or trust was considered (Gefen, 2002; Homburg & Giering 2001; Srinivasan et al. 2002). Kim and Son (2009) treated word of mouth as a dedication-based outcome variable that would be generated by customer loyalty. The result showed a very significant possibility that customers are willing to share positive experiences about the product or service (word of mouth) based on the customer’s rational judgment. Andreassen and Lindestad (1998) proposed that two indicators can be used to initially measure customer loyalty: repurchase probability and the likelihood of positive word of mouth to potential buyers.

Research on the relationship between loyalty and word of mouth behavior has been discussed, but important aspects remain neglected (Wangenheim & Bayon, 2004). Bowman and Narayandas (2001) measured word of mouth with loyalty and found evidence that word of mouth increases customer loyalty. The positive influence from word of mouth to customer loyalty has been studied; however, the question of whether or not positive correlation exists reversely has not been discussed thoroughly.

In this study, based on Fishbein and Ajzen’s framework, loyalty (attitude) is proposed to affect word of mouth (intention):

Hypothesis 5: Customer loyalty is positively associated with the word of mouth of the company.

Theoretical Perspectives and Research Model

The schematic presentation of conceptual framework connecting beliefs, attitudes,
intentions, and behaviors (Fishbein & Ajzen, 1975) indicates that attitudes are related to
the set of beliefs and are viewed as related to the intentions to perform a variety of
behaviors.

The foundation of the conceptual framework is presented by the distinction among
beliefs, attitudes, and behavioral intentions. In the theoretical framework, beliefs are the
fundamental elements in the conceptual structure. Attitudes, generated by beliefs in a
consistently favorable or unfavorable position, can be defined as a learned predisposition.
Generating from the general predisposition, behavioral intentions can affect behaviors
with respect to objects. The framework by Fishbein and Ajzen is therefore used to
develop a model of loyalty.

People may hold both positive and negative beliefs about objects, and attitude is
associated with the total effects that are generated by their beliefs. "Attitude toward an
object is viewed as related to the person's intentions to perform a variety of behaviors
with respect to that object (Fishbein & Ajzen, 1975, p.14)." The framework by Fishbein
and Ajzen also predicts that intentions lead to behaviors. In this study, the effects of
intentions on behaviors are assumed and are not directly tested.

Based on previous studies, three main factors are identified as the predictors of
loyalty, and two factors are identified as outcome variables of loyalty. In our
framework, benefit, satisfaction, and trust are viewed as "beliefs," loyalty is considered as
"attitude," and purchase intention and word of mouth are defined as "behavioral
intentions." Figure 2.1 summarizes the relationships among loyalty, its predictors, and its outcome variables.

![Research Model](image)

*Figure 2.1. Research Model*
CHAPTER 3: RESEARCH METHODOLOGY

Chapter 3 discusses the research methodology and measurement of the proposed model. In the first section, the structure of research methodology and measurement will be identified. Next, the plan for data collection and analysis is presented.

Structure of Research Methodology and Measurement

Figure 3.1 presents an overview of the research methodology and measurement of this study. In the first step, operationalization of the measurement and questionnaire are provided. Then the procedure to collect and screen the data is explained. Next, how to examine the measurement model and test the structural model are explained.

![Diagram of Research Methodology Structure](Kim & Son, 2009)
Operationalization of the Constructs

The main research instrument for this study includes the items to measure the constructs (i.e., benefit, satisfaction, trust, loyalty, repurchase/purchase intention, and word of mouth). The items of the constructs are collected from existing literatures. In other words, items for all the variables in the research model are adopted from previous scales and slightly modified for this study wherever necessary. For the questionnaire, a nine-point scale was used where 1 means strongly disagree and 9 represents strongly agree.

In this study, benefit refers to functional motives that include quality, variety, price, etc. To measure benefit, the items developed by Gauri et al. (2008) were used, and Table 3.1 displays the items.

Satisfaction refers to the consumer’s overall emotional reaction to the online products and services, including access to information, positive perception on navigation, and agreement with web-design (McKinney et al., 2002; Cyr, 2008). Instruments to measure satisfaction in the context of e-commerce have been well developed in information systems research. The items of measuring satisfaction were adopted from Cyr et al. (2005), Gauri, Bhatnagar, & Rao (2008), and Kim & Son (2009). Table 3.2 displays the detailed items.
This study employs measurement items of trust from several empirical studies (Cyr et al. 2005; Gefen 2000; Hess 1995; Gauri, Bhatnagar, & Rao, 2008). Table 3.3 displays the items.

Loyalty is defined as an attitudinal concept and refers to customer’s affective commitment toward particular companies, which results in purchases (or repeat purchases). The loyalty measures consist of six items. This study especially drew upon the items used by Zeithaml, Berry, Parasuraman (1996), Gremler (1995), and Kim & Son (2009) to develop the current model. All the items come from existing literature and already exhibit strong content validity. Table 3.4 displays the instrument items.

The instrument items of purchase intentions were employed from Harris & Goode (2004), Cyr et al. (2005), and Gauri, Bhatnagar, and Rao (2008). In this study, loyalty is defined as an attitudinal concept whereas purchase intentions are defined as behavioral consequences. Table 3.5 shows the items that reflect purchase intention.

Word of mouth refers to a behavioral intention construct. Word of mouth was measured with three items that were adopted from Zeithaml, et al. (1996). Table 3.6 displays word of mouth instruments in the current study (the last two items are reverse coded).
### Table 3.1

**Items for Benefit**

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA01</td>
<td>I think using this website is convenient.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>PA02</td>
<td>I can save money by using this website.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>PA03</td>
<td>I can save time by using this website.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>PA04</td>
<td>Using this website increases my productivity in shopping.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
</tbody>
</table>

### Table 3.2

**Items for Satisfaction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA05</td>
<td>Using this website is satisfactory overall.</td>
<td>Cyr et al. (2005)</td>
</tr>
<tr>
<td>PA06</td>
<td>I am content with the services provided by this website.</td>
<td>Kim &amp; Son (2009)</td>
</tr>
<tr>
<td>PA07</td>
<td>I am satisfied with the services provided by this website.</td>
<td>Kim &amp; Son (2009)</td>
</tr>
<tr>
<td>PA08</td>
<td>My experience with using this website was better than what I had expected (confirmation).</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
</tbody>
</table>

### Table 3.3

**Items for Trust**

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA09</td>
<td>I can trust this website.</td>
<td>Cyr (2008)</td>
</tr>
<tr>
<td>PA10</td>
<td>I trust the information presented on the website.</td>
<td>Cyr (2008)</td>
</tr>
<tr>
<td>PA11</td>
<td>I trust the transaction process on this website.</td>
<td>Cyr (2008)</td>
</tr>
<tr>
<td>PA12</td>
<td>This website is trustworthy.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>PA13</td>
<td>This website vendor gives the impression that it keeps promises and commitments.*</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>PA14</td>
<td>Most of the website says about its products is true.*</td>
<td>Hess (1995)</td>
</tr>
<tr>
<td>PA15</td>
<td>In my experience, this website is very reliable.</td>
<td>Hess (1995)</td>
</tr>
</tbody>
</table>

* modified to improve the meaning of the items
### Table 3.4
#### Items for Loyalty

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>t2PA16</td>
<td>I like using this website.</td>
<td>Zeithaml, Berry &amp; Parasuraman (1996); Gremler (1995)</td>
</tr>
<tr>
<td>t2PA17</td>
<td>I believe that this is my favorite retail website.</td>
<td>Zeithaml, Berry &amp; Parasuraman (1996); Gremler (1995)</td>
</tr>
<tr>
<td>t2PA18</td>
<td>When I need to make a purchase, this website is my first choice.</td>
<td>Zeithaml, Berry &amp; Parasuraman (1996); Gremler (1995)</td>
</tr>
<tr>
<td>t2PA19</td>
<td>As long as the present service continues, I doubt that I would switch websites.</td>
<td>Zeithaml, Berry &amp; Parasuraman (1996); Gremler (1995)</td>
</tr>
<tr>
<td>t2PA20</td>
<td>I consider myself to be highly loyal to the website.</td>
<td>Kim &amp; Son (2009)</td>
</tr>
<tr>
<td>t2PA21</td>
<td>I feel loyal towards the website.</td>
<td>Kim &amp; Son (2009)</td>
</tr>
</tbody>
</table>

### Table 3.5
#### Items for Purchase Intention

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>t2PA22</td>
<td>I would always continue to choose this website before others next time I shop online.</td>
<td>Harris &amp; Goode (2004)</td>
</tr>
<tr>
<td>t2PA23</td>
<td>I would consider purchasing from this website in the future.</td>
<td>Cyr et al. (2005)</td>
</tr>
<tr>
<td>t2PA24</td>
<td>I am likely to make another purchase from this site if I need the products that I will buy.*</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>t2PA25</td>
<td>I am likely to return to this website for my next purchase.</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
<tr>
<td>t2PA26</td>
<td>If I were to buy the same product again, I would likely buy it from the website.*</td>
<td>Gauri, Bhatnagar, &amp; Rao (2008)</td>
</tr>
</tbody>
</table>

* modified to improve the meaning of the items
Table 3.6
Items for Word of Mouth

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>t2PA27</td>
<td>I say positive things about this website to other people.</td>
<td>Zeithaml, Berry, &amp; Parasuraman (1996)</td>
</tr>
<tr>
<td>t2PA28</td>
<td>I recommend this website to anyone who seeks my advice.</td>
<td>Zeithaml, Berry, &amp; Parasuraman (1996)</td>
</tr>
<tr>
<td>t2PA29</td>
<td>I do not encourage friends to do business with this website.*</td>
<td>Zeithaml, Berry, &amp; Parasuraman (1996)</td>
</tr>
<tr>
<td>t2PA30</td>
<td>I hesitate to refer my acquaintances to this website.*</td>
<td>Zeithaml, Berry, &amp; Parasuraman (1996)</td>
</tr>
</tbody>
</table>

* These items were reverse-coded with new code (t2PA29b and t2PA30b).

These items are used to develop a survey questionnaire which is provided in Appendix A. The questionnaire is used in a series of controlled experimental surveys (explained in detail in the next chapter) to collect the data for this study. Statistical software programs (i.e., SPSS and LISREL) are used to screen and analyze the data. Cronbach’s alpha is used to check reliability of the constructs (internal consistency) with the cutoff value of 0.7 (Nunnally, 1978). In addition to Cronbach’s alpha, the other way of checking reliability was adopted from Fornell and Larcker (1981), and the formula for calculating reliability of the constructs (composite reliability) is:

\[
\rho_y = \frac{\left(\sum_{i=1}^{p} \lambda_{yi}\right)^2}{\left(\sum_{i=1}^{p} \lambda_{yi}\right)^2 + \sum_{i=1}^{p} \text{Var}(e_i)}
\]

Where \(\rho_y\) is composite reliability, \(\lambda_{yi}\) is standardized coefficient, and \(\text{Var}(e_i)\) is measurement error.

Structural equation modeling is used to evaluate a measurement model and a
structural model (Maruyama, 1997). The measurement model is used to test validity of the constructs. Construct validity consists of convergent validity and discriminant validity. Convergent validity refers to the extent to which the measures for a variable show all items are measuring the underlying construct because they share variance (Schwab, 1980). Discriminant validity refers to the degree to which measures of two constructs are distinct (Bagozzi et al. 1991). These types of validity are tested using average variance extracted (AVE) proposed by Fornell and Larcker (1981) as follows:

\[ \rho_{ve(\eta)} = \frac{\sum_{i=1}^{p} \lambda_{yi}^2}{\sum_{i=1}^{p} \lambda_{yi}^2 + \sum_{i=1}^{p} \text{Var}(\epsilon_i)} \]

Where \( \rho_{ve(\eta)} \) is average variance extracted, \( \lambda_{yi}^2 \) is standardized coefficient squared, and \( \text{Var}(\epsilon_i) \) is measurement error.

Nomological validity is “the degree that the summated scale makes accurate predictions of other concepts in a theoretically based model (Hair et al., 2010, p. 126)” and can be tested using the correlations among the latent variables (Hair et al., 2010).

Once the measurement model passes the validity and reliability tests, a structural model is evaluated to test the hypotheses. A set of fit indexes were used to determine whether these models were close to the predicted model. Fix indexes can be categorized as absolute fit indexes, incremental fit indexes, and parsimony fit indexes (Hair et al., 2010) as shown in Table 3.7. Absolute fit indexes are used to measure overall goodness of fit for models. Incremental fit indexes are used to measure how well a model fits relative to an alternative baseline model. Parsimony fit indexes are used to measure
overall goodness of fit representing the degree of model fit per estimated coefficient.

Table 3.7.
Selected Fit Indexes Used in This Study

<table>
<thead>
<tr>
<th>Type</th>
<th>Fit Index</th>
<th>Usage (Cut-off points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Fit</td>
<td>Chi-Square</td>
<td>Compare the observed and estimated covariance matrices (p&gt;0.5).</td>
</tr>
<tr>
<td>Indexes</td>
<td>Goodness of Fit Index (GFI)</td>
<td>Help produce a fit statistic that was less sensitive to sample size (0.9).</td>
</tr>
<tr>
<td></td>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>Favor model complexity (0.8).</td>
</tr>
<tr>
<td>Incremental Fit</td>
<td>Normed Fit Index (NFI)</td>
<td>Compare fitted models and null models (0.9)</td>
</tr>
<tr>
<td>Indexes</td>
<td>Comparative Fit Index (CFI)</td>
<td>Improved version of NFI. A comparison of the normed chi-square values for the null and specified model (0.9).</td>
</tr>
<tr>
<td>Parsimony Fit</td>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>Represents how well a model fits a population (0.05-0.08: acceptable fit; &lt;0.05: excellent fit).</td>
</tr>
<tr>
<td>Indexes</td>
<td></td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
CHAPTER 4: DATA COLLECTION AND ANALYSIS

This chapter presents how the data was collected and screened and how the research model was analyzed alongside the data.

Target Sample and Data Collection

Due to financial and time constraints, convenient sampling method was implemented in order to access the most available subjects as survey participants. This was also necessary to control the data collection process. In other words, this study tested the causal effects among the constructs, and the data was collected in two different time periods.

A series of paper-based survey sessions was distributed to collect the data. In the first set of surveys, several groups of participants were carefully selected. Each group of participants was accommodated in a classroom where they could use computers to access the Internet. Each participant was asked to read the instructions for the survey, sign the consent form, complete the survey questionnaire, and return the questionnaire. In the process, each participant was first asked to visit a website (selected online retailer) and navigate the website for approximately 10 to 15 minutes. The participants were also asked to imagine that they were searching for products for their cellular phones. Next, they were asked to complete the survey questionnaire based on their experience.

The second set of surveys was conducted approximately three weeks after the first set of surveys was completed. The same participants who completed the first set of
surveys and the same questions (with two extra questions) were used to complete the second set, which allowed a longitudinal analysis (i.e., panel analysis).

Data Analysis

Screening of data. After the data collection, missing data was checked and the usability of the collected data was analyzed. A total of 88 students participated in the survey. SPSS was used to examine missing data, and the cases with any key missing values were eliminated. Case No. 36 and case No. 80 were removed because the whole set of the data was missing in time period one. Case No. 20, case No.35, case No.64 and case No.79 were all removed because the whole set of data were missing in time period two. These cases removed because the participants didn’t respond to one whole set of the survey (either the first set or second set). This process resulted in a total of 82 usable responses.

Characteristics of the participants. Thirty-six respondents were female while forty-six were male. The ages of the participants were between 20 and 52. All of them felt comfortable with using the Internet and had been using the Internet for a long time (at least 7 years). Most of them also had used the Internet several times a day and purchased products online. Therefore, the respondents seemed to represent part of the demographic of online customers.

Analysis of Measurement Model

To test the proposed research model, data analysis for the measurement model was
performed using SPSS and LISREL (refer to Appendix B). The initial results showed that satisfaction and purchase intention have problems with other latent variables (i.e., high correlation) which resulted in poor discriminant validity. Therefore, the two constructs were removed from further analysis. Moreover, problematic items in other constructs were removed from the measurement model as well (PA 04, PA09, PA13, PA14, PA15, PA16, PA18, PA19, PA20, t2PA29b, and t2PA30b) because they had cross-loading problems.

With the finalized items, a measurement model (Figure 4.1) was evaluated for reliability and validity check (The LISREL input and part of the output is provided in Appendix C, D, and E). Overall, the measurement model fit the data well: Chi-square = 41.55, df = 29, p = 0.062; GFI = 0.91; AGFI= 0.84; NFI = 0.95; CFI = 0.99; RMSEA= 0.064, 90 percent confidence interval for RMSEA (0.0 ; 0.11), p=0.32. All the indexes were greater than the cut-off points.

Table 4.1 provides the data of reliability and average variance extracted (AVE) of the constructs as well as the correlations among the latent variables. All constructs pass the cut-off point of reliability (α > 0.7) and they seem to be measured reliably (internally consistent). The composite reliability values of all the constructs are also satisfactory. All constructs show AVEs greater than 0.5, indicating convergent validity of each construct (Fornell and Larcker, 1981). The AVEs are also greater than any squared
correlations among the constructs, implying each construct’s discriminant validity (Fornell and Larcker, 1981).

Chi-square = 41.55, df = 29, p = 0.062; GFI = 0.91; AGFI = 0.84; NFI = 0.95; CFI = 0.99; RMSEA = 0.064, 90 percent confidence interval for RMSEA (0.0 ; 0.11), p=0.32

Figure 4.1. Measurement Model
Table 4.1

Cronbach's α, Composite reliability, Correlation, AVE, and Correlation Squared of Measurement Model

<table>
<thead>
<tr>
<th></th>
<th>Benefit (α=0.887)</th>
<th>Trust (α=0.957)</th>
<th>Loyalty (α=0.960)</th>
<th>WOM (α=0.937)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(ρ=0.876)</td>
<td>(ρ=0.955)</td>
<td>(ρ=0.899)</td>
<td>(ρ=0.942)</td>
</tr>
<tr>
<td>Benefit</td>
<td>0.707</td>
<td>0.270</td>
<td>0.203</td>
<td>0.160</td>
</tr>
<tr>
<td>Trust</td>
<td>0.520</td>
<td>0.879</td>
<td>0.194</td>
<td>0.073</td>
</tr>
<tr>
<td>Loyalty</td>
<td>0.450</td>
<td>0.440</td>
<td>0.819</td>
<td>0.578</td>
</tr>
<tr>
<td>WOM</td>
<td>0.400</td>
<td>0.270</td>
<td>0.760</td>
<td>0.896</td>
</tr>
</tbody>
</table>

Cronbach's alpha and construct composite reliability (ρ) are presented under each construct's name in the first row of the table.

Correlations: Bottom left of the diagonal (italic font)
Average Variance Extracted (AVE): Diagonal (bold font)
Correlation Squared: Top right of the diagonal (normal font)

The positive correlations among the latent variables also provide evidence of nomological validity for each construct. For instance, benefit is positively correlated with loyalty, and thus benefit meets the nomological validity test (Hair et al., 2010). In the same vein, all the latent variables meet the nomological validity test.

Analysis of Structural Model

In the structural model, the two antecedent factors were specified as exogenous variables (benefit and trust), whereas one outcome variable was treated as an endogenous variable (word of mouth). In the model, loyalty is another endogenous variable which plays a mediating role between the exogenous variables (benefit and trust) and the endogenous variable (word of mouth). The research model is provided in Figure 4.2 with the standardized estimates (LISREL input code is provided in Appendix F and
unstandardized estimates are shown in Table 4.2. Overall, the structural model fit the data well: Chi-square = 43.26, df = 31, p = 0.071; GFI = 0.91; AGFI = 0.84; NFI = 0.95; CFI = 0.99; RMSEA = 0.060, 90 percent confidence interval for RMSEA (0.0 ; 0.11), p=0.35.

Figure 4.2. Structural Model
Table 4.2

Unstandardized Coefficients of Structural Model

<table>
<thead>
<tr>
<th></th>
<th>Estimated partial regression coefficient</th>
<th>Standard error of the regression estimates</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty ← Benefit</td>
<td>0.56</td>
<td>0.23</td>
<td>2.41</td>
</tr>
<tr>
<td>Loyalty ← Trust</td>
<td>0.34</td>
<td>0.17</td>
<td>1.99</td>
</tr>
<tr>
<td>Error variance of Loyalty</td>
<td>3.71</td>
<td>0.78</td>
<td>4.74</td>
</tr>
<tr>
<td>WOM ← Loyalty</td>
<td>0.65</td>
<td>0.09</td>
<td>7.00</td>
</tr>
<tr>
<td>Error variance of WOM</td>
<td>1.53</td>
<td>0.33</td>
<td>4.57</td>
</tr>
</tbody>
</table>

Benefit and trust explain approximately 26% of the variance in loyalty, and loyalty explains approximately 58% of the variance in word of mouth.

All the path coefficients are statistically significant, and thus hypotheses 1, 3, and 5 are supported. In other words, benefit has positive effects on loyalty (Hypothesis 1), trust has positive effects on loyalty (Hypothesis 3), and loyalty is positively related to word of mouth (Hypothesis 5).
CHAPTER 5: DISCUSSION AND CONCLUSION

This chapter presents a summary of this study's findings, implications for researchers and practitioners, limitations, and a conclusion.

Summary and Discussion of the Findings

This study found evidence that supports three out of the five hypotheses presented. It was hypothesized and supported that benefit and trust have positive effects on loyalty (Hypotheses 1 and 3). Furthermore, benefit and trust accounted for 26 percent of variance in loyalty. It was also hypothesized and supported that loyalty is positively related to word of mouth, and more than half (58%) of the variance in word of mouth was accounted for through loyalty.

Table 5.1.
Hypotheses and Results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Customers' perceived benefit is positively related to loyalty.</td>
<td>Supported</td>
</tr>
<tr>
<td>2: Customers' satisfaction is positively related to loyalty.</td>
<td>Not tested</td>
</tr>
<tr>
<td>3: Customer trust level is positively related to loyalty.</td>
<td>Supported</td>
</tr>
<tr>
<td>4: Customer loyalty is positively associated with purchase intention.</td>
<td>Not tested</td>
</tr>
<tr>
<td>5: Customer loyalty is positively associated with the word of mouth of the company.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Satisfaction and purchase intention were removed from the empirical model because they have high correlations with another latent variable, (i.e., benefit). The problem of satisfaction may be caused by the many aspects of satisfaction overlapping
with those of benefit. For instance, satisfaction may be recognized as the emotion that is generated by beneficial factors. Satisfaction is a theoretical complex construct which needs to be defined more clearly. However, benefit, defined as “consumer’s subjective perception of gain,” is a clear concept, so benefit is chosen over satisfaction in this study. Even though this study failed to support the relationship between satisfaction and loyalty, previous studies support the relationship between satisfaction and loyalty. Thus, future studies are called for further analysis of the relationship.

The problem of purchase intention is also involved with a high correlation to loyalty. In this study, purchase intention was used as a separate outcome of loyalty and measured in the same time period as loyalty was measured. In other words, no causal effects could be tested in this cross-sectional nature of research design. This may be a reason for the high correlation between loyalty and purchase intention, and future studies are called for to test the relationship with a better research design.

Implications

This study has both theoretical and practical implications. It integrated elements from traditional consumer loyalty frameworks and existing literature to examine related factors that affect loyalty and those that are affected by loyalty.

By nature, loyalty is attitude, i.e., “a leaned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object (Fishbein &
Ajzen, 1975, p.6). This way of defining loyalty makes it better to understand the construct clearly and identify its predictors and outcomes. With this definition of loyalty, this study provides evidence that benefit and trust are good predictors of loyalty which, in turn, leads to word of mouth.

The results of this study have important implications for managers who are responsible for improving customer loyalty and managers who are responsible for promoting brands and reputation. Early in the beginning of building up an online shopping company, managers should focus on improving customer trust, benefit and satisfaction. Once loyalty has been established, it is likely that loyalty will lead to spreading of word of mouth which is expected to affect more purchase by other customers who are influenced by word of mouth.

Limitations

The first limitation of this study is the sampling method used. Instead of obtaining a random sample, the data was collected from students in a series of controlled experimental surveys. Several previous studies have argued either student samples are better to be avoided or should be accepted with caution (Cunningham, Anderson, & Murphy, 1974). Several researchers seem to suggest that college students may not be appropriate as research objects unless they are used in pilot studies. The use of student respondents has also been questioned in terms of validity and generalizability. Nevertheless, multiple reasons indicate that the use of students does not lead to a
significant problem in validity of this study. First, the object of this study is customer loyalty in B2C e-commerce where college students comprise a relatively large and important group of online purchasers. Second, to test causal effects among the variables, the data collection process had to be controlled carefully, and using students as sample was the best option available.

Sample size might be another limitation. Due to financial and time constraints we have collected 88 cases which resulted in 82 cases after the screening process. The sample size is small but it is enough to test the model. Item to case ratio of 1:5 is the minimal requirement to test multi-variate statistics (Hair et al., 2010). Nonetheless, we have been collecting more data now, and we are going to add more data for further research.

The scope of this study is also a limitation. In other words, this study focuses on business-to-customer e-commerce, and the findings of this study may not be applicable to other situations (e.g., business-to-business). It was necessary, however, to test initially the model in the business-to-customer e-commerce, and future studies can extend this model to test it in a different environment.

This study used longitudinal analysis (panel analysis) partly for the relationships between the predictors (benefit and trust) and loyalty, but didn’t use it for the relationship between loyalty and word of mouth. This was due to time constraint, and the findings should be interpreted with caveats. To test causal effects, data should have been
collected in another different time period from the same group of participants, and future studies are called for to implement and test this research model with a better research method.

**Conclusion**

Based on the previous studies of loyalty, this research defined customers' loyalty in terms of attitude and identified the predictors and outcomes of loyalty. A partial longitudinal (panel) analysis was used to test the relationships among the variables (benefit, satisfaction, trust, loyalty, purchase intention, and word of mouth). This research found evidence that benefit and trust has positive effects on loyalty and that loyalty is positively related to word of mouth. The findings were used to provide implications for researchers and practitioners. With limitations aforementioned, it is hoped that this research is interpreted with caveats and that future studies extend this study with better research design.
REFERENCES


Harris, L. C., & Goode, M. M. H. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics, *Journal of Retailing*, 80, 139-158.


APPENDIX A:

Survey Questionnaire

Thank you for participating in this survey. Your participation will help a graduate student complete her thesis, and your honest response is greatly appreciated. Before you begin the survey, you must be at least 18 years of age. By participating, you have the option to earn extra credit. If you decide not to participate, there are other alternatives to earn the extra credit. Please contact your instructor for more details.

You will be asked to navigate a website and answer questions that relate to the site. Once you have completed the questionnaire, please return it to the administrator. You are free to drop out at anytime during the survey, and you will not be penalized. The survey will be kept anonymous, and your answers will not be released to the public.

If you have any questions about the survey, please contact Rui Zhang at rzhang@moreheadstate.edu or 606-776-0014, or Dr. Euijin Kim at e.kim@moreheadstate.edu or 606-783-9357.

Print your name and ID number below. This part will be removed, once your participation is confirmed, to protect your privacy.

Name:
MSU ID:
Part A: Select one number for each question where 1 means strongly disagree and 9 means strongly agree.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

1. I think using this website is convenient.

```
1 2 3 4 5 6 7 8 9
```

2. I can save money by using this website.

```
1 2 3 4 5 6 7 8 9
```

3. I can save time by using this website.

```
1 2 3 4 5 6 7 8 9
```

4. Using this website increases my productivity in shopping.

```
1 2 3 4 5 6 7 8 9
```

5. Using this website is satisfactory overall.

```
1 2 3 4 5 6 7 8 9
```

6. I am content with the services provided by this website.

```
1 2 3 4 5 6 7 8 9
```

7. I am satisfied with the services provided by this website.

```
1 2 3 4 5 6 7 8 9
```

8. My experience with using this website was better than what I had expected.

```
1 2 3 4 5 6 7 8 9
```

9. I can trust this website.

```
1 2 3 4 5 6 7 8 9
```

10. I trust the information presented on the website.

```
1 2 3 4 5 6 7 8 9
```

11. I trust the transaction process on this website.

```
1 2 3 4 5 6 7 8 9
```

12. This website is trustworthy.

```
1 2 3 4 5 6 7 8 9
```

13. This website company gives the impression that it keeps promises and commitments.

```
1 2 3 4 5 6 7 8 9
```
14. According to the website, its products are genuine (not fake).

15. In my experience, this website is very reliable.

16. I like using this website.

17. I believe that this is my favorite retail website.

18. When I need to make a purchase, this website is my first choice.

19. As long as the present service continues, I doubt that I will switch websites.

20. I consider myself to be highly loyal to the website.

21. I feel loyal towards the website.

22. I will continue to choose this website before others when I shop online.

23. I would consider purchasing from this website in the future.

24. I am likely to make a purchase from this site if I need a product.

25. I am likely to return to this website for my next purchase.

26. If I were to buy a product, I would likely buy it from this website.

27. I say positive things about this website to other people

28. I recommend this website to anyone who seeks my advice

29. I do not encourage friends to do business with this website

30. I hesitate to refer my acquaintances to this website
Part B: Answer the following questions as much as you can.

1. In what year were you born?

2. What is your gender?
   a. Female   b. Male

3. What is your education level?
   a. Freshman   b. Sophomore   c. Junior   d. Senior   e. Graduate
   f. Other

4. How comfortable are you with using the Internet?

5. How long have you been using the Internet and other related technologies?

6. On average, how frequently do you use the Internet?

7. Where do you access the Internet most of the time?

8. For what purpose do you use the Internet most of the time?

9. How many times have you purchased products through the Internet?

10. When was the first time you purchased products through the Internet?

11. When was the last time you purchased products through the Internet?

12. What is the URL of the website you have visited for this survey?

13. What is the current date and time?

14. Have you visited this website before?
   Yes ____________ If yes, how many times? ______________
   No ____________

15. Have you purchased products from this website before?
   Yes ____________ If yes, how many times? ______________
   No ____________

*16. Do you trust this website?  Yes ____________ No ____________
   Why:

*17. Has the website changed?  Yes ____________ No ____________
   If yes, how?::

* Questions B 16 and 17 were included in the second period.
APPENDIX B:

Measurement Model (Original)

Chi-square = 827.93, df = 390, p < 0.01; GFI = 0.61; AGFI = 0.53; NFI = 0.91; CFI = 0.95; RMSEA = 0.11,
90 percent confidence interval for RMSEA (0.10; 0.12), p < 0.001
APPENDIX C:

LISREL Input (SIMPLIS) for Measurement Model (Revised)

Measurement Model
Raw Data from file ''
Sample Size = 82
Latent Variables Benefit Satisfac Trust Loyalty PI WOM
Relationships
PA01 = 1*Benefit
PA02 = Benefit
PA03 = Benefit
PA10 = 1*Trust
PA11 = Trust
PA12 = Trust
t2PA17 = 1*Loyalty
t2PA21 = Loyalty
t2PA27 = 1*WOM
t2PA28 = WOM
Path Diagram
End of Problem

APPENDIX D:

Covariance Matrix of the Items

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<tr>
<th></th>
<th>PA01</th>
<th>PA02</th>
<th>PA03</th>
<th>PA10</th>
<th>PA11</th>
<th>PA12</th>
<th>t2PA17</th>
<th>t2PA21</th>
<th>t2PA27</th>
<th>t2PA28</th>
</tr>
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<tbody>
<tr>
<td>PA01</td>
<td></td>
<td>2.66</td>
<td></td>
<td></td>
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<tr>
<td>PA02</td>
<td>2.24</td>
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<td>4.07</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>PA03</td>
<td>2.09</td>
<td>2.68</td>
<td>3.37</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>PA10</td>
<td>0.99</td>
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<td>1.39</td>
<td>3.48</td>
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<tr>
<td>PA11</td>
<td>1.31</td>
<td>1.52</td>
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<tr>
<td>PA12</td>
<td>1.33</td>
<td>1.45</td>
<td>1.52</td>
<td>2.95</td>
<td>3.29</td>
<td>3.43</td>
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<tr>
<td>t2PA17</td>
<td>0.80</td>
<td>1.61</td>
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<tr>
<td>t2PA21</td>
<td>0.93</td>
<td>1.62</td>
<td>1.72</td>
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<tr>
<td>t2PA27</td>
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<td>1.42</td>
<td>1.27</td>
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<td>3.21</td>
<td>3.02</td>
<td>4.59</td>
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<tr>
<td>t2PA28</td>
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<td>1.62</td>
<td>1.29</td>
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<td>3.97</td>
<td>3.60</td>
<td>4.37</td>
<td>5.31</td>
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APPENDIX E:

Covariance Matrix of the Latent Variables

<table>
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<tr>
<th></th>
<th>Benefit</th>
<th>Trust</th>
<th>Loyalty</th>
<th>WOM</th>
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<tr>
<td>Benefit</td>
<td>1.68</td>
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<tr>
<td>Trust</td>
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<td>2.75</td>
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<tr>
<td>Loyalty</td>
<td>1.29</td>
<td>1.60</td>
<td>4.94</td>
<td></td>
</tr>
<tr>
<td>WOM</td>
<td>0.97</td>
<td>0.87</td>
<td>3.21</td>
<td>3.62</td>
</tr>
</tbody>
</table>

APPENDIX F:

LISREL Input (SIMPLIS) for Structural Model (Revised)

Structural Model
Raw Data from file '
Sample Size = 82
Latent Variables Benefit Satisfac Trust Loyalty PI WOM
Relationships
PA01 = 1*Benefit
PA02 = Benefit
PA03 = Benefit
PA10 = 1*Trust
PA11 = Trust
PA12 = Trust
t2PA17 = 1*Loyalty
t2PA21 = Loyalty
t2PA27 = 1*WOM
t2PA28 = WOM
Loyalty = Benefit Trust
WOM = Loyalty
Options: SS
Path Diagram
End of Problem
EXAMPT PROTOCOL REVIEW FOR THE HUMAN SUBJECTS IN RESEARCH
BY MSU INSTITUTIONAL REVIEW BOARD

<table>
<thead>
<tr>
<th>Principal Investigator/Researcher:</th>
<th>Title: Graduate Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Zhen, Fulin Kim</td>
<td></td>
</tr>
<tr>
<td>Campus Address: Combs 114C</td>
<td>Campus Phone: 606-776-0014</td>
</tr>
<tr>
<td>Department: Department of Management Info Sys</td>
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</tr>
</tbody>
</table>

**Purpose:**

Title of Project/Course: The predictors and outcomes of customer loyalty in B2C E-commerce

Funding Source/Agency: N/A

Period of Project/Course: From: 9/5/12 To: 9/4/18

Protocol Review Number: 12-09-10

Initial Review Yes  No

The human subject use protocol described above has been reviewed by the MSU Institutional Review Board for the Protection of Human Subjects in Research with the following results:

The IRB determined the project, as stated, is exempt based on federal regulation 46.101(b)(2). Federal regulations require that the IRB be notified if anything in the research changes, as additional review may be necessary.

**Yes  No**  Approved, may proceed as written

9/5/12 Approval Date

In accordance with new procedures instituted by the IRB, and because your study is exempt, you are not required to complete continuation or final review reports. However, it is your responsibility to notify the IRB prior to making any changes to the study. Please note that changes made to an exempt protocol may disqualify it from exempt status and may require an expedited or full-board review.

**Yes  No  N/A**  Regulatory requirements have been met for the waiver of documentation of consent

**Yes  No  N/A**  Regulatory requirements have been met for the waiver of informed consent

**Yes  No  N/A**  Criteria for use of children has been met

Please refer to the protocol review number in any future references to this protocol. If any revisions are made to a project or if any unforeseen risks arise during an investigation, the principal investigator must submit Form H to the IRB, fully explaining all changes or unexpected risks.
VITA
Graduate School
Morehead State University

Rui Zhang
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Bachelor of Economics in International Economics and Trade

Thesis Title:

The predictors and outcomes of customer loyalty in B2C e-commerce

Major Professor: Euijin Kim

Publications:
