

# **The Role of Trust and Customer Advocacy in the Online Environment**

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Ph.D. in Business Administration and Management

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## **Abstract**

While trust is widely considered as a key factor enhancing the anticipation of reciprocal and long-term relationships, customer advocacy has emerged as another driver of trust. After discussing its role in relationship marketing, this study (1) proposes that customer advocacy is an antecedent of online trust and relationship commitment, (2) develops a conceptual model that links the key drivers of online trust to its outcomes, (3) hypothesizes online trust and relationship commitment as the mediating variables, and (4) tests the model and the mediation effects empirically. A significant finding of this study is that online trust partially mediates the relationships between the drivers of online trust and consumer behavioral intention. The results of this research show that customer advocacy and relationship commitment are useful extensions to the current discussions on trust on the Web. The study is concluded with managerial implications and future research directions.

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*To my parents*

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# **Chapter 1**

## **Introduction**

### **1.1 Background**

For decades, one of the key global constructs predicting customer behavior has been overall customer satisfaction. The shifting emphasis to relational marketing has broadened the list of factors that predict future intentions to incorporate new constructs such as trust (Moorman, Deshpande and Zaltman 1993; Ganesan 1994) and relationship commitment (Dwyer, Schurr and Oh 1987; Gundlach, Achrol and Mentzer 1995; Morgan and Hunt 1994).

Previous research has shown that trust clearly is a crucial factor in the shift from discrete market transactions to long term relationships, playing a central role in the development of relationship marketing (Anderson and Narus 1990; Morgan and Hunt 1994; Smith and Barclay 1997; Doney and Cannon 1997; Chaudhuri and Holbrook 2001; Kumar 1996). The level of trust affects the nature of the business interaction and whether a business interaction will even occur (Fukuyama 1995).

It is also a significant factor leading to actual and to anticipated purchases (Doney and Cannon 1997), and creates the kind of environment where people are more willing to provide sensitive information (Ramaswani, Srinivasan and Gorton 1997). Trust increases the commitment of the involved companies to the business relationship between them, resulting in increased interaction between the companies and increased profits (Kumar 1996; Morgan and Hunt 1994).

The growth of the Internet has resulted in a great flood of information about corporations and their activities, and therefore huge numbers of consumers are now instantly made aware of a large amount of useful information, such as consumer complaints which occur any place in the world. In addition to the greater access to information thanks to the World Wide Web, consumers now have much more alternatives to choose from, and increasingly do business with the most trusted organizations (Reichheld and Schefter 2000; Urban, Sultan and Qualls 2000). However, the level of trust in corporations and their leaders has fallen to very low levels in recent years. The results of the Voice of the People survey by Gallup International (2004) disclose a dramatic lack of trust in global and large national companies. About half of the respondents had little or no trust in either domestic or international companies. Respondents across 20 countries found that business leaders are dishonest (43%), too easily influenced by people more powerful than themselves (49%), have too much power and responsibility (49%), and behave unethically (39%).

In the last decade, an increasing number of consumers have taken advantage of the many benefits offered by the Internet. While the Internet provides firms with

virtual environments to interact with their customers, it enables consumers to reach diverse kinds of information and resources. Purchase convenience, increasing access to information, lower search cost, simpler transactions, and increasing communication and interaction between customers are only some of the attributes associated with the online environment that has brought about a fundamental change in the conceptualization of business transactions. As a result, trust has become a critical element of almost any organization since their business processes and organizational relationships have become more dependent on information technology and the Internet.

## **1.2 Scope and Objectives**

Although the Internet provides consumers with a large amount of useful information and helpful Web-based tools, the question of trust in the source of information has gained much importance as the usage of the Internet have increased. Since the Web site visitors rely entirely on the amount and quality of information given by the site, they are in need to secure an assurance that the site is safe and reliable, and the information provided is accurate. This issue deals with the role of consumer trust in the Web sites on which commercial transactions and information exchange take place.

The determinants of trust that are most often taken into account in the models aimed at studying the construct in the online medium include the privacy and security aspects of the Web site, brand awareness, personal characteristics of the subject, perceived size and quality.

Conducting an empirical examination of relationship marketing concepts in the online environment, the objective of this research is to differentiate the effects of web site privacy and security from those of other variables that are managerially relevant in the online medium. The main focus is to explore the effects of customer advocacy on the level of customer trust in the Web site and commitment to a relationship with the firm. Additionally, the impacts of brand trust and Web site privacy and security on the consumer perceptions of online trust are also examined. A conceptual framework that links the drivers of online trust to consumer behavioral intentions, together with the mediation effects of online trust and relationship commitment will be tested by an empirical study on the Internet.

As discussed above, online trust has emerged as a major driver of online transactions. Although it is evident that factors such as brand trust, information and communication transparency, and cooperation are important predictors of trust, very few studies have explored their impacts on online trust. Furthermore, the issues of customer advocacy, advice, and cooperation have not been studied in the online context. This study aims to strengthen and extend direct research on customer advocacy and its impacts on trust on the Web. Therefore, this study seeks to approach the issue of trust and customer advocacy from the empirical perspective to explore the sources of Web site trust and the relationships between customer advocacy, trust, customers' commitment to relationship, and their behavioral intentions.

This research aims to make important contributions to marketing literature by (1) introducing the concept of customer advocacy as one of the key determinants of

online trust, (2) exploring the relationships among customer advocacy, online customer trust and relationship commitment, (3) demonstrating the impacts of customer advocacy and online trust on consumer behavioral intentions by an empirical test of the proposed conceptual model in the online environment, and (4) providing evidence on the mediation effect of online trust in the proposed model.

### **1.3 Structure of the Thesis**

This thesis is divided into six chapters. In Chapter 1, the background to the research is introduced followed by the objectives of this study, and a statement of the thesis structure. After summarizing the origins of the trust research in the basic disciplines, the role of trust in relationship marketing is reviewed in Chapter 2. Then the definition, dimensions, antecedents and consequences of trust are explored, with particular focus on marketing literature. Then, aspects of trust in the online environment is discussed, and the differences between the characteristics of trust in online and offline contexts are discussed. Lastly, the construct of customer advocacy and its role in the trust building process is discussed.

In chapter 3, the development of the conceptual framework is explained, and the research hypotheses are presented. The research methodology of the study and measure development are discussed in Chapter 4. The research was divided into two phases, qualitative phase and quantitative phase. The qualitative phase was conducted in the form of focus groups to elicit the causal factors of trust in the online medium. The quantitative phase was carried out to explore the relationships

among the constructs and test the proposed conceptual model and research hypotheses.

Chapter 5 presents all the data analysis process and discusses the results and findings providing detailed explanations. After the analysis of the measurement model and validation of the constructs, the model was studied in the form of Structural Equation Modeling (SEM) using LISREL 8.72. Finally, Chapter 6 summarizes and concludes the findings of this study, explores the managerial implications, and suggests recommendations for future research.



## **Chapter 2**

# **Trust and Customer Advocacy**

### **2.1 Introduction**

The construct of trust has received a great deal of attention from scholars in a number of disciplines such as psychology (e.g. Deutsch 1960; Larzelere and Huston 1980; Rempel, Holmes and Zanna 1985; Rotter 1980), sociology (e.g. Lewis and Weigert 1985; Luhmann 1979), philosophy (e.g. Lagenspetz 1992) and economics (e.g. Dasgupta 1988), as well as management (e.g. Barney and Hausen 1994; Whitener, Brodt, Korsgaard and Werner 1998) and marketing (e.g. Andaleeb 1992; Dwyer, Schurr and Oh 1987; Morgan and Hunt 1994). Although this multidisciplinary interest has added richness to the trust construct, such diversity has made it difficult to integrate the various perspectives and find a consensus on its nature.

As mentioned by Bhattacharya, Debinney, and Pillutla (1998), different scholars address the construct of trust using different approaches and methods. More

specifically, Lewicki and Bunker (1995) identify three different approaches on how trust is viewed. In contrast to personality psychologists' view of trust as an individual characteristic (e.g., Rotter 1980), social psychologists consider trust as an expectation that is specific to a transaction and the person with whom one is transacting. On the other hand, economists and sociologists are interested in how institutions and incentives reduce uncertainty, and in turn increase trust. Nevertheless, a review of the literature makes apparent that most perspectives on trust agree that confident expectations and risk are the critical components of the definition of trust.

The sources of risk are generally related to vulnerability and/or uncertainty about the outcome. In particular, Blomqvist (1997) associated the risk perception with a situation of imperfect information because in total ignorance it is possible only to have faith and/or gamble, and under perfect information there is no trust but merely rational calculation. Then, uncertainty regarding whether the other party intends to and will act appropriately is the source of risk (Rousseau, Sitkin, Burt and Camerer 1998).

Consequently, trust is a psychological state interpreted in terms of "perceived probabilities" (Bhattacharya et al. 1998), "confidence" (Barney and Hansen 1994; Deutsch 1973; Garbarino and Johnson 1999) or "expectancy" (Rempel, Holmes and Zanna 1985) assigned to the occurrence of some positive outcomes on the part of the trusting party. Accordingly, to trust someone implicitly means that there is a quite high probability that this person will perform actions that will result in positive, or at least non-negative, outcomes for the exchange partner.

Studies conducted in the psychology area are mainly focused on the motivational dimension of the construct. This dimension is related to the attribution that the exchange partner's behavior is guided or motivated by favorable and positive intentions towards the welfare and interests of the partner (Andaleeb 1992). To refer to this dimension a varied terminology has been used. For instance, Frost, Stimpson, and Maughan (1978) use the term altruism, Larzelere and Huston (1980) propose two qualities of trust: benevolence and honesty, and Rempel, Holmes and Zanna (1985) use dependability and fairness. Inspired by interpersonal research, most other studies also describe trust in terms of a set of motivational attributions because it is viewed as a mechanism to reduce the potential opportunism in a relationship (Geyskens, Steenkamp, and Kumar 1998; Morgan and Hunt 1994).

Nevertheless, other studies in management and marketing literature mention also a group of attributions with a technical or competence nature. A certain dependence on delivering the expected outcomes and performing activities exists in the business interactions. Therefore, in order to assert whether someone is trustworthy, it is also necessary to know his/her capacity and abilities to perform these activities and produce the desired outcomes (Andaleeb 1992).

In summary, on the one hand the motivational dimension of trust is the extent to which one believes that its partner is interested in its welfare and interests. On the other hand, the competence dimension mentioned above focuses on the belief that the partner has the required expertise to perform his/her activities, carry out

his/her obligations or accomplish his/her promises. The importance of these aspects will be further discussed in the following sections.

## **2.2 Origins of Trust Research**

As previously mentioned, the literature available on trust is substantial, but the main contributions to trust research in the past have come from three main areas, sociology, psychology, and philosophy. Previous research in these fields has shown that trust enables better accomplishments in the task performance (Golembiewski and McConkie 1975), an understanding of the complexity of our society (Luhmann 1979), and the ability to cooperate (Argyle 1991; Deutsch 1960, Gambetta 1988). Indeed, without trust, societies would cease to exist (Deutsch 1973; Luhmann 1979; Lagenspetz 1992). Without a background of trust, individuals would suffer from a loss of efficiency and dynamism (Golembiewski and McConkie 1975). Trust is a key to positive interpersonal relationships in various settings (e.g. Lewis and Weigert 1985) because it is central to how we interact with others (e.g. Golembiewski and McConkie 1975).

While social psychologists consider trust as an expectation that is specific to a transaction and the person with whom one is transacting, economists and sociologists are interested in how institutions increase trust and reduce uncertainty associated with transactions. Most perspectives on trust agree that confident expectations and risk are critical components of a definition of trust. For example, Deutsch (1973) defines trust as the confidence that one will find what is desired

from another, and Barney and Hansen (1994) describe trust as the mutual confidence that no party to an exchange will exploit another's vulnerability.

Economists view trust as the product being generated from the contract between the actors in an exchange and are more concerned with the costs and benefits of specific behaviors governed by the contract (Bhattacharya, Devinney and Pillutla, 1998). However, Bigley and Pearce (1998) point out that sociologists and economists are interested in the effect of organizational and institutional arrangements on trust rather than in the construct itself.

Trust is a psychological state interpreted in terms of perceived probabilities (Bhattacharya, Devinney and Pillutla 1998), confidence (Barney and Hansen 1994; Deutsch 1973) or expectancy assigned to the occurrence of positive outcomes on the part of the trusting party (Rempel, Holmes and Zanna 1985). Accordingly, to trust someone implicitly means that there is a high probability that this person will perform actions that will result in positive, or at least non-negative, outcomes for his/her exchange or relational partner. In other words, trust is based on the notion that people attempt to understand their partners in terms of acts, dispositions, and motives that would predict positive responses (Rempel, Holmes and Zanna 1985).

Social aspects may have a primary influence on the level of trust experienced by an individual. Lewis and Weigert (1985) define trust as a social reality, which penetrates the individual's psyche as well as the institutional texture of society. Luhmann (1979) considers trust as the main aspect reducing the social complexity, and a fundamental item for the functioning of society. Thus, trust acts as a critical

element capable of triggering the potential of complexity of current social systems, increasing the tolerance of uncertainty (Luhmann 1979). According to Barber (1983), trust represents a social mechanism that makes it possible to have a balanced use of power and knowledge, avoiding the manifestation of abuses.

In summary, trust is an important variable affecting human relationships at all levels (Rotter 1980). Therefore, when concepts and theories from research on interpersonal relationships are used to characterize and evaluate consumer-firm relationships, trust should be analyzed as a fundamental facet of the bond between consumers and firms.

## **2.2.1 Nature and Definitions of Trust**

Over many years, numerous scholars have studied the construct of trust from several disciplinary perspectives using different methods, and have different views on the fundamental nature of trust. However, some scholars (e.g. Bhattacharya, Devinney and Pillutla 1998; Hosmer 1995) argue that attempts to describe trust are incomplete. Thus, there is a need to review the definitions of the construct from different disciplines before settling on a definition for this study.

Personality psychologists conventionally judge trust as the characteristic of an individual or a group of individuals (e.g. Mellinger 1956; Deutsch 1960; Rotter 1971 and 1980). Social psychologists define trust as an expectation about the behavior of the other actors in a transaction, emphasizing the contextual factors affecting trust (e.g. Lewicki and Bunker 1995). Economists and sociologists focus on how institutions and incentives are created to reduce anxiety in processes of

exchange or interaction (e.g. Zucker 1986). Among the personality psychologists, Mellinger (1956) defines trust as an “individual’s confidence in the exchange partner’s understanding and motives, and the sincerity of his or her word.” Read (1962) builds on the definition of Mellinger and argues that people trust others by expecting their interests to be protected and promoted by those they trust. Similarly, Rotter, by adding to Deutsch’s (1960) definition, defines trust as a “generalized expectancy held by an individual or group that the word, promise, verbal, or written statement of another individual or group of individuals can be relied on” (Rotter 1971).

In contrast to personality psychologists, social psychologists define trust as an expectation about others’ behavior in transactions as well as the transactions themselves (e.g. Mayer, Davis and Schoorman 1995; Lewicki, McAllister and Bies 1998). For instance, Mayer, Davis and Schoorman (1995) define trust as the “willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to it, irrespective of the ability to monitor or control the party.” Obviously, this definition of trust focuses on the transaction together with the willingness to accept vulnerability. Social psychologists suggest that trust is a result of the exchange partner’s conduct. They point out that the exchange partner will perform in a cooperative or benevolent way simply because of external incentives or because of instruction or formal responsibility cannot be counted as trust, though the result may meet the expectations (Bhattacharya, Devinney and Pillutla 1998).

The remarkable diversity in viewing trust seems to be disconcerting for many scholars (Bigley and Pearce 1998). For instance, Shapiro (1987) points out that scholastic study of trust has resulted in a confusion of definitions. Hosmer (1995) supports this view, and states that there appears to be an agreement on the importance of trust, but a lack of agreement on a suitable definition. There have been some attempts to integrate different schools of thought in trust. For instance, Bhattacharya, Devinney and Pillutla (1998) attempt to formally and rigorously model trust in the perspective of social interactions by integrating several themes and discrepancies from literature, particularly those relating to the notions of trust (such as uncertainty, predictability and mutuality) and trust as a positive outcome.

### **2.2.2 Trust Building Processes**

Since trust building is a complex process based on the understanding of the actions and outcomes of the exchange partner (Doney, Cannon and Mullen 1998), it is necessary to understand the process used either consciously or unconsciously in order to identify the causal factors of trust. Doney, Cannon and Mullen (1998) suggest that a person who is willing to build trust in his/her exchange partner goes through a pattern of cognitive analysis, and summarize the pattern into five cognitive trust building processes as the calculative process, the prediction process, the intentionality process, the capability process and the transference process.

Economics literature (e.g. Williamson 1985; Dasgupta 1988) suggests that trust building involves a calculative process. Trust is developed through a calculative process whereby one party calculates the costs and benefits of the relationship with



the exchange partner (Doney and Cannon 1997). To build trust through a calculative process, the person will establish that a partner is trustworthy based on the assumption that, given the opportunity, most people act opportunistically and in their own self benefit (Williamson 1985). Thus, integrity is essential at this initial stage of the relationship. When a trustee adheres to a set of principles that is acceptable to the exchange partner, integrity is presumed by the latter (Mayer, Davis and Schoorman, 1995).

In building trust through a prediction process, trust is established depending on one party's ability to predict the exchange partner's behavior (Doney and Cannon 1997; Coutu 1998). In this process, one develops his/her trust from the knowledge of the exchange partners' past actions such as their fulfillment of promises and obligations to predict the latter's future action. Indeed, fulfillment of past promises could sustain the relationship and facilitate predictability (Rempel, Holmes and Zanna 1985; Butler 1991; Jones and George 1998). In addition, openness, honesty, consistency, and fairness in a transaction can lead to positive prediction (Anderson and Weitz 1989; Butler 1991; Peters, Covello and McCallum 1997; Selnes 1998; Sheppard and Sherman 1998; Jones and George 1998). Predictability generally rises with increased levels of trust (Michell, Reast and Lynch 1998). Trust building through a prediction process requires information about the past actions of the exchange party. Therefore, correct and trustful information is crucial to trust building (Sheppard and Sherman, 1998).

Trust building through an intentionality process depends on one party's perception of the motives of the exchange partner (Doney and Cannon 1997; Mayer, Davis

and Schoorman 1995). Using this process to build trust, one interprets the behavior of the exchange partners and attempt to determine their intention in the latter's actions. If the exchange partners are perceived to be self-interest seeking, opportunistic and unfair, trust is unlikely to be built. Thus, opportunistic behavior has a negative effect on trust (John 1984; Hill 1990; Morgan and Hunt 1994; Moore 1998, Das and Teng 1998). Benevolence certainly is an important factor in building an image of positive intention and forms a basis for trust (Mayer, Davis and Schoorman 1995). Indeed, consumer trust would be gained if the exchange party acts in the interest of consumers and shows genuine intention and care for the welfare of consumers. Consumers need to feel that the intention the exchange party is benevolent in order to establish trust through the intentionality process.

Trust building through a capability process is based on the assessment of the competence of the trustee to meet his/her obligations (Doney and Cannon 1997). Expertise and competence have been found to be a factor affecting trust in previous research (e.g. Moorman, Deshpandes and Zaltman 1993; Smith and Barclay 1997).

Trust may be established through a transference process, during which the trustor transfers trust from a known entity to an unknown one (Palmer and Bejou 1994; Doney and Cannon 1997). In other words, trust is transferred from a trusted source to another individual or group of individuals with which he/she has no or little previous direct encounter. In summary, this framework of trust-building processes is likely to be interrelated in practice (Doney, Cannon and Mullen 1998). For instance, a person who frequently encounters the trustee is in a better position to predict the trustee's behavior (prediction process) and future intention

(intentionality process), and such frequent encounters help him/her to assess the trustee's capabilities (capability process). In any given situation, he/she relies on more than one, and perhaps all processes to trust the exchange partner.

## **2.3 Trust Research in the Marketing Area**

Since the concept of trust has been investigated in many disciplines, it has been defined in a variety of ways, and some differences exist in its conceptualization due to the disciplinary traditions and assumptions.

Trust is crucial in many social and business relationships enabling the parties to form appropriate favorable expectations about the party they are doing business with (Fukuyama 1995; Luhmann 1979; Williamson 1985; Hosmer 1995; Lewis and Weigert 1985). Trust is essential especially in those business activities spanning time and those where the merchandise or service cannot be verified immediately (Fukuyama 1995; Luhmann 1979). Because of the inherent uncertainty, the social environment is so potentially complex that without reducing its social complexity, only simple short-term transactions would be possible. In many cases, rules and regulations enable individuals to reduce social complexity and make complex and long-term relationships possible. When rules and regulations are not enough, individuals reduce the social complexity by ignoring undesirable behaviors of others. This favorable presumption about the acceptable future actions of others is the essence of trust (Luhmann, 1979).

Most previous research regarded trust as a single conceptual construct, although numerous studies on the construct of trust have also pointed out that trust can also

be viewed as a multidimensional construct combining specific beliefs that either directly or through an overall assessment of trust influence relevant behavioral intentions (e.g. Mayer, Davis and Schoorman 1995; Andaleeb 1992; Morgan and Hunt 1994). Andaleeb (1992) argues that the dimensions of trust can be identified by the perceptions about motivations and ability of the counterparty. Ganesan (1994) proposes its dimensions as credibility and benevolence, while Mayer, Davis and Schoorman (1995) describe the three factors that affect trustworthiness as ability, integrity and benevolence. Morgan and Hunt (1994) argue that trust should be evaluated on reliability and integrity and confidence.

According to Mayer, Davis and Schoorman (1995) and related empirical research (Jarvenpaa, Knoll and Leidner 1998; Mayer and Davis 1999) overall trust is the product of a set of trustworthiness beliefs. These are primarily beliefs about the ability, integrity, and benevolence of the trusted party. Integrity is the belief that the trusted party adheres to accepted rules of conduct, such as honesty and keeping promises. Ability is about the skills and competence of the trusted party. Benevolence is the belief that the trusted party, aside from aiming at legitimate profits, wants to do good to the customer (Mayer and Davis 1999). As discussed above, many researchers treated these beliefs themselves as trust, and accordingly demonstrated how they directly determine the value of outcome variables, while others treated these beliefs as dimensions of trustworthiness.

### **2.3.1 Definitions of Trust in Marketing**

Not only the psychologists, social psychologists and economists define trust differently according to their disciplinary perspectives, Cowles (1997) points out that there is no unique definition of trust in marketing thought and practice, and neither scholars nor practitioners agree on a single model of trust that applies to all marketing contexts.

The definitions of trust in the marketing context emphasize the importance of confidence and reliability in the conception of trust. Some marketing scholars identify the aspects of credibility, benevolence, honesty, integrity and non-opportunism when defining trust. For instance Doney and Cannon (1997) define trust as the “perceived credibility and benevolence of a target of trust...and credibility is an expectancy that the partner’s word or written statement can be relied on.” Similar to the definition of Doney and Cannon (1997), Smeltzer (1997) defines trust in a buyer/seller perspective that a trustworthy buyer or supplier is one that does not act in a purely self-serving manner, not to take advantage of other parties, accurately discloses relevant information when requested, and generally acts according to normally accepted standards.

In the marketing literature, trust is generally viewed as an essential ingredient for successful relationships (Berry 1995; Dwyer, Schurr and Oh 1987; Moorman, Deshpande and Zaltman 1993; Morgan and Hunt 1994). Moorman, Deshpande and Zaltman (1993) define trust as “a willingness to rely on an exchange partner in whom one has confidence.” They propose that an expectation of trustworthiness

results from the ability to perform, reliability and intentionality. Morgan and Hunt (1994) define trust as “the perception of confidence in the exchange partner’s reliability and integrity.” Both definitions highlight the importance of confidence and reliability in the conception of trust. Likewise, Mayer, Davis, and Schoorman (1995), describe trust as the “willingness to be vulnerable to the actions of another person or people.” This is based on optimistic expectations that the other person or persons will protect the rights of all involved (Hosmer 1995). Ganesan (1994) points out that an important aspect is “the notion of trust as a belief, a sentiment, or an expectation about an exchange partner that results from the partner’s expertise, reliability and intentionality”.

Several times trust was conceptualized as a causal link between buyer–seller relationships and customer retention and loyalty (Bagozzi 1975; Reichheld 1994; Schurr and Ozanne 1985). Some definitions emphasize that trust is the confidence in the honesty and integrity of the other party, such as in a salesperson (e.g. Crosby, Evans and Cowles 1990). Frazier, Speckman, and O’Neal (1988) argued that trust is enhanced by means of personal integrity, upheld promises, and foregone opportunistic behavior. Similarly, trust has been approached by marketing scholars as a variable which facilitates relationships to evolve and change over time (Czepiel 1990; Beatty, Mayer, Coleman, Reynolds, and Lee 1996). These views of trust reflect the cumulative, reciprocal, and experiential attributes associated with trust formation.

Many researchers have shown the importance of personal characteristics like honesty, sincerity, frankness and reliability as elements that affect trust (Swan and

Nolan 1985; Crosby, Evans and Cowles 1990; Moorman, Deshpande and Zaltman 1993). Several studies have explored the precursors of trust relationships referred to contexts where the interaction is predominantly between individuals, as in the case of services and buyer-seller personal relationships.

Rather than focusing on trust in individuals, this study examines consumers' trust in an organization, captured as their perception of trust through the firm's online presence and confidence in the quality and reliability of the services offered. In this study, adapting the definition of Rousseau, Sitkin, Burt and Camerer (1998), trust is defined as the "psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behaviors of another."

### **2.3.2 Antecedents of Trust**

Despite agreement on the significance and importance of trust in long term customer relationships, there is still broad debate on the factors that constitute its antecedents and consequences in various contexts. According to previous research, the antecedents of trust include the seller's reputation for reliable, consistent, and fair behavior (Ganesan 1994), relationship-specific investments by the seller, and the seller's size (Doney and Cannon 1997), the buyer's past experience with the seller (Anderson and Weitz 1989; Ganesan 1994), and the incidence of opportunistic behavior by the seller (Morgan and Hunt 1994).

The abilities and functional competencies of the exchange partner that can lead to satisfaction are the basic elements for the development of a long term relationship

based on trust (Andaleeb 1992; Ganesan 1994; Mayer, Davies and Schoorman 1995; Doney and Cannon 1997). The level of credibility depends on the beliefs of the buyer that the seller will have the knowledge that is required to perform his role efficiently and reliably. Since the level of satisfaction experienced in past interactions provides the clearest indicator of the counterpart's capacity to keep its own promises, it is also among the factors that most authors think crucial to build trust (Anderson and Narus 1990; Ganesan 1994; Garbarino and Johnson 1999). In the case of service or buyer-seller personal relationships, where the interaction is mainly between individuals, personal characteristics such as honesty, sincerity, frankness and reliability are mentioned among the antecedents of trust (Swan and Nolan 1985; Crosby, Evans and Cowles 1990; Moorman, Deshpande and Zaltman 1993).

Another antecedent of trust is about the motivations of the exchange parties. Previous research mentions the importance of the certainty that the counterpart will not behave opportunistically, and be motivated to produce mutual benefits (Andaleeb 1992; Morgan and Hunt 1994; Zaheer and Venkatraman 1995; Rich 1997). The increase of similar motivations for the behavior of the exchange parties provides a more satisfying and reliable relationship. In addition, a number of studies have shown the role of communication as an antecedent of trust (e.g. Anderson, Lodish and Weitz 1987; Anderson and Narus 1990; Morgan and Hunt 1994). They argue that when communication is transparent and effective, it helps to resolve conflicts that can arise in the relationship, and thus plays a critical role on the level of trust.



A review of the past marketing literature shows additional factors to those of the antecedents of trust discussed above. Some other antecedents of trust studied previously include the level of investment in the relationship (Ganesan 1994), similarity between the partners (Crosby, Evans and Cowles 1990), reputation (Ganesan 1994), the partners' organizational structure and culture (Moorman, Desphande and Zaltman 1993), the features of the object of the transaction, and its degree of complexity (Moorman, Desphande and Zaltman 1993), the degree of customer orientation of the partners (Swan and Nolan 1985), and brand value (Schurr and Ozanne 1985).

### **2.3.3 Consequences of Trust**

The consequences mostly cited in the past literature include long-term relationship with the counterpart, sales performances, customer satisfaction, commitment and cooperation (e.g. Ganesan 1994; Morgan and Hunt 1994). Some others are the greater likelihood of allocating resources in favor of subjects who are trusted (Anderson, Lodish and Weitz 1987), the greater ease of persuading or influencing the counterpart (Swan and Nolan 1985) and the greater sales that follow from it. In a meta analysis of studies on trust in marketing relationships, Geyskens, Steenkamp and Kumar (1999) show that environmental uncertainty, own dependence, partner's coercive power use, communication and economic outcomes are the primary antecedents of trust, while satisfaction and long-term orientation are the consequences of trust.

The increase in the level of trust, and thus reduction in decisional uncertainty, makes the parties' decisional process more certain by allowing the behavior of a counterpart to be predicted (Mayer, Davis and Schoorman 1995). Previous studies by Anderson and Weitz (1992), Morgan and Hunt (1994) and Garbarino and Johnson (1999), arguing the significance of relationship commitment, have aroused great interest in understanding the relationship between trust and commitment. They have shown that commitment is another key consequence of trust that implies a desire to establish a long term relationship with the counterpart, and a willingness to make the short-term sacrifices needed to secure the relationship (Anderson and Weitz 1992; Ganesan 1994; Garbarino and Johnson 1999).

The antecedents and consequences of trust will be further discussed with a particular emphasis in the online environment in the following sections, where the variables taken into account in the conceptual framework will be tested in the context of market relations on the Internet.

## **2.4 Customer Advocacy and Trust**

This section describes the fundamental ideas behind the relationship between trust and consumer advocacy. Consumer advocacy lays the foundation for a mutually beneficial relationship between consumers and companies. On the one hand, this partnership provides the consumer with a trusted source of high quality products and information, thus reducing the amount of resources spent and eliminating the risk of being scammed. On the other hand, customers can act as delegates for the

trusted company by telling others about their positive experiences, and thus significantly reducing the cost of customer acquisition to the company.

The term “advocate” is defined in the Oxford English Dictionary as follows: (1) a person who publicly supports or recommends a particular cause or policy, (2) a person who pleads a case on someone else’s behalf, (3) to publicly recommend or support. Similarly, Webster’s English Dictionary defines “advocacy” as the act or process of advocating or supporting a cause or proposal, and “to advocate” as to plead in favor of.

Customer advocacy means truly representing customers’ interests by providing them with open, honest and complete information and finding the best products for them (Urban 2004). According to Urban (2004), companies should address eight customer advocacy elements to gain their customers’ trust, including information transparency, quality products and services, product comparison, alignment of incentives, partnering, cooperating design, trusted supply chain partners, and comprehensiveness.

Customer advocacy is not only about saying what is best for the customers but also about enabling them to make informed purchase decisions. It is about acting in the best interests of the customer, from recommending the best product or service for their needs, to cooperating with them, and helping resolve their complaints. A research study by Forrester (2003), which defines customer advocacy as acting in the best interests of the customer rather than the institution, indicates that advocacy is the strongest predictor of customer satisfaction and retention. Forrester further defines customer advocacy as: (1) matching products to customer needs at the right

time, (2) telling customers when not to buy, (3) helping customers reduce or avoid fees, and (4) delivering a great customer experience across all channels.

In the marketing literature, there has been no prior empirical research conducted to understand the role of customer advocacy on the customer-firm relationships in the online environment. This research argues that customer advocacy acts as another driver of online trust. In this study, customer advocacy will be defined as the “set of explicit cooperative behaviors of the firm that truly represents customers’ interests and enhances their decision making to increase customer welfare.” The aspects of customer advocacy taken into account in this study are information transparency, communication effectiveness, advice, and cooperation.

Information and advice to current and potential consumers is a managerially important factor that can potentially affect consumer trust in a Web site. Urban, Sultan and Qualls (2000) have shown how the presence of virtual advisors and other decision-making aids can help in building customer trust in Web sites. Some other studies have demonstrated that the depth and quality of information provided for the customers play a significant role in building customer trust (Ratchford, Pan and Shankar 2003; Shankar, Rangaswamy and Pusateri 2001). When the sharing of information is transparent, it helps to resolve conflicts that can arise in the relationship. Reduced uncertainty and right choices in turn lead to a higher degree of trust by consumers.

Perceptions play a determining role in the creation of trust. A difference of perception between the parties can easily occur where the subjects interpret the environment or external phenomena in a different way. It has been shown that there

is a negative relationship between the level of trust and the effort that consumers has to spend in gathering information regarding their purchases (Kiel and Layton 1981; Punj and Staelin 1983). Therefore, transparency enables trust act as substitute of information, reducing consumers' search costs and stabilizing the relationship with the firm.

Internet shopping involves a higher degree of uncertainty and risk when compared with conventional shopping. Prior studies of trust in traditional buyer-seller relationships (Doney and Cannon 1997) have already found that there exists a very strong relation between risk and trust. Perceived risk theory has been playing an important role in consumer behavior research and relationship marketing literature (Dion, Easterling and Miller 1995; Morgan and Hunt 1994). Mitchell (1999) contended that perceived risk is powerful in explaining consumer behavior since consumers tend to avoid mistakes than to maximize utility in purchasing. The reduction of decisional uncertainty makes the subjects' decisional process more certain by allowing the behavior of a counterpart to be predicted (Mayer, Davis and Schoorman 1995).

The link between the level of communication and trust has been one of the most deeply examined subjects by scholars interested in the customer relationships. Results show the role of communication as a determinant of the process of creating a trust-based relationship (Anderson, Lodish and Weitz 1987; Anderson and Narus 1990; Morgan and Hunt 1994). Effective communication influences the level of trust by aligning the expectations and perceptions of the parties (Morgan and Hunt 1994).

Another important aspect of customer advocacy is about cooperation and partnership with the customer. Crosby, Evans and Cowles (1990) argue that the perceptions of customers about the seller's intention to cooperate have an effect on trust. In practice, although cooperation can be defined as an antecedent of trust, and in the case of lack of trust, it is impossible to pursue behaviors based on reciprocal cooperation.

Furthermore, Morgan and Hunt (1994) argue that trust is responsible for the counterparts' exercise of non-coercive power. Non-coercive power means the use of sources of power that make it possible to offer contributions to the counterpart, thus favoring the achievement of the counterpart's own objectives. It has been shown that non-coercive sources of power are often used in relationships that are based on trust, providing positive effects on the satisfaction and performance of the two parties, and thus avoid the emergence of conflict.

In certain ways, traditional marketing methods assume that customers are passive individuals who must be coerced into buying. Advocacy is a major step forward in evolving the relationship between companies and their customers (Urban 2004), in that it treats customers like intelligent individuals who seek to make informed decisions about the goods and services they purchase.

Delving into the study of consumer trust in Internet shopping, this study synthesizes the three different perspectives of trust and perceived risk theory, and postulates an integrative model to explain consumer trust in Internet shopping.

## **2.5 Trust in the Online Environment**

One of the major factors that prevent consumer participation in an online relationship is the lack of online consumer trust in the vendor with whom they are engaging in business (Jarvenpaa and Tractinsky 1999; Reichheld and Schefter 2000; Rose, Khoo and Straub 1999, Urban, Sultan and Qualls 2000). Low levels of online consumer trust discourage consumers from either purchasing or looking for and exchanging information on the Web sites. Previous research suggests that establishing consumer trust is an imperative for success in the online environment (Reichheld and Schefter 2000; Urban 2004). Without doubt, previous research shows this significant role of online consumer trust in the Internet business, and that consumers do not prefer entering a relationship and doing business with an online vendor they do not trust (Reichheld and Schefter 2000, Gefen 2002). High levels of online consumer trust helps consumers build appropriate favorable expectations of what to expect from the firm.

The factors distinguishing online trust from the concept of trust in general include a number of specific Web site characteristics, such as privacy and security concerns, the physical distance between buyer and seller, the absence of salespeople, and the separation between buyer and products. This unique business environment generates issues of security and privacy among transaction counterparts, which create the need to build a trust-based relationship much stronger and more persistent than demanded offline.

Despite all these differences in the underlying factors between online and offline trust, there is a fundamental importance of trust in its impact on the consumers' purchase decisions in both cases. Just like offline trust, online trust will function as an enabler for building positive customer relationship and increasing their level of commitment to the company.

Arguably, many factors affecting trustworthiness in the offline environment identified by Mayer, Davis and Schoorman (1995) should apply in the online environment as well. Many aspects of integrity, such as obeying the rules and fulfilling promises, are clearly important also in the case of online business. Consumers of either online Web sites or bricks-and-mortar vendors, having doubts about the integrity of the organization, can neither be expected to interact, nor commit to a relationship with the firm. Also in the case of beliefs in the vendor's benevolence, consumers who have doubts about the honorable intentions of a firm, can hardly be expected to rely on the information provided online, nor show their willingness to develop a good relationship. Lastly, consumers, who have doubts about the online vendor's knowledge and abilities, can hardly be expected to do business with that firm. While these issues apply to any firm, they are even more critical in the case of online stores because consumers can not rely on body language or other physical cues when assessing the integrity, benevolence, or ability of the vendor (Reichheld and Scheffer 2000).

As mentioned above, several studies have empirically demonstrated that Web site characteristics indeed significantly affect perceptions of trust in a Web site. However, numerous factors other than privacy and security significantly also



influence the Web site trust (Bart, Shankar, Sultan and Urban 2005). While still examining the impacts of Web site characteristics such as privacy and security, this study further explores the roles of factors associated with brand trust and customer advocacy on the level of customer trust. Proposing a conceptual framework, the next chapter provides detailed explanation of each factor posited as precursors of online trust.

## **2.5.1 Web Site Characteristics Affecting Online**

### **Trust**

Because of its nature, the online environment exposes consumers to the threat of possible inappropriate opportunistic behaviors of firms via their online presence, such as misuse and unauthorized distribution of personal or credit card information. The lack of trust arises from online consumers' perceived lack of control over the access others have to their personal information during the online navigation process (Hoffman, Novak and Peralta 1999). Environmental control directly affects consumers' perceptions of the security of online shopping (Goodwin 1991). Companies can improve online trust by disclosing third-party certifications, and making it easy to locate, read and enforce policies involving privacy (Shneiderman 2000).

As another concern of control over information privacy, secondary use of information control reflects the consumer's perceived ability to control the use of personal information for other purposes, subsequent to the transaction during which the information was originally collected (Culman 1995). On the Internet,

this is manifested by consumers' concern that their personal information are being forwarded to third parties without their knowledge or permission. Data mining and data warehousing tools are extensively used due to the capabilities of the Internet and high-speed networks.

Perceived ease of use of the Web site and navigation are also important factors since they are directly related to the flow construct that has been considered critical for understanding consumer behavior on the Internet (Hoffman and Novak 1996). Consumer perceptions of navigation in Web sites are thus likely to significantly influence their trust in those Web sites (Bart, Shankar, Sultan and Urban 2005). Furthermore, visually appealing elements of presentation can offer clarity and enhance a visitor's perception of trust.

Depth of information at a Web site has the potential to lower customer price sensitivity and increase customer value (Shankar, Rangaswamy and Pusateri 1999). If consumers perceive greater value in a product or service online, they are likely to perceive higher trust online as well. Reduced uncertainty and right choices in turn lead to a higher degree of trust by consumers (Urban, Sultan and Qualls 2000).

## **2.5.2 Consumer Characteristics Affecting Online**

### **Trust**

In addition to the specific Web site features and characteristics, consumer characteristics also play an important role in determining online consumer trust. These consumer characteristics include demographics and behavioral factors such

as previous Web site experience, type of usage, and the purpose of use (Bart, Shankar, Sultan and Urban 2005; Jarvenpaa, Tractinsky and Vitale 2000; Novak, Hoffman and Yung 2000; Yoon 2002).

Customer experience in online environment is important in determining their behavior on a Web site (Novak, Hoffman and Yung 2000). Trust operates in different ways depending on a consumer's state of knowledge about products and services. There are two components of trust between two parties, cognitive and affective (Lewis and Wiegert 1985). The cognitive component of trust comes from one party having some knowledge about the other party to develop expectations about the response of the other party, but not enough knowledge to predict that response with absolute certainty. The affective component of trust is partially determined by the lack of knowledge, since uncertainty about the behavior of the other party generates fear, while higher levels of certainty induce comfort. Lewicki and Bunker (1995) suggest that knowledge based trust develops over time through experience and interaction. Past experience affects individual trust propensity, which has an important role in determining online trust (Lee and Turban 2001).

A firm's Web site can be viewed as its electronic sales person (Jarvenpaa and Tractinsky 1999). When consumers are knowledgeable about a purchase decision, they typically trust a salesperson if he/she reflects the consumer's level of knowledge in the sales process. If consumers are limited in their product knowledge, they are more likely to develop trust with a vendor based on knowledge and comfort gained from previous interactions so that there are no

surprises once an agreement is reached (Doney and Cannon 1997; Moorman, Deshpande, and Zaltman 1993). This reasoning applies to the online context where trust is likely driven by past experiences (Jarverpaa and Tractinsky 1999). Yoon (2002) has shown that Web site trust is influenced by consumer familiarity and prior satisfaction with e-commerce.

Many household consumers use the Internet for online entertainment purposes. Consumers also share their experiences and get information from other consumers on products, services and related aspects. This experience and information can also contribute to increased confidence with Web sites. Greater confidence reduces uncertainty and builds trust (Ganesan 1997). Greater entertainment may thus reduce uncertainty associated with Web sites (Bart, Shankar, Sultan and Urban 2005). Additionally, such features can enhance the reviewed benefits of the site and make the site appear as one that caters to consumers needs for entertainment and community. Therefore, it is likely that greater entertainment and experience on the Internet will lead to greater trust in a Web site. Thus, consumer experience with a Web site is likely to affect trust in the Web site. In addition, consumer demographics may impact consumer perceptions of trust. For example, more educated consumers may rely more on their knowledge and may inherently trust Web sites less than other consumers.

After this review of the trust literature in diverse fields, the development of the conceptual framework and the research hypotheses tested in this study will be explained and further discussed in the following chapter.

## **Chapter 3**

# **Conceptual Framework and Research**

## **Hypotheses**

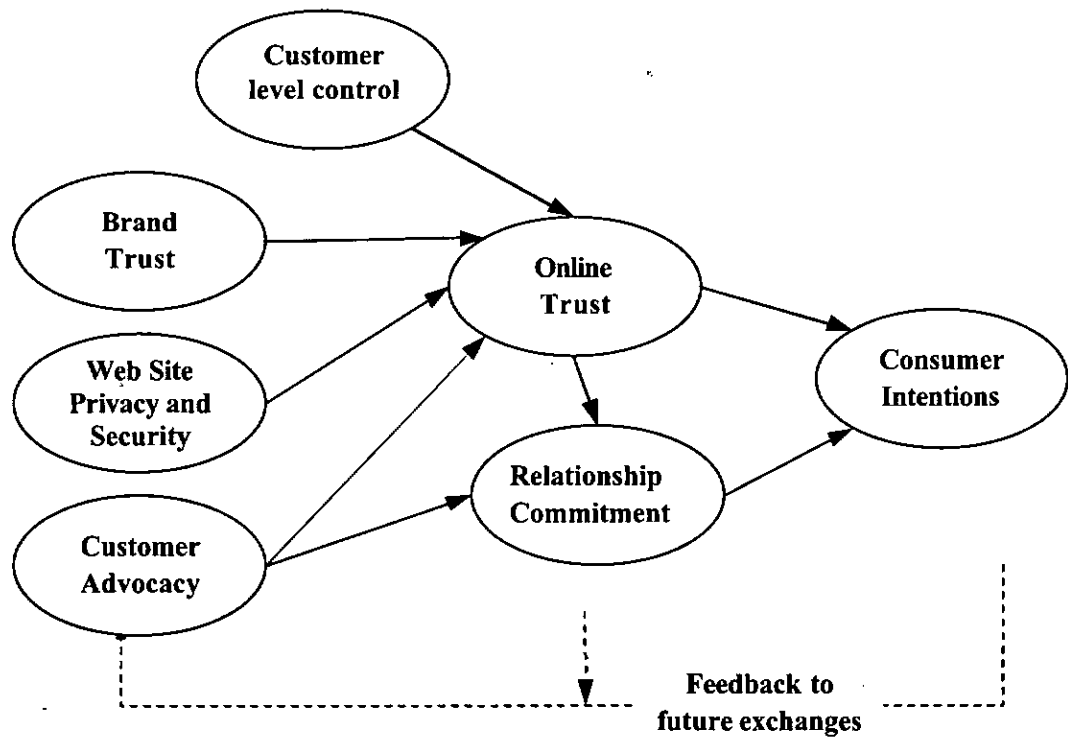
### **3.1 Conceptual Framework of Online Trust**

Previous research has shown that online trust has a number of possible antecedents and consequences (e.g. Jarvenpaa, Tractinsky, and Vitale 2000; Shankar, Urban and Sultan 2002; Yoon 2002). In addition, as described in the previous section, there are a number of studies in the marketing area demonstrating the crucial role of trust in building long-term relationship with customers (e.g. Ganesan 1994; Geyskens, Steenkamp and Kumar 1999; Morgan and Hunt 1994).

In this study, a conceptual framework is developed to investigate the structural relationships among the antecedents of online trust, relationship commitment and their outcomes. The summary diagram of the proposed framework is shown in Figure 1. In the model, online trust and relationship commitment are the mediating

constructs between the determinants of trust and future intentions. A review of the literature supporting the proposed relationships in the conceptual model follows.

Figure 3.1 Conceptual Framework of Online Trust



### 3.2 Research Hypotheses

As shown on the conceptual framework, the role of trust in the online environment is explored to by developing research hypotheses related to (1) brand trust, (2) Web site privacy and security, (3) customer advocacy, and (4) the mediating roles of trust and relationship commitment. The effect of customer characteristics, in particular consumer propensity to online trust and Internet usage, on the levels of online trust is also controlled. The feedback effect shown in the conceptual

framework will not be tested, but will be discussed based on the results and findings of the study.

### **3.2.1 Brand Trust**

As a company's significant marketing variable, brand plays a key role in the development of trust in Web based relationship marketing (Davis, Buchanan-Oliver and Brodie 1999). A brand is a trust mark that is the cue for all intangible trust generating activity, and in the absence of human touch, it can be a symbol of quality and assurance that is capable of building trust. According to Keller (1993) brand is a surrogate for risk.

In the online environment, brand reputation significantly affects the attitude, risk perception, and in turn, the level of trust and the willingness to buy in an electronic store (Jarvenpaa, Tractinsky, and Vitale 2000; Sultan, Urban, Shankar and Bart 2003). In the absence of all relevant information for comparison, brands can provide greater comfort online than offline in customer choice (Degeratu, Rangaswamy and Wu 2000). Pan, Ratchford and Shankar (2002) demonstrates that Amazon has a greater level of trust than the other online book stores, while having a high brand recognition at the same time.

Adapting the definition provided by Chaudhuri and Holbrook (2001), brand trust is defined as the "willingness of the consumer to rely on the ability of the brand to perform its stated function." The increase in brand trust and comfort lowers the risk or uncertainty in that brand. Extending this to the online environment, it is expected that the higher the trust in the brand behind a Web site, the greater will be

the consumer trust in that Web site. These arguments lead to the following hypothesis:

H<sub>1</sub>: Brand trust is positively related to consumer trust in the Web site.

### **3.2.2 Web Site Privacy and Security**

One of the reasons why trust is even more critical in the case of online environments arises from the less verifiable and less controllable business environment of the Web (Gefen 2002; Reichheld and Schefer 2000). When online consumers provide personal information they are exposing themselves to the possible unethical use and distribution of the data.

There are a number of Web site characteristics that affect perceptions of online trust (Jarvenpaa, Tractinsky, and Vitale 2000; Shankar, Urban and Sultan 2002, Yoon 2002). Several studies have shown that security and privacy elements are among the key drivers of trust on the Internet (e.g. Hoffman, Novak and Peralta 1999; Smith, Bailey and Brynjolfsson 2000). Privacy refers to the protection of individually identifiable information on the Internet and involves the adoption and implementation of a privacy policy, notice, disclosure, and choice/consent of the Web site visitors. Security at a Web site refers to the safety of the computer and credit card or financial information.

In summary, security and privacy elements are argued to be among the key drivers of online trust, and this leads to the following hypothesis:



H<sub>2</sub>: Consumer perceptions of privacy and security on a Web site are positively related to consumer trust in the Web site.

### **3.2.3 Customer Advocacy**

The Internet has empowered consumers with information, more options, and a simple mechanism for commercial transactions. It also acts as an effective communications medium that facilitates information exchange among customers. Although the Internet has not entirely replaced traditional shopping methods, it has brought about a change in the balance of power between suppliers and consumers. Thanks to the immense proliferation of the Internet and the World Wide Web, vast amount of information about products and services from various independent sources are now easily accessible. However, these issues have caused the question of credibility and reliability of the information sources.

This study proposes that, in addition to the brand effect and Web site characteristics, customer advocacy also affect consumer perceptions of trust in a Web site. Consumers may prefer a Web site that is willing to assist them in the purchasing process, offers complete information and accurate advice in the choice of a product or services.

In summary, this study argues that if the firm advocates for its customers by providing honest and complete information about their products or services, and cooperating with them, then those customers will reciprocate with their trust and commitment to a relationship with the firm. Based on the discussion on customer

advocacy in the previous section, and its implications in the online environment, the following research hypotheses are advanced:

H<sub>3</sub>: Customer advocacy on a Web site is positively related to consumer trust in the Web site.

H<sub>4</sub>: Customer advocacy on a Web site is positively related to consumers' commitment to relationship.

### **3.2.4 Online Trust and Relationship Commitment**

In the marketing literature, various studies have focused on different impacts of online trust (e.g. Jarvenpaa, Tractinsky and Vitale 2000; McKnight, Harrison, Choudhury and Kacmar 2002). According to Shankar, Urban and Sultan (2002), consequences of online trust can be grouped into three broad categories: (1) intent to act, (2) stakeholder satisfaction and loyalty, and (3) firm performance.

Regarding customer intentions, a major outcome of consumer trust that is suggested by research in the specific case of Internet business is the willingness to purchase online from the vendor (Jarvenpaa and Tractinsky 1999; Reichheld and Scheffer 2000). Some others include willingness to click through further in a Web site, return to the Web site, register, send messages, download files, order from a Web site, and recommend the site to others. Yoon (2002) and Jarvenpaa, Tractinsky and Vitale (2000) have shown that Web site trust affects the willingness to buy in an electronic store. Some studies have examined the effect of trust on prices and price dispersion on the Internet. In a study of price competition between pure play and online retailers, Pan, Shankar and Ratchford (2002) found that online trust had a

positive impact on Web site traffic or visits to the Web site in the gifts and flowers and computer hardware categories. They have also shown that trust may have a significant impact on online price dispersion over time.

In this study, we propose that if trust mediates the aforementioned relationships, then improving trust by manipulating the drivers of trust will influence consumers' behavioral intention on the Web site. The role of trust as a mediating variable has been explored in a number of previous studies. It has been shown that trust impacts behavioral intent, and that the effect of trust on its consequences is greater than the direct effect of any of its antecedents (Doney and Cannon 1997; Kumar 1996; Morgan and Hunt 1994). Singh and Sirdeshmukh (2000) examined the role of trust in enhancing satisfaction in the context of exchange relationships and showed that trust mediates the relationship between agency mechanisms and satisfaction and between satisfaction and loyalty. According to Geyskens, Steenkamp and Kumar (1999) trust can potentially mediate antecedents such as environment uncertainty and consequences such as satisfaction in a relationship marketing context. The focus here will be on the impact of trust on the level of customers' relationship commitment and their behavioral intentions in the online context.

Relationship commitment is defined as an exchange partner believing that an ongoing relationship with another is so important as to make maximum efforts to maintain (Morgan and Hunt 1994). Moorman, Zaltmann and Desphande (1992) also suggested a similar explanation stating that "commitment to a relationship is an enduring desire to maintain a valued relationship." This implies a desire to

establish a stable relationship with the counterpart, and a willingness to invest in the relationship, and make the short-term sacrifices needed to consolidate the relationship, relying at the same time on the relationship's stability (Anderson and Weitz 1992; Ganesan 1994; Garbarino and Johnson 1999). Three models suggested by Anderson and Weitz (1992), Morgan and Hunt (1994) and Garbarino and Johnson (1999) have established great interest in understanding the links between trust and relationship commitment. Because commitment entails vulnerability, parties will seek only trustworthy partners. These models provide an opportunity for considering the commitment of each of the counterparts, as a way of understanding the nature of the customer relationships.

Morgan and Hunt (1994) theorize that trust and commitment are key mediating constructs in successful relational exchanges. They consider these two constructs as mediating variables between five important antecedents (relationship termination costs, relationship benefits, shared values, communication, and opportunistic behavior) and five outcomes (acquiescence, propensity to leave, cooperation, functional conflict, and decision-making uncertainty).

In accordance with the theory of trust and commitment as mediators (Morgan and Hunt 1994), online trust is considered as a precursor of commitment. Because commitment involves potential vulnerability and sacrifice, it follows that people are unlikely to be committed unless trust already is established. This theory also proposes that trust and commitment both are influential in the future intentions of an exchange partner. On the basis of the commitment-trust theory of relationship marketing, this study hypothesizes that trust and commitment act as focal

intermediate constructs in the conceptual model proposing relationships between customer advocacy and the other precursors of online trust and customers' behavioral intentions.

In the relationship marketing literature, there are some empirical precedents regarding some of the antecedents of trust, such as abilities, competencies and motivation of the counterpart, but there is no empirical study to describe how customer advocacy might influence trust and relationship commitment of consumers. Unlike traditional retail environments in the physical world, consumer perceptions of limited control over information privacy on the Internet have a major influence on consumer willingness to engage in relationship exchanges.

Although prior studies have examined several antecedents and consequences of trust in a Web site, they have not examined the mediation effects of trust and relationship commitment. In other words, they have not examined whether customers first develop their trust about a Web site and commit to a relationship due to various possible antecedents before they are willing to act at a Web site.

Based on prior research in the offline environment (e.g. Geyskins, Steenkamp and Kumar 1999), online trust is expected to play a mediating role between brand trust, Web site characteristics and customer advocacy at one end and behavioral intent at the other end. Likewise, on the basis of Morgan and Hunt's (1994) commitment-trust theory, relationship commitment is posited as another key mediating construct.

As a result of these discussions, the following three hypotheses that reflect the expectations about the relationships described above are proposed:

H<sub>5</sub>: Consumer perceptions of trust in the Web site are positively related to consumers' commitment to relationship.

H<sub>6</sub>: Consumer perceptions of trust in the Web site are positively related to consumer behavioral intentions.

H<sub>7</sub>: Relationship commitment is positively related to consumer behavioral intentions.

### **3.3 Control Variables**

Although this study focuses on the main antecedents and consequences of online consumer trust, previous research suggests that several customer level variables might affect attitudes and willingness to shop in an Internet store (Jarvenpaa, Tractinsky and Vitale 2000; Novak, Hoffman and Yung 2000; Shim and Drake 1990; Yoon 2002). The impact of the drivers of online trust can be influenced by the individual's Internet usage and propensity to trust on the Internet. Thus, in order to avoid confounding results, these constructs are included as control variables in the analysis.

## **Chapter 4**

### **Research Methodology and Measure**

#### **Development**

##### **4.1 Methodology**

The key dependent variables in the conceptual model are online trust, relationship commitment and consumer behavioral intent; and the independent variables are brand, Web site characteristics, and customer advocacy. In this study, rather than incorporating every single variable that may influence trust, those antecedents that are managerially relevant in the online context are examined. The analysis of data and testing of the research hypothesis will be performed by applying the LISREL model (Joreskog and Sorbom 1989).

The research includes two separate studies conducted in two phases. In phase 1, the antecedents of online trust that are most relevant to the context of this study and the measures of trust, customer advocacy and behavioral intent are identified

based on an initial exploratory study. This phase has also supported the development of the conceptual framework. The second phase includes the testing of the conceptual model with an empirical study, in which factors that influence trust perceptions are examined based on a quantitative model.

## **4.2 Research Phase I**

Before conducting an empirical examination, an exploratory study was conducted with MIT students in Spring 2004, to identify specific customer advocacy and Web site features that respondents thought would impact their perceptions of trust in a Web site. The objectives of this part was to identify the measures and dimensions of customer advocacy and online trust as perceived by consumers, to help in the development of the conceptual framework, and design of a quantitative survey that would allow us to measure and empirically test the model. This focus group study was also helpful in the evaluation of the progress and direction of the research project.

### **4.2.1 Study Web Site Design**

To gather information on the usability and acceptability of several customer advocacy features, we designed a “customer advocate” Web site (see Figure 4.1 for the main page of study Web site) for the Wireless division of Qwest Communications, Inc., a research sponsor of the MIT Center for eBusiness. The study Web site was designed in assistance with Sha Ma, Stephen Kao. After a detailed analysis of the existing wireless services Web sites, we identified the



services to offer in the prototype Web site and design specifications, which included information, education, advice, and guarantees.

The site had four main functional parts. “Create your own plan” is designed to find the best matching wireless plans for consumers, providing information and advice according to the customer’s wireless usage. The “retroactive pricing” feature was implemented as a part of the price guarantees section to help customers switch to a better plan based on their usage. “Name your own price”, was modeled after the priceline.com bidding system used in the airline industry, to allow budget constrained users who are fairly flexible with respect to features and plans to negotiate the best available rates among all wireless providers. We included several other sections such as “New technologies” and “Guide to Wireless” that serve as learning centers and improve customers’ knowledge about the wireless market. And lastly, we designed a section that provides user ratings and reviews about the products and services offered by the Web site. The screen captures of some selected pages of the “My Wireless Advocate” site can be found in Appendix A.

## **4.2.2 Research Study Participants**

The focus group study consisted of 18 MIT students from 3 different majors (Sloan School of Management, Department of Electrical Engineering and Computer Science, and Department of Mathematics), all of which were current or potential wireless services customers. About 38 percent of the participants were Verizon Wireless customers, and 30 percent were using Sprint wireless services. The

remaining participants' current wireless providers were T-Mobile (20 percent) and AT&T (12 percent). Their average usage of anytime minutes was 400, and the average monthly bill was \$37. Regarding their [shopping behaviors] research for a future wireless plan, 11 percent of the participants indicated that they would go directly to the wireless carrier Web sites, 61 percent would search for information (e.g., plan specification and user reviews) on independent Web sites (such as epinions.com or letstalk.com), and 28 percent would prefer shopping in physical stores.

### **4.2.3 Research Study Procedures**

In this focus group study, the participants were asked to make a series of comments about the three Web sites selected for this study: Verizon Wireless, LetsTalk.com, and My Wireless Advocate. Verizon Wireless is the number one wireless provider in the United States. LetsTalk.com is an overall excellent third-party wireless Web site that serves as an independent resource for wireless product and service comparisons. And My Wireless Advocate aims to achieve more than LetsTalk by really looking out for its customers' interests and offer unbiased advice and new features that are not existing in the market. The focus group study, which took approximately one hour, was conducted in two parts of 30 minutes each.

During the first part of the study, for each of the three selected Web sites, participants were given a guided tour of the Web site and its main features, and asked to perform certain tasks on the Web site. Participants were then encouraged to express their thoughts in an unstructured and natural manner in a discussion with

others participants and the moderator. Specifically, participants were given the opportunity to express their overall impressions of the Web site as well as their likes and dislikes of specific features on the Web site, the design and ease of use of the site, and the content, advice, and trustworthiness of the Web site. In the discussions, we focused on exploring the customer advocacy aspects that influence the perception of trust. In order to examine the trustworthiness of the selected Web sites, respondents were asked several questions on their perceptions about the sites, in terms of customer advocacy and other Web site features affecting trust.

Figure 4.1 Study Web Site Main Page



In the second part of the study, having already browsed and discussed all three Web sites independently, participants were asked to participate in a general discussion expressing their opinions regarding all three sites and making comparisons among them. The participants were encouraged to brainstorm

collectively, so that a number of ideas, issues, topics, and even solutions to problems could be generated through the discussions. Participants were then asked several open-ended questions to evaluate the ideas and concepts found on the three Web sites. Following the general discussion, the participants were given a short questionnaire to address some other issues such as preference, ratings, and intent relating to consumer advocacy and My Wireless Advocate Web site. A copy of this questionnaire can be found in Appendix B.

#### **4.2.4 Qualitative Study Findings**

In the focus group study, we examined people's general attitude toward the Web sites and their reactions to the consumer advocacy features. The study has shown that the components of trust have important effects on customers' intent to act on a Web site. This phase also helped us identify the measures of the focal constructs as perceived by consumers online, as well as gaining an insight on specific advocacy features that impact consumers' perceptions of trust in a Web site.

As a part of the questionnaire, the participants were also asked to explain what they understand by the term "customer advocacy", and what it meant to them. Some of the definitions made by the study participants were the following: "Giving information to consumers in an unbiased way, in order to help them make informed decisions", "Truthful with information", "Providing unbiased reviews of products and services", "When customer gives some power to another party in giving advice/information or helping in decision making", and "To speak up for the benefit of the customer, and make the customer aware of the alternatives."

These definitions approved that the construct of customer advocacy was well defined and understood by the research study participants, and were also in line with the definition of this study.

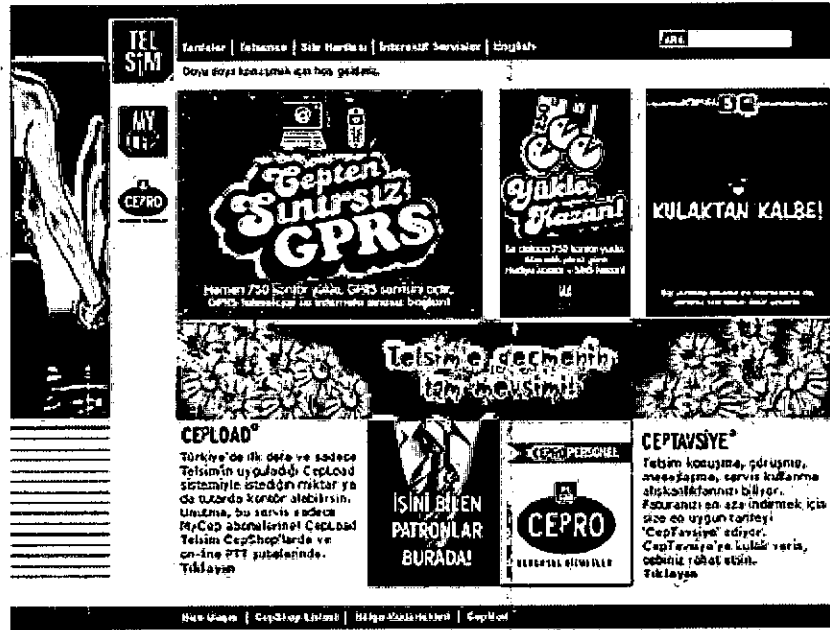
As a result of the study, brand, information, advice and Web site quality are found to be important factors for online trust. Past experience with a particular brand was also observed to clearly affect trust perceptions. It was observed that customer advocacy features are positive contributors to trust, increasing consumers' willingness to visit the site for their future purchases. A majority of the subjects considered the customer advocacy features as useful tools, which in turn affected their intentions to benefit from the customer advocacy features in the purchasing process. Among the most discussed and positively perceived items are brand, the quality and amount of information available on this Web site, advice, search and comparison tools, and ease to find the useful and relevant tools and features on the site. This study also helped us identify measures of the constructs, as well as gain an insight on specific customer advocacy aspects that impact consumer perceptions of trust in a Web site.

### **4.3 Research Phase II**

The conceptual model developed based on the qualitative study and the results of a large literature review is shown in Figure 3.1. In Phase 2, the model was tested in an empirical study with students at a major European university. This section provides information about the Web site selection, research study participants, and procedures.

The Web sites included in the research were selected based on the features offered on the Web site, level of customer advocacy, and other related factors. A number of Web sites were evaluated on several dimensions such as Web based tools, site design and information content. Based on these selection criteria, the two major mobile operators in Turkey were chosen: Turkcell Communication Services (NYSE: TKC), www.turkcell.com.tr, and Telsim, www.telsim.com.tr. (Figure 4.2 and Figure 4.3)

Figure 4.2 Turkcell Web Site Main Page



The motive to select the telecommunications industry is due to its disreputable nature and aggressive marketing tactics (Urban 2004). Additionally, mobile services have complex fee structures (including activation fees, roaming charges and early-termination fees) that make the shopping and selection process difficult for the consumers. The expertise and knowledge on the mobile telecommunication

industry acquired in the first phase of the study also helped us develop the research design and the empirical study in the second phase.

Figure 4.3 Telsim Web Site Main Page



### 4.3.1 Research Study Participants

Participants in the empirical study consisted of university students at a major European university, where the language of instruction is English. The study was conducted with 235 participants, all of which were current or potential wireless services customers. As described above, the usage of mobile services is widely spread among university students that certainly represent one of the best populations of interest in mobile telecommunications.

### **4.3.2 Research Study Procedures**

The surveys were conducted in Internet connected classrooms. Each student had his/her own Internet connected PC with identical hardware and software configurations. All the PCs also had exactly the same software installed and was connected to the Internet through the same network.

The participants were first given a guided tour of the two Web sites and their main features. Then, they were asked to inquire about the mobile tariffs offered, with a specific task to identify the tariff that best matches their needs and preferences. They were expected to obtain all the necessary information about their purchase, and benefit from the features provided by the Web site, and then go through the procedure of purchasing the tariff without actually submitting the purchase transaction. Next, they were asked to complete the questionnaire that requests the participants to assess the measurement items on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree) with the midpoint 4 being neutral.

### **4.4 Measure Development**

In this study, data analysis and testing of the hypotheses and the model will be performed by applying the LISREL model (Joreskog and Sorbom 1989). All measures will be analyzed for validity and reliability following the guidelines offered by Anderson and Gerbing (1988) and Joreskog and Sorbom (1989).

The variables in the model were operationalized based on the findings from the initial study and past marketing literature. Some of the items generated from



previous research were modified to fit the online environment when necessary. New items were developed through a thorough literature review on the topics and based on the initial qualitative study. The origin and development of the measures are briefly discussed below. In the questionnaire, the items are written in the form of statements with which the respondent is to agree or disagree on a 7-point Likert scale. The questionnaire was also pre-tested with doctoral students in Business Administration and Management at a major European university.

#### **4.4.1 Brand Trust**

A brand can be considered a memory node in a network that links the brand to a set of associations (Keller 1993). In this study, the focus is on brand trust, which is considered to be important in shaping the level of customer trust on the Web, and can be directly used in this research. Multiple items can be used to conceptualize and measure customer trust in a brand. Adapting measures from the research on the effects of brand trust and brand affect to brand performance by Chaudhuri and Holbrook (2001), brand trust was measured as a three-item scale based on the ratings of agreements with the following statements: "I trust this brand," "I have a favorable opinion of this company," and "This is an honest brand."

#### **4.4.2 Web Site Privacy and Security**

Consumer perception of Web site privacy and security was assessed by three items commonly employed in previous research (e.g. Bart, Shankar, Sultan and Urban

2005; Yoon 2002) that reflect the consumer information privacy concerns of information collection, unauthorized secondary use, and improper access.

### **4.4.3 Customer Advocacy**

Customer advocacy was measured by eight items which are developed based on the findings from the initial study and an analysis of the past literature. The measures of customer advocacy will be developed for the first time mainly on the basis of the definition of customer advocacy, and the advocacy elements suggested by Urban (2004). However, some other measures from past literature concerning communication and cooperation was also adapted (e.g. Daft and Lengel 1986); Anderson, Lodish, and Weitz 1987).

### **4.4.4 Online Trust**

In this study, online trust will be conceptualized as a unidimensional construct. To develop the measures of trust, an initial set of items was adapted from existing research on trust in ability, integrity, and benevolence in buyer-seller relationships (Bhattacharjee 2002; Crosby, Evans and Cowles 1990; Ganesan 1994; Garbarino and Johnson 1999; Gefen 2002; Kumar, Scheer and Steenkamp 1995; Moorman, Deshpande and Zaltman 1993; Morgan and Hunt 1994; Sirdeshmukh, Singh and Sabol 2002). The entire set of items used in the above studies was examined, and the items that apply also to the online context was then chosen and adapted. As a result, the construct of online trust is assessed by six items, which are either newly developed or adapted to the context of this study.

#### **4.4.5 Relationship Commitment**

In the context of this research, relationship commitment was assessed by four items adapted from Morgan and Hunt (1994) and Garbarino and Johnson (1999). Morgan and Hunt (1994) modified the eight items of the organizational commitment scales of Meyer and Allen (1984) and Mowday, Steers, and Porter (1979) to reflect relationship commitment. Garbarino and Johnson (1999) developed commitment measures to capture identification with the company, psychological attachment, concern with long-term welfare, and loyalty. Four items are used to assess the multiple facets of relationship commitment such as customers' level of loyalty and expectation of continuity in the relationship.

#### **4.4.6 Behavioral Intention**

Behavioral intention was measured by addressing consumers' willingness to interact and engage in future interactions with the company through its Web site. Due to the difficulty of simulating actual behavior in an experimental setting, this study measures behavioral intentions instead. Previously, many other studies have measured behavioral intentions but not behaviors (Karahanna, Straub and Chervany 1999; Venkatesh 2000). Prior research has confirmed a strong correlation between behavioral intentions and actual behavior (Sheppard, Hartwick and Warshaw 1988; Venkatesh and Davis 2000). Adapting measures from McKnight, Choudhury and Kacmar (2002), this study assesses customer behavioral intentions by using items addressing behavioral intention to visit the Web site,

intention to share personal information on the Web site, intention to purchase, and intention to follow advice provided on the site.

#### **4.4.7 Control Variables**

Consumer propensity to online trust and Internet usage, as the control variables potentially influencing the results, were assessed by three and two items respectively, adapted from previous studies (e.g. Lee and Turban 2001; McKnight, Choudhury and Kacmar 2002; Novak, Hoffman and Yung 2000).

Table 4.1 Measures

Constructs	Items <sup>a</sup>
<b>Brand Trust</b>	<ul style="list-style-type: none"> <li>a. I have a favorable opinion of Company X.</li> <li>b. I trust this brand.</li> <li>c. This is an honest brand.</li> </ul>
<b>Web Site Privacy and Security</b>	<ul style="list-style-type: none"> <li>a. I am concerned that the Company X web site is collecting too much personal information from me.<sup>b</sup></li> <li>b. I am concerned that the Company X web site will use my personal information for other purposes without my authorization.<sup>b</sup></li> <li>c. I am concerned about the security of my personal and credit card information.<sup>b</sup></li> </ul>
<b>Customer Advocacy</b>	<ul style="list-style-type: none"> <li>a. Company X web site provides unbiased advice that helps me choose the best products for my needs.</li> <li>b. I expect that Company X will work together with customers to create new products and services.</li> <li>c. I expect that my suggestions to Company X will be immediately taken into account.</li> <li>d. I expect that the advice given by Company X is their best judgment.</li> <li>e. I feel Company X is genuinely interested in my requests.</li> <li>f. Overall, the Company X web site provides me with rich product information in order to make wise purchase decisions.</li> <li>g. Company X tries to create a collaborative, mutually-beneficial partnership with me as a customer.<sup>c</sup></li> <li>h. I feel Company X values me as a customer.<sup>c</sup></li> </ul>
<b>Online Trust</b>	<ul style="list-style-type: none"> <li>a. I expect that Company X web site keeps my best interests in mind.</li> <li>b. Company X web site is likely to be reliable.</li> <li>c. Company X web site visually conveys a sense of honesty.</li> <li>d. In our relationship Company X can be counted on to do what is right.</li> <li>e. I expect that Company X will keep promises and commitments they make.<sup>c</sup></li> <li>f. I expect that Company X web site has good intentions toward me.<sup>c</sup></li> </ul>
<b>Relationship Commitment</b>	<ul style="list-style-type: none"> <li>a. The relationship with Company X is something I am very committed to.</li> <li>b. I have a strong sense of loyalty to this company.</li> <li>c. I expect to be using this company's products or services for a long time.</li> <li>d. The relationship with Company X deserves my maximum effort to maintain and further develop.</li> </ul>
<b>Behavioral Intentions</b>	<ul style="list-style-type: none"> <li>a. I would be willing to provide personal and credit card information on Company X web site.</li> <li>b. I would make my purchase decision based on the advice I was given by Company X web site.</li> <li>c. I would be comfortable shopping at Company X web site.</li> <li>d. I would consider visiting this web site for my future purchases.</li> <li>e. I would feel comfortable acting upon the information given to me by Company X web site.<sup>c</sup></li> </ul>
<b>Propensity to Online Trust</b>	<ul style="list-style-type: none"> <li>a. Most web sites are honest.</li> <li>b. I would feel secure completing commercial transactions over the Internet.</li> <li>c. Most Internet retailers keep promises and commitments.</li> </ul>
<b>Internet Usage</b>	<ul style="list-style-type: none"> <li>a. I use the Internet as an information tool.</li> <li>b. I use the Internet for shopping.</li> </ul>
<p><sup>a</sup> All items used in the scale 7= strongly agree 4= neither agree nor disagree 1= strongly disagree</p> <p><sup>b</sup> Item was reverse scored.</p> <p><sup>c</sup> Item was dropped in the data analysis.</p>	

# **Chapter 5**

## **Results and Discussions**

### **5.1 Data Analysis**

This chapter provides a comprehensive discussion of the data analysis techniques utilized in the quantitative part of the study, and the results obtained. First, the data analysis technique is described. Second, the sample characteristics are reported. Third, the steps taken to establish validity and reliability of the survey instrument are explained. Fourth, the statistical analyses that are performed to test the research framework and hypotheses are discussed, and the results obtained from these tests are presented. Finally, the results are discussed and interpreted in greater detail.

In this research, structural equation modeling (SEM) was employed in the technical data analysis and testing the proposed model of consumer trust on the Internet. SEM technique has often been used in the marketing literature to explore the possible relationships among factors simultaneously and to address

complicated managerial and behavioral issues (Bagozzi 1994). Structural equation modeling is the basis for the empirical estimation of the strength of each causal relationship depicted in the structural model, and is based on calculating the strength of the causal relationships from the correlation among the constructs. The procedure can be formulated as the estimation of the coefficients of a set of linear structural equations representing the hypothesized cause and effect relationships (Jöreskog and Sörbom, 1996).

Structural equation modeling merges the logic of multiple regression and path analysis with a single data analytical framework, and therefore can examine the presence of a mediating variable in between exogenous (independent) variables and endogenous (dependent) variables (Bentler 1980; Cheng 2001). Furthermore, the causal effects of individual exogenous variables can be determined. This includes a combination of direct and indirect effects, the direct effect from the exogenous variables onto the endogenous variable, and the indirect effect from the exogenous variables onto the endogenous variable through mediating variables (Hoyle 1995).

The data were analyzed using LISREL 8.72 (Joreskog and Sorbom 1993), and the two-step structural equation modeling procedure was used to evaluate the measurement and structural models (Anderson and Gerbing 1988). By specifying the relationships among measurement items and the underlying factors based on theory, the measurement model provided an assessment of factor reliability and validity. The structural model specified the relationships among factors and provided an assessment of the model.

## 5.2 Sample Characteristics

The sampling frame for this study consisted of students at a major European university. The survey studies were conducted in classrooms, and the total sample size was 235. Of the 235 questionnaires returned, 11 of them were incomplete, and thus were dropped from subsequent analyses, yielding 224 complete and usable questionnaires. The final sample consisted of 91 female (40.6%) and 133 male (59.4%) respondents. The mean age of the respondents was 22.1, and the average years of Web experience of the respondents was 6.3. Table 5.1 below summarizes the sample characteristics. The use of structural equation modeling (SEM) technique requires a large sample size. Bentler and Cho (1988) recommend that in SEM, at least a five-to-one sample size to parameter estimate should be observed to analyze a comprehensive measurement model.

Table 5.1 Sample Demographics

<b>Total responses:</b>	224	
<b>Gender (%):</b>	Female: 40.6%	Male: 59.4%
<b>Age:</b>	Mean: 22.1	Std. Dev.:1.6
<b>Years of Web experience:</b>	Mean:6.3	Std. Dev.:1.7

## 5.3 Measurement Model

The adequacy of the measurement model is evaluated on the criteria of overall fit with the data, reliability, convergent validity and discriminant validity of the multi-item scales for the 8 model constructs.



As part of the measurement purification process, five items were dropped from the analysis (see Table 4.1) because of not loading strongly on their constructs. The analysis and criteria for reliability, convergent validity and discriminant validity of the scales will be further explained in the following sections. The final exogenous model includes 17 measures and five constructs, and the final endogenous model includes 12 measures and three constructs as shown in Table 5.2.

The measurement model produced the following statistics: root mean square error of approximation [RMSEA] = .056, normed fit index [NFI] = .97, non-normed fit index [NNFI] = .98, comparative fit index [CFI] = .98, goodness of fit index [GFI] = 0.84 and standardized RMR = .042. Given the size of the sample and the number of constructs, it is not surprising that the chi-square statistic is significant (chi-square [349 degrees of freedom {df}] = 593.61,  $p = .00$ ). However, the chi-square test is of limited usefulness because its value is too sensitive to sample size differences and thus, it is highly unlikely to obtain a non-significant test statistic with large sample size, especially in cases where the sample size exceeds 200 respondents (Fornell and Larcker 1981; Bagozzi and Yi 1988). Overall, the measurement model indicates acceptable levels of fit.

Table 5.2 Measurement Model Results

Constructs	Items	Factor Loadings
<b>Brand Trust</b>	1. I have a favorable opinion of Company X.	.90
	2. I trust this brand.	.93
	3. This is an honest brand.	.88
	Cronbach's Alpha: .93; Lowest t-value: 16.36; AVE: .82 Total variance explained: .87	
<b>Web Site Privacy and Security</b>	1. I am concerned that the Company X web site is collecting too much personal information from me. (reverse scored)	.74
	2. I am concerned that the Company X web site will use my personal information for other purposes without my authorization. (reverse scored)	.75

	3. I am concerned about the security of my personal and credit card information. (reverse scored)	.72
	Cronbach's Alpha: .78; Lowest t-value: 11.08; AVE: .54 Total variance explained: .69	
<b>Customer Advocacy</b>	1. Company X web site provides unbiased advice that helps me choose the best products for my needs.	.81
	2. I expect that Company X will work together with customers to create new products and services.	.80
	3. I expect that my suggestions to Company X will be immediately taken into account.	.81
	4. I expect that the advice given by Company X is their best judgment.	.84
	5. I feel Company X is genuinely interested in my requests.	.88
	6. Overall, the Company X web site provides me with rich product information in order to make wise purchase decisions.	.89
	Cronbach's Alpha: .93; Lowest t-value: 14.32; AVE: .70 Total variance explained: .75	
<b>Online Trust</b>	1. I expect that Company X web site keeps my best interests in mind.	.81
	2. Company X web site is likely to be reliable.	.90
	3. Company X web site visually conveys a sense of honesty.	.86
	4. In our relationship Company X can be counted on to do what is right.	.87
	Cronbach's Alpha: .92; Lowest t-value: 15.15; AVE: .74 Total variance explained: .80	
<b>Relationship Commitment</b>	1. The relationship with Company X is something I am very committed to.	.86
	2. I have a strong sense of loyalty to this company.	.91
	3. I expect to be using this company's products or services for a long time.	.85
	4. The relationship with Company X deserves my maximum effort to maintain and further develop.	.88
	Cronbach's Alpha: .93; Lowest t-value: 16.59; AVE: .77 Total variance explained: .82	
<b>Behavioral Intentions</b>	1. I would be willing to provide personal and credit card information on Company X web site.	.91
	2. I would make my purchase decision based on the advice I was given by Company X web site.	.85
	3. I would be comfortable shopping at Company X web site.	.92
	4. I would consider visiting this web site for my future purchases.	.79
	Cronbach's Alpha: .92; Lowest t-value: 16.00; AVE: .76 Total variance explained: .81	
<b>Propensity to Online Trust</b>	1. Most web sites are honest.	.85
	2. I would feel secure completing commercial transactions over the Internet.	.59
	3. Most Internet retailers keep promises and commitments.	.79
	Cronbach's Alpha: .78; Lowest t-value: 8.84; AVE: .56 Total variance explained: .69	
<b>Internet Usage</b>	1. I use the Internet as an information tool.	.85
	2. I use the Internet for shopping.	.94
	Cronbach's Alpha: .89; Lowest t-value: 12.31; AVE: .80 Total variance explained: .90	

### 5.3.1 Factor Reliability

An important step in factor validation is to test the reliability to ensure measurement accuracy and minimize the measurement error. Factor reliability is a measure to ensure the variance captured by the factor is more than that by the error component (Hair, Anderson, Tatham and Black 1992). Several types of reliability are defined in the literature. Since most factors employed in this study were measured by multi-items, the assessment of factor reliability was based on the correlation between individual items that made up the factor, relative to the variances of the items. The minimum requirements for adequate factor reliability are that they are positive, have a sufficiently large item loading (larger than .70), and are statistically significant, with very small standard deviation (Bagozzi and Baumgartner 1994).

Consequently, Cronbach's alpha coefficients, which are calculated based on the average inter-item correlations, were used to measure internal consistency, and the guideline is that Cronbach's alpha coefficients should be greater than .70 for acceptable reliability (Bagozzi and Yi 1988).

Table 5.2 shows the results of the reliability analysis. The reliabilities of the individual scales are above recommended levels, ranging from .78 to .93 for Cronbach's alpha coefficient providing evidence in favor of the reliability of the measurement model constructs. However, to obtain a more reliable set of online trust measures, two items with the lowest factor loadings were excluded from this scale.

In addition, a more rigorous test of reliability, which involves assessing the amount of variance captured by a construct's measures in relation to the amount of variance due to measurement error, was also performed. In order to claim reliability, the average variance extracted (AVE) by the construct's measures should be greater than .50 (Fornell and Larcker 1981). As shown in Table 5.2, ranging from .54 to .82, all the AVE values for the constructs in the measurement model provide additional evidence for reliability.

In summary, all of the eight constructs, namely brand trust, Web site privacy and security, customer advocacy, propensity to online trust, Internet usage, online trust, relationship commitment and behavioral intention demonstrate acceptable levels of reliability.

### **5.3.2 Factor Validity**

Factor validity was tested to ensure that the factor adequately measures the concept it is supposed to measure. Without assessing the factor validity, the hypotheses might be accepted or rejected when there is excessive error in factor measurement (Bagozzi 1994). In order to claim the validity of a construct, it is necessary to have both convergent and discriminant validity. Convergent validity refers to the state when items measure their intended construct and no other construct, whereas discriminant validity is confirmed when the construct as a whole differs from the other constructs.

### **5.3.2.1 Convergent Validity**

Convergent validity was assessed by two methods to ensure the extent to which measurement scales designed to measure the same factor are related. First, it was required that each item loaded highly on its hypothesized factor in the confirmatory factor analysis (CFA). Except three cases, all the measures loaded significantly on their intended latent constructs (Table 5.2 shows the factor loadings and the lowest t-values), and all the factor loadings are substantively large (28 out of 29 items have loadings above .70), demonstrating convergent validity (Bagozzi and Yi 1988).

Furthermore, if the average variance extracted (AVE) is less than .50 that is the variance due to measurement error is greater than that captured by the factor, the convergent validity of the factors is questionable (Fornell and Larcker 1981). Based on this criterion, the AVE values ranging from .54 to .82 show convergent validity of the factors.

### **5.3.2.2 Discriminant Validity**

Discriminant validity was tested to ensure the degree to which measures of different factors are unique. The most common test of discriminant validity is to check whether the confidence interval around the correlation between any two latent constructs (as shown in the phi matrix) does not include 1 (Smith and Barclay 1997). Of the 28 cases tested, none of the confidence intervals reach 1. The correlation matrix of the constructs is shown in Table 5.3. Because of the

inherent high correlations that generally exist among the various relationship constructs (e.g. Garbarino and Johnson 1999; Morgan and Hunt 1994; Smith and Barclay 1997), two other conservative tests of discriminant validity were also performed to provide further evidence.

Table 5.3 Correlations among Constructs

Constructs	1	2	3	4	5	6	7	8
1. Brand Trust	-							
2. Web Site Privacy and Security	.34	-						
3. Customer Advocacy	.62	.51	-					
4. Propensity to Trust	.08 <sup>ns</sup>	.07 <sup>ns</sup>	-.01 <sup>ns</sup>	-				
5. Internet Usage	.04 <sup>ns</sup>	-.02 <sup>ns</sup>	-.02 <sup>ns</sup>	.46	-			
6. Online Trust	.71	.61	.83	.05 <sup>ns</sup>	.03 <sup>ns</sup>	-		
7. Relationship Commitment	.59	.50	.82	.02 <sup>ns</sup>	.01 <sup>ns</sup>	.82	-	
8. Behavioral Intentions	.54	.46	.64	.04 <sup>ns</sup>	.02 <sup>ns</sup>	.77	.62	-

First, discriminant validity was addressed by using the procedure proposed by Bagozzi, Yi and Phillips (1991), where each pair of constructs is analyzed through a pair of models with and without the correlation between constructs fixed to unity. In other words, each pair of constructs were set up as a model with the correlation between them set to one (constrained model) and then compared with the model without fixing the correlation (unconstrained model). This procedure involves comparing the chi-square values of the models and testing whether the constraint causes a significant decrease in fit. The fit of the unconstrained model should be significantly better than the constrained one in order to satisfy the discriminant validity criterion (Bagozzi, Yi and Phillips 1991).

For each of 28 pairs in the model, the chi-square statistic for the unconstrained model is significantly lower than that of the constrained model (difference ranges from 98.99 to 699.52, d.f. = 1,  $p < .001$ ). Since for each model the difference in

chi-square was highly significant, it is confirmed that the scales measure 8 distinct model constructs.

Second, discriminant validity can also be assessed by using a more rigorous test suggested by Fornell and Larcker (1981) that compares the average variance extracted (AVE) values associated with each construct to the correlations among constructs. Discriminant validity is achieved if the items share more common variance with their respective constructs than any variance that construct shares with other constructs. Therefore, a construct's AVE should be higher than the squared correlation between that construct and any other construct. According to this criterion, each construct sufficiently differs from the other constructs, evidenced by the squared correlations between all latent constructs significantly less than the corresponding AVE values.

Both techniques described above provided strong evidence for discriminant validity. In summary, it is concluded that the measurement models fit the data well, demonstrating good reliability, convergent and discriminant validity.

## **5.4 Structural Model Evaluation**

Using the model purification process, the empirical modeling was based on the latent factors and measures as shown in Figure 5.1 and Table 5.2. LISREL 8.72 provides not only the estimated coefficients but also the standard errors and calculated t-values for each coefficient. A hypothesis is confirmed if the estimated path coefficient is significant and has the hypothesized sign. In this study, one-

tailed significance levels are used since the hypotheses formulate explicit predictions of the direction of the effect of one variable on another.

## **5.4.1 Overall Goodness of Model Fit**

The overall goodness of model fit was assessed to ensure that it adequately represented the entire set of causal relationships. Many indicators calculated by LISREL 8.72 can be used to evaluate the overall model fit. This study used the following indices to assess model fit, namely the absolute fit, the comparative fit, and the parsimonious fit.

### **5.4.1.1 Absolute Fit**

This study assessed the absolute fit to check for the ability of the model to reproduce the actual covariance matrix. The most common absolute fit index is the chi-square goodness of fit. However, the usefulness of the chi-square test is limited because as sample size increases, this measure has a greater tendency to indicate significant differences for equivalent models. As previously mentioned, with large samples, the statistical test will almost certainly be significant, even if the model actually describes the data very well (Bagozzi and Yi 1988; Bentler 1990; Fornell and Larcker 1981). Moreover, when the sample size nears 100 or goes even lower, the chi-square test will show acceptable fit even when none of the model relationships are shown to be different ways to both small and large sample sizes (Hair, Anderson, Tatham and Black 1992).



Therefore, this study uses a number of alternative measures to assess the overall model fit by considering several fit indices because false indication might be obtained if the assessment of overall fit relied on a single measure exclusively (Bollen and Long 1992; Bagozzi and Baumgartner 1994). In the evaluation of the models, root mean squared error of approximation (RMSEA), goodness of fit index (GFI), and the standardized root mean square residual (Standardized RMR) were calculated to assess the absolute fit of the models.

The root mean square error of approximation (RMSEA) takes into account the error of approximation in the population. The RMSEA value is the discrepancy per degree of freedom, and is measured in terms of the population, not just the sample used for estimation. It is commonly considered that values less than .08 for RMSEA represents a fair fit (Bagozzi and Yi, 1988; Baumgarten and Homburg, 1996).

The goodness-of-fit index (GFI) is a non-statistical measure ranging in value from 0 (poor fit) to 1.0 (perfect fit), which measures the degree to which the actual input matrix is predicted by the estimated model. For the GFI index, usually values more than .80 are considered to indicate reasonable model fit (Browne and Cudeck, 1993). Lastly, regarding the standardized RMR index, which ranges from 0 to 1.00, Byrne (1998) suggests that in a well-fitting model this value should be smaller than 0.05.

### **5.4.1.2 Comparative Fit**

After checking the absolute fit, tests of comparative fit were performed to provide a basis when comparing two or more alternative models to assess which model provided a better fit to the data. The greater the comparative index, the better the fit among the competing models. Normed fit index (NFI), non-normed fit index (NNFI), incremental fit index (IFI), comparative fit index (CFI), and relative fit index (RFI) were calculated to assess the comparative fit. Bentler (1990) suggests that comparative fit index (CFI) values exceeding .95 indicate a good fit, while a CFI score of between .90 and .95 represent adequate fit. For all the other indices, values above .90 reflect a good fit.

### **5.4.1.3 Parsimonious Fit**

Parsimonious fit indices are concerned primarily with the trade-off between the model fit and the degrees of freedom, such that the absolute fit may be improved with a sacrifice of the degree of freedom. Unlike the other fit indices, there are no standard high or low values to indicate acceptable parsimonious fit. A comparatively higher value indicates a better parsimonious fit. In this study, parsimonious normed fit index (PNFI) and parsimonious goodness of fit index (PGFI) were calculated and used for the comparison of models.

## **5.4.2 Rival Model Comparison**

There may be alternative relationships among the factors which are reflected in the structural model. Bollen and Long (1992) point out that any plausible model that

acts as an alternative to the proposed model has to be examined. In other words, although the fit indices associated with the proposed model indicated that the data fitted the model well, it is possible that some alternative models were equivalent and fully account for the relationships among factors (Breckler, 1990), and thus rival model comparison has to be conducted.

The decision of accepting the proposed model or its alternative depends on the value of the fit indices, namely the absolute fit, comparative fit, and the parsimonious fit indices. Apart from the RMSEA, the higher is the fit index; the better is the model able to fit the data. In addition to fit indices, the number of significant paths in the models can also be compared before making the decision.

## **5.5 Base Structural Model Results**

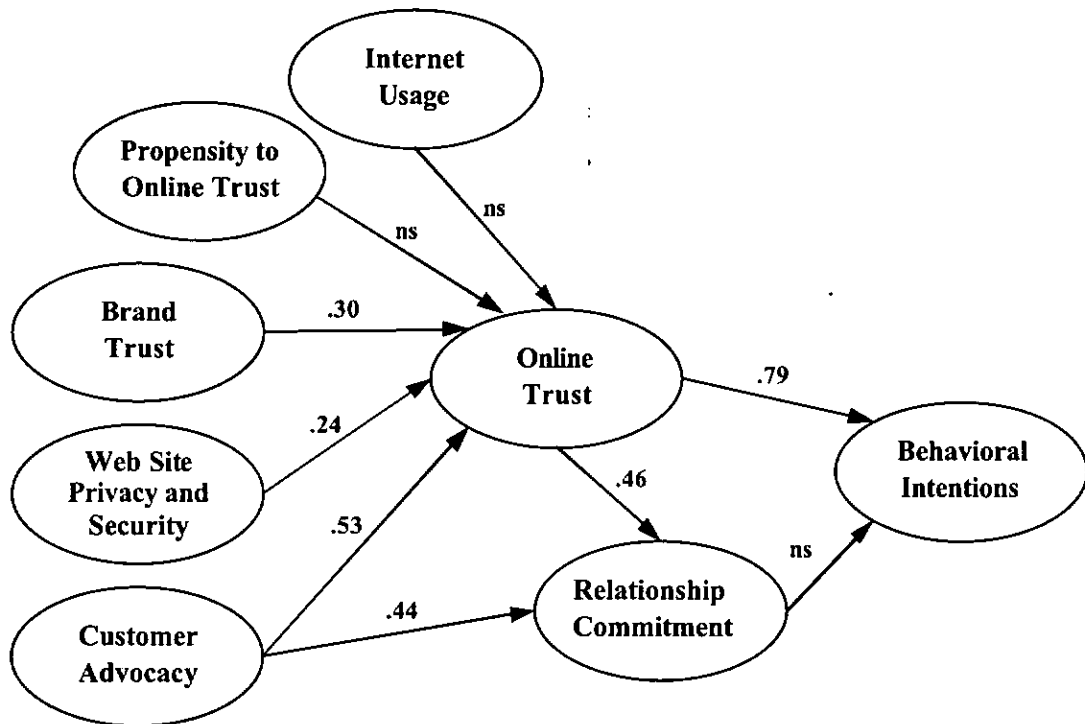
The estimates generated by LISREL 8.72 resulted in the following fit statistics for the base structural model (Figure 5.1): root mean squared error of approximation [RMSEA] = .060, normed fit index [NFI] = .96, non-normed fit index [NNFI] = .98, goodness-of-fit index [GFI] = .83, comparative fit index [CFI] = .98, parsimony normed fit index [PNFI] = .85, and standardized RMR = .057. Six of the 9 paths are significant (67%). The results of the structural model appear in Table 5.4, and the path coefficients can be found in Figure 5.1 and Table 5.4.

Regarding GFI usually values greater than .80 is considered to indicate reasonable model fit (Browne and Cudeck, 1993). This assessment is supported by the RMSEA, for which values less than .08 usually are considered to represent a fair fit (Bagozzi and Yi, 1988; Baumgarten and Homburg, 1996). Also, according to

Bentler (1990), CFI, NFI, and NNFI values exceeding .95 indicate a good fit.

These results provide evidence of an acceptable model fit.

Figure 5.1 Base Structural Model



Although the chi-square is significant (chi-square [358 degrees of freedom {df}] = 646.01,  $p = .00$ ), it is not necessarily an indicator of poor fit (Bagozzi and Yi, 1988). As already underlined, statistical tests are problematic as their power varies with sample sizes, i.e. since the analysis is based on a large sample, the statistical test would almost certainly be significant. Following the recommendation by Jöreskog and Sörbom (1996), the ratio of the chi square statistic over the degrees of freedom was used as a measure of overall goodness-of-fit. The overall fit of the model is satisfactory as the ratio is 1.80.

The hypotheses about the relationships between the exogenous variables, namely brand trust, Web site privacy and security, and customer advocacy, and online trust are strongly supported. The hypothesized relationships between online trust → behavioral intention and online trust → relationship commitment are also strongly supported by the survey data. However, the path from relationship commitment to behavioral intention is not significant. Also, the results show that effects of control variables, propensity to online trust and Internet usage, on the online trust construct are not significant.

Table 5.4 Standardized Path Coefficients (Base Model)

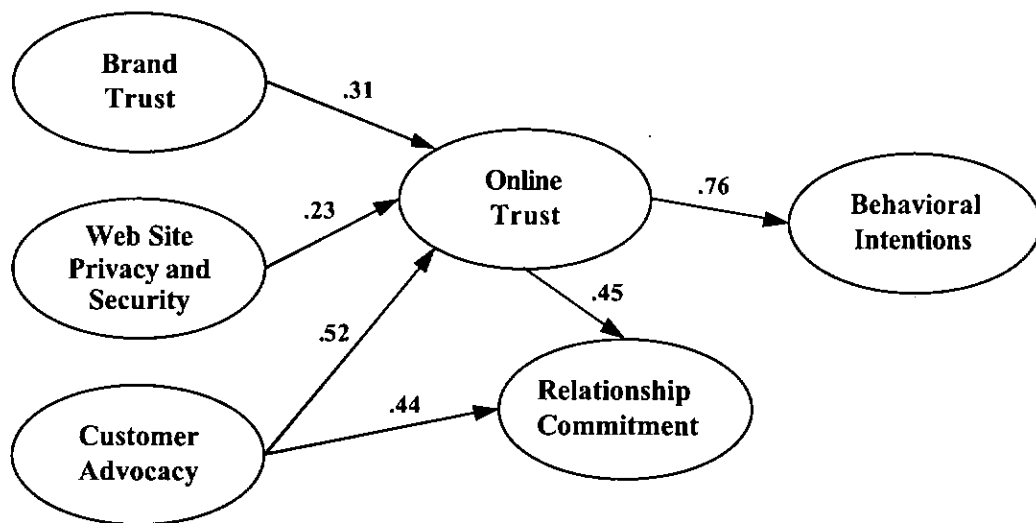
	Hypothesis	Coefficient	t-value
<b>Hypothesized Links</b>			
Brand Trust → Online Trust	H <sub>1</sub>	0.30	5.48
Web Site Privacy and Security → Online Trust	H <sub>2</sub>	0.24	4.36
Customer Advocacy → Online Trust	H <sub>3</sub>	0.53	7.81
Customer Advocacy → Relationship Commitment	H <sub>4</sub>	0.44	4.75
Online Trust → Relationship Commitment	H <sub>5</sub>	0.46	4.93
Online Trust → Behavioral Intention	H <sub>6</sub>	0.79	7.18
Relationship Commitment → Behavioral Intention	H <sub>7</sub>	-0.03	n.s.
<b>Control Variables</b>			
Propensity to Trust		0.00	n.s.
Internet Usage		0.03	n.s.

## 5.6 Refining the Model and Final Model Results

Obtaining an acceptable level of fit does not assure that the best model has been found, since some alternative models may provide a better fit than that of the original model. Model modifications should be made in order to improve the theoretical explanations or the goodness-of-fit of the model. As a means of evaluating the estimated model with alternative models, overall model comparisons can be performed.

Based on the results of the theoretical base model, three changes were made, leading from the base model shown in Figure 5.1 to the revised model shown in Figure 5.2. The base theoretical model was modified by removing the non-significant paths in the base model, namely the paths from propensity to online trust to online trust, from Internet usage to online trust, and from relationship commitment to behavioral intention.

Figure 5.2 Final (Revised) Model



Overall fit of the revised model is good, with root mean squared error of approximation [RMSEA] = .058, normed fit index [NFI] = .97, non-normed fit index [NNFI] = .99, goodness-of-fit index [GFI] = .86, comparative fit index [CFI] = .99, parsimony normed fit index [PNFI] = .86, and standardized RMR = .052. The ratio of the chi square statistic over the degrees of freedom is 1.75 (chi-square [243 degrees of freedom {df}] = 425.18,  $p = .00$ ).

All of the hypothesized paths in the revised model are significant, and all the 6 hypotheses are strongly confirmed by the empirical data. The goodness-of-fit index [GFI] of .86 considered to indicate reasonable model fit (Browne and Cudeck, 1993). The value of the root mean square error of approximation (RMSEA = .058) is below the value of .08, which indicates a fair fit (Bagozzi and Yi, 1988; Baumgarten and Homburg, 1996). The comparative fit index [CFI] of .99 confirms the accuracy of the model fit, since it is larger than the threshold value of .90 (Bentler 1990). The path coefficients can be found in Figure 5.2 and Table 5.4. A comparison of the model fit indices of the base and revised models can be found in Table 6.5. The values of the RMSEA, CFI and GFI have increased in the revised model. Based on the comparison of the model fit indices, it is concluded that the revised model provides a better fit than the base structural model, and thus, is chosen as the final model, to be compared with the alternative models.

Table 5.5 Standardized Path Coefficients (Final Model)

<b>Hypothesized Links</b>	<b>Hypothesis</b>	<b>Coefficient</b>	<b>t-value</b>
Brand Trust → Online Trust	H <sub>1</sub>	0.31	5.54
Web Site Privacy and Security → Online Trust	H <sub>2</sub>	0.23	4.37
Customer Advocacy → Online Trust	H <sub>3</sub>	0.52	7.81
Customer Advocacy → Relationship Commitment	H <sub>4</sub>	0.44	4.84
Online Trust → Relationship Commitment	H <sub>5</sub>	0.45	4.94
Online Trust → Customer Intentions	H <sub>6</sub>	0.76	11.75

## 5.7 Implications for Hypotheses

Results of the final structural model provide strong support for most of the research hypotheses. The final structural model of consumer trust on the Web incorporates six hypotheses that will be tested simultaneously, and all of the relationships were

found to be in the hypothesized direction. All the path coefficients are displayed in Figure 6.2 and Table 6.2. Furthermore, the model explains a substantial portion of the variance (average squared multiple correlations SMC) of the endogenous variables (80% for online trust, 73% for relationship commitment, and 58 % for behavioral intention).

Hypothesis H<sub>1</sub> examines the effects of brand trust on online trust. Specifically, the hypothesis suggests that the level of customer trust in the brand has a positive effect on the level of consumer trust in the Web site. The analysis revealed the path coefficient was significantly different than 0, and in the hypothesized direction. Therefore, the results strongly supported this hypothesis.

Hypothesis H<sub>2</sub> is about the effects of Web site privacy and security on online trust. This hypothesis suggests that the consumer perceptions of privacy and security on a Web site increase the level of trust in the Web site. The direction of the relationship and its significance was strongly confirmed by the survey data.

The effect of customer advocacy on online trust is examined by Hypothesis H<sub>3</sub>. Specifically, it is argued that customer advocacy on a Web site has a positive effect on consumer trust in the Web site. The analysis revealed that there is a significant and positive relationship between the two constructs.

In hypothesis H<sub>4</sub>, the effects of customer advocacy on relationship commitment is tested. The positive effect of Customer advocacy on the level of consumers' commitment to relationship with the firm was strongly supported by the survey data.



Hypothesis H<sub>5</sub> examines the impact of online trust on relationship commitment. The analysis revealed the path coefficient was significantly different than 0, and in the hypothesized direction. Therefore, the results strongly supported this hypothesis.

Lastly, a positive relationship between online trust and behavioral intention was hypothesized. The results showed that the path coefficient was significant, and in the hypothesized direction. Thus, this hypothesis was also strongly supported.

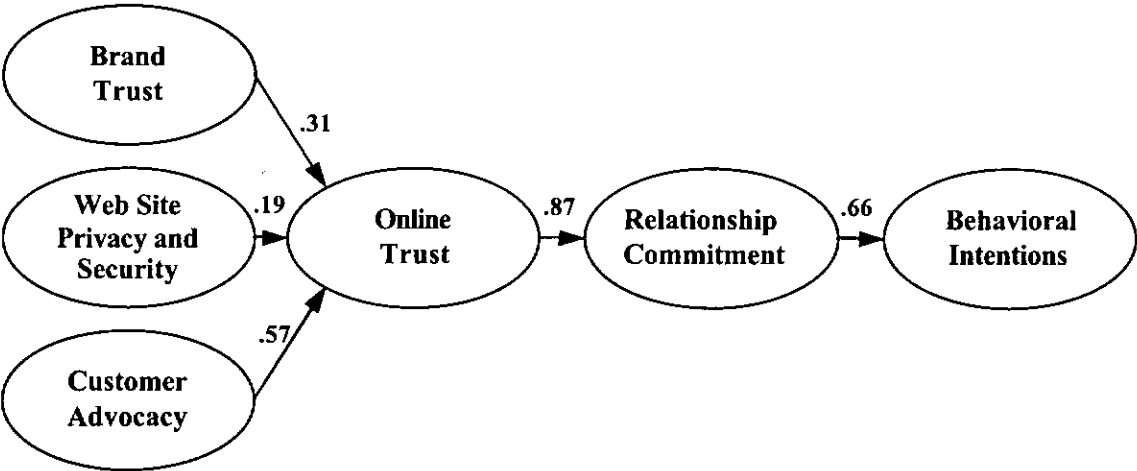
Since the path between relationship commitment and behavioral intention was not significant in the base model, and thus removed from the model, the hypothesis that relationship commitment has a positive effect on behavioral intention was obviously not testable. Also, as the results did not provide significant statistical evidence for the paths from propensity to online trust and Internet usage to online trust, these two variables were dropped in the model refining process, and the role of these variables on online trust was not confirmed.

## **5.8 Testing the Alternative Models**

There may be alternative relationships among the factors which are reflected in the conceptual model. Bollen and Long (1992) point out that all plausible models that act as an alternative model to the proposed model have to be examined. In other words, although the fit indices associated with the proposed model indicated that the data fitted the model well, some alternative models may have similarly good or better fit as judged by the set of goodness of fit measures.

The dominance of the final structural model is shown through comparing it with two alternative models. In the first alternative model, the relationship commitment construct mediates the effects of online trust on behavioral intention as shown in Figure 5.3 (Alternative Model I). The second alternative model is a nested model, which is obtained by removing the direct path between customer advocacy and relationship commitment as shown in Figure 5.4 (Alternative Model II).

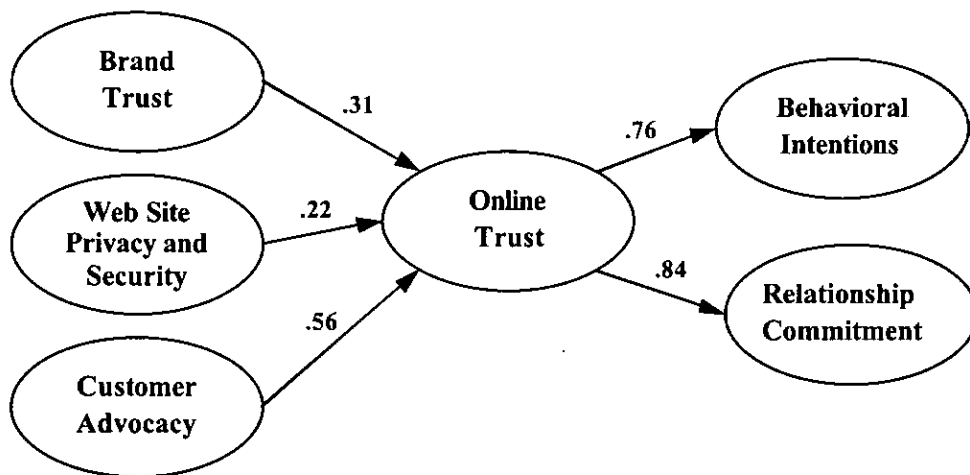
Figure 5.3 Alternative Model I



The alternative models were estimated similarly, and compared with the proposed model (see Table 5-5) on the following criteria: (1) overall fit statistics; (2) percentage of statistically significant paths; and (3) parsimony of the models, as measured by the parsimonious normed fit index (PNFI) (James, Mulaik, and Brett 1982; Morgan and Hunt 1994). In addition to these criteria, the final model is compared with the nested model (Alternative Model II) also based on the chi-square difference test.

The comparison of Alternative Model I with the final model revealed that the final model better fits the data on almost all indices (Final model: chi-square [243 degrees of freedom {df}] = 425.18, RMSEA = .058, GFI = .86, CFI = .99, NNFI = 0.99, PNFI = .86, PGFI = .70; Alternative Model I : chi-square [244 degrees of freedom {df}] = 508.97, RMSEA = .070, GFI = .84, CFI = .98, NNFI = 0.98, PNFI = .86, PGFI = .68). All paths are significant in both models. As a result, the Alternative Model I can be rejected in favor of the final model.

Figure 5.4 Alternative Model II



Regarding the comparison with Alternative Model II, the final structural model is again better on almost all indices, and fits the data better (Final model: chi-square [243 degrees of freedom {df}] = 425.18, RMSEA = .058, GFI = .86, CFI = .99, NNFI = 0.99, PNFI = .86, PGFI = .70; Alternative Model II : chi-square [244 degrees of freedom {df}] = 454.59, RMSEA = .062, GFI = .85, CFI = .99, NNFI = 0.98, PNFI = .86, PGFI = .69). All paths are significant in both models.

The chi-square difference test was also performed for this pair of models (Final model and Alternative Model II). The test is set as a null hypothesis of no significant difference between the two models. In the case when this null hypothesis is not rejected, the more constrained structural model should be chosen (Anderson and Gerbing 1988). The null hypothesis is rejected for this model pair ( $\chi^2 = 29.41$ , d.f. = 1,  $p < .01$ ). Therefore, based on the overall fit statistics and the results of the chi-square difference test, the Alternative Model II can be rejected in favor of the final model.

Table 5.6 Comparison of the Overall Goodness of Alternative Model Fits

	<b>Base Model</b>	<b>Final Model</b>	<b>Alternative Model I</b>	<b>Alternative Model II</b>
<b>Absolute fit indices</b>				
Chi-square (d.f.)	646.01 (358)	425.18 (243)	508.97 (244)	454.59 (244)
RMSEA	.060	.058	.070	.062
NFI	.96	.97	.97	.97
NNFI	.98	.99	.98	.98
GFI	.83	.86	.84	.85
SRMR	.057	.052	.085	.053
<b>Comparative fit indices</b>				
CFI	.98	.99	.98	.99
IFI	.98	.99	.98	.99
RFI	.96	.97	.97	.97
<b>Parsimonious fit indices</b>				
PGFI	.69	.70	.68	.69
PNFI	.85	.86	.86	.86
<b>Number of significant paths</b>				
	6/9	6/6	5/5	5/5

In summary, the comparison of the final model with these two alternative models on the above mentioned criteria provides support for the final structural model (see Table 5.5). The hypothesized model outperforms the alternative models with

better fit statistics. Thus, it is concluded that the hypothesized mediated model better represents the effects of the antecedents of the online trust on relationship commitment and behavioral intention.

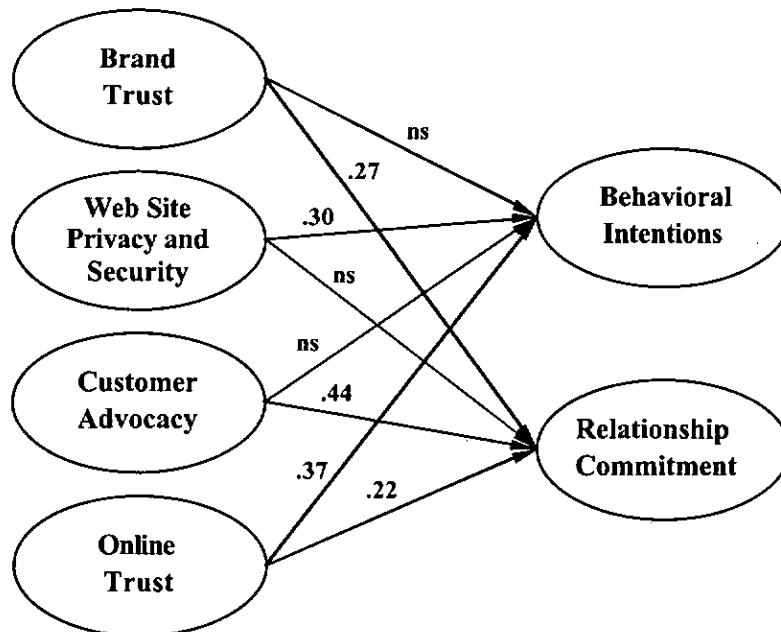
## 5.9 Tests of Mediation

The mediating role of online trust in the final model was tested by comparing the final model to a non-mediated rival model positing only direct paths from each of the antecedents to the outcomes, thereby making online trust similar to the three antecedents (Figure 5.5). In the final model, the three antecedents, brand trust, Web site privacy and security, and customer advocacy, influence their outcomes through the mediating variable of online trust. However, in this rival model, no indirect effects are allowed; in other words, online trust is not allowed to mediate any of the relationships. This rival model is similar to the non-mediated model used by Morgan and Hunt (1994). The two models were compared based on their: (1) overall fit statistics, (2) percentage of statistically significant paths, and (3) parsimony of the models.

The final model and the rival model show similar goodness of fit statistics (Final model: chi-square [243 degrees of freedom {df}] = 425.18, RMSEA = .058, GFI = .86, CFI = .99, NNFI = 0.99, PNFI = .86, PGFI = .70; Rival model: chi-square [238 degrees of freedom {df}] = 394.56, RMSEA = .054, GFI = .87, CFI = .99, NNFI = 0.99, PNFI = .84, PGFI = .69). However, in the final model, a larger percentage of the paths are significant (100% versus 62.5%), and it is more

parsimonious (6 versus 8 paths), yielding PNFI indices of .86 versus .84. Thus, the non-mediated model can be rejected in favor of the final model.

Figure 5.5 Rival Model of Online Trust

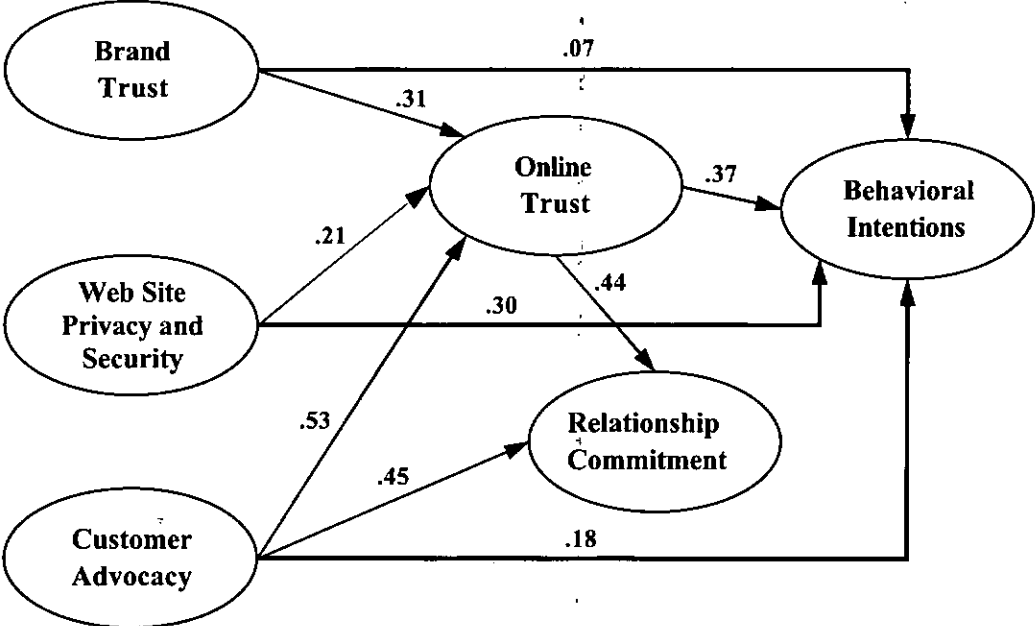


Additionally, the procedure used by Dholakia, Bagozzi and Pearo (2004) is performed as another the test of mediation. This test was conducted to check if additional direct paths not included in the model were significant. Specifically, 2 tests were performed to check the significance of a total of 5 potential direct paths.

As the first step, to check if the direct paths from the three drivers of online trust to behavioral intention were significant, the final model was compared with a rival one, in which those additional direct paths were added (as shown in Figure 5.6). The difference in chi-square values between the two models is significant (? chi-square = 14.14, d.f. = 3,  $p < .01$ ). However, the direct paths from brand trust to behavioral intention and from customer advocacy to behavioral intention are not

significant, confirming the full mediation effect of online trust for the links from both brand trust and customer advocacy to behavioral intention. The results also reveal that there is partial mediation between web site privacy and security and behavioral intention.

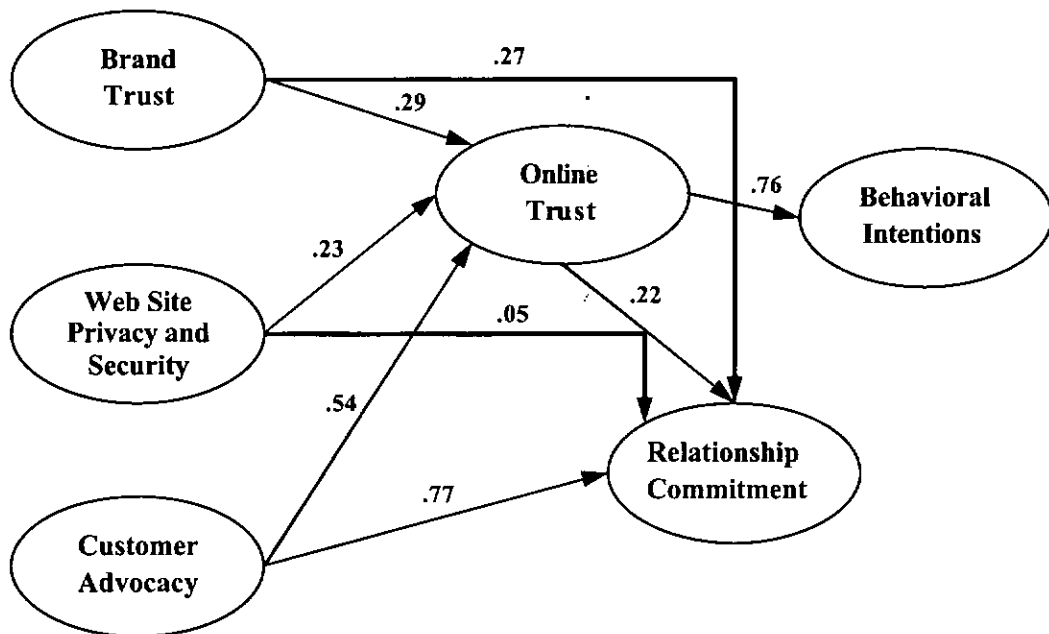
Figure 5.6 Test of Mediation (I)



For the potential direct paths from the three drivers of online trust to relationship commitment, the same procedure was applied. The final model was compared with a rival model in which two additional direct paths from the antecedents of online trust to relationship commitment were added (as shown in Figure 5.7). The difference in chi-square values between the two models is significant (? chi-square = 19.39, d.f. = 2, p < .001). The results confirmed the full mediation effect of online trust between Web site privacy and security and relationship commitment,

and its partial mediation effect for the links from both brand trust and customer advocacy to relationship commitment.

Figure 5.7 Test of Mediation (II)



Since both the direct and indirect effects of customer advocacy on relationship commitment are included in the model, the mediation effect of online trust was also tested by comparing the chi-square statistics between the models where the direct path between them is freely estimated and the model where it is constrained to zero. Since the chi-square statistics were significantly different, the results confirmed that there is a partial mediation effect of online trust between customer advocacy and relationship commitment.

In summary, these results provide additional evidence that the final model is better than the non-mediated model, suggesting that online trust partially mediates the



effects of the drivers of online trust on relationship commitment and behavioral intention.

## **5.10 Discussions**

In this study, the conceptual model of online trust was developed mainly on the relationship marketing literature and the qualitative study. Drawing on a broad-based review of the relationship marketing literature, and Morgan and Hunt's (1994) commitment-trust theory of relationship marketing, trust and relationship commitment are hypothesized as the focal intermediate constructs in the structural model of online trust.

The main conclusions obtained from testing the hypothesized model are: (1) Brand trust has a positive effect on online trust; (2) Web site privacy and security has a positive effect on online trust; (3) customer advocacy has positive effects on both online trust and relationship commitment; (4) online trust has positive effects on both relationship commitment and behavioral intention; (5) online trust partially mediates the effects of the antecedents of online trust on behavioral intention.

This study empirically demonstrates that Web site privacy and security significantly affects consumer perceptions of trust in a Web site. While it is predictable that Web site privacy and security affects online trust, it is surprising that it is not the most influential driver of online trust. Rather, brand trust and customer advocacy are more important determinants of online trust and behavioral intention. This result suggests that privacy and security elements are necessary, but not sufficient conditions to build trust and influence behavioral intention.

Online trust influences both consumers' relationship commitment and behavioral intention, but their future intentions on the Web site are determined only by their trust in the site, rather than their commitment to a relationship with the firm. As a result of the technical data analysis, strong support is obtained for the partially mediating role of online trust. These findings imply that online trust is not only an important variable in customer relationships on the Internet, but also is the key mediating variable in these relationships.

The results also demonstrate that customer advocacy strongly affects both online trust and relationship commitment. Moreover, customer advocacy emerged as the most important antecedent of online trust. These findings will be further elaborated in the managerial implications section.

The reason that the link between relationship commitment and behavioral intention was insignificant in the base model could be related to the measures. While the survey respondents were asked about their level of commitment to a relationship with the firm in general (but not their level of commitment to an online relationship), they were asked to assess their behavioral intention to the Web site. The objective was to examine not only whether high levels of online trust increase relationship commitment, but also whether relationship commitment influences behavioral intention to the web site. For this reason, the effects of relationship commitment on behavioral intention could not be represented in this model.

The non-significance of the effects of propensity to online trust and Internet usage on online trust might be attributed to insignificant correlations between these constructs. It is also possible that customers' general propensity to online trust

does not affect their trust levels on the Internet, because people are more likely to develop a sense of trust in a particular Web site through their trust in the brand, web site privacy and security policies, and customer advocacy.

In accordance with existing relationship marketing literature (e.g. Anderson and Narus 1990; Ganesan 1994; Garbarino and Johnson 1999; Morgan and Hunt 1994) strong support for the positive effect of trust on relationship commitment was also confirmed in the online environment. The findings imply that trust on the Web is not only an important variable in marketing relationships on the Internet, but also is the key mediating variable in customer relationships. Moreover, customer trust is particularly important in the online context as customers increasingly rely on the Internet for information and purchases and can be more loyal online (Shankar, Smith, and Rangaswamy 2003). As expected, all the hypothesized antecedents of online trust are found to be significantly related to online trust, which has a strong positive effect on the customer's commitment to the relationship with the firm and behavioral intention on the Web site.

## **Chapter 6**

# **Conclusions and Further Research**

### **6.1 Summary and Conclusions**

This paper raises a number of critical issues for the study of customer trust in the online environment. Representing an empirical examination of relationship marketing concepts in the online environment, this research aims at differentiating the effects of Web site privacy and security from those of other variables that are managerially relevant in the online medium.

The model proposed in this research is the first that explicitly defines and considers customer advocacy as a focal construct in the theoretical customer trust and relationship commitment framework on the Web. One of the objectives of this research has been to conceptualize customer advocacy, and to verify this concept through this empirical study. The empirical results strongly support the relevance of customer advocacy and justify an addition to models of customer trust on the Internet.

Next, the research premises of Morgan and Hunt (1994) and Crosby, Evans, and Cowles (1990) are extended to the online environment, arguing that online trust and relationship commitment mediates the relationships between the antecedents of online trust and behavioral intention. A significant finding of this study is that online trust partially mediates the relationships between brand trust, Web site privacy and security, and customer advocacy and behavioral intention.

The model and hypotheses were tested in an empirical study with customers of mobile services. The survey strongly confirmed the hypothesis that brand trust and Web site privacy and security have positive effects on online trust ( $H_1$  and  $H_2$ ). The survey findings also revealed that customer advocacy has positive effects on both online trust and relationship commitment ( $H_3$  and  $H_4$ ). The hypotheses that online trust has positive effects on relationship commitment and consumer behavioral intentions ( $H_5$  and  $H_6$ ) were also strongly confirmed by the survey data.

The measure development of the variables was critical to the validation of the model. Measures of brand trust, Web site privacy and security, online trust, relationship commitment and behavioral intention were either newly developed or adapted from past literature to fit the online context, consistent with the definitions provided. In addition, new items were developed to capture the impacts of customer advocacy on trust and relationship commitment.

The results of this research makes contributions to the marketing literature by introducing the concept of customer advocacy as one of the main antecedents of trust in the conceptual framework, exploring the relationship between customer advocacy and both online customer trust and relationship commitment, and the

mediation effects of online trust and relationship commitment by empirically testing the proposed conceptual model on the Internet. It has been shown that customer advocacy and relationship commitment are useful extensions to the Web site trust models. The results offer important implications for online marketing and trust building strategies.

## **6.2 Managerial Implications**

The findings of this research provide a number of practical implications. The concept of trust in customer relationships has always attracted attention from both academics and managers. In the relationship marketing literature, there is strong evidence that strong customer-firm relationships can only be established based on the concept of trust (e.g. Kumar 1996; Ganesan 1994)

The growth of the Internet has dramatically enabled the sharing and flood of information about corporations, their strategies and activities. Consumers today are more informed than ever before, and have more tools with which to verify a company's claims or to search for superior product and service alternatives. As a consequence, companies have less power to push messages onto customers. Thus, increased customer power is clearly reducing the effectiveness of marketing strategies aimed at short term financial results, and driving the trend based on long term customer relationships by building trust, sharing unbiased advice, information transparency, and advocating for the customer.

With an increasing trend towards using the Internet as a shopping or information gathering environment among the consumers, managing and maintaining ongoing

trust based customer relationships on the Internet is gaining much importance, and firms have to learn about trust building processes and mechanisms through their Internet presence. Thus, firms need to understand which drivers create value for their customers in order to build customer trust in their Web sites.

The conceptual model, as proposed, suggests some implications for firms seeking to develop customer trust on their Web sites, and strengthen their customers' commitment to a relationship with the firm. Firms should move from short term, and often adversarial relationships based on promotions to trusting relationships with their customers. The present study suggests that advocating for customers enhances the firm's performance in building trust as well as increasing their commitment to a relationship with the firm.

A fundamental implication of the results is that managers must go beyond privacy and security strategies on the Web. Overall, managers should think of site design to emphasize privacy, security and brand, but extend this to include the more creative and collaborative aspects such as information transparency, unbiased product advice and interactive communication. Although the expectation that managers must ensure high levels of privacy and security for their sites is reinforced by this study, brand trust and customer advocacy are more important predictors of online trust than are Web site privacy and security.

Customer trust in the firm's Web site has a strong impact on his intention to actively use the Web site as well to commit to a long term relationship with that firm, and to be a loyal and a tolerant partner. Therefore, for building trust and thus long term relationships, managers must recognize that the level of Web site trust

perceived by customers is the cornerstone of the customers' commitment to a relationship and behavioral intentions on the site.

Perhaps the most important finding of this work is that online trust partially mediates the relationship between the drivers of trust and behavioral intention. This means that managers should not only think of the direct effects on behavioral intention like sales effects from promotions, but also consider the relationship effects of trust building. These promotions may have a positive short term effect of increasing behavioral intent of buying, but the longer run effects of Web site and brand loyalty that result from trust may be more important. Managers should think of trust as an intervening state that consumers must move through, and design their Web sites to build consumer trust through all the elements cited above. The results on the mediating role of online trust suggest that managers do need to focus first on improving customer trust by manipulating its drivers before they can influence consumers' behavioral intention to act at the Web site. Incorporating Web site characteristics that enhance online trust can result in a long-term favorable consumer relationship with the firm.

This finding implies that the study Web site used in the qualitative study, shown in Figure 4.1, is correctly using high privacy and security, information transparency, cooperation and advice factors to build consumer trust and positive behavioral intention. However, the lack of consumer trust in the brand itself, which is an influential driver of online trust, prevents the building of trust on the Web site. But the company could enhance trust by first building its brand, effectively communicating that it is really on the consumer's side. It could also differentiate



itself and increase trust by emphasizing customer advocacy, the factor that is the most influential driver of trust.

John Deere Company's use of virtual product advisor (eAdvisor Tool Suite) to find and compare products similarly is an example of trust building through information transparency and advice. John Deere, using the advantage of its relatively high brand recognition and competitive advantages in its market, enhances consumer trust by providing them with complete and open product information, product comparisons with the competition and an advisor to recommend the best product according to the needs and expectations of the customer.

Finally, in the case of General Motors, while consumer trust in its Web site is strongly influenced by the effect of its brand, GM allocates considerable resources and efforts to advice and provides unbiased product information to the auto buyers. In fact, GM is currently offering a virtual product advisor on its Web site, helping the customers find the right product according to their needs while presenting the information of all vehicles available in the market.

Customer advocacy is an approach that deepens the relationship between a company and its customers. Rather than employing methods such as increased media advertising, aggressive promotion, and one-sided communication, companies should focus on creating a positive relationship with an increasingly loyal customer base. Companies should attempt to earn their customers' trust by demonstrating that they are working with the customer and in the customer's interest. They should actively provide open and complete product information and unbiased advice to consumers. And it's crucial for companies to have the best

product, or at least a product that is best in its niche. A company that is confident in its own products is more willing to admit the existence of competitors, and share unbiased information with consumers. In order to capture the benefits of customer advocacy and trust, a company must have a solid strategy to establish itself as the trusted partner of the customer. Each positive interaction with the consumer provides greater strength for the foundation of a long-term trusting relationship.

A final implication of the results is for the comprehensiveness of the trust building process. Building customer trust by customer advocacy might seem to be only the responsibility of a company's marketing functions. However, this process requires participation of the entire organization. Specifically, the values of the company must reflect the primacy of customer advocacy. In addition, since most firms rely on a network of channel partners, such as distributors and retailers, and any element on the supply chain can affect a customer trust in that company and their relationships. In this study, Web sites were examined, but many of the same factors are present in other marketing channels. For instance, advice can be given by sales personnel or telemarketing operators. Branding can be reinforced across channels by advertising or other marketing tools. Privacy and security are important in store and on the phone as well as on the Internet. Therefore, managers should maintain a high level of coherence across all the organizational levels and supply chain partners, so that trust building efforts are reinforced throughout the whole consumer experience.

## **6.3 Limitations and Future Research**

It is important to view the study and results in the context of its limitations. The first limitation is the cross-sectional design employed. In any model in which causality is suggested, longitudinal studies may provide stronger inferences. Since the construct of trust has a dynamic nature and builds over time, the model of Web site trust developed and tested in this work could benefit from a longitudinal study. The feedback effect shown in the conceptual framework can also be tested by the longitudinal study.

Additionally, inline with most empirical studies, the sample size and variety of respondents is a limitation for the generalizability of the results. A statistically random sample of consumers would have increased confidence in the results.

Additionally, this study did not require respondents to actually make a purchase on the Web site, and did not actually measure consumer action on the Web site in terms of actual purchase and order fulfillment, rather this study measures consumers' behavioral intentions. Although prior research has confirmed a strong correlation between behavioral intentions and actual behavior (Sheppard, Hartwick and Warshaw 1988; Venkatesh and Davis 2000), the effects of the purchase process could be understated in this study.

Another avenue for future research is to design and implement experiments on the drivers of online trust, and test the potential interactions among them. Brand trust and customer advocacy could interact such that customer advocacy is a stronger driver of online trust for low trusted than high trusted brands. Given that there are

many important drivers, there is a need for online market experimentation to find the best mix of characteristics on a Web site that enhance trust. Considering all possible combinations of the drivers of online trust, a factorial design can show the interaction effects between any combinations of the variables.

Another issue to be resolved is the need for better and more generalizable measures of the customer advocacy construct. This study is one of only a few empirical studies of customer advocacy and is the first to examine the effects of customer advocacy on the evaluations of customers regarding the trustworthiness of the Web site. The close relationships between the constructs and the relative newness of the study increase the importance and difficulty of refining the measures so that they can reliably discriminate the various constructs. Even though discriminant validity was confirmed in this study, further research could develop measures that can be generalized to a broader set of contexts.

Because some people are difficult to convince, but on the contrary some are more trusting, the effect of consumers' propensity to trust on their levels of trust in the Web site are also investigated in this study. However, the results did not provide significant evidence for the relationship between propensity to online trust and online trust. Further research in this area could identify whether the building of Web site trust and commitment for customers differs among various clusters of consumers, and if it does, which marketing tools impact the trust building process for different consumer groups. This could provide helpful several insights for companies, since trust building is difficult, and it is worth thinking about in terms of what the companies have to do with different types of consumers.

In this research, consumers' commitment to a relationship with the firm is used as one of the focal constructs. As mentioned earlier, the mediating role of relationship commitment was not confirmed in this study. A possible explanation for this non significance is that the respondents' level of commitment to a relationship with the firm was assessed compared to their behavioral intentions related to the Web site. Further research can be conducted by developing measures for commitment to an "online relationship" with the firm, and incorporating it to the Web site trust model. Another alternative is to employ the same relationship commitment measures, but conduct the empirical study using firms solely operating on the Internet, such as Amazon.com, so that the relationship commitment measures will by design address the respondents' levels of commitment to an online relationship. This could resolve the issue since both relationship commitment and behavioral intention constructs will be evaluated in the same context.

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# Appendix A

## Study Web Site

Figure A.1 Study Web Site Main Page



Figure A.2 Study Web Site Create Your Own Plan Page

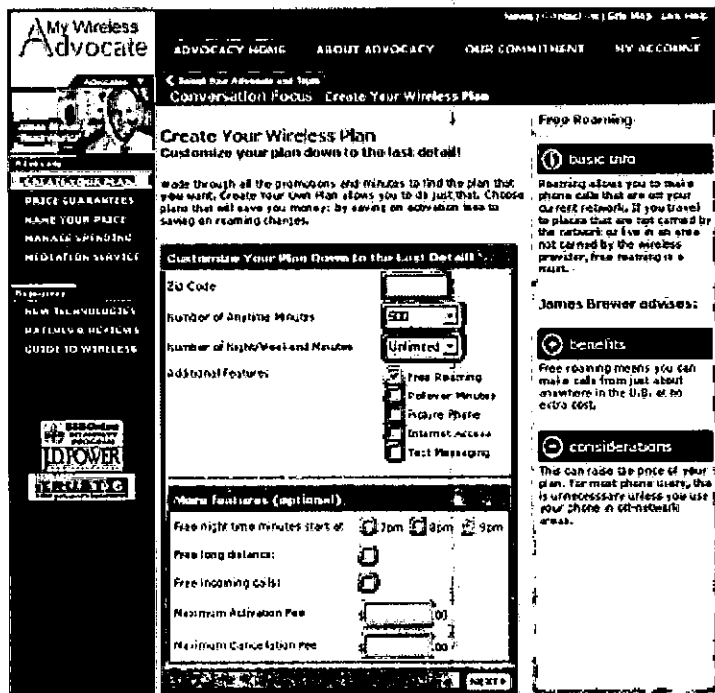


Figure A.3 Study Web Site Name Your Own Price Page

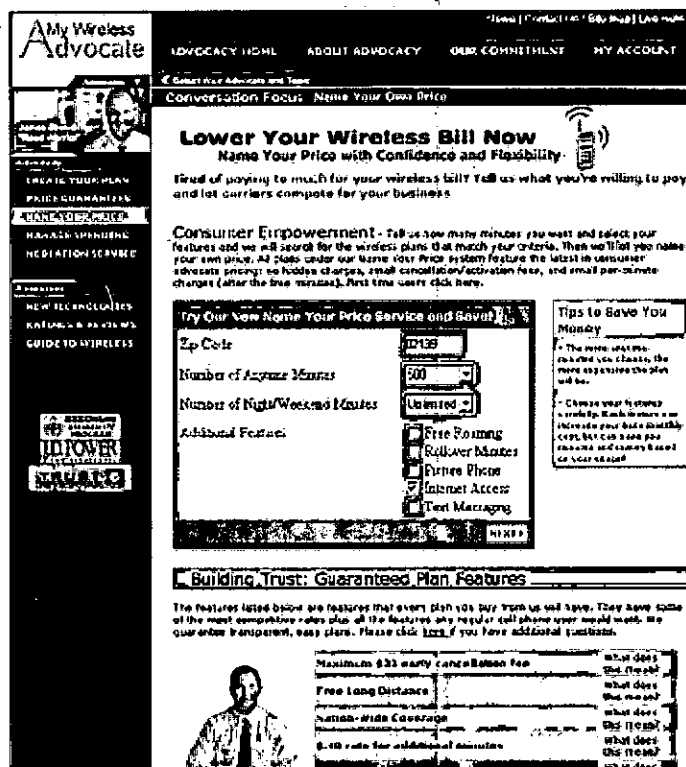


Figure A.4 Study Web Site Retroactive Pricing Page

Any Wireless Advocate

[Home](#) | [Contact Us](#) | [Site Map](#) | [Log Out](#)

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ADVOCACY HOME
ABOUT ADVOCACY
OUR COMMITMENT
MY ACCOUNT

---

Conversations Home
Price Guarantees

Price Guarantees

Choose the option that fits your style!

---

KNOWLEDGE

CREATE YOUR PLAN

RETRACTIVE PRICING

NAME YOUR PRICE

MINIMIZE SPENDING

REDUCTION IN PRICE

---

EXAMPLES

NEW TECHNOLOGIES

PLANS & SERVICES

NEWS TO WATCH

Retroactive Pricing

Tired of hidden charges at the end of the month? Wish you could turn back time to avoid roaming, long distance, and over usage fees? How you care! Simply provide us with information about your current plan and preferences, we will find a plan that fits your usage, and send you a refund check in the mail for up to 2 billing cycles.

MORE ABOUT RETROACTIVE PRICING

Enter Your Average Monthly Usage Below:

Zip Code:

Number of Airtime Minutes:

Number of Night/Weekend Minutes:

Number of Roaming Minutes:

Number of Long Distance Minutes:

Additional Features you Use:

Roaming Minutes

Return Phone

Text Messaging

Wireless Web

Total Cost of Existing Plan: \$

# of Months until end of contract:

NEXT >

**Our Commitment**

- We aim to find a wireless plan that fits your usage style.
- Your selected usage from one month will be the benchmark to see you meet.
- The actual refund might differ from the estimated amount. Our plan may vary across wireless carriers.

# Appendix B

## Focus Group Questionnaire and Consent

Thanks again for being a part of the "Adaptive Site Experimentation and Strategic Trust Audit" Research Project.

Please answer the following questions. This survey should take around 5 minutes.

Please provide the following details about your current wireless plan:

1. Current Provider:

- |   |  |
|---|--|
| <input type="checkbox"/> AT&T Wireless                | <input type="checkbox"/> Cingular Wireless |
| <input type="checkbox"/> Nextel                       | <input type="checkbox"/> T-Mobile          |
| <input type="checkbox"/> Verizon Wireless             | <input type="checkbox"/> Sprint            |
| <input type="checkbox"/> Other (please specify) _____ |  |

2. Number of Anytime Minutes: \_\_\_\_\_  Do not know

3. Average Monthly Bill: \$ \_\_\_\_\_  Do not know

Now, we would like to learn about your shopping behaviors.

4. Have you researched or purchased a wireless plan on the Internet?

- Yes  
 No

5. How would you research for a future wireless plan?

- I go directly to the wireless carrier web site.  
 I search for wireless information (e.g., plan specification and user reviews) on independent sites (such as epinions.com or letstalk.com).  
 I prefer shopping in physical stores.

6. Please **rank** the three sites you have seen in this study according to the following characteristics (please indicate the rank (1, 2 or 3) in the boxes):

	My Wireless Advocate	Verizon	Letstalk.com
Helpfulness in the shopping process			
Ease of navigation			
Trustworthiness in providing unbiased carrier/product information			
Provides the best tools for finding a wireless plan			
Reflects my needs and interests			
Personal and friendly			
Preferred site to research/buy my next wireless plan			

The following questions are about the “My Wireless Advocate” site:

7. Please **rate** the “My Wireless Advocate” on the following characteristics, based on your experience.

(1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither agree nor disagree, (4) Somewhat Agree, (5) Strongly Agree

I enjoyed the overall experience of the site	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I found it easy to understand and use the features	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I found the site trustworthy and credible	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I found it helpful in the wireless plan shopping process	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I could easily navigate through the site without assistance	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I would be confident in the advice given on this site	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I found the amount of information clear enough to understand the features	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

Feel free to elaborate on any of the above statements in the space provided below:

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8. Did you understand the concept of “Create Your Own Plan”?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Hard to Understand/ Confusing		Neutral		Easy to Understand

9. How helpful was the “Create Your Own Plan” feature?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Not Relevant/Helpful		Neutral		Very Relevant/Helpful

10. Did you understand the concept of “Retroactive Pricing”?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Hard to Understand/Confusing		Neutral		Easy to Understand

11. How helpful was the “Retroactive Pricing” feature?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Not Relevant/Helpful		Neutral		Very Relevant/Helpful

12. Did you understand the concept of “Name Your Price”?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Hard to Understand/Confusing		Neutral		Easy to Understand

13. How helpful is the “Name Your Price” feature?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Not Relevant/Helpful		Neutral		Very Relevant/Helpful

14. Please rate the following items, based on your behavioral intent.

(1) Strongly Disagree, (2) Somewhat Disagree, (3) Neither agree nor disagree, (4) Somewhat Agree, (5) Strongly Agree

I would be comfortable shopping at this site	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I would visit this site to get advice and information	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I would like to try the new features (Create Your Own Plan, Retroactive Pricing, Name Your Price) offered by this site	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
I would recommend this site to a friend	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

15. Please indicate your overall trust in the “My Wireless Advocate” site:

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Extremely untrustworthy		Neutral		Extremely trustworthy

16. Qwest Communications is the sponsor of the "My Wireless Advocate" site. How does this fact influence your overall opinion of Qwest?

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Negatively	Somewhat Negatively	Does not influence	Somewhat Positively	Positively

17. In a few sentences, please explain what you understand by the term "customer advocacy". What does "customer advocacy" mean to you?

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## **CONSENT TO PARTICIPATE IN NON-BIOMEDICAL RESEARCH**

### **ADAPTIVE SITE EXPERIMENTATION AND STRATEGIC TRUST AUDIT**

You are asked to participate in a research study conducted by Professor Glen L. Urban, from the Sloan School of Management at the Massachusetts Institute of Technology (M.I.T.). You were selected as a possible participant in this study because you are a current or potential wireless services customer and a student. You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.

- **PARTICIPATION AND WITHDRAWAL**

Your participation in this study is completely voluntary and you are free to choose whether to be in it or not. If you choose to be in this study, you may subsequently withdraw from it at any time without penalty or consequences of any kind. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

- **PURPOSE OF THE STUDY**

The purpose of this study is to test the usability of some selected Web sites and understand the customers' reactions to specific site features and their perceptions of trust. In the study, you will be asked to make a series of comments about the three Web sites selected for this study. After browsing the sites together, the moderator will facilitate discussions by asking you questions about the sites. You are expected to express your thoughts in an unstructured and natural manner, discussing and interacting with others.

- **PROCEDURES**

This study will be conducted in two parts as described below. In total, the study will take approximately one hour.

#### Part I

In the first part, you will be asked to examine three Web sites: Verizon Wireless Web site, LetsTalk.com Web site (independent, third party wireless service provider site) and My Wireless Advocate Web site. We will guide you during this process.

After browsing each of the three sites, the moderator will facilitate discussions by asking you questions about your experience –likes, dislikes and overall impressions, as well as about more specific issues regarding the features on the sites, design, navigation, content, advice, and trust. Each site tour and discussion should take approximately 7 minutes. Here, we would like you to express your thoughts in an unstructured and natural manner, discussing and interacting with other subjects of the study. There are no right or wrong answers.



## Part 2

In the second part, having already browsed and discussed about all the three sites, you will be asked questions regarding all the three sites, and be expected to tell your opinions, following the moderator's questions, and making comparisons among the sites. We would like you to evaluate the ideas and concepts on the sites and assess their usability, speaking freely and completely about your opinions and attitudes. There are no right or wrong answers. You are also expected to brainstorm collectively, so that a number of ideas, issues, topics, and even solutions to a problem can be generated through the discussions. Everyone is expected to participate actively in the discussions. The second part of the study will take approximately 30 minutes. The study personnel in research will take notes and audiotape the session in order to document the data.

- **POTENTIAL RISKS AND DISCOMFORTS**

There are no physical or psychological risks in this study.

- **POTENTIAL BENEFITS**

Your benefits in this study will be learning about the state of the art of product advisor tools and trust mechanisms, as well as gaining knowledge of some applications to wireless services.

- **PAYMENT FOR PARTICIPATION**

At the end of the study, you will be made a payment of \$20 for your participation in the study. Payment will be prorated for early withdrawal.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

The study personnel will take notes and audiotape the session in order to document the data. However, your data will be kept completely confidential by not storing your personal information along with the data. All the subjects have the right to hear the tape and request that it be edited. When the research is completed, the tapes will be archived.

- **IDENTIFICATION OF INVESTIGATORS**

If you have any questions or concerns about the research, please feel free to contact:

Birgi Martin: sbmartin@mit.edu

Sha Ma: shama@mit.edu

Stephen Kao: kao@mit.edu

- **EMERGENCY CARE AND COMPENSATION FOR INJURY**

In the unlikely event of physical injury resulting from participation in this research you may receive medical treatment from the M.I.T. Medical Department, including emergency treatment and follow-up care as needed. Your insurance carrier may be billed for the cost of such treatment. M.I.T. does not provide any other form of compensation for injury. Moreover, in either providing or making such medical care available it does not imply the injury is the fault of the investigator. Further information may be obtained by calling the MIT Insurance and Legal Affairs Office at 1-617-253 2822.

- **RIGHTS OF RESEARCH SUBJECTS**

You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you feel you have been treated unfairly, or you have questions regarding your rights as a research subject, you may contact the Chairman of the Committee on the Use of Humans as Experimental Subjects, M.I.T., Room E32-335, 77 Massachusetts Ave, Cambridge, MA 02139, phone 1-617-253 6787.

**SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE**

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

\_\_\_\_\_  
Name of Subject

\_\_\_\_\_  
Name of Legal Representative (if applicable)

\_\_\_\_\_  
MID ID #

\_\_\_\_\_  
Social Security #

\_\_\_\_\_  
Signature of Subject or Legal Representative

\_\_\_\_\_  
Date

**SIGNATURE OF INVESTIGATOR**

In my judgment the subject is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

\_\_\_\_\_  
Signature of Investigator

\_\_\_\_\_  
Date