Determinants and Consequences of Trust in Online Environment

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ABSTRACT

The fundamental role of trust in numerous business transactions, and especially in customer relationship management, has been widely acknowledged by both industry and academia. The establishment of trust is a necessary condition for the long-term success of any business enterprise. This is particularly true in the Internet environment, where rapid technological advances accompany the rise and fall of many companies in a relatively short period of time. Previous studies have emphasized the significance of trust in Internet strategies; virtual experiences created by online systems eliminate or minimize face-to-face contact, but human trust is still essential for the experience to be effective. However, while the importance of trust in online environments is recognized, the determinants and consequences of customer trust have not been systematically investigated across a variety of industries, particularly in B2C context.

This research is designed to investigate consumer perceptions of trust and the role of trust in consumer behavior in e-Business environments. It examines the following key research questions: What exactly is online customer trust? How is online trust different from offline trust? How does online trust affect customer behavior on a website? What are the antecedents and consequences of online trust?

To address these questions, a model is developed that links consumer perceptions of website characteristics to perceptions of overall trust in a website, and perceptions of trust to consumer behavior related to the website. The proposed model identifies a number of factors that drive online trust, shows how website cues and online trust shape customer decision process, and identifies special role of online trust as a mediator in the link between website characteristics and consumer behavior. A large-scale empirical study is presented that applies this model across a variety of websites in various industries, using a structural equation modeling approach (LISREL), coupled with application of moderator/mediator analysis techniques. A holdout sample is utilized to test the validity of the model. Managerial implications for successful Internet strategies, incorporating appropriate usage of different website trust cues for different categories of customers, are presented.

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1. Introduction

Over the last several years, the World Wide Web has become popular not only with technically savvy consumers, but it has also extended its influence to a much wider audience. According to recently issued industry monitoring and projections data, there were 124.7 million (m) US online users in the year 2000, and this number is expected to increase to 210.8m in 2006 (JMM 2002). Electronic commerce is accordingly growing at exponential rate; the number of US households shopping online has increased from 5m in 1997 to 32.1m in 2001, and is projected to reach 62.9m in 2007 (Forrester Research 2002). Unfortunately, many consumers still regard e-commerce as "an excursion beyond the unknown into the unknowable" (McKnight and Chervany 2002).

Early commercial transactions, such as purchasing grocery goods from a local supermarket or performing financial transactions in a local bank, involved dealing with real goods and real people, whose quality and reputation could be checked by asking trusted friends and verified by the client's own experiences. Later on, the growth of urban populations and greater turnover of working force necessitated the introduction of institutional regulations and licensing procedures, so that any individual was able to verify the reputation of a particular vendor, bank or lawyer by inspecting an appropriate certificate or license. The reason many consumers are cautious about online shopping, is that e-commerce has been traditionally provided few means for verifying either the quality of goods or the reputation of merchants. Physical separation of the buyer and seller, the absence of a salesperson, the separation of the product and the buyer, and the

overall environment of perceived insecurity on the Internet provide unique challenges to Web marketers, who must find ways to develop trust-based relationships in order to attract and retain customers (Warrington, Abgrab et al. 2000).

Lack of trust is perceived to be one of the most prominent triggers of the latest downturn in e-commerce and bankruptcies of numerous Internet companies. A Forrester survey in 2000 found that 51% of companies would not trade with parties they do not trust over the Web. Concerns about trust issues were identified as one of the greatest barriers inhibiting online trade between buyers and sellers who are unfamiliar with each other (CommerceNet 2000). In supply-chain management, the root cause of the failure to collaborate effectively appears to be the lack of trusted relationships (Gallagher 2001). During the 2001 holiday season, consumers feeling the pressure of an economic downturn, bought predominantly from the most trusted websites (Neuborne 2001).

Even though there is a general agreement that the transactions of either money or information on the Web require trust on the users' part, there are still many questions that have remained largely untouched by scientific research. What exactly is online customer trust? How is online trust different from offline trust? How does online trust affect customer behavior on a website? What are the antecedents and consequences of online trust? What are the underlying dimensions of online trust? What factors influence trust in a website, and what specific website trust cues associated with these factors? All these questions are crucial for the future development and growth of online shopping; without clear answers to these questions, virtual merchants will not be able to develop and sustain their relationships with online customers.

In this study, we present a model linking consumer perceptions of website characteristics to perceptions of trust and perceptions of trust to consumer behavior online. The proposed model identifies a number of factors that drive online trust, shows how website cues and online trust shape customer decision process, and identifies the special role of online trust as a mediator in a link between website characteristics and consumer behavior. A large-scale empirical study is presented that examines this model across a variety of websites in various industries. Among the unique features of the study are the large number and diversity of survey respondents, applying moderator/mediator analysis techniques in a structural equations modeling context, and using a holdout data sample to test the validity and assess the predictive power of the model.

The rest of this paper is organized as follows: in section 2, we review offline and online literature on the topic and based on that, motivate the current study. Section 3 describes moderator/mediator analysis techniques that are used for defining trust role in customer online experience. We follow in section 4 with presenting our research methodology and collected data. In section 5, we analyze the data with exploratory factor analysis tools, specify several structural equation models linking website characteristics and consumer behavior, and conduct mediation tests. Section 6 uses a holdout sample to validate, replicate and assess the predictive power of the resulting model. In section 7, we proceed with several moderation variables tests, involving user characteristic and demographic variables. Section 8 draws several conclusions of the conducted study, presents some limitations and suggests a set of implications for further research.

2. Literature review

Trust has been a topic of research in communication, philosophy, political science, sociology, computer science, psychology, management science and marketing since the 1950s (Deutsch 1958), and each field has established its own conceptual framework. Although these frameworks are quite different, they all have contributed to a better understanding of trust in general. For obvious reasons, most of the studies have focused on offline trust, though research activity in the area of online trust has been growing exponentially over the last several years. We begin this section by reviewing offline trust literature from several different fields, mostly from management science and marketing, and then concentrate on existing studies on online trust and discuss our contribution in this area.

2.1. Offline trust literature

Trust has been defined by researches in many different ways. Describing the concept of trust can be compared with the story of the six blind men and an elephant (Lewicki and Bunker 1995). Each man perceived the elephant ("trust") to be something different, because of the narrow portion of the elephant that they blindly felt. They each thought the elephant was what they felt because they were unable to see the big picture of what an entire elephant is like. Similar situation with trust: economists tend to view trust as a rational choice mechanism (Williamson 1993), sociologists have viewed trust as structural in nature (Lewis and Weigert 1985), and psychologists are more inclined to view trust as a personal attribute (Rotter 1967). Although there have been attempts to conceptualize trust as an interdisciplinary construct (McKnight and Chervany 2002) and derive a mathematically precise and statistically rigorous universal definition of trust (Bhattacharya, Devinney et al. 1998), the success of such attempts remains to be seen.

2.1.1. Management literature

Because our focus here is on customer trust, we will concentrate on the trust literature from management science and marketing. Although there is no universally accepted definition of trust in management science and/or marketing, trust has been defined in various terms ranging from "the willingness to be vulnerable to the actions of another party" (Mayer, Davis et al. 1995) to "the probability one attaches to cooperative behavior by other parties" (Hwang and Burgers 1997). Rousseau proposed the following

helpful generalization of trust definition in the management literature (Rousseau, Sitkin et al. 1998):

Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.

The importance of trust has been a key issue in many management studies. It is a form of organization control (Creed and Miles 1996), and it is a transaction cost-reduction mechanism (Wicks, Berman et al. 1999). Trust is also used for reducing uncertainty (Mayer, Davis et al. 1995) and predicting satisfaction (Driscoll 1978). Moreover, previous research indicates that trust might assume a special role in online environment, similar to its role in virtual organizations (Handy 1995) and in response to technological advances (Zuboff 1982).

Management scholars have also created various taxonomies of trust for different subject levels. Barber distinguishes between general trust and specific trust, where general trust represents natural moral social order and specific trust is either competence trust or trust in goodwill (Barber 1983). Dodgson studies interorganizational level of trust and distinguishes between competence, good will and contractual trust (Dodgson 1993). Lewicki and Bunger distinguish among deterrence, knowledge and identification-based trust, and argue that we can make a distinction between different stages of trust development (Lewicki and Bunker 1996). Understanding the influence of national culture on the development of trust through five cognitive trust-building processes (calculative,

prediction, intentionality, capability and transference) is the focus of another study (Doney, Cannon et al. 1998). Especially relevant to the online environment is distinction between swift and slow trust (Meyerson, Weick et al. 1996).

Lewicki et al argue that not only we should treat trust as a multidimensional concept, but it is also might be necessary to reconsider traditional bipolar paradigm of trust and distrust concepts (distrust is not the same as low trust level) (Lewicki, McAllister et al. 1998).

Various hypotheses have been suggested about the causes of particular types of trust. Repeated interaction (Shapiro, Sheppard et al. 1992) and the alignment of interests (Bhattacharya, Devinney et al. 1998) were hypothesized to cause deterrence-based trust. Shared identity (Bhattacharya, Devinney et al. 1998) and increased perceived similarities were put forward as possible causes of identification-based trust. Careful choosing partners (Bhattacharya, Devinney et al. 1998) and predictability (Shapiro, Sheppard et al. 1992) are seen as causes of knowledge-based trust.

Researchers are also active in proposing possible causes of trust in general. Integrity, competence, consistency, loyalty and openness were discussed in several studies (Whitney 1994; Sheppard and Sherman 1998; Baba 1999). Mayer et al. argue that trust involves a belief that the other has ability, benevolence and integrity (Mayer, Davis et al. 1995). Others report that reliability and fairness also play significant role in creating trust (Whitney 1994). Similarly, good relationships and effective communication are advanced as causes of trust (Dodgson 1993). Repeated alliances between the same partners are shown to lead to interfirm trust (Gulati 1995). In the meta-analysis study of

65 articles and books that provide definitions of trust, four second-order categories (competence, benevolence, integrity and predictability) were found to cover 91.8% of all characteristics-based trust definitions (McKnight and Chervany 2002).

Finally, McAllister developed conceptual and empirical versions of trust that differentiated trust's cognitive and emotional aspects (McAllister 1995). This study found evidence for a clear distinction between affect-based and cognition-based trust, both in terms of factor separation, and in terms of distinct relationships with other concepts. This hypothesis of two distinct forms of trust is tested in our study (Section 5). Specifically, we will first look at reliability of the constructs of affection-based trust and cognition-based trust. Then we proceed with testing whether including these constructs as underlying dimensions of trust increase goodness-of-fit of the structural equation model, and compare several rival model specifications in order to test whether these two concepts serve as mediators of website trust cues (privacy, brand, content etc) to trust.

2.1.2. Marketing literature

Generally, trust in marketing has traditionally been a center of discussion in relationship marketing, where many researchers recognize it as an essential ingredient in building successful relationship marketing strategy (Dwyer, Schurr et al. 1987; Ganesan 1994; Morgan and Hunt 1994; Kumar 1996; Doney and Cannon 1997; Geyskens, Steenkamp et al. 1999). A frequently used definition is "willingness to rely on an exchange partner in whom one has confidence" (Moorman, Deshpande et al. 1993). That is, trust can be viewed as both a belief in the trustworthiness of a partner and a behavioral

intention to rely on a partner in a situation of vulnerability. Several studies identify credibility and benevolence as underlying dimensions of trust (Ganesan 1994; Doney and Cannon 1997; Ganesan and Hess 1997). Credibility is based on the buyer's belief in the vendor's expertise to do the job effectively and reliably. Benevolence, on the other hand, refers to the buyer's belief that the vendor has positive intentions and will act in a way that is beneficial to the buyer even in new situations for which no commitments have yet been made (Ganesan 1994). Other multidimensional conceptualizations of customer trust include competence and benevolence (Singh and Sirdeshmukh 2000).

Several determinants of trust have been identified in the literature. The buyer's trust in a seller is increased if the seller has a reputation for reliable, consistent and fair behavior (Ganesan 1994). Trust is also increased by a perception that the vendor organization has made investments in the relationship (Ganesan 1994; Doney and Cannon 1997), large size of the vendor (Doney and Cannon 1997), and effective communication and shared values between the vendor and buying firms (Morgan and Hunt 1994).Trust can be decreased by perceptions of opportunistic behavior by an exchange partner (Morgan and Hunt 1994). Such factors as expertise, likeability, frequency of business contacts, dependability, honesty and customer orientation were proposed as causes of trust in marketing relationships involving a salesperson (Swan, Trawick Jr et al. 1988; Andaleeb and Anwar 1996; Doney and Cannon 1997). Swan describes the trust development process as a function of buyer's personality, buyer's experience with the salesperson and image of the salesperson's firm (Swan and Nolan 1985). Interpersonal factors, such as perceived integrity, willingness to decrease

uncertainty, expertise, tactfulness and sincerity were found to be good indicators of trust in market research relationships (Moorman, Deshpande et al. 1993).

Trust can lead to successful long-term exchange relationships (Ganesan 1994), cooperation (Morgan and Hunt 1994) and satisfaction (Grewal, Comer et al. 1999), but trust in a seller firm or salesperson may not affect the buyer's choice of the seller if factors such as delivery performance, price and product performance are appropriately accounted for (Doney and Cannon 1997). However, it is possible that price and performance may drive both the buyer's trust and its choice of the seller.

Trust has been recognized as a key mediator construct in successful relational exchanges in general (Morgan and Hunt 1994), and in the relationships between agency mechanisms and satisfaction and between satisfaction and loyalty in particular (Singh and Sirdeshmukh 2000). Trust also has been described as a primary mediator construct between the buyer's attitudes and future intentions (Garbarino and Johnson 1999). Andaleeb demonstrates how the behavioral intentions of marketing channel members are likely to be moderated by trust and reveals the important role of trust in explaining intentions to cooperate, exert controls, and adopt a strong influence stance in a buyer-seller dyad (Andaleeb 1995). Other researchers examine the moderating role of trust in the link to loyalty in a conceptual model of buyer-seller relationships (Chow and Holden 1997), and trust in a working relationship was identified as an essential element in the causal model of distributor firm and manufacturer firm working partnerships (Anderson and Narus 1990).

In a meta analysis of 71 studies of trust and satisfaction in marketing relationships, Geyskens et al. 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 (Geyskens, Steenkamp et al. 1999).

When applied to online trust, these studies have important implications. For instance, credibility and benevolence could be two important underlying dimensions of online trust as well. Moreover, a firm's reputation and size, the user's past experience with the firm and its website, the user's dependence on the firm, and communication between the firm and the user are also potential antecedents of trust in the online context. Finally, satisfaction, commitment, and long-term success could be some of the consequences of online trust.

Sections 5 and 6 of this study test whether trust is a mediator construct for the relationship between website characteristics and customer behavior at the website. First, we test whether including trust as a mediator construct improves the goodness-of-fit of our structural equations model. Second, we assess how well this mediation model can predict customer intentions to make a purchase at the website, and in section 7, we investigate whether user and demographic characteristics moderate this mediation.

2.2. Online trust literature

Trust is important in the adoption of new technologies such as the Internet (Fukuyama 1995), and researchers in the areas of electronic commerce and human-computer interactions have repeatedly addressed various trust issues in their studies. We discuss some of these studies here and conclude with describing the contribution of our study to the field.

Surprisingly, there is still no agreement on the object of trust among e-commerce researchers. Some argue that technology itself is a proper object of trust (Marcella 1999), while others suggest that people trust other people, but not machines (Friedman, Kahn et al. 2000). Yet there is another point of view in the field, which is that people can trust websites and thereby trust the companies behind the sites (Jarvenpaa, Tractinsky et al. 1999). A similar framework is adopted in research that explores how online organizations might build trust by using hypertext links to associate themselves with other, more trusted organizations and by creating an association with the more trust-inducing traditional retail channel (Stewart 1999). A cognitive trust transference model of how such associations influence users' perceptions and trust in a target organization is supported by the experiments she has described.

Jarvenpaa et al. distinguish between trust in the early and mature stages of e-commerce (Jarvenpaa, Tractinsky et al. 1999). In the early stages, online trust might have more to do with the performance of the technology, whereas in the later stages, trust may be more dependent on differences in firms' implementation of Internet technology.

Marcella discusses the deepening of online trust from building trust to confirming

and maintaining trust over time (Marcella 1999). Trust is driven by past experiences, long-term orientation, positive trusting stance, and feeling of control (Jarvenpaa, Tractinsky et al. 1999). From a privacy standpoint, trust can be viewed as the customer's expectation that the online business will treat the customer's information fairly. The quantity, quality and timeliness of information can enhance trust (Urban, Sultan et al. 2000). Their testing of virtual personal advisors resulted in high values for both trust and acceptance levels. Moreover, rapid technology advancements allow researchers to test whether virtual conversational agents help in establishing a trusting relationship (Bickmore and Cassell 2001). In an experiment with an embodied conversation agent, a social dialogue was demonstrated to have an effect on trust for users with a disposition towards extroversion. Another study examined the early formation of trust in different communication media, e.g. the phone vs. the web (Basso, Goldberg et al. 2001). The results indicate that real-time interactivity, though not necessarily voice interactivity, increased judgments of friendliness and the trustworthiness of the salesperson.

Dayal et al. propose a trust pyramid in which state-of-art security, merchant legitimacy, and fulfillment are the core drivers of online trust while customer control, tone and ambience and consumer collaboration are the differentiating drivers (Dayal, Landesberg et al. 1999). Other potential drivers of online trust include site longevity, selection of items, online community, links to and from other sites, the presence of search engine on the site, and privacy (Smith, Bailey and Brynjolfsson 2000). Hoffman et al focus on security and privacy as the key drivers of online trust. They argue that environmental control or the consumer's ability to control the actions of a Web vendor

directly affects consumer perception of security and privacy online (Hoffman, Novak et al. 1999).

Another study focuses on the role of trust in the relationships among information availability, problem resolution and customer satisfaction in the online support context (Shankar, Sultan et al. 2002). The authors show that trust moderates the relationships between perceived information availability and problem resolution and between problem resolution and customer satisfaction. The positive effects of perceived information availability and problem resolution on customer satisfaction are significantly enhanced by trust with the online provider.

Trust spans several aspects including browsing, buying, and security according the assessment criteria of Case Trust (UHK 2000). Jarvenpaa et al. found that perceived size and perceived reputation of an electronic store determined trust which affected the buyer's attitude, risk perception and willingness to buy from that electronic store (Jarvenpaa, Tractinsky et al. 2000). Brand, as a symbol of quality and assurance, is also very important to the development of trust in Web-based relationship marketing (Davis, Buchanan-Oliver et al. 1999).

Several attempts were made to build a trust model of consumer Internet shopping. Consumer trust was modeled to be driven by trustworthiness of the Internet merchant, trustworthiness of the Internet shopping medium, contextual factors (e.g., security, privacy), and other factors (e.g., company size, demographic variables) (Lee and Turban 2001). The findings of this study indicate that merchant integrity is a major positive determinant of consumer trust in Internet shopping, and that its effect is moderated by the

individual consumer's trust propensity. In another study, a generic model of trust for electronic commerce is presented (Tan and Thoen 2000). The model consists of two basic components, party trust and control trust, and it is based on the concept that trust in a transaction with another party combines trust in the other party and trust in the control mechanisms that ensure the successful performance of the transaction.

Others investigate the development of trust in a Web-based vendor during two stages of a consumer's Web experience: exploration and commitment (McKnight, Choudhury et al. 2000). Through an experimental design, the study tests the effects of third party endorsements, reputation, and individual differences on trust in the vendor during these two stages. In another study, the trust model includes four components: pre-interactional filters assumed by the users, the interface properties of the site, the informational content of the site, and relationship management (Egger 2001). Each of these components includes several factors. For example, the informational content component of e-commerce trustworthiness includes information about products, services and the company, security and privacy.

An empirical analysis of the role of familiarity and trust in e-commerce shows that both familiarity with an Internet vendor and its processes, and trust in the vendor influenced the users' intentions to make a purchase (Gefen 2000). Additionally, the data reveal that while familiarity indeed builds trust, it is primarily people's disposition to trust that affected their trust in the vendor. A similar idea is used in another theoretical model (Cheung and Lee 2000), where consumers' trust in Internet shopping is affected by two groups of antecedent factors, namely, trustworthiness of Internet vendors and

external environment. In addition, the effects of these factors on online trust in the model are moderated by consumers' propensity to trust.

Some researchers have investigated the function of trust in particular types of online businesses. In a study on the adoption of Internet banking (Kim and Prabhakar 2000), the authors propose that both the level of initial trust in e-channels and the level of trust in the bank positively influence the adoption of Internet banking. Online investing is the topic of another study (Menon, Konana et al. 1999), which is concerned with users' perceptions of the trustworthiness of online financial transactions and of electronic brokerage firms. The model suggests that individual investors' trust beliefs are influenced by investor characteristics, investor perceptions of the broker, and investor perceptions of the transaction process.

The role of online trust has been analyzed in the context of adopting an electronic commerce intermediary (Chircu, Davis et al. 2000). The paper analyzes both the direct effects of trust and expertise on adoption intention, as well as the indirect effects of two mediating variables widely used in adoption studies, usefulness and ease of use. These effects are thought to be further moderated by the level of transaction complexity. Trust is also assumed to have a large impact on the likelihood of purchase behavior of consumers in another exploratory study (Nöteberg, Christiaanse et al. 1999).

Trustworthiness can be built up from seals of approval (logos of security firms), branding, fulfillment, navigation, presentation and technology (Cheskin/Sapient 1999). These six building blocks can be further divided into 28 specific ways to establish trustworthiness. An extension of this study was undertaken to explore the dimensions of

online trust in Latin America (Cheskin 2000). Their findings show that a global market requires universal symbols of online security. Since then, numerous websites have started to display trust seals, such as TRUSTe (Benassi 1999), to send a clear signal to users that they have openly agreed to disclose their information gathering and dissemination practices, and that their disclosure is backed by credible third-party assurance. Displaying trust seals has therefore become a basic trust requirement in e-business (Jones, Wilikens et al. 2000).

A few other studies investigate the role that culture plays in the formation of online trust. A cross-cultural comparison between Finland and Sweden identified the differences between the users' perceptions of trust that might depend on the differences in cultural backgrounds (Karvonen, Cardholm et al. 2000). A similar study, which included users from 12 countries, indicates that site quality and online trust are critical in explaining both the purchase intentions and loyalty of visitors to the site (Lynch, Kent et al. 2001). This research shows that the impact of trust varies across different regions of the world and across different product categories.

Several studies identified how a website interface might affect trust. Kim and Moon focused on the visual elements of an interface. They found that the manipulation of visual elements, such as the use of color and clipart, can influence the user's perception of trustworthiness of an electronic commerce interface (Kim and Moon 1997). Further work indicates that the factors positively related to trust include: provision of comprehensible information, perception of shared values between the e-tailer and the user, perception of frequent, high-quality communication, and internet store specificity

(Lee, Kim et al. 2000). In addition, it was found that the level of involvement with the product moderates the effects of these factors on trust. Another paper discusses the notion of online trust from a semiotic point of view, seeking to understand and analyze the signs of trustworthiness that the design of a website is sending (Karvonen and Parkkinen 2001). This study identified a set of visual and content cues that might enhance online trust.

Fogg and Tseng define trust as "a positive belief about the perceived reliability of, dependability of, and confidence in a person, object or process". They argue that the trustworthiness of a computer is a key element of computer credibility, along with computer expertise (Fogg and Tseng 1999). Four types of computer credibility are proposed: presumed, reputed, surface and experienced credibility. In the subsequent study, Fogg et al. conducted an empirical study of people's perception of the website credibility on 1400 students in the U.S. and Europe, who evaluated 51 different website site elements relating to trust (Fogg 2001). Real-world feel, ease of use, expertise, trustworthiness, and personalization turned out to be the most important factors affecting Web credibility, in that order. These factors were defined and the scale items were designed a priori and were not empirically derived.

A few 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 bricks-and-clicks e-tailers across eight product categories, it was found that online trust had a positive impact on web site traffic in two categories (gifts/flowers and computer hardware), but no significant effects in the other six categories (Pan, Shankar et al. 2002). The effects of trust on prices were insignificant in all the eight categories they studied. In a study of

price levels and price dispersion across another eight categories, they found that trust is positively associated with prices only in the consumer electronics category (Pan, Ratchford et al. 2001). It was not significant in five categories, and in fact negative in two categories (DVDs and desktop computers). In all these studies, the operationalization of trust was the number of trust seals present on an e-tailer's Website. Therefore, only the security and privacy aspects of trust were addressed.

Based on the antecedents of trust from past studies, trust can be diminished or lost due to problems such as inferior product quality, poor content of the Web site, complex or unintuitive navigation, technology failures, inferior customer service, poor response time, and problems in order fulfillment. A number of studies actually give recommendations on how companies should focus on enhancing online trust.

. Urban et al. recommend the following ways to building trust online: maximize cues that build web site trust, use virtual-advisor technology to gain customer confidence and belief, provide unbiased and complete information, include information on competitive products, increase reliability and keep promises (Urban, Sultan et al. 2000). Others suggest that user-driven personalization may be key to enhancing trust at higher levels (Dayal, Landesberg et al. 1999). Trust can be improved by quoting policies of customer satisfaction, returns and refunds (Jarvenpaa, Tractinsky et al. 2000). Giving consumers the opportunity to be anonymous or pseudonymous when engaging in information exchanges and online transactions seems to enhance online trust as well (Hoffman, Novak et al. 1999). It is also recommended that companies disclose patterns of past performance, provide references from past and current users, get third-party

certifications, and make it easy to locate, read and enforce policies involving privacy and security (Shneiderman 2000). Another study confirms that privacy statements and third-party involvement can improve trust (Palmer, Bailey et al. 2000). Because different organizations (e.g., retailer, shipping courier, and bank) are involved in an online transaction, online trust may be increased if these organizations work well together (Shankar, Sultan et al. 2002).

A problem that runs throughout most of the studies on online trust is the lack of clear distinctions between the underlying dimensions and antecedents of online trust. For example, although Dayal et al. discuss security, merchant legitimacy and fulfillment as important determinants of online trust, they also allude to them as the core elements of online trust (Dayal, Landesberg et al. 1999). Elements and determinants of online trust are used interchangeably in many studies. For example, researchers claim that trustworthiness affects credibility, but these two constructs are blurred and not well differentiated (Fogg 2001).

In the current study, the scale items were designed based on consumer reactions to focus group surveys, and the dimensions and antecedents of trust are well differentiated and empirically derived. The survey respondents were chosen across the entire spectrum of age, education, Internet usage patterns, expert levels, etc. Our large-scale empirical analysis includes reliability and validity checks for all model constructs, and mediators and moderator variables are identified through rigorous procedures, involving structural equation modeling. The large sample of collected survey responses allowed us to use a holdout sample for replication, cross-validation and assessing predictive power of the

model. All these unique features advantageously differentiate our study from previous research and support our confidence in the value of our contribution to a better understanding of the determinants and consequences of online trust.

3. Mediation/Moderation Analysis: review

The purpose of this section is to provide a brief discussion of two conceptual functions of third variables: mediation and moderation. These two functions have been extensively used in the social sciences for quite a long time, and their application in management science is growing. As we proceed with the empirical procedures for testing our hypotheses of moderation and mediation between constructs in the following sections, it is essential to distinguish between the properties of mediator and moderator variables and to understand the analytical procedures appropriate for making the most effective use of the mediator/moderator distinction. Specifically, we differentiate between the following functions of third variables (Baron and Kenny 1986):

- The moderator function of third variables, which partitions a focal independent variable into subgroups that establish its domains of maximum effectiveness in regard to a given dependent variable
- The mediator function of a third variable, which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest

3.1. The nature of moderators

Generally, a variable is called a moderator if it affects the direction and/or strength of the relation between an independent variable and a dependent variable. A common framework for capturing the properties of a moderator variable is illustrated by the following path diagram (Baron and Kenny 1986):

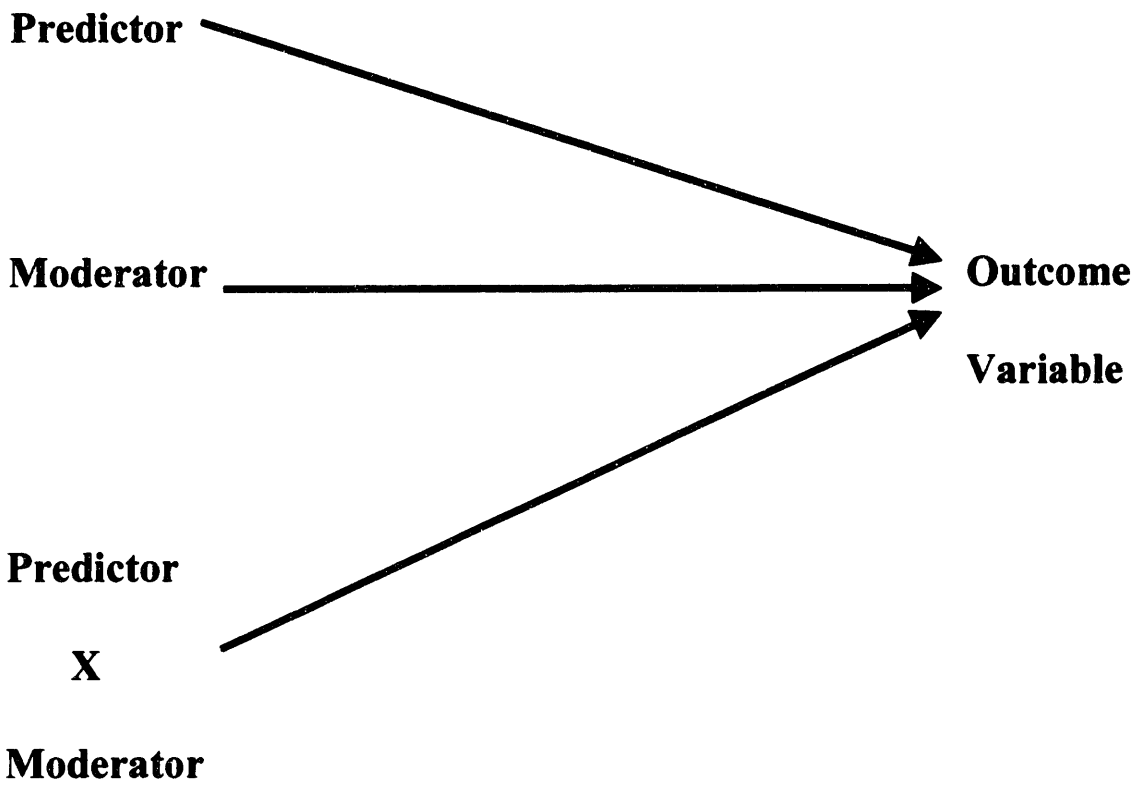


Figure 1. Moderator model.

The model diagrammed in Figure 1 has three causal paths that lead to the outcome variable: the impact of the predictor, the impact of moderator and the interaction of these two. The moderator hypothesis is supported if the interaction is significant. There may also be significant main effects for the predictor and the moderator, but these are not directly relevant conceptually to testing the moderator hypothesis.

In addition, it is always recommended that the moderator variable be uncorrelated with both the predictor and the outcome variable to provide a clearly interpretable term. Another property of the moderator variable that is apparent from Figure 1 is that, unlike the mediator-predictor relation (where the predictor is causally antecedent to the mediator), moderators and predictors are at the same level in regard to their role as causal variables antecedent to certain outcome effects. It emphasizes the position of moderators as independent variables, whereas mediator variables shift roles from effects to causes, depending on the focus of the analysis.

Within this framework, moderation implies that the causal relation between two variables changes as a function of a moderator variable. The statistical analysis must measure and test the differential effect of the independent variable on the dependent variable as a function of the moderator. This task is accomplished in this study by using the "multigroup" nested goodness of fit strategy in LISREL, a structural equation modeling application.

In order to test the interaction effect, two steps are required. The first step involves a "multiple-group" solution in which LISREL derives parameter estimates for each group separately. LISREL also calculates a measure of goodness of fit of the model

for both groups considered simultaneously (Jaccard and Wan 1996), where each group consists of the observations with identical moderator value (e.g. if gender were the moderator variable we would have two groups, males and females). The overall test of goodness of fit is based on a pooling of the fit measures from each group separately. The step one analysis does not formally evaluate the interaction effect, but it provides perspectives on how well the model fits the data when LISREL is permitted to estimate coefficients in each group separately without constraints across groups. In step two, we re-estimate the model, but this time we impose an equality constraint on the solution. Specifically, we permit LISREL to fit the data as best as it can using the model as a framework, but now with the constraint that the path coefficients for the causal relation of interest be equal in all groups. If there is indeed no interaction effect and the path coefficients are equal in all groups, that such a constraint should not adversely affect model fit relative to the analysis in step one. If there is a reasonably sizable interaction effect, then such a constraint will adversely affect model fit, and based on the size of the difference in fit indexes, we can make a conclusion about the interaction effect. Traditionally, chi square statistics are used as a fit index, and any conclusion on the presence or absence of moderation effect depends on whether the chi square difference between two steps is significant or not.

In addition to testing for the presence of an interaction effect, it is also desirable to obtain some indices of effect size in order to gain an appreciation of the magnitude of the effect. Two commonly used indices exist: one is the difference in the magnitude of the relevant standardized latent regression coefficients, and the other is the incremental

explained variance in the criterion that the interaction adds, over and above the model with no moderation effect. It is suggested in the literature (Jaccard and Wan 1996) that both indexes are only crude estimates of relative effect size and should be used in a purely descriptive fashion.

3.2. The nature of mediator variables

In general, a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion (Baron and Kenny 1986). Mediator variables tell us how or why certain effects occur, while moderator variables merely specify when such effects occur. For a better illustration of the properties of a mediator, we use the following path diagram for depicting a causal chain:

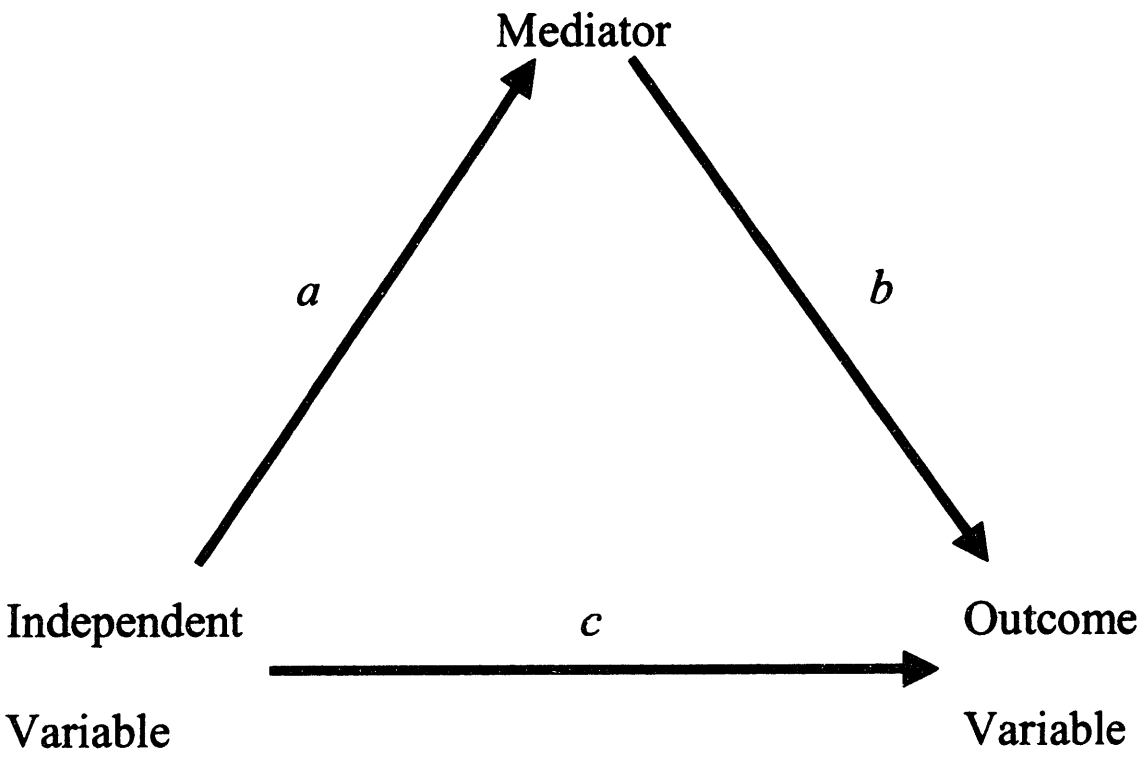


Figure 2. Mediational model.

The model in Figure 2 assumes a three-variable system in which there are two causal paths leading into the outcome variable: the direct impact of the independent variable (path *c*) and the impact of the mediator (path *b*). There is also a path from independent variable to the mediator (path *a*). A variable functions as a mediator when it meets the following conditions:

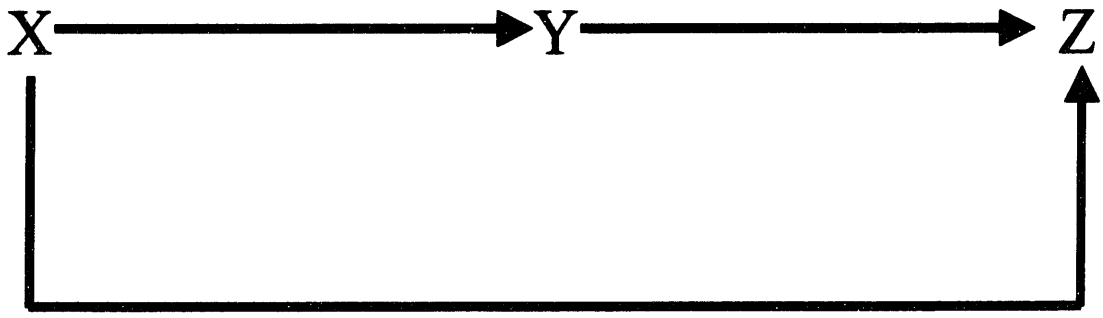
- Variations in levels of the independent variable significantly account for variations in the presumed mediator (path *a*)
- Variations in the mediator significantly account for variations in the outcome variable (path *b*)
- When paths *a* and *b* are controlled, a previously significant relation between the independent and dependent variables is no longer significant.

In case when path *c* is zero, it is described as a case of perfect mediation.

LISREL allows testing for mediation effects by estimating several models within a nesting sequence (Kelloway 1998). Specifically, for each mediated relationship in a model, there are two plausible rival specifications: a partially mediated model and a nonmediated model. To illustrate these models, consider the diagrams presented in Figure 3:

Mediated Model

Partially Mediated Model



Nonmediated Model

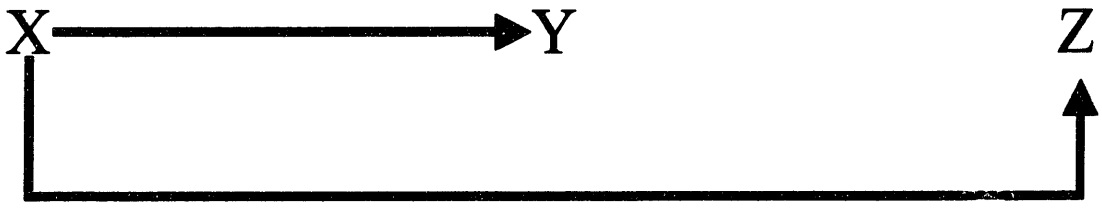


Figure 3. Nested causal paths for mediation testing

Each diagram gives a plausible account of how X is related to Z. First, the mediated model suggests that X causes Y, which in turn causes Z. Second, the partially mediated model suggests that X causes both Y and Z directly. In the partially mediated model, Y also is hypothesized as a cause of Z. Finally, the nonmediated model suggests that X causes both Y and Z, but there is no direct relationship between Y and Z.

The decision on the presence of a mediation effect depends in this case on which model provides the best fit on the data. Additionally, path coefficients of the causal relation X ->Z should be checked for partially mediated and nonmediated models. If these coefficients are significant in a nonmediated model, but not significant or significantly smaller in a partially mediated model, a positive conclusion on the presence of the mediation effect should be made.

3.3. LISREL vs. Multiple Regression Analysis

This subsection provides a brief discussion of the main advantages of LISREL over more traditional multiple regression analysis tools in testing for moderation and mediation effects. First, multiple regression analysis assumes no measurement error in independent variables, an assumption that is unrealistic in many situations, especially when dealing with survey response data. The presence of measurement error in the mediator tends to underestimate the effect of the mediator and overestimate the effect of the independent variable on the dependent variable when all coefficients are positive, which in effect can result in missing some successful mediators (Judd and Kenny 1981). Moreover, in regard to moderation analysis, multiple regression analysis cannot accommodate the scenario in which the reliability of measures differs in the various subgroups being considered, therefore leading to a bias in interaction terms and potentially incorrect identification of moderation effects (Jaccard and Wan 1996).

Another important difference between the two analytic techniques concerns the assumption of homogeneity of residuals across the various groups defined by the qualitative moderator variable. In traditional multiple regression, it is assumed that the variance of the residual scores is equal in all the groups being compared. Violations of this assumption can reduce statistical power and affect Type I errors (Alexander and DeShon 1994), whereas the LISREL strategy of testing for moderation effect does not require the assumption of homogeneous residual variances across groups and hence is more flexible.

In summary, LISREL's advantage in testing potential moderation and

mediation variables stems from the following features, not supported by traditional multiple regression analysis:

- Allows for heterogeneous measurements errors in independent variables
- Uses multiple indicators for each construct
- All the relevant paths are directly tested and none are omitted

However, LISREL also has several disadvantages in comparison to multiple regression analysis. Using single indicators for latent variables, for example, often lead to an unidentified model, and in many cases using as much as three indicators per each of latent variables is recommended. In addition, LISREL models are not as amenable to small sample analyses as traditional multiple regression models.

Another issue relates to violations of positive definiteness. Problems with indefinite matrices can occur at three points in the model building process (Dillon, White et al. 1997):

- The input sample covariance matrix may not be positive definite because of multicollinearity.
- The model covariance matrix may not be positive definite because of the choice of parameter starting values.
- The parameter estimates can assume values that are not in a strict sense permissible, for example, negative estimates of a parameter variance.

3.4. Combining Mediation and Moderation effects

In the previous subsections, we discussed mediation and moderation relationships separately. However, this does not imply that in any given model only one of two relationships might be possible. We now describe two cases where mediator and moderator variables interact with each other, the models of mediated moderation and moderated mediation. The path diagram of the first model is depicted in Figure 4:

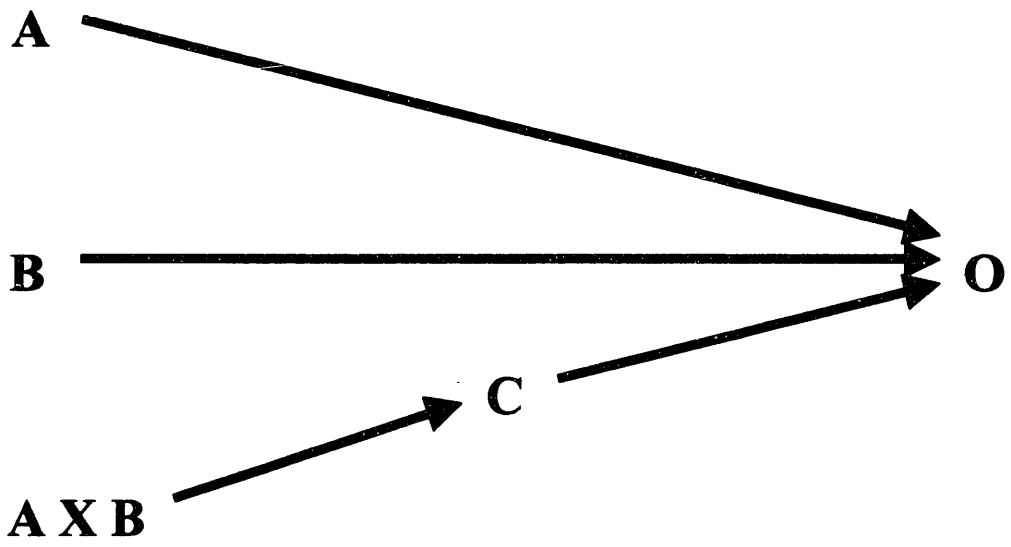


Figure 4. Mediated Moderation

Model variables are described as following: A is an independent variable, O is an outcome variable, B is a moderator variable, and C is a mediator. In regard to variables A, B and O, the model is a canonical example of a moderator effect, but in addition to this, C is mediating the interaction effect of AxB on O. Therefore, this is the case of a mediated moderation model.

The path diagram of the second model is depicted in Figure 5:

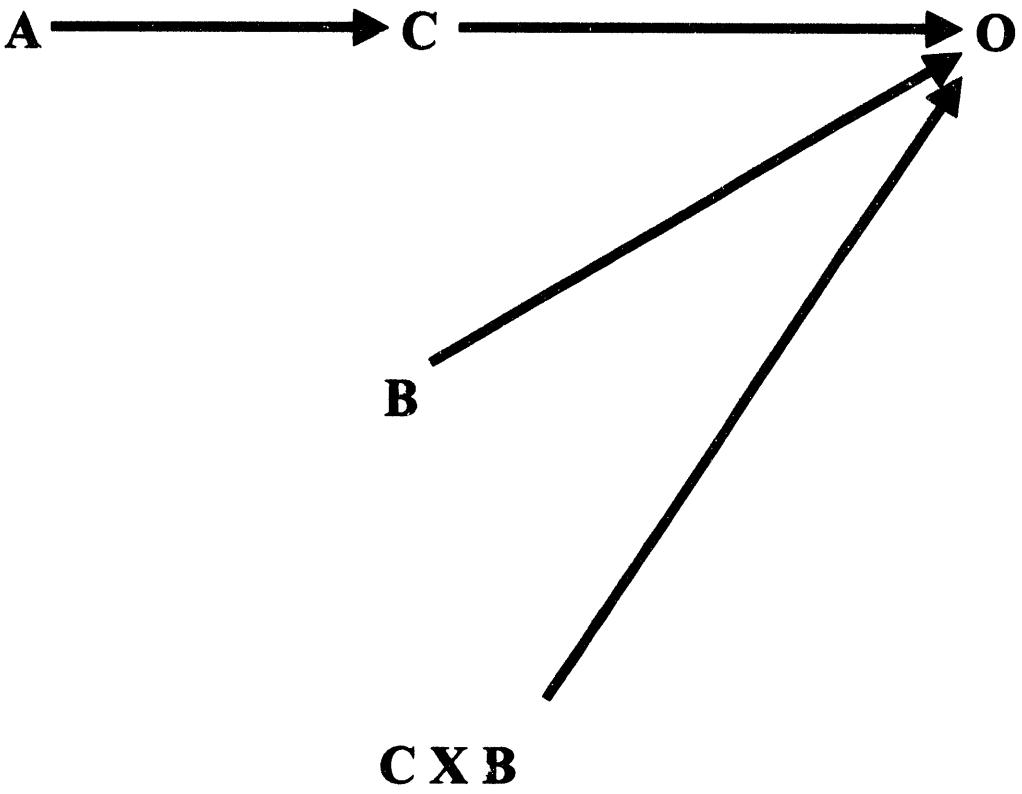


Figure 5. Moderated mediation

Model variables are described as following: A is an independent variable, O is an outcome variable, C is a mediator and B is a moderator variable. In regard to variables A, C and O, the model is a canonical example of a mediation effect, but there is in addition to this an interaction effect of CxB on O. Therefore, this is a case of a moderated mediation model.

4. Research Methodology

Exploratory research on Internet customer experience with an emphasis on trust and usability was the first stage of our research project. It was done in October 2000 in collaboration with McCann-Erickson WorldGroup and Zentropy Partners. After identifying vocabulary and terminology of trust from the customer point of view, initial survey questions were refined and reevaluated. Later that year, NFO WorldGroup conducted the survey and collected a representative data sample, taking into account the set of recommendations from the first stage of the research project. The first wave of responses was heavily disproportionate on a gender basis and was therefore unacceptable for further use in estimating the model parameters, but the second wave of responses in March 2001 satisfied all the requirements and was used for the empirical part of this paper.

4.1. Exploratory Stage

In order to perform quantitative research to validate the drivers and role of trust, an exploratory qualitative research was first conducted. Pre-testing the data collection methodology and the self-administrated questionnaire in order to recommend improvements was the main objective of the first stage.

The research was conducted over three days (October 2-4, 2000) at a focus group facility in Boston. Each day consisted of 8 one-on-one, in-depth, face-to-face interviews lasting 45 minutes and conducted by a trained qualitative moderator. In total, 24 interviews were completed, and each interview was audio- and video-recorded. In order to obtain a representative sample of data, participants were chosen from different demographic groups and had different interests and levels of familiarity with the Internet. During each session, a respondent was assigned to a website and asked to perform a task there while the moderator left the room. After the respondent had completed the task and had some time to browse the site, the moderator asked both general questions about the experience and more specific questions regarding the site's layout, navigation, content, trust and other issues. Lastly, respondents were asked to circle words/phrases in the survey that they found confusing, reword statements in their own words and make any other general comments about the statements.

Among the various findings from the first stage on procedure and content improvement, the following set of recommendations was identified as essential for the success of the quantitative study:

- Add quotas for different levels of comfort with Internet-based tasks, such as information gathering, shopping, banking/investing, etc
- Create quotas for age by Internet usage
- Prescreen respondents based on degree of interest in various categories and assign them randomly to visit a predetermined website within one of those categories
- Prescreen respondents based on familiarity with proposed websites, and obtain a quota sample for both "familiar" and "unfamiliar"
- Categorize websites into comparable levels of experience and activities as delivered by the company today, such as shopping for small items, managing personal finances in real time, general searching for information, etc
- Assign specific tasks for a respondent based on category of business and what the current website allows you to do today
- Allow the respondent at least 20 minutes to conduct the assigned task, and to explore the website appropriately

These recommendations were adopted in the quantitative stage of the research project, which we describe below.

4.2. Sampling and data collecting stage

NFO WorldGroup conducted the first wave of survey data collection at the end of 2000, but the resulting sample turned out to be heavily disproportionate on a gender scale and therefore was inadequate for further use in estimating the model. Hence, another wave of survey data collection was conducted at the beginning of 2001, and this produced the suitable balanced sample that is used in the empirical part of this paper. The sampling and data collecting procedures are described in the following chronological report of the second, successful wave:

- 2/19/01 – 2/22/01: NFO designed a sample of 120,000 U.S. online individuals with the following parameters:
    - key balancing demographics included: age, gender, income, geography, market size and household size
    - These 120,000 individuals were divided into 20 groups – 10 female and 10 males groups – each group being representative of the U.S. online population. The groups were created to facilitate releasing invitations on an as-needed basis.
- 2/22/01: 70,000 panelist invitations (35,000 male and 35,000 females) were emailed to participants, along with the pre-screener survey (see Appendix A).
- 2/26/01: 10,000 panelist invitations (5,000 male and 5,000 female) were emailed to participants.

- 3/2/01: 6078 male 18-29 panelist invitations were emailed to participants and 3548 18-24 females panelist invitations were emailed to participants.
- 3/8/01: 3100 male 18-24 panelist invitations were emailed to participants.
- 3/8/01: Returns from the first 70,000 pre-screener invitations (qualifying and non-qualifying) were weighted based on quotas of a representative U.S. Online population for: age, gender, income, geography, market size and household size. Only returns from the first 70,000 invitations were used because this was the most balanced sample and involving the other groups might have biased the weighting. The weighted data was used to cross interest category by demographics to determine ideal quotas for the sample build for each website in phase two. The data for each individual was sourced as follows:
    - NFO Master Panel Data was used for: household size, income, geography, income
    - Survey data was used for: age, gender
- 3/13/01: the pre-screener portion of the study closed.
- 3/13-3/15/01: NFO designed 27 sample groups (one sample group per website) according to the following criteria:
    - All individuals answering Q1, codes 1,2 or 3 AND Q2 any code were used to create the 27 sample groups.
    - In order to achieve 150 completes per website, each group contained 575-855 panelists.

- Individuals were assigned to websites based on their expressed interest in the category (Q2 of the pre-screener).
- The first priority was to create the necessary groups for the low incidence categories, saving the high incidence categories for the last sample builds.
- When possible, websites groups were balanced to quotas determined by the demographics profile of each category.

- 3/15/01: NFO invited 27 groups of panelists to view the respective websites and to participate in the final survey (Appendix A). The average time per session is 45 minutes, and the amount of cash reward is $20
- 3/26/01: The study closed, and data processing commenced.

Out of 27 websites initially chosen for the study, two (www.etown.com and www.softseek.com) went out of business during the data collection stage. The resulting list of 25 websites assessed in the study is included in Appendix A. Basic statistics for all variables in the collected sample of 6831 observations are included in Appendix A as well.

4.3. Sample splitting

Before proceeding with any data analysis, the sample was randomly split into a proportion of 2:1, with 4554 observations in the so-called "calibration" sample, and 2277 observations in the so-called "validation sample". Calibration data sample was subsequently used in exploring the factor structure, choosing the best model and estimating model parameters (Section 5), while validation data sample was used for model validation and assessing the predictive power of the model (Section 6).

5. Specifying and Analyzing the Model

There are numerous methods that could be used for analyzing the collected data, identifying possible determinants of trust, and linking trust with other important concepts. Structural equation modeling (with preceding exploratory and confirmatory factor analysis) was chosen for the following reasons:

- The necessity of using factor analysis procedure arises from the fact, that some variables of interest cannot be observed directly. These unobserved variables are usually referred to as latent variables or factors. While latent variables cannot be directly observed, information about them can be obtained indirectly by noting their effects on observed variables. Factor analysis is a statistical procedure for uncovering a smaller set of latent variables by studying the covariation structure among a set of observed variables.

- Since we did not specify the set of concepts and sets of variables related to the concepts before the study, exploratory factor analysis is necessary to empirically identify the latent variables and to choose the sets of observed variables that have higher loadings on the concepts of interest. After identifying these variables and concepts (latent variables), the covariance structure model will be formulated and assessed. Notice here, that while exploratory factor analysis and other specification search techniques provide

useful information, it is important to realize that since the sample data is used to select a model, the same data cannot be used to formally assess the fit of the model. This is one of the reasons why we split the data into calibration and validation samples: it allows us to use exploratory analysis and model selection on the calibration sample, with subsequent application of the best selected model to the validation sample for model validation.

- After identifying the concepts of interest and appropriate scales (related observed variables), we need to conduct confirmatory factor analysis to assess the measurement properties of the scales. Estimating latent variables through the confirmatory factor analysis is necessary in order to eliminate errors in measurement. Reliability checks are also performed at this stage.

- While the confirmatory factor model can provide correlations among latent variables, these are generally insufficient to determine the structural parameters of interest. This is why we need the second part of covariance structure model, where we estimate structural parameters through the application of a structural equation model (SEM) to the factors. Both confirmatory factor analysis and the incorporation of structural relations among latent variables can be accomplished with the LISREL model, which was developed by Karl Joreskog and Dag Sorbom in the 1970s. The LISREL

model has been extensively used in a number of disciplines, including psychology, sociology, economics and marketing.

- It is necessary to notice that the fit of a model to data in itself conveys no information about the validity of our theory of causal relationships. Although the hypotheses underlying model development may be causal in nature, assessing the fit of a model does not provide a basis for causal inference. Therefore, a more carefully designed study is needed to validate the causal relationships in the model (see implications for future research in Section 8).

5.1. Exploratory factor analysis

Before conducting exploratory factor analysis on the observed variables, we divided the variables into several groups, so that all variables in any given group would relate to some specific area/function. This division can be done based on common sense and the existing literature on trust.

5.1.1. Group descriptions

1. Website Cues.

The first group (website cues) consists of the variables describing objective basic features of a particular website, including touch and feel, security and privacy statements, presence or absence of shopping tips and trust seals, mechanism of order fulfillment and means of communication, etc. The complete list of questions used to obtain all variables in this group is given below:

1. The site is easy to use
2. Overall layout of the site is clear
3. The site layout is consistent across all pages
4. The process for browsing is clear
5. The site has legible images, colors and text
6. The site uses simple language
7. The site uses a layout that is familiar
8. There is a readily available site map, which allows you to figure out where to go and what you can do at the site

9. There are useful links to other sites that aid the primary purpose of coming to this site

10. The site is visually appealing

11. The visual appearance and manner of the site is professional (not amateur looking)

12. The site displays a high level of artistic sophistication/creativity

13. This site features are state-of-the-art, better than most sites in this industry

16. The site is engaging and captures attention

17. The site is entertaining

18. Information on the site can be obtained quickly

19. I am familiar with the company whose site this is

21. The site carries products and services with reputable brand names

22. I am generally familiar with other brands (products and services) being advertised on the site

26. The general privacy policy is easy to find on the site

27. The text of the privacy policy is easy to understand

28. The site clearly explains how user information is used

29. Information regarding security of payments is clearly presented

30. Informational text regarding the site's use of cookies is clearly presented

32. The site explains clearly how my information will be shared with other companies

35. There were signs or symbols on the site placed there by third-party companies indicating that the site had been reviewed or audited for sound business practices

36. There were trust seals present (e.g. TRUSTe)

37. There were seals of companies stating that my information on this site is secure (e.g. Verisign)

38. Information is present indicating that this site has received a best site award

39. Endorsement by celebrities is present

40. Testimonials / endorsement by past users is present

41. The site content is easy for me to understand

42. The content appears to be up-to-date

43. The site provides accurate and relevant information

44. The site provides me with sufficient information to make a purchase decision on all products being offered

45. The illustrations for the products and services at the site are helpful in making a purchase decision

46. The site has useful shopping support tools (such as a calculator or planner)

47. The site provides an explanation of services and products being offered

48. The site set up can be personalized to my needs

49. The site can recommend products based on previous purchase

50. The site allows me to create products or services to exactly fit my needs

51. Products can easily be compared

52. Comparisons of all competing brands are presented

53. Good shopping tips are provided

54. To recommend products, easy to answer questions are asked about my preferences

55. Useful shopping recommendations are made based on my personal information and preferences

56. The site is helpful to me in reaching my buying decisions

57. The site presents both benefits and drawbacks of products and services

58. A toll free number is easily found for live help

59. Informative magazine articles or editorial content are present

60. The site asks questions to determine needs and preferences

61. There is a search tool to help find information on the site

62. It is possible to interact on the screen with a shopping advisor

63. It is possible to contact a shopping assistant through e-mail

64. It is possible to communicate via fax to an expert advisor

65. The site appears to offer secure payment methods

66. The site accepts a variety of payment methods

67. Easy ordering and payment mechanisms exist

68. Service and product guarantees are clearly explained

69. Shipping and handling costs are listed up front

70. The site tells me immediately if something is out of stock, so time is not wasted going through the checkout process and finding this out later

71. Delivery options are available

72. Return policies or other measures of accountability are present

73. Once an order is placed, it can be tracked to see where it is in the shipping process

74. Order confirmation is given via e-mail

75. The items I looked at were in stock

76. The Internet links were in working order

77. There were no errors or crashing

78. There were no busy server messages

79. There were no pages 'under construction'

80. The download time was acceptable

81. All text and menus displayed properly

82. The site and its contents could be accessed without requiring too much personal information

83. All features of the site could be used without the requirement to download programs

84. It is easy to interact with other users of this site who may have bought things at the site before or who use the site frequently

86. I found games/puzzles/freebies or gifts on the site

87. I found photos of people/family/kids on the site

88. I found bios of executives on the site

89. The site allows user direct input or posting to site (bulletin board, e-mail, personals, etc)

90. Evidence of the site participating in philanthropy / charity is present

91. A chat room is available where consumers can discuss their experience with the site and/or its products

2. Action / Intention to Act

After spending some time at the website, online visitors were asked to make decisions on whether they wanted to make a purchase or not, whether they would recommend the website to a friend or not, whether they wished to register on the website or not, etc. The respondents were not actually being asked to buy the product, or register themselves, and it is known that purchase intentions are not necessarily best predictors of actual purchases (Morwitz 1997). Nevertheless, collecting several measurements of the same concept (Action) helped us to eliminate possible, and in most cases inevitable, errors of measurement. The following variables were included in this group:

33. I would be comfortable giving personal information on this site

34. I would be comfortable shopping at this site

118. I would purchase an item at this site

119. I would recommend this site to a friend

120. I am comfortable providing financial and personal information on this site

121. I would bookmark this site

122. I would register at this site

3. Trust

As mentioned above, there is no general agreement on the definitions of trust, believability, confidence etc. Therefore, in this study, a user had the freedom to define these notions as he/she understands it and rate the level of appropriate concept at the website accordingly. The following variables summarize all statements that were rated in the Trust group:

117. This site appears to be more trustworthy than other sites I have visited

124. My overall trust in this site

125. My overall believability of the information on this site

126. My overall confidence in the recommendations on this site

4. Trust dimensions

Not all variables describing user attitudes toward a website could be related to the Action, Trust or Website Cues groups. It is noticed in Literature Review section that trust is being perceived nowadays most commonly as a multidimensional concept. Therefore, we needed to specify a special group of variables describing the possible dimensions of trust in our study. The complete list of such variables is the following:

14.The site visually conveys a sense of honesty

15. The site feels warm and comforting

20. The site represents a quality company or organization

85. I enjoyed the overall experience of the site

123. The site represents a company or organization that will deliver on promises made

5.1.2. Exploratory factor analysis: procedure and results

The SAS System for Windows, Release 8.02 software product was used for exploratory factor analysis. In particular, the FACTOR procedure was employed, using principal component analysis option with orthogonal varimax rotation for the cases with more than one extracted factor. Scree test was used to define the number of extracted factors for each group normally, but in some cases, the resulting latent variables were not identifiable, and other rules were therefore implemented in such instances.

In the case of the Website Cues group, factor analysis results have not revealed variables describing content. However, content parameters have been mentioned in many previous empirical and theoretical studies as important determinants of trust, and therefore we could not ignore it. The group of content-related variables was analyzed separately, and the resulting latent variable was added to the list of Website Cues factors.

Complete results of all exploratory factor analysis are given in Appendix B. The following is the list of extracted factors for each group with their identifiers and three variables with the highest loadings on appropriate latent variable (if all three variables have absolute value of loadings higher than 0.60). Also, all cross-loadings for these variables were below the suggested maximum cross-loading of 0.40 (Ford, MacCallum et al. 1986).

Group Website Cues: 9 Factors

Factor 1: Touch&Feel

- Overall layout of the site is clear (2)
- The process for browsing is clear (4)
- The site is visually appealing (10)

Factor 2: Advice

- Good shopping tips are provided (53)
- To recommend products, easy to answer questions are asked about my preferences (54)
- Useful shopping recommendations are made based on my personal information and preferences (55)

Factor 3: NoErrors

- There were no errors or crashing (77)
- There were no busy server messages (78)
- There were no pages 'under construction' (79)

Factor 4: OrderFulfillment

- Delivery options are available (71)
- Return policies or other measures of accountability are present (72)
- Order confirmation is given via email (74)

Factor 5: Community

- The site allows user direct input or posting to site (bulletin board, email, personals, etc) (89)
- Evidence of the site participating in philanthropy/charity is present (90)
- A chat room is available where consumers can discuss their experience with the site and/or its products (91)

Factor 6: Privacy

- The text of the privacy policy is easy to understand (27)
- The site clearly explains how user information is used (28)
- The site explains clearly how my information will be shared with other companies (32)

Factor 7: TrustSeals

- There were signs or symbols on the site placed there by third-party companies indicating that the site had been reviewed or audited for sound business practices (35)
- There were trust seals present (e.g. TRUSTe) (36)
- There were seals of companies stating that my information on this site is secure (e.g. Verisign) (37)

Factor 8: Brand

- I am familiar with the company whose site this is (19)
- The site carries products and services with reputable brand names (21)

- I am generally familiar with other brands (products and services) being advertised on the site (22)

Factor 9: Content

- The content appears to be up-to-date (42)
- The site provides accurate and relevant information (43)
- The site provides me with sufficient information to make a purchase decision on all products being offered (44)

Group Action: 1 Factor

Factor 1: Action

- I would purchase an item at this site (118)
- I would recommend this site to a friend (119)
- I would register at this site (122)

Group Trust: 1 Factor

Factor 1: Trust

- My overall trust in this site (124)
- My overall believability of the information on this site (125)
- My overall confidence in the recommendations on this site (126)

Group Trust Dimensions: 2 Factors

Factor 1: Affection

- The site visually conveys a sense of honesty (14)
- The site feels warm and comforting (15)
- I enjoyed the overall experience of the site (85)

Factor 2: Cognition

- The site represents a quality company or organization (20)
- The site represents a company or organization that will deliver on promises made (123)

5.2. Measurement model: Confirmatory Factor Analysis

For all of the following tests, we used LISREL software, version 8.51 (October 2001) by Karl Joreskog and Dag Sorbom. Accompanying technical documentation and other couple sources (Bollen 1989; Kelloway 1998; Diamantopoulos and Siguaw 2000) were used for technical references.

5.2.1. One-Stage versus Two-Stage estimation

There are two basic approaches in structural equation modeling (SEM). Using a one-stage approach, both data and theory can be analyzed together, with loadings for the measures and estimates of the relationships between constructs estimated simultaneously (Bagozzi 1984). The alternative is a two-stage approach, where the researcher first assesses the quality of the measurement items (e.g. through confirmatory factor analysis) and then subsequently estimates the causal model using either the subset of measures identified as appropriate during first stage, or a one-indicator index formed from these measures (Anderson and Gerbing 1988). The strategy is based on the observation that the latent variable structural model incorporates the measurement model. Therefore, the fit of the measurement model provides a baseline for the fit of the full latent variable model. The full model, incorporating both structural and measurement relationships, cannot provide a better fit to the data than does the measurement model.

Incorporating Anderson and Gerbing's (1988) suggestions in our case suggested a sequence of model tests in which we first established the fit of the measurement model

and then moved to a consideration of the structural parameters of interest. The remainder of this section therefore provides the assessment of the measurement model.

5.2.2. Measurement model: Specification and Identification

In testing the measurement part of the model, we focused on the relationships between the latent variables and their indicators (i.e. the observed variables). The aim was to determine the validity and reliability of the measures used to represent the constructs of interest. Validity reflects the extent to which an indicator actually measures the latent variable, while reliability refers to the consistency of measurement (i.e. the extend to which an indicator is free of random error). Clearly, unless we can trust the quality of our measures, then any assessment of the substantive relations of interest (i.e. the links among the latent variables themselves) will be problematic.

The model is based on the latent variables extracted in exploratory factor analysis, and the corresponding indicators listed under each of the factors in section 5.1.2. Based on orthogonality of eight Website Cues factors from exploratory factor analysis and our need to separate an impact of content factor on trust as well, we imposed the constraint of orthogonality on all nine Website Cues factors. Maximum likelihood method of estimation was used.

5.2.3. Parameter Estimation: Validity and Reliability Checks

All parameter estimates and goodness-of-fit indices can be found in Appendix C. In this model, all indicator loadings are significant (at $p < 0.05$), as indicated by t-values well in excess of 1.96 in absolute terms, and all error variances of indicators are significant as well. The values of standardized indicator loadings are reasonably large, in the range between 0.52 and 0.94. All this provides validity evidence in favor of the indicators used to represents the constructs of interest.

Moving on to the reliability of indicators, the latter were examined by looking at the squared multiple correlations (R-squares) of the indicators. A high multiple squared correlation value denotes high reliability of the indicator concerned. For this model, all values of R-squares are substantially high, ranging between 0.27 and 0.88 with median value above 0.5.

It is also possible to calculate construct reliability for each latent variable:

Touch&Fl	0.828	Brand	0.749
Advice	0.874	Content	0.848
NoErrors	0.876	Affect	0.683
OrderFul	0.766	Cognit	0.625
Communit	0.712	Trust	0.847
Privacy	0.871	Action	0.797
TrustSls	0.791		

Since all values comfortably exceed 0.6, we concluded that our indicator sets provided reliable measurements of the constructs (Bagozzi and Yi 1988).

In summary, the assessment of the measurement part of our model revealed good evidence of validity and reliability for the operationalizations of the latent variables. We now turn to the evaluation and comparison of structural equation models.

5.3. Testing Affection and Cognition as Mediators of Trust

The literature review (Section 2) indicates that online trust most likely is driven by website cues and user characteristics. Also, previous research in offline trust emphasizes the importance of considering trust as a multidimensional concept. Therefore, given somewhat similar nature of offline trust and online trust concepts, it is likely that online trust could have several underlying dimensions as well. In the following model specification we are going to test whether the Website Cues factors drive Trust factor, and, subsequently, whether Affection and Cognition factors are mediating this relationship.

Consistent with the discussion of mediated relationships in Section 3, the test should include three rival specifications: a fully mediated model, a partially mediated model, and a nonmediated model. To illustrate application of these models in this case, consider the diagrams presented in Figure 6. Each diagram gives a plausible description of how Website Cues factors are related to the Trust factor. First, the fully mediated model suggests that Website Cues factors cause Affection and Cognition factors, which in turn cause the Trust factor. Second, the partially mediated model suggests that Website Cues factors cause not only Affection and Cognition factors, but also cause the Trust factor. Finally, the nonmediated model suggests that Website Cues factors cause all three factors, but there is no direct relationship between either of Affection or Cognition factor and the Trust factor.

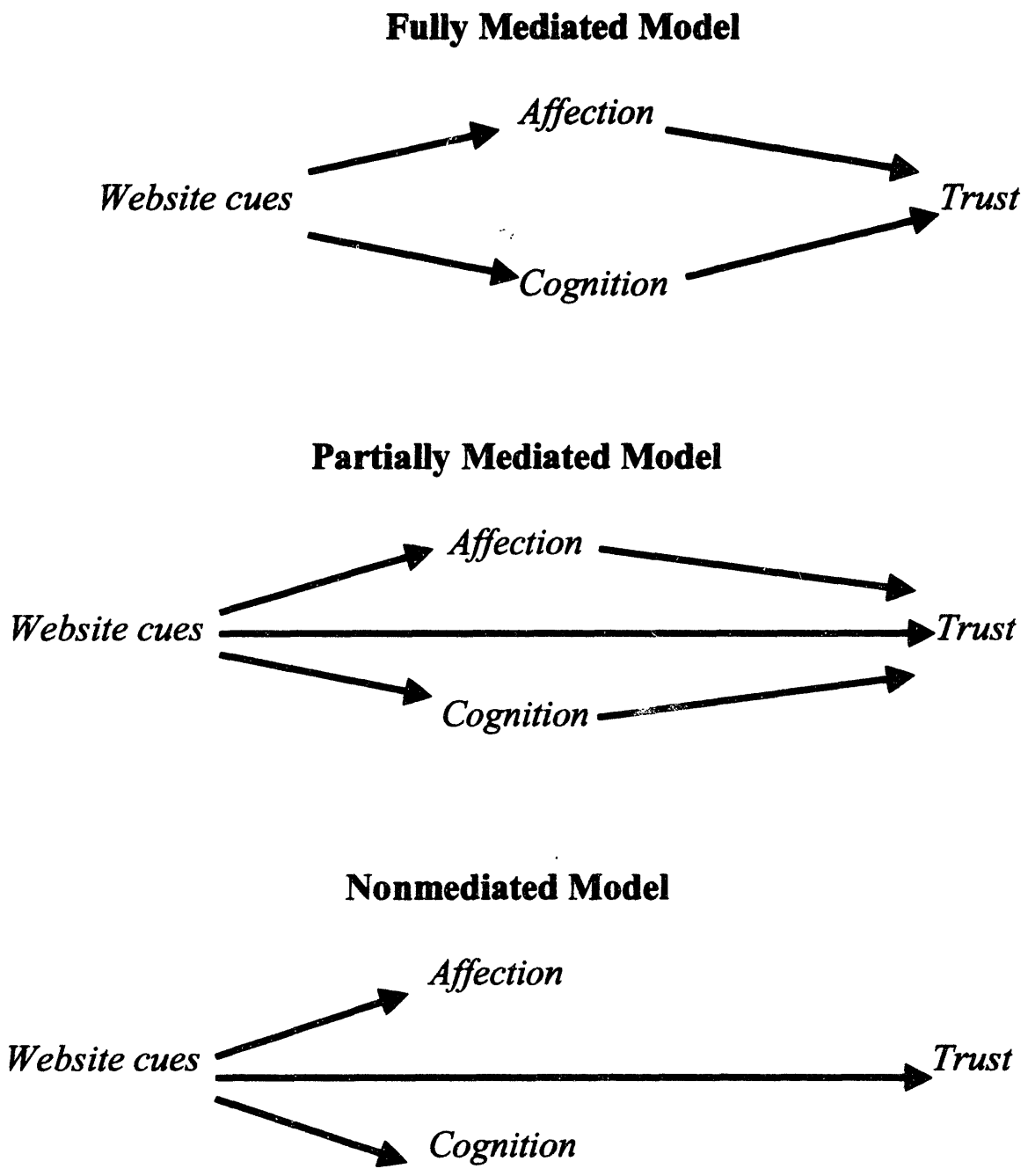


Figure 6. Affection and Cognition as Mediators

If Affection and Cognition factors relationships to the Trust factor are positively tested, it suggests a support for the following hypothesis, already discussed in Section 2 (McAllister 1995):

> *Trust is characterized by two dimensions – cognition-based trust and affect-based trust.*

5.3.1. Model Identification Issues

Broadly speaking, the problem of identification relates to the question of whether one has sufficient information to obtain the solution for the parameters to be estimated in the model. A necessary condition for identification is that the number of parameters to be estimated should not exceed the number of distinct elements in the variance-covariance matrix of the observed variables. This condition has been checked for all models tested in the paper. Unfortunately, it is not a sufficient condition for identification. General, easy-to-follow procedures for proving identification are unavailable except in specialized cases, and showing that a model is identified may be quite nontrivial for models with a high level of complexity (Baumgartner and Homburg 1996), which is exactly the case here. Moreover, even if a model is identified in principle, it may not be so in practice for some particular types of samples. Therefore, we have to rely on the LISREL program itself, which has a very handy diagnostic facility for detecting identification problems, including empirical underidentification problems as well; although LISREL's warning

facility is not infallible, "experience dictates that it is nearly so" (Joreskog and Sorbom 1996).

5.3.2. Problems with Assessment of Model Fit

Our model is quite unusual in its level of complexity. In the survey of prior applications of structural equation modeling in four major marketing journals, it was found that 75% of these models include only 17 observed variables and 266 observations (Baumgartner and Homburg 1996), whereas our model includes 38 observed variables and 6831 observations. Fitting models of this size renders most, if not all, of the available literature on assessing model fit and the properties of parameter estimates irrelevant (Dillon, White et al. 1997). The quantity of material appearing on this topic stands in stark contrast to the thinness of the current consensus on how to proceed (Hayduk 1996). However, researchers seem to agree on the following key points (Bollen and Long 1993):

- Strong substantive theory is fundamental to assessing model fit
- The chi-square test should not be the basis for determining model fit, because a variety of concerns, such as excessive test power (due to large N), may prompt the rejection of acceptable models
- No single measure of fit should be relied on exclusively, a number of goodness-of-fit indices should be compared if choosing among competing model specifications

We proceed according to these general guidelines. If comparing of fit indices does not reveal any differences, the choice is made on the differences in path coefficients and considerations of parsimonious fit (Hayduk 1996).

5.3.3. Choosing Best-Fit Model

Parameter estimates and goodness-of-fit indices can be found in Appendix D. First, we notice that error variance in the structural equation for Trust in partially mediated model is negative and also that solution in this case failed to converge. We also observe negative error variance in the structural equation for Cognit in the nonmediated model. Both outcomes are indicative of empirical unidentification in these models, in the sense that the information matrix is nearly singular. This unfeasibility of obtaining sufficiently good parameter estimates might be caused by very large correlations between latent variables, and, indeed, we find that both correlations between Cognit and Brand and between Cognit and Trust exceed 0.8.

Since this unidentification of both partially mediated and nonmediated models makes them impossible to use for comparison with fully mediated model, the nonmediated model was re-run with both intermediate factors (Affect and Cognit) eliminated (see the LISREL output in Appendix D). Hence, we needed to make a choice between this reduced nonmediated model and fully mediated model.

Inspection of validity and reliability of measurement parts of both models did not result in finding any undesirable departures from the measurement model considered above. All path coefficients, except Order Fulfillment and Trust Seals, are significant in

both cases. The signs of the significant parameter estimates are consistent with the hypothesized relationships among the latent variables. Hence, we used a set of goodness-of-fit indices to choose the best-fit model. Given below is the list of indices and statistics, chosen according to the recommendations from relevant methodological literature, including the direction indicating a better fit (Bollen 1989; Kelloway 1998; Diamantopoulos and Siguaw 2000):

Degrees of Freedom (df)

Minimum Fit Function Chi-Square (CH) (low)

Root Mean Square Error of Approximation (RMSEA) (low)

Normed Fit Index (NFI) (high)

Parsimony Normed Fit Index (PNFI) (high)

Comparative Fit Index (CFI) (high)

Relative Fit Index (RFI) (high)

Standardized Root Mean Square Residual (SRMR) (low)

Goodness of Fit Index (GFI) (high)

Adjusted Goodness of Fit Index (AGFI) (high)

Parsimony Goodness of Fit Index (PGFI) (high)

Table 1 presents the fit indices for the two structural models of interest.

	df	CH	RMSEA	NFI	PNFI	CFI	RFI	SRMR	GFI	AGFI	PGFI
Nonmediated	477	16002	0.101	0.81	0.73	0.81	0.79	0.25	0.77	0.73	0.65
Fully mediated	636	21755	0.099	0.79	0.72	0.8	0.77	0.27	0.75	0.71	0.64

Table 1. Choosing best-fit trust model

As shown, the nonmediated model provided a better fit to the data than the fully mediated model. This led us to reject McAllister's hypothesis on affection-based trust and cognition-based trust. We accept the nonmediated model for Trust, which was subsequently used for the structural equations model for Action.

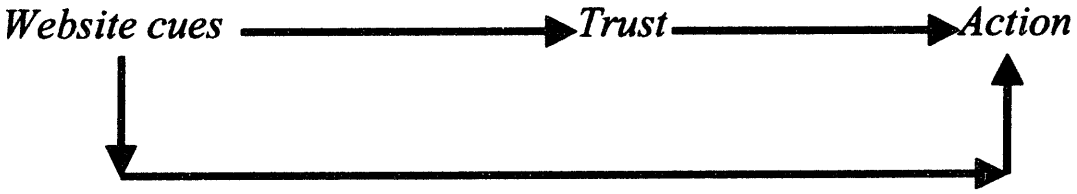
5.4. Testing Trust as a Mediator for Action

The literature review (Section 2) indicated that users' decisions to make a purchase at a website or bookmark a page might be driven not just by objective website trust cues, but that it could also be influenced by users' overall perceptions of the trustworthiness of the site. It was also established that overall trust perceptions might be driven by website trust cues. Using the following model specification, we tested whether the Website Cues factors drive Action factor, and, subsequently, whether the Trust factor mediates this relationship.

Consistent with the discussion of mediated relationships in Section 3, the test should include three rival specifications: a fully mediated model, a partially mediated model, and a nonmediated model. To illustrate application of these models in this case, consider the diagrams presented in Figure 7. Each diagram gives a plausible description of how Website Cues factors are related to the Action factor. First, the fully mediated model suggests that Website Cues factors cause the Trust factor, which in turn causes the Action factor. Second, the partially mediated model suggests that Website Cues factors cause not only the Trust factor, but also cause the Action factor. Finally, the nonmediated model suggests that Website Cues factors cause both factors, but that there is no direct relationship between the Trust factor and the Action factor.

Fully Mediated Model

Partially Mediated Model



Nonmediated Model

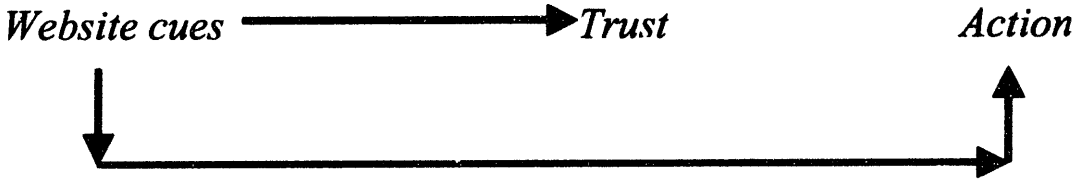


Figure 7. Trust as a Mediator

5.4.1. Choosing Best-Fit Model

Parameter estimates and goodness-of-fit indices can be found in Appendix E. Here, we needed to make a choice between the nonmediated, partially mediated and fully mediated models.

Inspection of validity and reliability of measurement parts of all three models did not result in finding any undesirable departures from the measurement model considered above. Almost all path coefficients are significant in all three cases. The signs of the significant parameter estimates are consistent with the hypothesized relationships among the latent variables. Hence, we used a set of goodness-of-fit indices to see if we can choose the best-fit model. Table 2 presents the fit indices for all three structural models of interest.

	df	CH	RMSEA	NFI	PNFI	CFI	RFI	SRMR	GFI	AGFI	PGFI
Nonmediated	477	16002	0.101	0.81	0.73	0.81	0.79	0.25	0.77	0.73	0.65
Partially mediated	476	14895	0.099	0.82	0.74	0.82	0.8	0.25	0.78	0.74	0.66
Fully mediated	485	15127	0.099	0.82	0.75	0.82	0.8	0.24	0.77	0.74	0.67

Table 2. Fit indices

As shown, all three models provide almost similar fit to the data. Therefore, we proceed with another comparison; next table shows structural path coefficients for links from Website Cues to Action for nonmediated and partially mediated models:

	T&F	Advice	NoError	OrdFul	Comm	Privacy	TrSls	Brand	Content
Nonmediated	0.203	0.172	0.06	0.082	0.062	0.037	0.053	0.258	0.476
Partially Mediated	0.115	0.098	-0.01	0.08	0.031	-0.02	0.036	0.065	0.075

Table 3. Path coefficients

We observe that effect of most Website Cues on Action is much smaller in the partially mediated model (error variances are smaller than 0.025 for every path coefficient). In addition, the standardized path coefficient from Trust to Action in the partially mediated model is 0.663 and r-square parameter of validity is larger in the partially mediated model vs. nonmediated model (0.59 vs. 0.38). This evidence is sufficient to conclude (Baron and Kenny 1986) that the partially mediated is preferable to the nonmediated model.

However, the models of partial and full mediation do not differ significantly; comparing the fit indices does not lead to any definitive conclusion and path coefficients are very similar. Based on the consideration of parsimonious fit (Kelloway 1998), the fully mediated model was retained for further analysis.

5.4.2. Analyzing Structural Equations for Trust and Action

Let us have a closer look at the parameters of the chosen model. The structural equations for Trust and Action are (t-values are in parentheses):

$$\underset{}{\text{Trust} = 0.18^{*}\text{Touch\&FI} + 0.15^{*}\text{Advice} + 0.14^{*}\text{NoErrors} + 0.02^{*}\text{OrderFul}}$$
$$\underset{}{\qquad\qquad (12.11) \qquad (10.49) \qquad (9.77) \qquad (1.54)}$$

$$\underset{}{+ 0.03^{*}\text{Communit} + 0.13^{*}\text{Privacy} + 0.03^{*}\text{TrustSIs} + 0.25^{*}\text{Brand} + 0.49^{*}\text{Content}}$$
$$\underset{}{\qquad (2.04) \qquad (9.00) \qquad (2.17) \qquad (16.47) \qquad (30.72)}$$

$$R^2 = 0.39$$

$$\underset{}{\text{Action} = 0.78^{*}\text{Trust}, R^2 = 0.61}$$
$$\underset{}{\qquad\qquad (41.09)}$$

Several conclusions can be made. First, all path coefficients are significant, except one. The reason that the Order Fulfillment factor turned out not to be significant in the model might be the research methodology. Since survey respondents were not asked to make an actual purchase at the website, their perceptions of quality of order fulfillment at the web site could be seriously biased and not representative. Second, from the second equation, we see that Trust indeed plays a crucial role in users' behavior at the website. Finally, since all coefficients here are standardized, we can order website trust cues in their actual order of importance based on the coefficients from the first equation (Figure 8).

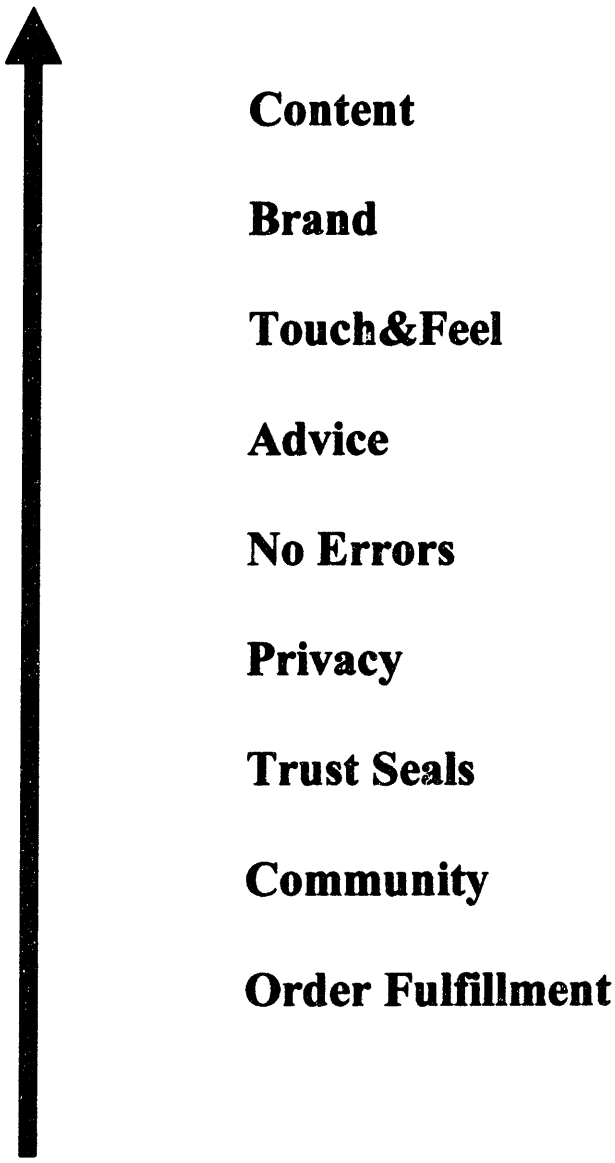


Figure 8. Website cues in the order of importance

6. Cross-Validation Analysis

In this section, we check that the fully mediated model of Trust, recognized, in the previous section as the best-fit model on the given sample, would actually work for other samples as well. In our cross-validation analysis, we use the split-sample approach whereby the total sample is randomly split to a calibration sample and a validation sample (see subsection 4.3). The former was used in the previous section to develop the model, while the latter is used to test the derived model. In this sense, cross-validation simulates prediction on an independent sample.

There are three types of cross-validation strategies: loose replication, tight replication and moderate replication strategies. Under loose replication strategy, the values of all parameters are allowed to differ between the calibration and validation samples. In case of tight replication strategy, we not only use the same model specification but also fix all parameters at the values estimated from the calibration sample before fitting the model to the validation sample. Finally, under a moderate replication strategy, some parameters are fixed to the values estimated from the calibration sample, while others parameters are set free and subsequently estimated on the validation sample.

We started by demonstrating that our model works under loose replication strategy. We proceeded with cross-validating the model under tight replication strategy, and then showed that this tight replication of the model works just as well as a moderate replication.

6.1. Implementing loose replication strategy

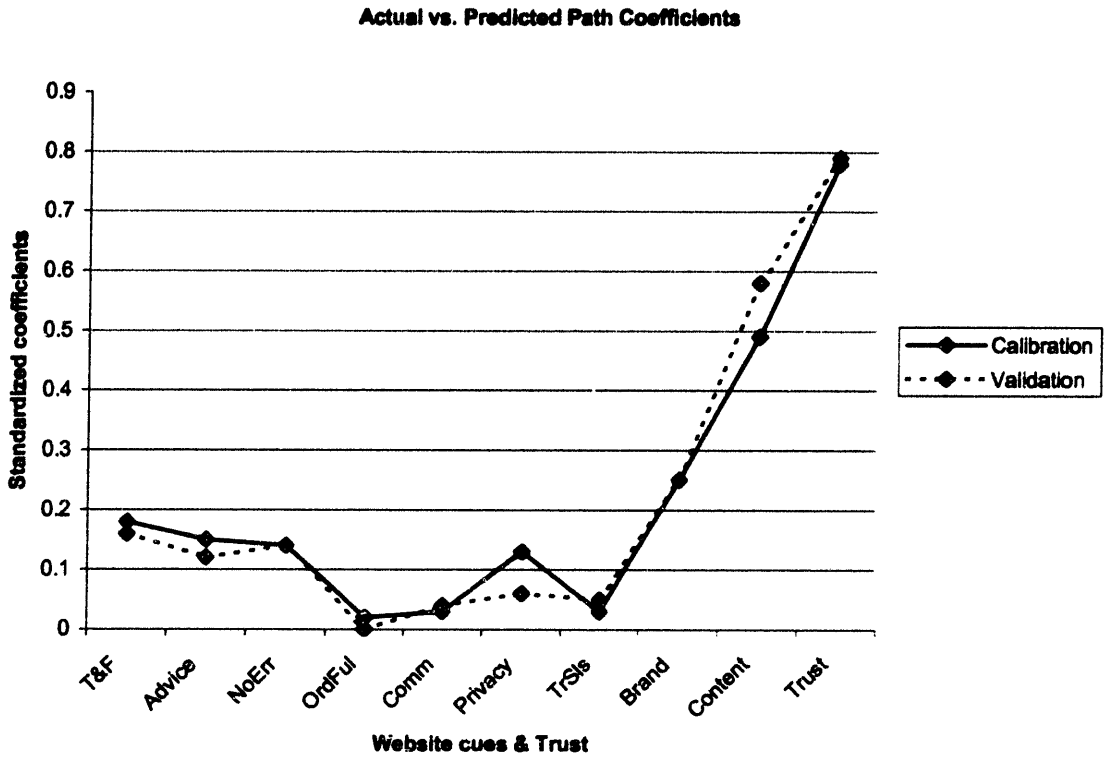
Parameter estimates and goodness-of-fit indices can be found in Appendix F. Overall, all path coefficients were significant (except Community and Order Fulfillment), and reasonable similarity in the fit statistics and coefficients of the structural equations in calibration and validation samples indicated the substantial predictive power of our model:

Fit statistics:

	RMSEA	NFI	PNFI	CFI	RFI	SRMR	GFI	AGFI	PGFI
Calibration	0.099	0.82	0.75	0.82	0.8	0.24	0.77	0.74	0.67
Validation	0.097	0.82	0.75	0.83	0.8	0.24	0.77	0.74	0.67

Path coefficients:

	T&F	Advice	NoErr	OrdFul	Comm	Privacy	TrSls	Brand	Content	Trust
Calibration	0.18	0.15	0.14	0.02	0.03	0.13	0.03	0.25	0.49	0.78
Validation	0.16	0.12	0.14	0	0.04	0.06	0.05	0.25	0.58	0.79



Next, we checked whether our model still performed adequately under fixed path coefficients constraint.

6.2. Implementing tight replication strategy

We used LISREL's multi-sample analysis facility for implementation of tight replication strategy. Since all parameters were the same as in the calibration sample, only overall (across two samples) goodness of fit statistics are included in Appendix F. For interpretation purposes, we also implemented a moderate replication strategy (see results in Appendix F), where all path coefficients were set free (i.e. re-estimated in the validation sample). Cross-validation overall goodness-of-fit statistics from both moderate and tight replication strategies are shown in the following table:

	Df	CH	RMSEA	NFI	PNFI	CFI	RFI	SRMR	GFI
Tight	1044	22858	0.095	0.82	0.81	0.82	0.81	0.24	0.77
Moderate	1001	22838	0.097	0.82	0.77	0.82	0.81	0.24	0.77

We can now formally compare the results of the tight and moderate replication strategies by means of a chi-square difference test. It is only possible because we have two nested models; tight replication strategy can be derived from the moderate replication strategy by introducing additional equality constraints. Specifically, the chi-square difference here is 20, while the difference in degrees of freedom is equal to 43. A chi-square value of 20 with 43 degrees of freedom is not significant ($p<0.05$), which implies that a tight replication of the model works just as well as the replication with free path coefficients. This shows that our model replicates well even under strict conditions and confirms strong predictive power of the model.

7. Analysis of Moderator Variables

As noted in our literature review (Section 2), many researchers tend to include user and demographic characteristics in a set of factors that affect online trust and its role in customer behavior at a website. Nevertheless, the mechanism of interaction between user characteristics and trust is quite elusive and seems to be hard to identify, as was observed in some studies. Therefore, without knowing how or why this interaction occurs, we cannot include these variables in the model as mediator constructs. However, as some modelers in e-commerce noticed, it seems plausible that these variables might be moderator variables in the online trust model; they could either moderate impact of website cues on trust, or moderate impact of trust on consumer decisions. This section discusses and tests a set of hypotheses related to this proposition.

7.1. Methodology and results

Six variables were chosen to be tested as potential moderator variables. Observations from previous studies, parallels with similar research in offline trust and common sense were among the criteria for choosing these variables. The final list includes three demographic variables and three user characteristics variables:

Gender (q110)

Education (q113)

Income (q115)

Level of Internet Expertise (q105)

Prevalence of Business Internet Usage over Household Usage (q104)

Presence of Previous Experience with a Website in question (q100)

All these variables were tested as qualitative moderators with two values. In order to prevent potential problems with different sample sizes, the values were determined so as to insure an approximately similar number of observations per value for every moderator variable, and were assigned based on their range according to the following scheme (Figure 9):

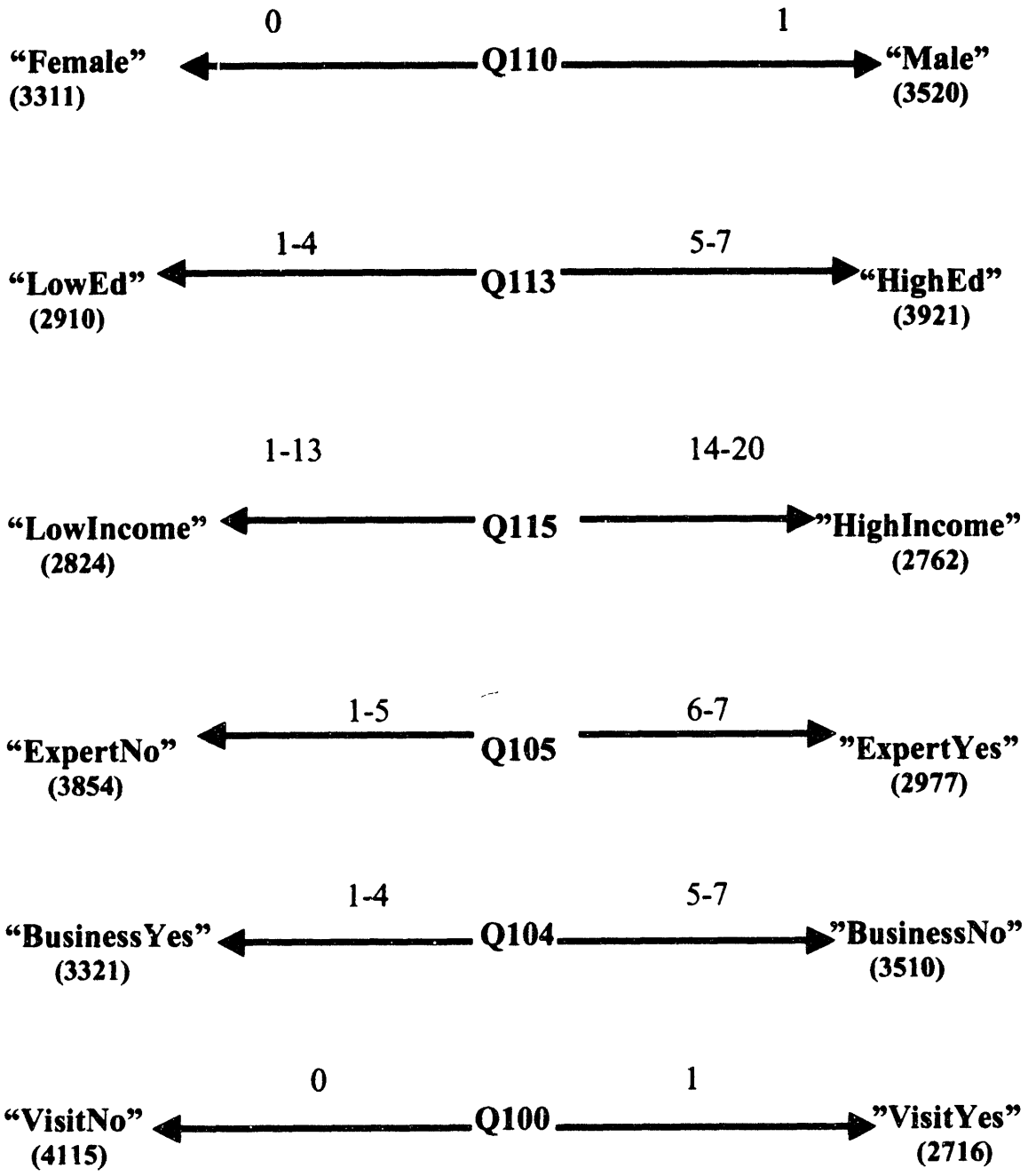


Figure 9. Assigning values to moderator variables

The methodology is described in section 3. Ten causal links were tested as potentially moderated by user characteristics: nine links between website cues and trust and the link between trust and action in the fully mediated model, as developed in Section 5. In the analysis, 60 nested structural equations models were tested. All 6831 observations from both calibration and validation samples were used. The generalized Least Squares method was used in LISREL implementation. The LISREL outputs for all 12 values of 6 moderator variables are listed in Appendix G. The results are presented in the following manner:

1. Our model was applied to 12 sub-samples, each consisting of observations with identical values for one of the moderator variables. The resulting standardized path coefficients provided some approximation of the size of interaction effects, and they are shown in six tables.
2. After estimation of all nested models, the differences in chi-squares were calculated and the presence of interaction effects determined. Those interaction effects that are significant ($p<0.05$), are listed under each moderation variable.

Part 1: Path Coefficients

	T&F	Advice	NoError	OrdFul	**Comm**	Privacy	TrSIs	**Brand**	Content	Trust
Male	0.166	0.129	0.152	-0.014	**0.077**	0.105	0.023	**0.193**	0.517	0.798
Female	0.177	0.146	0.126	0.069	**0.012**	0.103	0.056	**0.309**	0.519	0.776

	T&F	Advice	NoError	**OrdFul**	**Comm**	Privacy	TrSIs	**Brand**	Content	**Trust**
HighEd	0.158	0.154	0.131	**0.071**	**-0.028**	0.101	0.053	**0.301**	0.518	**0.786**
LowEd	0.183	0.115	0.149	**-0.032**	**0.119**	0.101	0.024	**0.192**	0.515	**0.783**

	T&F	Advice	NoError	**OrdFul**	**Comm**	Privacy	TrSIs	**Brand**	Content	**Trust**
HighIncome	0.154	0.147	0.105	**0.085**	**0.038**	0.095	0.063	**0.279**	0.531	**0.792**
LowIncome	0.177	0.117	0.151	**-0.039**	**0.134**	0.107	0.021	**0.185**	0.52	**0.782**

	T&F	**Advice**	NoError	OrdFul	**Comm**	Privacy	TrSIs	**Brand**	**Content**	**Trust**
ExpertYes	0.174	**0.152**	0.122	0.063	**0.011**	0.098	0.051	**0.319**	**0.518**	**0.771**
ExpertNo	0.171	**0.127**	0.153	-0.013	**0.073**	0.111	0.03	**0.196**	**0.515**	**0.799**

	T&F	Advice	NoError	OrdFul	**Comm**	Privacy	TrSIs	**Brand**	Content	Trust
BusinessYes	0.164	0.126	0.155	-0.012	**0.085**	0.099	0.022	**0.2**	0.514	0.798
BusinessNo	0.176	0.147	0.126	0.07	**0.015**	0.106	0.054	**0.3**	0.523	0.777

	T&F	Advice	NoError	**OrdFul**	**Comm**	Privacy	TrSIs	**Brand**	Content	**Trust**
VisitYes	0.177	0.121	0.158	**-0.039**	**0.134**	0.105	0.023	**0.179**	0.516	**0.78**
VisitNo	0.163	0.152	0.123	**0.069**	**0.034**	0.1	0.051	**0.305**	0.515	**0.786**

Part 2: Identifying Moderation Effects

Gender:

*Brand, Community**

Education:

Trust, Brand, Community, Order Fulfillment**

Income:

Trust, Brand, Community, Order Fulfillment*

Level of Internet Expertise:

Trust, Brand, Content, Community, Advice*

Prevalence of Business Internet Usage over Household Usage:

*Brand, Community**

Presence of Previous Experience with a Website in question:

Trust, Brand, Community, Order Fulfillment

* - path coefficient is not significant in one of sub-samples

7.2. Discussion of interaction effects

Brand, Community and Order Fulfillment causal links to trust and the causal link from trust to action appear to be moderated by several user characteristics. We discuss the impact of each of moderator variables on these links and suggest some explanations for these interaction effects.

We see that role of Brand in perceptions of Trust is more important for female users than for male users. This might be the effect of gender differences in risk-averseness; that is, female users need more assurances of past performance to develop trust. On the other hand, we observe that male users require a higher sense of community at a website, whereas female users perceive Community factor as not significant for online trust.

Brand also plays a more important role in building Trust, and Trust has a larger weight in customer decisions, for higher educated users and also for customers with higher income. This could be explained by their lower sensitivity to price, when compared to low income/low education consumers, i.e. they can afford to pay a premium for a privilege to buy from a more trusted website with a better brand. Order Fulfillment factor is significant and more pronounced for high income/high education customers for the same reason: they are willing to pay more for a better service from a seller side. In addition, high income/high education individuals pay much less attention to the Community factor, possibly because they can afford to obtain information about a website from other sources than a chat room.

Those people who feel more confident about their ability to assess the quality of websites, pay more attention to Advice, Brand and Content when developing their perceptions of the trustworthiness of a website, though Trust itself weighs less in their decisions compared with non-expert users. This might be the result of their higher level of awareness in regards to various website characteristics, such as Advice, Brand and Content. They also probably rely mostly on observable website cues when making decisions, since they supposedly know more about it, whereas non-expert consumers rely more on their perceptions of trust when deciding whether to make a purchase or not. In addition, non-expert users feel the Community factor to be significant in forming their perceptions of trust.

People using Internet mostly for business needs consider Brand to be less important and Community factor to be more important to trust, than people using Internet primarily for household needs. This can be explained by the fact that business-oriented consumers are more concerned about the current situation at a website, and therefore they tend to trust sites whose quality can be confirmed in the chat room today (Community factor), than to trust sites with a better brand (i.e. evidence of better past performance).

First-time visitors care more about Order Fulfillment and Brand than visitors with some previous experience, when forming their perceptions of trust. This seems to stem from the fact that first time visitors are more cautious, i.e. they will trust you if you were good about delivering goods/services in the past (Brand) and it looks like you are still keeping your promises today (Order Fulfillment). The larger weight of trust in the decision process of first-time visitors may also result from their lack of experience with

the website; those with previous experience can use it for making decisions, whereas first time visitors have to rely more on trust. Ability to use the Community factor might also be available only to the consumers who previously dealt with the website: people rarely use the chat rooms during their first visits at the websites.

8. Conclusions

This last section discusses several recommendations for practitioners, limitations of the study, implications for future research and conclusion.

8.1. Recommendations for Practitioners

Our study demonstrates and recognizes the importance of trust in building and maintaining customer relationships in online environment. The framework of the fully mediated model leaves no doubt that successful online business is impossible without trust. Therefore, online retailers should be creative in finding different ways to earn consumer trust, and in this respect, the current study has many practical implications.

We identified nine major drivers of trust in order of importance (see Figure 8). Even though advising online merchants to pay special attention to the content of the website seem trivial, it is still not uncommon to come across a website where information has not been updated for months. It is essential that all information necessary to make a purchase decision on all products be offered at the website. Accuracy and relevancy of the content at the website might be a critical factor in consumers' perceptions of trust and their purchase behavior.

Another obvious, but nevertheless often neglected, driver of trust is brand. This website characteristic is the trust mark that is the cue for all the past 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. Hence, those online merchants with high brand equity should not hesitate to invest more in brand transference and to use symbolic brand-related elements in the design of their website, and those who do not have recognizable brand should strive to build it up in order to reap the accompanying advantages.

The next item in our list is Touch&Feel. A professional and creative look, easy and intuitive navigation, and consistent layout are all necessary not just because it is good for a website to look nice and be usable, but because this is one of the requirements for earning consumer trust nowadays. Our study shows that quality of navigation and presentation at a website plays an important role in users' assessment of trustworthiness. Therefore, special efforts should be directed at increasing usability of a website and making it look visually appealing to a customer.

Customers often feel lost among an overwhelming number of menus and choices at websites, which explains why we have Advice factor on the list of trust drivers. It has been noted (Urban, Sultan et al. 2000) that a virtual advisor can help build trust and thus sales on the Internet for products that have numerous and complex attributes. Though it might be not necessary to provide a special virtual advisor for every product category, customers nevertheless should always be provided with careful assistance and guidance as they navigate a website.

As obvious as it may sound, nobody would ever trust a website that is prone to crashes. There are still many online merchants who do not yet recognize the crucial impact of the No Errors factor on consumers' trust and their subsequent purchase decisions. Unfortunately, the same could be said in regard to the Order Fulfillment factor,

even though the significance of it is not universal across all groups of customers in our study (see next subsection for possible reasons). Failing to meet customer expectations is the quickest way to destroy trust. Therefore, online merchants should use the most reliable software and hardware to exclude such trustbusters as busy server messages, pages "under construction" and frequent errors at the website. Critical order fulfillment functions would include shipping the right product at the right time, automated tracking services, error-free billing, effective service and support.

It is been known for quite a while that privacy is essential for online trust and that third-party seals of approval can provide an important cue to consumers that they can trust a particular website. This is why the presence of the Privacy and Trust Seals factors on our list is not surprising. Relatively low placement indicates the large amount of effort that online retailers have made lately to keep customers' personal data private and to obtain certification from such organizations as TRUSTe and VeriSign. Nevertheless, the significance of these factors in our model points out that privacy issues are still crucial in gaining customer trust. Several recommendations here would include not employing cookies unless their use is specifically allowed by the individual customer, using more sophisticated tools to protect users' personal information, and displaying trust seals on all relevant web pages.

One of the last but not the least factors among online trust drivers is the Community factor. Our study shows that creating customer communities that present user feedback is one of the ways to establish website trust. However, a word of caution is due here. Although customer feedback is a potential trust builder, there are real limitations.

Abuse by supposedly impartial reviewers can bias the input (Urban, Sultan et al. 2000), and a manufacturer may hire a firm to create favorable comments about its products and unfavorable comments about competitors' products, etc. When using customer feedback, online merchants should implement effective policing rules together with a warning to their customers that such anonymous reviews may be unreliable.

According to the path coefficients from the structural equations model in our study, customers do not give the same weight to all website cues in building website trust. Moreover, as our moderation variables analysis shows, depending on the type of user, each one of website cues contributes to trust with different weights. Therefore, if a company is able to identify the type of customers it deals with or wishes to attract, it will be in a position to fine-tune their interface in order to earn consumer trust more efficiently. Alternatively, a company can use different interfaces for different types of customers to achieve the same goal.

For instance, if a company distributes high-quality cosmetic products, then most of its customers are probably females with a relatively high income. The table in section 7 shows that online trust (and purchase decisions) of females and high-income people depends on Brand factor more heavily, when compared with the population in general. This means that greater investment in building and transferring brand attributes to the website might result in higher ROI for this particular cosmetics company. The same type of logic can be used in applying the results of our study to a variety of other companies, if they are able to differentiate their customers on the basis of gender, education, income, Internet knowledge, business usage and previous experience.

8.2. Limitations and implications for future research

We start our discussion with the research methodology issues and then proceed to the theory developing and validating concerns.

Methodology

One of the limitations of this study was the fact that the respondents were not asked to spend any real money on the websites; they merely indicated their purchase intentions, which might be not a reliable predictor of the actual purchase in some cases (Morwitz 1997). Hence, it is possible to improve the study by setting up a reward structure for respondents in such a way that actual purchases at the website become an option. Including the amount of money actually spent on the website into the Action factor might significantly improve our model.

The absence of real purchases in the study might be also the reason for the non-significance of the Order Fulfillment factor path coefficient in the Trust factor structural equation. Including buying processes in the study might reveal a greater role for order fulfillment in comparison to our results.

Another limitation of our study relates to the fact that the only data points we collected were surveys that were completed immediately after the first tour of the website. Since some website characteristics might be not accurately measured on a "one-visit" basis (e.g. order fulfillment), substantial improvement can result from a longitudinal study. Giving respondents an opportunity to visit the websites periodically

for some period of time and collecting several data points (e.g., at the beginning, in the middle and at the end of the time period), might produce considerably better measurements for all variables in the model. It would also allow us to look at the development of online trust over some period of time and to test whether earning online trust is a multi-stage process or not.

Estimating the models and choosing the one with the best fit revealed certain problems with LISREL implementation. First, an absence of simple algorithm for theoretical model identification results in delegating identification check to LISREL's diagnostic functions, which leads to potential difficulties with replication without the software. Second, lack of sensitivity in fit differences invariably puts more responsibility for choosing best-fit model on the researcher judgment and common sense. Both factors might have negative impact on the objectivity and validity of the research study.

As we noted in the research methodology section, we had to eliminate the data points related to two websites that went out of business during the period of data collection. In the future, researchers need to prescreen the websites chosen for a study more carefully in order to prevent potential problems that might lead to a skewed data sample.

Theory

The Affection and Cognition factors were rejected as potential trust dimensions in our study. However, this does not imply that trust is a one-dimensional construct, as there are a number of other potential dimensions of trust named in the literature but not tested

in the current study. Possible constructs that might be tested with appropriate scales as potentials dimensions of online trust include Competence, Integrity, Benevolence and some others.

The current study includes a test of whether the causal mediation link from the Trust factor to the Action factor is moderated by user characteristics, which is called moderated mediation. The test was positive for several variables, but the mechanism of interaction between trust and these moderator variables is not revealed in our study. Using more elaborate research methodology (e.g., a longitudinal study) might discover this mechanism, and, possibly, update our model with a mediated moderation structure connecting user characteristics and trust.

As we noted in Section 5, the fit of a model to data, in itself, conveys no information about the validity of our theory of causal relationships. Although the hypotheses underlying model development may be causal in nature, assessing the fit of a model does not provide a basis for causal inference. Therefore, more carefully designed studies are needed to validate causal relationships in the model. In particular, the experimental design should include control and test groups, clear and precise treatments, and careful measurements of outcomes.

8.3. Conclusion

The structural equations model that links consumer perceptions of website characteristics to perceptions of overall trust in a website and perceptions of trust to consumer behavior related to the website was developed. The proposed model identifies nine website characteristics factors that drive online trust. The fully mediated structural equations model with online trust as a mediator between website characteristics and consumer behavior was accepted as a best-fit model. A holdout sample was utilized to test the validity of the model. Applying several types of replication strategies revealed the substantial predictive power of the model. Six user characteristics and demographic moderation variables were described, and their significant interaction effects with website cues and trust were identified and assessed. Managerial implications for successful trust-based Internet strategy, incorporating appropriate usage of different website trust cues for different categories of customers, are presented.

Online trust is a relatively under-explored topic with a large number of open questions waiting to be answered. We hope that the study presented here provides answers to some of these questions and contributes to a better understanding of the determinants and consequences of trust in online environment.

Appendix A

Research Methodology

Pre-screener questionnaire:

1. Please select only one of the four options below to describe your own online shopping behavior that you have primarily engaged in during the past 3 months

1[ ] I have primarily searched for products/services and paid for it by completing the transaction online
2[ ] I have primarily searched for products/services online and purchased from web sites by paying for it via fax, phone, mail or other method but not made payment online
3[ ] I have primarily searched for information on products/services online but not purchased them from web sites.
4[ ] None of the above (Skip to Q.4)

2. Please select all of the categories/areas listed below that you, yourself would consider using the Internet to explore/research. (Select all that apply)

1[ ] Automotive (For example: kbb.com, carpoint.msn.com, gmbuypower.com)

2[ ] Family & Lifestyle (For example: webmd.com, ancestry.com, foodtv.com)

3[ ] Finance/Insurance/Investment (For example: marketwatch.com, etrade.com, schwab.com, insure.com)

4[ ] Personal/Business Electronics and Software (For example: Microsoft.com, dell.com, softseek.com, etown.com)

5[ ] Search Engines/Portals (For example: aol.com, mysimon.com, lycos.com)

6[ ] Shopping (For example: amazon.com, ebay.com, cdnow.com, proflowers.com)

7[ ] Sports (For example: sportsline.com, nike.com, mvp.com)

8[ ] Travel (For example: travelocity.com, aa.com, cheaptickets.com)

3. Thank you for your participation. The questions you answered today are part of a qualification process for a website evaluation survey. If you qualify, you will receive a survey the week of March 5, 2001 asking you to take a tour of a website and answer questions about your experience. For your participation in this survey you will
receive a cash payment. We look forward to your participation and hope that you enjoy the website tour and opportunity to provide your perspective.

Please click below to continue.

4. Just to verify, what is your age?

(Code_Min_Val: 16)
(Code_Max_Val: 99)

5. What is your sex?

1[ ] Male
2[ ] Female

6. Including yourself, how many people live in your household? (Select one)

1[ ] 1
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7+

7. What is your household's combined yearly income?

1[ ] Less than $20,000
2[ ] $20,000 - $34,999
3[ ] $35,000 - $54,999
4[ ] $55,000 - $84,999
5[ ] $85,000+
[ ] Prefer not to answer

8. What is the highest level of education you have completed? (Select one)

1[ ] Grade School
2[ ] Some High School
3[ ] Graduated High School
4[ ] Some College - no degree
5[ ] Graduated College - Associate's degree (2 year)
6[ ] Graduated College - Bachelor's degree (4 year)
7[ ] Post Graduate Degree - MS, MA, MBA, MD, DVM, PHD, DDS, etc.

9. What is your employment status? (Select one)

1[ ] Full -Time
2[ ] Part -Time
3[ ] Retired
4[ ] Not Employed

10. Where do you live? (Select one)

1[ ] Northeast (CT, MA, ME, NH, RI, VT)
2[ ] Middle Atlantic (NJ, NY, PA)
3[ ] East North Central (IL, IN, MI, OH, WI)
4[ ] West North Central (IA, KS, MN, MO, NE, ND, SD)
5[ ] South Atlantic (DE, District of Columbia, FL, GA, MD, NC, SC, VA, WV)
6[ ] East South Central (AL, KY, MI, TN)
7[ ] West South Central (AK, LA, OK, TX)

8[ ] Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)
9[ ] Pacific (CA, OR, WA)

Final Survey:

We hope you enjoyed exploring the web site. Thank you for taking time out of your day to help us with our research. We would like to reiterate that your participation is voluntary, and that you may decline to answer any questions. You may decline further participation at any time without prejudice, and your confidentiality and/or anonymity is assured.

In order to complete the survey you may feel the need to reference the website. The easiest way to do this without logging out of the survey is to minimize and maximize
screens. Please follow the directions listed below to allow for easy transitions between the website and survey.

1. After clicking on the website URL provided in the email letter, a new Internet window will appear.

2. Complete the web site tour. When finished, "minimize" the window by clicking on the minimize icon. The "minimize" button is in the upper right hand corner. There should be three icons in the upper right corner, one with an "x", one with two squares and a third with a small black dash. By clicking on the icon with two squares, the screen will shrink. If you want to make the screen larger, look for a new icon with only one square in the right hand corner. By clicking the icon with one square, the screen will enlarge or "maximize".

3. Now go back to the e-mail invitation and click on the URL for the survey and again, a new Internet window will appear.

4. By minimizing and maximizing both the web site and survey screens you will be able to move easily between both screens allowing you to reference the website while taking the survey, if needed.

1. Please answer the following questions about navigation at the web site. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

The site is easy to use

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

2. Please answer the following questions about navigation at the web site. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

Overall layout of the site is clear

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4

5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

3. The site layout is consistent across all pages

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

4. The process for browsing is clear

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

5. The site has legible images, colors and text

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

6. The site uses simple language

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

7. The site uses a layout that is familiar

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

8. There is a readily available site map (a summary of site links) which allows you to figure out where to go and what you can do at the site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

9. There are useful links to other sites that aid the primary purpose of coming to this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

10. Please answer the following questions about the web site's presentation and interface. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

The site is visually appealing

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

11. The visual appearance and manner of the site is
professional (not amateur looking)

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree
12. The site displays a high level of artistic sophistication/creativity

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3

4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

13. This site features are state-of-the-art, better than most sites in this industry

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

14. The site visually conveys a sense of honesty

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

15. The site feels warm and comforting

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

16. The site is engaging and captures attention

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ]
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

17. The site is entertaining

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

18. Information on the site can be obtained quickly

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

19. Please answer the following questions about the web site's brand. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

I am familiar with the company whose site this is

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

20. The site represents a quality company or organization

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

21. The site carries products and services with reputable brand names

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

22. I am generally familiar with other brands (products and services) being advertised on the site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

23. The quality of the brands being advertised on this site is consistent with the quality of the site's sponsoring company

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

24. The site is consistent with my image of the company whose site this is

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

25. The site enhanced how I feel about the company whose site this is

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

26. Now we'd like you to answer some questions about the web site's security/privacy. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 =
Strongly Agree)

The general privacy policy is easy to find on the site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

27. The text of the privacy policy is easy to understand

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4

5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

28. The site clearly explains how user information is used

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

29. Information regarding security of payments is clearly presented

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

30. Informational text regarding the site's use of cookies is clearly presented (A cookie is a program on your computer which allows companies to see where you go and what you do on their site and on the Internet)

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

31. I believe the company sponsoring this site will not use cookies to invade my privacy in any way

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

32. The site explains clearly how my information will be shared with other companies

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5

6[ ] 6
7[ ] 7 Strongly Agree

33. I would be comfortable giving personal information on this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

34. I would be comfortable shopping at this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

35. For the following questions about security/privacy, please select yes or no.

There were signs or symbols on the site placed there by third-party companies indicating that the site had been reviewed or audited for sound business practices

1[ ] Yes
2[ ] No

36. There were trust seals present (e.g. TRUSTe)

1[ ] Yes
2[ ] No

37. There were seals of companies stating that my information on this site is secure (e.g. Verisign)

1[ ] Yes
2[ ] No

38. Information is present indicating that this site has received a best site award

1[ ] Yes
2[ ] No

39. Endorsement by celebrities is present

1[ ] Yes
2[ ] No

40. Testimonials / endorsement by past users is present

1[ ] Yes
2[ ] No

41. Please answer the following questions about the web site's content. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

The site content is easy for me to understand

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

42. The content appears to be up-to-date

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

43. The site provides accurate and relevant information

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

44. The site provides me with sufficient information to make a purchase decision on all products being offered

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

45. The illustrations for the products and services at the site are helpful in making a purchase decision

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3

4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

46. The site has useful shopping support tools (such as a calculator or planner)

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

47. The site provides an explanation of services and products being offered

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

48. The site set up can be personalized to my needs

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

49. The site can recommend products based on previous purchase

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

50. Please answer the following questions about the web site's content. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

The site allows me to create products or services to exactly fit my needs

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3

4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

51. Products can easily be compared

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

52. Comparisons of all competing brands are presented

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

53. Good shopping tips are provided

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

54. To recommend products, easy to answer questions are asked about my preferences

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

55. Useful shopping recommendations are made based on my personal information and preferences

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

56. The site is helpful to me in reaching my buying decisions

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

57. The site presents both benefits and drawbacks of products and services

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

58. A toll free number is easily found for live help

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

59. For the following questions about content, please select yes or no.

Informative magazine articles or editorial content are present

1[ ] Yes
2[ ] No

60. The site asks questions to determine needs and preferences

1[ ] Yes
2[ ] No

61. There is a search tool to help find information on the site

1[ ] Yes
2[ ] No

62. It is possible to interact on the screen with a shopping advisor

1[ ] Yes

2[ ] No

63. It is possible to contact a shopping assistant through e-mail

1[ ] Yes
2[ ] No

64. It is possible to communicate via fax to an expert advisor

1[ ] Yes
2[ ] No

65. Please answer the following questions about the web site's order fulfillment. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

The site appears to offer secure payment methods

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

66. The site accepts a variety of payment methods

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

67. Easy ordering and payment mechanisms exist

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

68. Service and product guarantees are clearly explained

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

69. Shipping and handling costs are listed up front

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

70. The site tells me immediately if something is out of stock, so time is not wasted going through the checkout process and finding this out later

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

71. For the following questions about order fulfillment, please select yes or no.

Delivery options are available

1[ ] Yes
2[ ] No

72. Return policies or other measures of accountability are present

1[ ] Yes
2[ ] No

73. Once an order is placed, it can be tracked to see where it is in the shipping process

1[ ] Yes
2[ ] No

74. Order confirmation is given via e-mail

1[ ] Yes
2[ ] No

75. For the following questions about site characteristics, please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7= Strongly Agree).

The items I looked at were in stock

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3

4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

76. The Internet links were in working order

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

77. There were no errors or crashing

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

78. There were no busy server messages

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

79. There were no pages 'under construction'

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

80. The download time was acceptable

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

81. All text and menus displayed properly

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

82. The site and its contents could be accessed without requiring too much personal information

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

83. All features of the site could be used without the requirement to download programs (such as downloading a "flash" program to watch a video or to hear music)

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

84. Please answer the following questions about the web site's community. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

It is easy to interact with other users of this site who may have bought things at the site before or who use the site frequently

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

85. I enjoyed the overall experience of the site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4

5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

86. For the following questions about community, please select yes or no.

I found games/puzzles/freebies or gifts on the site

1[ ] Yes
2[ ] No

87. I found photos of people/family/kids on the site

1[ ] Yes
2[ ] No

88. I found bios of executives on the site

1[ ] Yes
2[ ] No

89. The site allows user direct input or posting to site (bulletin board, e-mail, personals, etc)

1[ ] Yes
2[ ] No

90. Evidence of the site participating in philanthropy / charity is present

1[ ] Yes
2[ ] No

91. For the following questions about community, please select yes or no.

A chat room is available where consumers can discuss their experience with the site and/or its products

1[ ] Yes
2[ ] No (Skip to Q.94)

92. If you found a chat room, was it easy to use?

1[ ] Yes
2[ ] No

93. If you found a chat room, was the conversation being monitored by anyone?

1[ ] Yes
2[ ] No

94. For the following questions about your Internet habits, please select yes or no.

I use the Internet as an information tool

1[ ] Yes

2[ ] No

95. I use the Internet for e-mail

1[ ] Yes
2[ ] No

96. I use the Internet for shopping

1[ ] Yes
2[ ] No

97. I use the Internet for banking/investing

1[ ] Yes
2[ ] No

98. I use the Internet for entertainment

1[ ] Yes
2[ ] No

99. I have used the Internet to take part in chat rooms

1[ ] Yes
2[ ] No

100. Before this survey, I was familiar with the site I have just evaluated

1[ ] Yes
2[ ] No

101. I have made a purchase on this site in the past

1[ ] Yes
2[ ] No

102. I have purchased products or services at other sites by completing the transaction online

1[ ] Yes
2[ ] No

103. Please answer the following questions about your thoughts and opinions to the following statements. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

I use the Internet primarily for business/work related activities

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6

7[ ] 7 Strongly Agree

104. I use the Internet primarily for household related activities

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

105. I consider myself to be quite knowledgeable about Internet sites in general

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

106. I am confident in my ability to assess trustworthiness of web sites

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

107. I am confident in my ability to assess the quality of a site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

108. The number of hours I spend per week on the Internet are:

1[ ]
(Code_Min_Val: 0)
(Code_Max_Val: 168)
(Code_Min_Dec: 0)
(Code_Max_Dec: 0)

109. Before today, approximately how many times had you visited this site?

(Code_Min_Val: 0)

(Code_Max_Val: 100)

110. What is your gender?

1[ ] Male
2[ ] Female

111. What is your age?

(Code_Min_Val: 16)
(Code_Max_Val: 99)

112. What is your employment status?

1[ ] Full-Time
2[ ] Part Time
3[ ] Retired
4[ ] Not Employed

113. What is the highest level of education you have completed?

1[ ] Grade School
2[ ] Some High School
3[ ] Graduated High School
4[ ] Some College - No degree
5[ ] Graduated College - Associate's degree (2 year)
6[ ] Graduated College - Bachelor's degree (4 year)
7[ ] Post Graduate Degree - MS, MA, MBA, MD, DVM, PHD,
DDS, etc.

114. Including yourself, how many people live in your household? (Select one)

1[ ] 1
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 or more

115. What is your household's combined yearly income? Be sure to combine the total income for all household members living with you such as wages or salaries, income from self-employment, rents, dividends, etc - BEFORE tax deductions. (Select One)

1[ ] Under $10,000
2[ ] $10,000 - $14,999
3[ ] $15,000 - $19,999
4[ ] $20,000 - $24,999
5[ ] $25,000 - $29,999
6[ ] $30,000 - $34,999
7[ ] $35,000 - $39,999
8[ ] $40,000 - $44,999
9[ ] $45,000 - $49,999

10[ ] $50,000 - $54,999
11[ ] $55,000 - $59,999
12[ ] $60,000 - $64,999
13[ ] $65,000 - $69,999
14[ ] $70,000 - $74,999
15[ ] $75,000 - $79,999
16[ ] $80,000 - $84,999
17[ ] $85,000 - $89,999
18[ ] $90,000 - $94,999
19[ ] $95,000 - $99,999
20[ ] $100,000+
21[ ] Prefer not to answer

116. Where do you live? (Select one)

1[ ] Northeast (CT, MA, ME, NH, RI, VT)
2[ ] Middle Atlantic (NJ, NY, PA)
3[ ] East North Central (IL, IN, MI, OH, WI)
4[ ] West North Central (IA, KS, MN, MO, NE, ND, SD)
5[ ] South Atlantic (DE, District of Columbia, FL, GA, MD,
NC, SC, VA, WV)
6[ ] East South Central (AL, KY, MI, TN)
7[ ] West South Central (AK, LA, OK, TX)
8[ ] Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)
9[ ] Pacific (CA, OR, WA)

117. Please answer the following questions concerning site characteristics. (Please rate each statement on a scale of 1 to 7, where 1= Strongly Disagree and 7 = Strongly Agree)

This site appears to be more trustworthy than other sites I have visited

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

118. I would purchase an item at this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

119. I would recommend this site to a friend

1[ ] 1 Strongly Disagree
2[ ] 2

3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

120. I am comfortable providing financial and personal information on this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

121. I would bookmark this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

122. I would register at this site

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

123. The site represents a company or organization that will deliver on promises made

1[ ] 1 Strongly Disagree
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Strongly Agree

124. Please rate your overall trust of this site on a scale of 1 to 7, where 1= Extremely Untrustworthy and 7 = Extremely Trustworthy

My overall trust in this site

1[ ] 1 Extremely Untrustworthy
2[ ] 2

3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Extremely Trustworthy

125. Please rate your overall believability of the information on this site on a scale of 1 to 7, where 1=Extremely Unbelievable and 7 = Extremely Believable

My overall believability of the information on this site

1[ ] 1 Extremely Unbelievable
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Extremely Believable

126. Please rate your overall confidence in the recommendations at this site on a scale of 1 to 7, where 1=Not Confident At All and 7 = Extremely Confident

My overall confidence in the recommendations on this site

1[ ] 1 Not Confident At All
2[ ] 2
3[ ] 3
4[ ] 4
5[ ] 5
6[ ] 6
7[ ] 7 Extremely Confident

127. What are your overall thoughts about this site? (Please be as specific as possible, if nothing comes to mind, please type in NA)

(Please Specify): [ ]

List of websites by category:

Auto
www.carpoint.com
www.gmbuypower.com
www.kbb.com
www.carsdirect.com

Finance
www.etrade.com
www.marketwatch.com
www.schwab.com

Computers
www.dell.com
www.microsoft.com

Sport
www.nba.com
www.sportsline.com
www.nike.com

Travel
www.aa.com
www.travelocity.com
www.cheaptickets.com

E-tailers
www.amazon.com
www.cdnow.com
www.proflowers.com

Community
www.ancestry.com
www.foodtv.com
www.webmd.com

Portals
www.aol.com
www.lycos.com
www.ebay.com
www.mysimon.com

Basic statistics for total sample of 6831 observations:

N	MEAN	STD	N	MEAN	STD	N	MEAN	STD
Q1	5.216	1.521	Q43	5.556	1.285	Q85	4.956	1.570
Q2	5.229	1.391	Q44	5.262	1.463	Q86	0.281	0.450
Q3	5.397	1.349	Q45	5.218	1.469	Q87	0.310	0.463
Q4	5.299	1.421	Q46	4.469	1.574	Q88	0.315	0.464
Q5	5.793	1.351	Q47	5.176	1.358	Q89	0.517	0.500
Q6	5.659	1.294	Q48	4.860	1.553	Q90	0.273	0.446
Q7	5.358	1.392	Q49	4.504	1.549	Q91	0.411	0.492
Q8	5.150	1.565	Q50	4.751	1.571	Q92	0.626	0.484
Q9	4.897	1.486	Q51	4.641	1.539	Q93	0.343	0.475
Q10	5.116	1.452	Q52	4.017	1.702	Q94	0.992	0.087
Q11	5.815	1.316	Q53	4.270	1.567	Q95	0.982	0.134
Q12	4.741	1.456	Q54	4.398	1.576	Q96	0.910	0.286
Q13	4.506	1.386	Q55	4.330	1.567	Q97	0.531	0.499
Q14	4.921	1.346	Q56	4.719	1.567	Q98	0.872	0.335
Q15	4.370	1.473	Q57	3.951	1.593	Q99	0.376	0.485
Q16	4.672	1.473	Q58	4.565	1.933	Q100	0.398	0.489
Q17	4.229	1.543	Q59	0.624	0.484	Q101	0.128	0.334
Q18	5.247	1.553	Q60	0.710	0.454	Q102	0.864	0.343
Q19	4.989	2.127	Q61	0.876	0.330	Q103	3.240	1.817
Q20	5.272	1.446	Q62	0.397	0.489	Q104	4.595	1.700
Q21	5.542	1.363	Q63	0.782	0.413	Q105	5.124	1.476
Q22	5.116	1.448	Q64	0.501	0.500	Q106	4.851	1.496
Q23	5.178	1.312	Q65	5.399	1.540	Q107	5.416	1.340
Q24	5.216	1.381	Q66	5.248	1.574	Q108	20.002	15.626
Q25	4.514	1.540	Q67	5.246	1.509	Q109	6.054	16.813
Q26	5.317	1.689	Q68	5.011	1.531	Q110	1.485	0.500
Q27	5.285	1.523	Q69	4.638	1.744	Q111	41.326	13.385
Q28	5.314	1.481	Q70	4.541	1.676	Q112	1.698	1.088
Q29	5.211	1.532	Q71	0.816	0.388	Q113	5.089	1.405
Q30	4.900	1.656	Q72	0.764	0.424	Q114	2.905	1.326
Q31	4.610	1.727	Q73	0.725	0.446	Q115	14.447	6.042
Q32	4.931	1.541	Q74	0.869	0.337	Q116	5.191	2.644
Q33	4.680	1.661	Q75	5.081	1.672	Q117	4.392	1.278
Q34	5.211	1.561	Q76	5.508	1.616	Q118	4.674	1.777
Q35	0.548	0.498	Q77	5.627	1.820	Q119	4.993	1.658
Q36	0.544	0.498	Q78	5.968	1.511	Q120	4.532	1.705
Q37	0.571	0.495	Q79	6.132	1.318	Q121	4.148	2.065
Q38	0.425	0.494	Q80	5.546	1.575	Q122	4.218	1.968
Q39	0.252	0.434	Q81	5.799	1.511	Q123	5.013	1.433
Q40	0.426	0.495	Q82	5.672	1.478	Q124	5.113	1.277
Q41	5.557	1.381	Q83	5.870	1.434	Q125	5.395	1.232
Q42	5.855	1.248	Q84	3.746	1.609	Q126	5.099	1.270

Appendix B

Results of Exploratory Factor Analysis

Group Website Cues:

The SAS System

The FACTOR Procedure
Initial Factor Method: Principal Components

Eigenvalues of the Correlation Matrix: Total = 81 Average = 1

	Eigenvalue	Difference	Proportion	Cumulative
1	24.1027389	16.7471926	0.2976	0.2976
2	7.3555463	3.9399159	0.0908	0.3884
3	3.4156304	0.7936659	0.0422	0.4305
4	2.6219645	0.4832949	0.0324	0.4629
5	2.1386696	0.2667226	0.0264	0.4893
6	1.8719470	0.1884551	0.0231	0.5124
7	1.6834918	0.1170967	0.0208	0.5332
8	1.5663951	0.1897661	0.0193	0.5525
9	1.3766290	0.1613402	0.0170	0.5695
10	1.2152888	0.0422877	0.0150	0.5845
11	1.1730011	0.1785777	0.0145	0.5990
12	0.9944234	0.0287176	0.0123	0.6113
13	0.9657058	0.0504167	0.0119	0.6232
14	0.9152892	0.0727909	0.0113	0.6345
15	0.8424982	0.0117959	0.0104	0.6449
16	0.8307023	0.0399313	0.0103	0.6552
17	0.7907710	0.0123271	0.0098	0.6649
18	0.7784438	0.0457348	0.0096	0.6746
19	0.7327091	0.0111344	0.0090	0.6836
20	0.7215746	0.0315308	0.0089	0.6925
21	0.6900438	0.0117622	0.0085	0.7010
22	0.6782816	0.0243850	0.0084	0.7094
23	0.6538966	0.0165171	0.0081	0.7175
24	0.6373796	0.0128845	0.0079	0.7253
25	0.6244951	0.0168622	0.0077	0.7331
26	0.6076329	0.0048934	0.0075	0.7406
27	0.6027395	0.0161710	0.0074	0.7480
28	0.5865685	0.0054916	0.0072	0.7552
29	0.5810769	0.0090702	0.0072	0.7624
30	0.5720067	0.0062684	0.0071	0.7695
31	0.5657382	0.0079144	0.0070	0.7765
32	0.5578239	0.0068748	0.0069	0.7833
33	0.5509490	0.0170401	0.0068	0.7901
34	0.5339090	0.0046809	0.0066	0.7967
35	0.5292281	0.0111897	0.0065	0.8033
36	0.5180384	0.0095654	0.0064	0.8097

37	0.5084730	0.0060046	0.0063	0.8159
38	0.5024684	0.0065283	0.0062	0.8222
39	0.4959401	0.0132345	0.0061	0.8283
40	0.4827056	0.0144380	0.0060	0.8342
41	0.4682676	0.0055240	0.0058	0.8400
42	0.4627435	0.0111689	0.0057	0.8457
43	0.4515747	0.0060232	0.0056	0.8513
44	0.4455515	0.0049118	0.0055	0.8568
45	0.4406397	0.0091306	0.0054	0.8622
46	0.4315092	0.0050748	0.0053	0.8676
47	0.4264343	0.0160461	0.0053	0.8728
48	0.4103882	0.0066347	0.0051	0.8779
49	0.4037535	0.0066924	0.0050	0.8829
50	0.3970611	0.0041704	0.0049	0.8878
51	0.3928907	0.0084237	0.0049	0.8926
52	0.3844670	0.0035828	0.0047	0.8974
53	0.3808842	0.0068844	0.0047	0.9021
54	0.3739998	0.0092855	0.0046	0.9067
55	0.3647143	0.0104177	0.0045	0.9112
56	0.3542966	0.0032999	0.0044	0.9156
57	0.3509967	0.0030089	0.0043	0.9199
58	0.3479879	0.0094889	0.0043	0.9242
59	0.3384990	0.0028663	0.0042	0.9284
60	0.3356327	0.0044809	0.0041	0.9325
61	0.3311518	0.0072098	0.0041	0.9366
62	0.3239419	0.0024536	0.0040	0.9406
63	0.3214884	0.0108332	0.0040	0.9446
64	0.3106552	0.0111227	0.0038	0.9484
65	0.2995325	0.0060752	0.0037	0.9521
66	0.2934573	0.0042826	0.0036	0.9557
67	0.2891748	0.0060238	0.0036	0.9593
68	0.2831510	0.0023393	0.0035	0.9628
69	0.2808116	0.0075127	0.0035	0.9663
70	0.2732989	0.0096710	0.0034	0.9697
71	0.2636279	0.0066363	0.0033	0.9729
72	0.2569916	0.0071275	0.0032	0.9761
73	0.2498642	0.0055131	0.0031	0.9792
74	0.2443511	0.0067553	0.0030	0.9822
75	0.2375958	0.0052765	0.0029	0.9851
76	0.2323192	0.0168578	0.0029	0.9880
77	0.2154615	0.0145848	0.0027	0.9906
78	0.2008766	0.0043118	0.0025	0.9931
79	0.1965648	0.0075090	0.0024	0.9955
80	0.1890559	0.0175354	0.0023	0.9979
81	0.1715205		0.0021	1.0000

8 factors will be retained by the NFACTOR criterion.

Rotation Method: Varimax

Rotated Factor Pattern

Factor1	Factor2	Factor3	Factor4

Q1	Q1	0.67559	0.08006	0.24089	0.05748
Q2	Q2	0.79501	0.13455	0.18414	0.07118
Q3	Q3	0.70077	0.10723	0.22403	0.05020
Q4	Q4	0.76048	0.13666	0.21252	0.08371
Q5	Q5	0.67126	0.05453	0.24185	0.10032
Q6	Q6	0.67706	0.07961	0.23105	0.09358
Q7	Q7	0.72660	0.09084	0.18585	0.07074
Q8	Q8	0.63621	0.18328	0.14928	0.06070
Q9	Q9	0.56427	0.22741	0.09314	0.05219
Q10	Q10	0.74271	0.21596	0.10271	0.09420
Q11	Q11	0.70631	0.12485	0.21775	0.07595
Q12	Q12	0.67575	0.25769	0.02414	0.10830
Q13	Q13	0.64202	0.28848	0.05881	0.09766
Q16	Q16	0.69840	0.28747	0.07356	0.09732
Q17	Q17	0.58560	0.27315	0.01311	0.11577
Q18	Q18	0.67363	0.22903	0.28701	0.06195
Q19	Q19	0.12321	-0.06048	0.11344	-0.00765
Q21	Q21	0.36805	0.18465	0.24864	0.09163
Q22	Q22	0.29062	0.14340	0.15633	0.05257
Q26	Q26	0.37473	0.15652	0.13505	0.06485
Q27	Q27	0.38408	0.18118	0.19260	0.05815
Q28	Q28	0.38790	0.20355	0.19562	0.08624
Q29	Q29	0.34941	0.19502	0.18499	0.26781
Q30	Q30	0.28889	0.22469	0.14224	0.05754
Q32	Q32	0.32314	0.23179	0.15369	0.09192
Q35	Q35	0.02751	0.12337	-0.00024	0.12515
Q36	Q36	0.03685	0.12466	-0.00793	0.14421
Q37	Q37	0.02637	0.20517	-0.03059	0.22135
Q38	Q38	0.08812	0.21357	-0.05167	0.11569
Q39	Q39	0.00801	0.10403	-0.05968	0.07563
Q40	Q40	0.00888	0.29373	-0.03182	0.09526
Q41	Q41	0.56855	0.22627	0.32504	0.10004
Q42	Q42	0.47543	0.21346	0.42892	0.13471
Q43	Q43	0.46886	0.30547	0.39250	0.10840
Q44	Q44	0.40618	0.42206	0.31325	0.25058
Q45	Q45	0.41392	0.38733	0.26872	0.25476
Q46	Q46	0.22178	0.57853	0.11516	0.13310
Q47	Q47	0.39555	0.48420	0.29306	0.19931
Q48	Q48	0.26214	0.50996	0.20129	0.12160
Q49	Q49	0.18717	0.55226	0.13261	0.30335
Q50	Q50	0.24143	0.63598	0.21037	0.12166
Q51	Q51	0.28465	0.70095	0.18744	0.09845
Q52	Q52	0.17268	0.70904	0.06308	0.02862
Q53	Q53	0.24252	0.70921	0.09545	0.12837
Q54	Q54	0.21882	0.75419	0.11363	0.17910
Q55	Q55	0.20776	0.76123	0.08345	0.21260
Q56	Q56	0.32806	0.68344	0.22274	0.11191
Q57	Q57	0.16555	0.66623	0.05343	0.09362
Q58	Q58	0.18323	0.41775	0.06858	0.32079
Q59	Q59	0.04562	0.14862	0.03687	0.01444
Q60	Q60	0.04324	0.47068	-0.00618	0.08889
Q61	Q61	0.08075	0.02767	0.10717	0.26745

Q62	Q62	0.03228	0.26809	-0.03285	0.19125
Q63	Q63	0.01774	0.19929	0.02785	0.39902
Q64	Q64	-0.00830	0.22029	-0.03842	0.27057
Q65	Q65	0.19905	0.17536	0.31591	0.58073
Q66	Q66	0.15998	0.14874	0.25841	0.63835
Q67	Q67	0.23127	0.20438	0.31958	0.64660
Q68	Q68	0.24796	0.40221	0.24800	0.53926
Q69	Q69	0.19044	0.32708	0.13888	0.56564
Q70	Q70	0.14782	0.35427	0.12863	0.54215
Q71	Q71	0.03361	0.04352	-0.01145	0.68401
Q72	Q72	0.06625	0.09971	-0.01738	0.67367
Q73	Q73	0.05529	0.09797	-0.01892	0.61965
Q74	Q74	0.02126	0.06733	0.01897	0.71326
Q75	Q75	0.18535	0.17983	0.39221	0.45873
Q76	Q76	0.24079	0.15513	0.72930	0.14615
Q77	Q77	0.18551	0.12969	0.76407	0.08917
Q78	Q78	0.19485	0.09169	0.77493	0.08815
Q79	Q79	0.22249	0.06694	0.75999	0.07621
Q80	Q80	0.30590	0.16435	0.66471	0.01959
Q81	Q81	0.29383	0.14302	0.74810	0.09449
Q82	Q82	0.30756	0.13276	0.62828	0.09575
Q83	Q83	0.26336	0.09211	0.65230	0.06457
Q84	Q84	0.17478	0.33743	0.06700	0.26715
Q86	Q86	0.02032	0.03622	-0.02322	0.10363
Q87	Q87	0.02409	0.04852	-0.01647	0.10019
Q88	Q88	-0.02730	0.07444	0.06499	0.03639
Q89	Q89	0.05922	0.07147	0.00333	0.13459
Q90	Q90	0.00755	0.11946	0.00031	0.11346
Q91	Q91	0.03261	0.03402	-0.02912	0.13079

Rotated Factor Pattern

		Factor5	Factor6	Factor7	Factor8
Q1	Q1	-0.05885	0.12221	0.03441	0.01024
Q2	Q2	-0.04527	0.14761	0.06240	-0.01620
Q3	Q3	-0.04688	0.20162	0.02207	-0.01312
Q4	Q4	-0.02195	0.17040	0.02970	-0.02642
Q5	Q5	-0.03699	0.12350	0.03874	0.05473
Q6	Q6	-0.06066	0.20407	0.00735	0.06319
Q7	Q7	-0.02446	0.14402	0.04476	0.03985
Q8	Q8	0.03093	0.16406	0.12649	-0.00147
Q9	Q9	0.16630	0.13408	0.13459	0.09628
Q10	Q10	0.10577	0.03790	-0.01844	0.10642
Q11	Q11	-0.00542	0.09755	-0.02623	0.18800
Q12	Q12	0.18537	0.03906	0.00766	0.11032
Q13	Q13	0.16093	0.06312	0.03294	0.12516
Q16	Q16	0.18811	0.05961	-0.03637	0.12329
Q17	Q17	0.28236	0.05562	-0.02872	0.09571
Q18	Q18	0.01936	0.13297	0.05285	0.03140
Q19	Q19	0.04695	0.02860	0.00569	0.74576
Q21	Q21	-0.01303	0.14088	0.01527	0.61940
Q22	Q22	0.03702	0.10854	0.09228	0.64155

Q26	Q26	0.01370	0.60870	0.07579	-0.04201
Q27	Q27	0.03767	0.73228	0.02022	0.02046
Q28	Q28	0.04412	0.73300	0.01928	0.07039
Q29	Q29	0.06487	0.61865	0.10006	0.10600
Q30	Q30	0.15806	0.62639	0.02243	0.10704
Q32	Q32	0.09842	0.67028	-0.00371	0.11563
Q35	Q35	0.12416	0.04901	0.71800	0.07146
Q36	Q36	0.21464	0.02748	0.75960	0.06915
Q37	Q37	0.17270	0.01300	0.71146	0.04872
Q38	Q38	0.26331	0.02876	0.58511	-0.03978
Q39	Q39	0.52653	-0.00434	0.21945	-0.00294
Q40	Q40	0.32749	0.00142	0.36077	-0.16615
Q41	Q41	-0.03700	0.28344	-0.02214	0.15631
Q42	Q42	-0.03264	0.25232	-0.05716	0.27478
Q43	Q43	-0.01415	0.26087	-0.04849	0.27875
Q44	Q44	-0.01611	0.18356	-0.01523	0.22220
Q45	Q45	0.07379	0.15075	-0.08841	0.20663
Q46	Q46	0.12282	0.11461	0.13471	0.18703
Q47	Q47	0.01856	0.26189	-0.01042	0.20018
Q48	Q48	0.11931	0.16725	0.05890	0.14400
Q49	Q49	0.17731	0.09298	0.12047	0.11198
Q50	Q50	0.01346	0.14557	0.01985	0.11656
Q51	Q51	0.04082	0.14674	0.07535	0.01886
Q52	Q52	0.13405	0.05120	0.18233	-0.01031
Q53	Q53	0.21945	0.10803	0.10806	0.01913
Q54	Q54	0.11850	0.11291	0.11353	-0.03356
Q55	Q55	0.14768	0.07347	0.09288	-0.00998
Q56	Q56	-0.00356	0.12122	0.03889	0.11362
Q57	Q57	0.23205	0.08465	0.13954	-0.01616
Q58	Q58	0.17047	0.16442	0.09093	-0.04088
Q59	Q59	0.50846	0.01512	0.10259	0.11265
Q60	Q60	0.16232	0.02110	0.24121	-0.19122
Q61	Q61	0.24294	0.02894	0.22294	0.07858
Q62	Q62	0.41916	0.00040	0.25716	-0.13352
Q63	Q63	0.22339	0.03852	0.19732	-0.11073
Q64	Q64	0.34828	0.01826	0.35125	-0.05358
Q65	Q65	0.00225	0.25529	0.05058	0.22691
Q66	Q66	0.07868	0.18973	0.02252	0.19063
Q67	Q67	0.03875	0.22878	-0.01093	0.20117
Q68	Q68	0.07477	0.24770	0.03949	0.12187
Q69	Q69	0.18381	0.16334	-0.01613	0.06446
Q70	Q70	0.19637	0.12086	0.05414	0.07394
Q71	Q71	0.16179	-0.06860	0.14642	-0.03272
Q72	Q72	0.19357	-0.01611	0.12654	-0.05928
Q73	Q73	0.24856	-0.02291	0.16286	-0.06637
Q74	Q74	0.06823	-0.02383	0.13273	-0.05656
Q75	Q75	0.05857	0.10235	-0.01782	0.11724
Q76	Q76	0.04357	0.06120	0.02783	0.08401
Q77	Q77	0.02570	-0.00305	0.01919	0.00029
Q78	Q78	0.00269	0.06658	-0.00333	0.08030
Q79	Q79	-0.07053	0.11934	-0.04059	0.11565
Q80	Q80	0.02875	0.08129	0.00865	0.02319
Q81	Q81	-0.00478	0.10368	0.02435	0.02329

Q82	Q82	0.02502	0.19267	-0.07788	0.12312
Q83	Q83	-0.04915	0.18495	-0.04195	0.05321
Q84	Q84	0.43695	0.07900	0.12834	-0.04727
Q86	Q86	0.60570	0.01456	-0.00824	0.01834
Q87	Q87	0.57029	0.01072	-0.02527	-0.00948
Q88	Q88	0.51861	0.07195	0.05627	0.09272
Q89	Q89	0.63961	0.03232	0.08376	-0.03195
Q90	Q90	0.62533	0.05165	0.13488	0.00511
Q91	Q91	0.66628	0.00639	0.09885	-0.03446

Variance Explained by Each Factor

Factor1	Factor2	Factor3	Factor4
11.272582	8.104371	6.397601	5.557309

Factor5	Factor6	Factor7	Factor8
4.394327	3.888264	2.851891	2.290039

Group Content: (part of Website Cues)

The SAS System

The FACTOR Procedure
Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 5 Average = 1

	Eigenvalue	Difference	Proportion	Cumulative
1	3.50477737	2.91135492	0.7010	0.7010
2	0.59342246	0.24507180	0.1187	0.8196
3	0.34835066	0.01952081	0.0697	0.8893
4	0.32882984	0.10421017	0.0658	0.9551
5	0.22461967		0.0449	1.0000

1 factor will be retained by the NFACTOR criterion.

Factor Pattern

		Factor1
Q41	Q41	0.82771
Q42	Q42	0.86302
Q43	Q43	0.87942
Q44	Q44	0.82917
Q45	Q45	0.78355

Variance Explained by Each Factor

Factor1
3.5047774

Group Action:

The SAS System

The FACTOR Procedure
Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 7 Average = 1

	Eigenvalue	Difference	Proportion	Cumulative
1	4.55916410	3.62680717	0.6513	0.6513
2	0.93235694	0.48387867	0.1332	0.7845
3	0.44847827	0.09077862	0.0641	0.8486
4	0.35769965	0.06000205	0.0511	0.8997
5	0.29769760	0.08850711	0.0425	0.9422
6	0.20919050	0.01377756	0.0299	0.9721
7	0.19541294		0.0279	1.0000

1 factor will be retained by the NFACTOR criterion.

Factor Pattern

		Factor1
Q33	Q33	0.75148
Q34	Q34	0.81412
Q118	Q118	0.83196
Q119	Q119	0.83669
Q120	Q120	0.82172
Q121	Q121	0.76104
Q122	Q122	0.82767

Variance Explained by Each Factor

Factor1
4.5591641

Group Trust:

The SAS System

The FACTOR Procedure
Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 4 Average = 1

	Eigenvalue	Difference	Proportion	Cumulative
1	2.96058510	2.38258538	0.7401	0.7401
2	0.57799972	0.33342179	0.1445	0.8846
3	0.24457794	0.02774069	0.0611	0.9458
4	0.21683724		0.0542	1.0000

1 factor will be retained by the NFACTOR criterion.

Factor Pattern

		Factor1
Q117	Q117	0.72836
Q124	Q124	0.90200
Q125	Q125	0.89192
Q126	Q126	0.90607

Variance Explained by Each Factor

Factor1
2.9605851

Group Trust Dimensions:

The SAS System

The FACTOR Procedure
Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

Eigenvalues of the Correlation Matrix: Total = 5 Average = 1

	Eigenvalue	Difference	Proportion	Cumulative
1	3.02900476	2.23835345	0.6058	0.6058
2	0.79065130	0.28776177	0.1581	0.7639
3	0.50288954	0.12862520	0.1006	0.8645
4	0.37426434	0.07107428	0.0749	0.9394
5	0.30319006		0.0606	1.0000

2 factors will be retained by the NFACTOR criterion.

Rotation Method: Varimax

Rotated Factor Pattern

		Factor1	Factor2
Q14	Q14	0.81364	0.28972
Q15	Q15	0.90207	0.14111
Q20	Q20	0.16054	0.88713
Q85	Q85	0.68016	0.45112
Q123	Q123	0.36746	0.79129

Variance Explained by Each Factor

Factor1	Factor2
2.0991688	1.7204873

Appendix C

Results of Confirmatory Factor Analysis

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q2 = 0.8704*Touch&Fl, Errorvar.= 0.2425 , R^2 = 0.7575
(0.01307) (0.01139)
66.6111 21.2873

Q4 = 0.8038*Touch&Fl, Errorvar.= 0.3540 , R^2 = 0.6460
(0.01339) (0.01157)
60.0488 30.6040

Q10 = 0.6714*Touch&Fl, Errorvar.= 0.5492 , R^2 = 0.4508
(0.01402) (0.01342)
47.8936 40.9247

Q14 = 0.5280*Affect, Errorvar.= 0.4985 , R^2 = 0.3587
(0.01273) (0.01186)
41.4614 42.0322

Q15 = 0.5324*Affect, Errorvar.= 0.4901 , R^2 = 0.3664
(0.01267) (0.01172)
42.0176 41.8190

Q19 = 0.6732*Brand, Errorvar.= 0.5468 , R^2 = 0.4532
(0.01466) (0.01460)
45.9078 37.4520

Q20 = 0.5681*Cognit, Errorvar.= 0.4745 , R^2 = 0.4048
(0.01268) (0.01157)
44.8063 41.0152

Q21 = 0.7890*Brand, Errorvar.= 0.3774 , R^2 = 0.6226
(0.01423) (0.01378)
55.4638 27.3915

Q22 = 0.6505*Brand, Errorvar.= 0.5769 , R^2 = 0.4231
(0.01477) (0.01491)
44.0481 38.7031

Q27 = 0.8397*Privacy, Errorvar.= 0.2949 , R^2 = 0.7051
(0.01284) (0.01011)
65.3857 29.1627

Q28 = 0.9367*Privacy, Errorvar.= 0.1226 , R^2 = 0.8774
(0.01231) (0.01027)
76.1097 11.9397

Q32 = 0.7108*Privacy, Errorvar.= 0.4948 , R^2 = 0.5052

(0.01344) (0.01187)
52.8791 41.6745

Q35 = 0.6781*TrustSls, Errorvar.= 0.5402 , R^2 = 0.4598
(0.01480) (0.01482)
45.8292 36.4397

Q36 = 0.8399*TrustSls, Errorvar.= 0.2945 , R^2 = 0.7055
(0.01477) (0.01590)
56.8531 18.5210

Q37 = 0.7186*TrustSls, Errorvar.= 0.4836 , R^2 = 0.5164
(0.01479) (0.01477)
48.5869 32.7494

Q42 = 0.7993*Content, Errorvar.= 0.3611 , R^2 = 0.6389
(0.01320) (0.01099)
60.5373 32.8479

Q43 = 0.8960*Content, Errorvar.= 0.1972 , R^2 = 0.8028
(0.01269) (0.01060)
70.5810 18.6010

Q44 = 0.7173*Content, Errorvar.= 0.4855 , R^2 = 0.5145
(0.01362) (0.01222)
52.6816 39.7299

Q53 = 0.7500*Advice, Errorvar.= 0.4374 , R^2 = 0.5626
(0.01322) (0.01104)
56.7540 39.6250

Q54 = 0.8718*Advice, Errorvar.= 0.2400 , R^2 = 0.7600
(0.01255) (0.009500)
69.4538 25.2677

Q55 = 0.8813*Advice, Errorvar.= 0.2234 , R^2 = 0.7766
(0.01250) (0.009465)
70.5288 23.5966

Q71 = 0.7630*OrderFul, Errorvar.= 0.4178 , R^2 = 0.5822
(0.01538) (0.01628)
49.6082 25.6595

Q72 = 0.7261*OrderFul, Errorvar.= 0.4727 , R^2 = 0.5273
(0.01533) (0.01590)
47.3609 29.7270

Q74 = 0.6766*OrderFul, Errorvar.= 0.5422 , R^2 = 0.4578
(0.01527) (0.01569)
44.3088 34.5640

Q77 = 0.7906*NoErrors, Errorvar.= 0.3750 , R^2 = 0.6250
(0.01303) (0.01043)

60.6698 35.9555

Q78 = 0.9198*NoErrors, Errorvar.= 0.1539 , R^2 = 0.8461
(0.01233) (0.009796)
74.6060 15.7137

Q79 = 0.7981*NoErrors, Errorvar.= 0.3630 , R^2 = 0.6370
(0.01299) (0.01033)
61.4244 35.1473

Q85 = 0.6166*Affect, Errorvar.= 0.3160 , R^2 = 0.5461
(0.01144) (0.009305)
53.9130 33.9582

Q89 = 0.7016*Communit, Errorvar.= 0.5077 , R^2 = 0.4923
(0.01771) (0.02013)
39.6069 25.2273

Q90 = 0.5258*Communit, Errorvar.= 0.7235 , R^2 = 0.2765
(0.01659) (0.01803)
31.6961 40.1330

Q91 = 0.7386*Communit, Errorvar.= 0.4545 , R^2 = 0.5455
(0.01799) (0.02118)
41.0561 21.4606

Q118 = 0.6425*Action, Errorvar.= 0.3864 , R^2 = 0.5165
(0.01220) (0.01002)
52.6428 38.5712

Q119 = 0.7192*Action, Errorvar.= 0.2311 , R^2 = 0.6912
(0.01120) (0.008151)
64.2082 28.3529

Q122 = 0.6354*Action, Errorvar.= 0.3998 , R^2 = 0.5025
(0.01229) (0.01023)
51.6806 39.0967

Q123 = 0.6207*Cognit, Errorvar.= 0.3726 , R^2 = 0.5084
(0.01222) (0.01052)
50.7949 35.4002

Q124 = 0.7014*Trust, Errorvar.= 0.2386 , R^2 = 0.6734
(0.01068) (0.006820)
65.6615 34.9806

Q125 = 0.6886*Trust, Errorvar.= 0.2660 , R^2 = 0.6406
(0.01089) (0.007237)
63.2353 36.7593

Q126 = 0.7086*Trust, Errorvar.= 0.2227 , R^2 = 0.6927
(0.01056) (0.006596)
67.0944 33.7679

Goodness of Fit Statistics

Degrees of Freedom = 623
Minimum Fit Function Chi-Square = 19741.0328 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 26173.8748 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 25550.8748
90 Percent Confidence Interval for NCP = (25024.4306 ; 26083.5646)

Minimum Fit Function Value = 4.3358
Population Discrepancy Function Value (F0) = 5.6119
90 Percent Confidence Interval for F0 = (5.4963 ; 5.7289)
Root Mean Square Error of Approximation (RMSEA) = 0.09491
90 Percent Confidence Interval for RMSEA = (0.09393 ; 0.09589)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 5.8005
90 Percent Confidence Interval for ECVI = (5.6849 ; 5.9175)
ECVI for Saturated Model = 0.3255
ECVI for Independence Model = 22.9493

Chi-Square for Independence Model with 703 Degrees of Freedom = 104412.3552
Independence AIC = 104488.3552
Model AIC = 26409.8748
Saturated AIC = 1482.0000
Independence CAIC = 104770.4582
Model CAIC = 27285.8786
Saturated CAIC = 6983.0071

Normed Fit Index (NFI) = 0.8109
Non-Normed Fit Index (NNFI) = 0.7920
Parsimony Normed Fit Index (PNFI) = 0.7186
Comparative Fit Index (CFI) = 0.8157
Incremental Fit Index (IFI) = 0.8158
Relative Fit Index (RFI) = 0.7867

Critical N (CN) = 164.3028

Root Mean Square Residual (RMR) = 0.2345
Standardized RMR = 0.2585
Goodness of Fit Index (GFI) = 0.7677
Adjusted Goodness of Fit Index (AGFI) = 0.7237
Parsimony Goodness of Fit Index (PGFI) = 0.6455

Appendix D

Testing Affection and Cognition as Mediators to Trust

Fully Mediated Model:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q14 = 0.54*Affect, Errorvar.= 0.46 , R^2 = 0.39
(0.012)
39.94

Q15 = 0.54*Affect, Errorvar.= 0.46 , R^2 = 0.39
(0.017) (0.012)
32.80 39.81

Q20 = 0.57*Cognit, Errorvar.= 0.49 , R^2 = 0.40
(0.012)
40.62

Q85 = 0.60*Affect, Errorvar.= 0.35 , R^2 = 0.50
(0.017) (0.010)
35.61 34.86

Q123 = 0.68*Cognit, Errorvar.= 0.27 , R^2 = 0.63
(0.017) (0.0094)
39.61 28.99

Q124 = 0.69*Trust, Errorvar.= 0.25 , R^2 = 0.66
(0.0071)
34.46

Q125 = 0.68*Trust, Errorvar.= 0.26 , R^2 = 0.64
(0.012) (0.0073)
57.49 35.25

Q126 = 0.69*Trust, Errorvar.= 0.22 , R^2 = 0.68
(0.012) (0.0068)
59.30 32.85

Q2 = 0.86*Touch&Fl, Errorvar.= 0.26 , R^2 = 0.74
(0.013) (0.011)
65.55 23.25

Q4 = 0.80*Touch&Fl, Errorvar.= 0.36 , R^2 = 0.64

(0.013) (0.012)
59.59 31.26

Q10 = 0.68*Touch&Fl, Errorvar.= 0.54 , R^2 = 0.46
(0.014) (0.013)
48.41 40.46

Q19 = 0.62*Brand, Errorvar.= 0.62 , R^2 = 0.38
(0.015) (0.016)
40.57 39.47

Q21 = 0.79*Brand, Errorvar.= 0.37 , R^2 = 0.63
(0.015) (0.015)
54.19 25.19

Q22 = 0.66*Brand, Errorvar.= 0.56 , R^2 = 0.44
(0.015) (0.015)
44.35 36.76

Q27 = 0.84*Privacy, Errorvar.= 0.30 , R^2 = 0.70
(0.013) (0.010)
65.22 29.10

Q28 = 0.94*Privacy, Errorvar.= 0.12 , R^2 = 0.88
(0.012) (0.010)
76.11 11.59

Q32 = 0.71*Privacy, Errorvar.= 0.50 , R^2 = 0.50
(0.013) (0.012)
52.76 41.68

Q35 = 0.68*TrustSls, Errorvar.= 0.54 , R^2 = 0.46
(0.015) (0.015)
45.84 36.40

Q36 = 0.84*TrustSls, Errorvar.= 0.30 , R^2 = 0.70
(0.015) (0.016)
56.79 18.54

Q37 = 0.72*TrustSls, Errorvar.= 0.48 , R^2 = 0.52
(0.015) (0.015)
48.58 32.72

Q42 = 0.79*Content, Errorvar.= 0.38 , R^2 = 0.62
(0.013) (0.011)
59.88 34.46

Q43 = 0.87*Content, Errorvar.= 0.25 , R^2 = 0.75
(0.013) (0.010)
68.29 24.52

Q44 = 0.73*Content, Errorvar.= 0.47 , R^2 = 0.53
(0.014) (0.012)

53.82 39.00

Q53 = 0.75*Advice, Errorvar.= 0.44 , R^2 = 0.56
(0.013) (0.011)
56.76 39.55

Q54 = 0.87*Advice, Errorvar.= 0.24 , R^2 = 0.76
(0.013) (0.0095)
69.20 25.60

Q55 = 0.88*Advice, Errorvar.= 0.22 , R^2 = 0.78
(0.012) (0.0095)
70.49 23.60

Q71 = 0.76*OrderFul, Errorvar.= 0.42 , R^2 = 0.58
(0.015) (0.016)
49.52 25.75

Q72 = 0.73*OrderFul, Errorvar.= 0.47 , R^2 = 0.53
(0.015) (0.016)
47.36 29.66

Q74 = 0.68*OrderFul, Errorvar.= 0.54 , R^2 = 0.46
(0.015) (0.016)
44.31 34.52

Q77 = 0.79*NoErrors, Errorvar.= 0.38 , R^2 = 0.62
(0.013) (0.010)
60.64 35.90

Q78 = 0.92*NoErrors, Errorvar.= 0.15 , R^2 = 0.85
(0.012) (0.0098)
74.58 15.56

Q79 = 0.80*NoErrors, Errorvar.= 0.36 , R^2 = 0.64
(0.013) (0.010)
61.35 35.13

Q89 = 0.71*Communit, Errorvar.= 0.50 , R^2 = 0.50
(0.018) (0.020)
40.04 24.99

Q90 = 0.53*Communit, Errorvar.= 0.72 , R^2 = 0.28
(0.017) (0.018)
31.86 39.94

Q91 = 0.73*Communit, Errorvar.= 0.47 , R^2 = 0.53
(0.018) (0.021)
40.83 23.00

Q118 = 0.64*Action, Errorvar.= 0.37 , R^2 = 0.53
(0.012) (0.010)
52.29 35.91

Q119 = 0.71*Action, Errorvar.= 0.24 , R^2 = 0.68
(0.012) (0.0093)
61.72 25.72

Q122 = 0.63*Action, Errorvar.= 0.40 , R^2 = 0.50
(0.012) (0.011)
50.31 37.40

Structural Equations

Affect = 0.61*Touch&Fl + 0.32*Advice - 0.016*NoErrors + 0.013*OrderFul + 0.14*Communit + 0.097*Privacy + 0.038*TrustSls
s + (0.019) (0.016) (0.014) (0.015) (0.016) (0.014) (0.015)
31.83 20.52 -1.12 0.85 8.87 6.86 2.59

+ 0.12*Brand + 0.45*Content, Errorvar.= 0.28 , R^2 = 0.72
(0.015) (0.017) (0.021)
7.76 26.32 13.27

Cognit = 0.10*Touch&Fl + 0.091*Advice + 0.091*NoErrors + 0.024*OrderFul + 0.077*Communit + 0.053*Privacy - 0.012*TrustSls
Sls + (0.015) (0.014) (0.014) (0.015) (0.015) (0.014) (0.014)
6.79 6.47 6.57 1.60 5.01 3.91 -0.81 R^2

+ 0.61*Brand + 0.51*Content, Errorvar.= 0.34 , R^2 = 0.66
(0.019) (0.018) (0.021)
31.47 28.86 16.02

Trust = 0.23*Affect + 0.72*Cognit, Errorvar.= 0.29 , R^2 = 0.71
(0.017) (0.022) (0.015)
13.95 32.51 19.56

Goodness of Fit Statistics

Degrees of Freedom = 636
Minimum Fit Function Chi-Square = 21755.01 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 28954.66 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 28318.66
90 Percent Confidence Interval for NCP = (27764.42 ; 28878.99)

Minimum Fit Function Value = 4.78
Population Discrepancy Function Value (F0) = 6.22
90 Percent Confidence Interval for F0 = (6.10 ; 6.34)
Root Mean Square Error of Approximation (RMSEA) = 0.099
90 Percent Confidence Interval for RMSEA = (0.098 ; 0.100)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00

Expected Cross-Validation Index (ECVI) = 6.41
90 Percent Confidence Interval for ECVI = (6.28 ; 6.53)
ECVI for Saturated Model = 0.33

ECVI for Independence Model = 22.95

Chi-Square for Independence Model with 703 Degrees of Freedom = 104412.36
Independence AIC = 104488.36
Model AIC = 29164.66
Saturated AIC = 1482.00
Independence CAIC = 104770.46
Model CAIC = 29944.15
Saturated CAIC = 6983.01

Normed Fit Index (NFI) = 0.79
Non-Normed Fit Index (NNFI) = 0.77
Parsimony Normed Fit Index (PNFI) = 0.72
Comparative Fit Index (CFI) = 0.80
Incremental Fit Index (IFI) = 0.80
Relative Fit Index (RFI) = 0.77

Critical N (CN) = 152.08

Root Mean Square Residual (RMR) = 0.24
Standardized RMR = 0.27
Goodness of Fit Index (GFI) = 0.75
Adjusted Goodness of Fit Index (AGFI) = 0.71
Parsimony Goodness of Fit Index (PGFI) = 0.64

Nonmediated reduced model:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q124 = 0.69*Trust, Errorvar.= 0.27 , R^2 = 0.63
(0.0078)
34.53

Q125 = 0.70*Trust, Errorvar.= 0.24 , R^2 = 0.67
(0.012) (0.0075)
56.60 31.93

Q126 = 0.71*Trust, Errorvar.= 0.22 , R^2 = 0.70
(0.012) (0.0072)
57.43 29.97

Q2 = 0.88*Touch&Fl, Errorvar.= 0.22 , R^2 = 0.78
(0.014) (0.013)
64.94 16.35

Q4 = 0.81*Touch&Fl, Errorvar.= 0.34 , R^2 = 0.66

(0.014) (0.013)
58.70 26.64

Q10 = 0.64*Touch&Fl, Errorvar.= 0.59 , R^2 = 0.41
(0.014) (0.014)
44.82 41.78

Q19 = 0.58*Brand, Errorvar.= 0.67 , R^2 = 0.33
(0.015) (0.016)
37.28 40.59

Q21 = 0.83*Brand, Errorvar.= 0.32 , R^2 = 0.68
(0.016) (0.018)
53.03 18.05

Q22 = 0.70*Brand, Errorvar.= 0.50 , R^2 = 0.50
(0.015) (0.016)
45.58 31.33

Q27 = 0.84*Privacy, Errorvar.= 0.30 , R^2 = 0.70
(0.013) (0.010)
65.23 29.08

Q28 = 0.94*Privacy, Errorvar.= 0.12 , R^2 = 0.88
(0.012) (0.010)
76.05 11.67

Q32 = 0.71*Privacy, Errorvar.= 0.50 , R^2 = 0.50
(0.013) (0.012)
52.80 41.66

Q35 = 0.68*TrustSls, Errorvar.= 0.54 , R^2 = 0.46
(0.015) (0.015)
45.86 36.37

Q36 = 0.84*TrustSls, Errorvar.= 0.30 , R^2 = 0.70
(0.015) (0.016)
56.77 18.59

Q37 = 0.72*TrustSls, Errorvar.= 0.48 , R^2 = 0.52
(0.015) (0.015)
48.58 32.71

Q42 = 0.80*Content, Errorvar.= 0.36 , R^2 = 0.64
(0.013) (0.011)
60.65 33.56

Q43 = 0.88*Content, Errorvar.= 0.23 , R^2 = 0.77
(0.013) (0.010)
69.29 22.44

Q44 = 0.72*Content, Errorvar.= 0.47 , R^2 = 0.53
(0.014) (0.012)

53.41 39.34

Q53 = 0.75*Advice, Errorvar.= 0.44 , R^2 = 0.56
(0.013) (0.011)
56.31 39.74

Q54 = 0.87*Advice, Errorvar.= 0.24 , R^2 = 0.76
(0.013) (0.0097)
69.31 24.38

Q55 = 0.88*Advice, Errorvar.= 0.22 , R^2 = 0.78
(0.013) (0.0097)
70.22 22.93

Q71 = 0.76*OrderFul, Errorvar.= 0.42 , R^2 = 0.58
(0.015) (0.016)
49.55 25.72

Q72 = 0.73*OrderFul, Errorvar.= 0.47 , R^2 = 0.53
(0.015) (0.016)
47.37 29.68

Q74 = 0.68*OrderFul, Errorvar.= 0.54 , R^2 = 0.46
(0.015) (0.016)
44.32 34.53

Q77 = 0.79*NoErrors, Errorvar.= 0.37 , R^2 = 0.63
(0.013) (0.010)
60.71 35.89

Q78 = 0.92*NoErrors, Errorvar.= 0.16 , R^2 = 0.84
(0.012) (0.0098)
74.50 15.83

Q79 = 0.80*NoErrors, Errorvar.= 0.36 , R^2 = 0.64
(0.013) (0.010)
61.43 35.11

Q89 = 0.70*Communit, Errorvar.= 0.50 , R^2 = 0.50
(0.018) (0.020)
39.39 24.58

Q90 = 0.52*Communit, Errorvar.= 0.72 , R^2 = 0.28
(0.017) (0.018)
31.59 40.12

Q91 = 0.74*Communit, Errorvar.= 0.46 , R^2 = 0.54
(0.018) (0.021)
40.55 21.46

Q118 = 0.65*Action, Errorvar.= 0.37 , R^2 = 0.53
(0.012) (0.011)
52.16 34.98

Q119 = 0.71*Action, Errorvar.= 0.24 , R^2 = 0.68
(0.012) (0.0097)
60.57 25.00

Q122 = 0.63*Action, Errorvar.= 0.40 , R^2 = 0.50
(0.013) (0.011)
50.06 36.79

Structural Equations

Trust = 0.15*Touch&Fl + 0.12*Advice + 0.12*NoErrors + 0.011*OrderFul + 0.038*Communit + 0.10*Privacy + 0.022*TrustSls
\+ (0.014) (0.014) (0.014) (0.015) (0.016) (0.014) (0.015)
10.62 8.55 8.74 0.72 2.47 7.41 1.51

+ 0.27*Brand + 0.54*Content, Errorvar.= 0.56 , R^2 = 0.44
(0.015) (0.016) (0.021)
17.72 33.73 26.99

Goodness of Fit Statistics

Degrees of Freedom = 477
Minimum Fit Function Chi-Square = 16001.56 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 22834.98 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 22357.98
90 Percent Confidence Interval for NCP = (21866.21 ; 22856.15)

Minimum Fit Function Value = 3.51
Population Discrepancy Function Value (F0) = 4.91
90 Percent Confidence Interval for F0 = (4.80 ; 5.02)
Root Mean Square Error of Approximation (RMSEA) = 0.10
90 Percent Confidence Interval for RMSEA = (0.10 ; 0.10)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00

Expected Cross-Validation Index (ECVI) = 5.05
90 Percent Confidence Interval for ECVI = (4.94 ; 5.16)
ECVI for Saturated Model = 0.25
ECVI for Independence Model = 18.18

Chi-Square for Independence Model with 528 Degrees of Freedom = 82706.00
Independence AIC = 82772.00
Model AIC = 23002.98
Saturated AIC = 1122.00
Independence CAIC = 83016.98
Model CAIC = 23626.57
Saturated CAIC = 5286.73

Normed Fit Index (NFI) = 0.81
Non-Normed Fit Index (NNFI) = 0.79
Parsimony Normed Fit Index (PNFI) = 0.73
Comparative Fit Index (CFI) = 0.81
Incremental Fit Index (IFI) = 0.81
Relative Fit Index (RFI) = 0.79

Critical N (CN) = 158.00

Root Mean Square Residual (RMR) = 0.23
Standardized RMR = 0.25
Goodness of Fit Index (GFI) = 0.77
Adjusted Goodness of Fit Index (AGFI) = 0.73
Parsimony Goodness of Fit Index (PGFI) = 0.65

Appendix E

Testing Trust as a Mediator to Action

Nonmediated model:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6504*Action, Errorvar.= 0.3701 , R^2 = 0.5333
(0.01058)
34.9767

Q119 = 0.7137*Action, Errorvar.= 0.2417 , R^2 = 0.6782
(0.01582) (0.009666)
45.1089 25.0034

Q122 = 0.6333*Action, Errorvar.= 0.4027 , R^2 = 0.4990
(0.01514) (0.01095)
41.8310 36.7858

Q124 = 0.6860*Trust, Errorvar.= 0.2706 , R^2 = 0.6349
(0.007837)
34.5299

Q125 = 0.7011*Trust, Errorvar.= 0.2382 , R^2 = 0.6736
(0.01239) (0.007460)
56.6010 31.9266

Q126 = 0.7107*Trust, Errorvar.= 0.2172 , R^2 = 0.6993
(0.01238) (0.007248)
57.4272 29.9713

Q2 = 0.8833*Touch&Fl, Errorvar.= 0.2198 , R^2 = 0.7802
(0.01360) (0.01344)
64.9369 16.3506

Q4 = 0.8108*Touch&Fl, Errorvar.= 0.3427 , R^2 = 0.6573
(0.01381) (0.01286)
58.7000 26.6369

Q10 = 0.6392*Touch&Fl, Errorvar.= 0.5914 , R^2 = 0.4086
(0.01426) (0.01416)
44.8233 41.7810

Q19 = 0.5767*Brand, Errorvar.= 0.6675 , R^2 = 0.3325
(0.01547) (0.01645)

37.2755 40.5851

Q21 = 0.8257*Brand, Errorvar.= 0.3183 , R^2 = 0.6817
(0.01557) (0.01763)
53.0328 18.0541

Q22 = 0.7046*Brand, Errorvar.= 0.5035 , R^2 = 0.4965
(0.01546) (0.01607)
45.5751 31.3324

Q27 = 0.8391*Privacy, Errorvar.= 0.2960 , R^2 = 0.7040
(0.01286) (0.01018)
65.2317 29.0792

Q28 = 0.9375*Privacy, Errorvar.= 0.1211 , R^2 = 0.8789
(0.01233) (0.01038)
76.0535 11.6652

Q32 = 0.7102*Privacy, Errorvar.= 0.4956 , R^2 = 0.5044
(0.01345) (0.01190)
52.7996 41.6555

Q35 = 0.6787*TrustSls, Errorvar.= 0.5393 , R^2 = 0.4607
(0.01480) (0.01483)
45.8650 36.3739

Q36 = 0.8392*TrustSls, Errorvar.= 0.2958 , R^2 = 0.7042
(0.01478) (0.01591)
56.7673 18.5924

Q37 = 0.7188*TrustSls, Errorvar.= 0.4834 , R^2 = 0.5166
(0.01479) (0.01478)
48.5831 32.7136

Q42 = 0.7978*Content, Errorvar.= 0.3636 , R^2 = 0.6364
(0.01315) (0.01083)
60.6475 33.5606

Q43 = 0.8787*Content, Errorvar.= 0.2278 , R^2 = 0.7722
(0.01268) (0.01015)
69.2946 22.4433

Q44 = 0.7248*Content, Errorvar.= 0.4747 , R^2 = 0.5253
(0.01357) (0.01207)
53.4104 39.3380

Q53 = 0.7462*Advice, Errorvar.= 0.4433 , R^2 = 0.5567
(0.01325) (0.01115)
56.3075 39.7414

Q54 = 0.8734*Advice, Errorvar.= 0.2372 , R^2 = 0.7628
(0.01260) (0.009729)
69.3089 24.3843

Q55 = 0.8816*Advice, Errorvar.= 0.2228 , R^2 = 0.7772
(0.01255) (0.009714)
70.2206 22.9345

Q71 = 0.7624*OrderFul, Errorvar.= 0.4188 , R^2 = 0.5812
(0.01539) (0.01628)
49.5525 25.7216

Q72 = 0.7265*OrderFul, Errorvar.= 0.4722 , R^2 = 0.5278
(0.01534) (0.01591)
47.3701 29.6779

Q74 = 0.6769*OrderFul, Errorvar.= 0.5418 , R^2 = 0.4582
(0.01527) (0.01569)
44.3176 34.5324

Q77 = 0.7911*NoErrors, Errorvar.= 0.3742 , R^2 = 0.6258
(0.01303) (0.01043)
60.7129 35.8873

Q78 = 0.9191*NoErrors, Errorvar.= 0.1552 , R^2 = 0.8448
(0.01234) (0.009805)
74.5044 15.8338

Q79 = 0.7983*NoErrors, Errorvar.= 0.3627 , R^2 = 0.6373
(0.01299) (0.01033)
61.4340 35.1113

Q89 = 0.7048*Communit, Errorvar.= 0.5033 , R^2 = 0.4967
(0.01789) (0.02048)
39.3922 24.5803

Q90 = 0.5249*Communit, Errorvar.= 0.7245 , R^2 = 0.2755
(0.01662) (0.01806)
31.5864 40.1154

Q91 = 0.7355*Communit, Errorvar.= 0.4590 , R^2 = 0.5410
(0.01814) (0.02139)
40.5519 21.4560

Structural Equations

Trust = 0.1528*Touch&Fl + 0.1206*Advice + 0.1227*NoErrors + 0.01084*OrderFul +
0.03844*Communit + 0.1028*Privacy
02218* (0.01438) (0.01410) (0.01403) (0.01503) (0.01557) (0.01388)
10.6230 8.5519 8.7429 0.7211 2.4681 7.4092

+ 0.02218*TrustSls + 0.2717*Brand + 0.5442*Content, Errorvar.= 0.5645 , R^2 = 0.4355
(0.01465) (0.01534) (0.01613) (0.02091)
1.5141 17.7152 33.7267 26.9921

Action = 0.2028*Touch&FI + 0.1723*Advice + 0.06014*NoErrors + 0.08245*OrderFul + 0.06163*Communit + 0.03714*Privacy

(0.01565)	(0.01531)	(0.01496)	(0.01618)	(0.01673)	(0.01481)
12.9621	11.2569	4.0197	5.0948	3.6839	2.5068

+ 0.05259*TrustSIs + 0.2580*Brand + 0.4758*Content, Errorvar.= 0.6179 , R^2 = 0.3821

(0.01573)	(0.01653)	(0.01724)	(0.02616)
3.3427	15.6087	27.5927	23.6162

Goodness of Fit Statistics

Degrees of Freedom = 477
Minimum Fit Function Chi-Square = 16001.5638 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 22834.9782 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 22357.9782
90 Percent Confidence Interval for NCP = (21866.2072 ; 22856.1452)

Minimum Fit Function Value = 3.5145
Population Discrepancy Function Value (F0) = 4.9106
90 Percent Confidence Interval for F0 = (4.8026 ; 5.0200)
Root Mean Square Error of Approximation (RMSEA) = 0.1015
90 Percent Confidence Interval for RMSEA = (0.1003 ; 0.1026)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 5.0523
90 Percent Confidence Interval for ECVI = (4.9443 ; 5.1617)
ECVI for Saturated Model = 0.2464
ECVI for Independence Model = 18.1797

Chi-Square for Independence Model with 528 Degrees of Freedom = 82705.9988
Independence AIC = 82771.9988
Model AIC = 23002.9782
Saturated AIC = 1122.0000
Independence CAIC = 83016.9830
Model CAIC = 23626.5741
Saturated CAIC = 5286.7301

Normed Fit Index (NFI) = 0.8065
Non-Normed Fit Index (NNFI) = 0.7909
Parsimony Normed Fit Index (PNFI) = 0.7286
Comparative Fit Index (CFI) = 0.8111
Incremental Fit Index (IFI) = 0.8112
Relative Fit Index (RFI) = 0.7858

Critical N (CN) = 158.0019

Root Mean Square Residual (RMR) = 0.2344
Standardized RMR = 0.2513
Goodness of Fit Index (GFI) = 0.7669
Adjusted Goodness of Fit Index (AGFI) = 0.7258
Parsimony Goodness of Fit Index (PGFI) = 0.6521

Partially mediated Model:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6477*Action, Errorvar.= 0.3772 , R^2 = 0.5266
(0.01014)
37.2102

Q119 = 0.7173*Action, Errorvar.= 0.2359 , R^2 = 0.6857
(0.01498) (0.008650)
47.8933 27.2741

Q122 = 0.6341*Action, Errorvar.= 0.4029 , R^2 = 0.4995
(0.01480) (0.01050)
42.8346 38.3563

Q124 = 0.6930*Trust, Errorvar.= 0.2574 , R^2 = 0.6511
(0.007382)
34.8734

Q125 = 0.6930*Trust, Errorvar.= 0.2575 , R^2 = 0.6510
(0.01202) (0.007383)
57.6393 34.8783

Q126 = 0.7141*Trust, Errorvar.= 0.2116 , R^2 = 0.7067
(0.01189) (0.006802)
60.0828 31.1108

Q2 = 0.8851*Touch&Fl, Errorvar.= 0.2167 , R^2 = 0.7833
(0.01362) (0.01355)
64.9636 15.9920

Q4 = 0.8112*Touch&Fl, Errorvar.= 0.3419 , R^2 = 0.6581
(0.01383) (0.01292)
58.6566 26.4614

Q10 = 0.6382*Touch&Fl, Errorvar.= 0.5926 , R^2 = 0.4074
(0.01426) (0.01417)
44.7508 41.8299

Q19 = 0.5732*Brand, Errorvar.= 0.6715 , R^2 = 0.3285
(0.01550) (0.01651)
36.9766 40.6716

Q21 = 0.8356*Brand, Errorvar.= 0.3018 , R^2 = 0.6982
(0.01589) (0.01859)

52.5919 16.2337

Q22 = 0.7073*Brand, Errorvar.= 0.4997 , R^2 = 0.5003
(0.01564) (0.01643)
45.2143 30.4161

Q27 = 0.8390*Privacy, Errorvar.= 0.2961 , R^2 = 0.7039
(0.01286) (0.01016)
65.2584 29.1483

Q28 = 0.9375*Privacy, Errorvar.= 0.1211 , R^2 = 0.8789
(0.01232) (0.01035)
76.1097 11.7026

Q32 = 0.7104*Privacy, Errorvar.= 0.4953 , R^2 = 0.5047
(0.01345) (0.01189)
52.8260 41.6636

Q35 = 0.6788*TrustSls, Errorvar.= 0.5393 , R^2 = 0.4607
(0.01480) (0.01483)
45.8677 36.3748

Q36 = 0.8391*TrustSls, Errorvar.= 0.2960 , R^2 = 0.7040
(0.01478) (0.01591)
56.7597 18.6059

Q37 = 0.7190*TrustSls, Errorvar.= 0.4830 , R^2 = 0.5170
(0.01479) (0.01478)
48.6005 32.6910

Q42 = 0.8009*Content, Errorvar.= 0.3585 , R^2 = 0.6415
(0.01322) (0.01106)
60.5759 32.4217

Q43 = 0.8952*Content, Errorvar.= 0.1986 , R^2 = 0.8014
(0.01274) (0.01075)
70.2771 18.4699

Q44 = 0.7163*Content, Errorvar.= 0.4869 , R^2 = 0.5131
(0.01363) (0.01227)
52.5418 39.6869

Q53 = 0.7459*Advice, Errorvar.= 0.4436 , R^2 = 0.5564
(0.01325) (0.01115)
56.2898 39.7693

Q54 = 0.8743*Advice, Errorvar.= 0.2356 , R^2 = 0.7644
(0.01260) (0.009735)
69.4000 24.2028

Q55 = 0.8815*Advice, Errorvar.= 0.2230 , R^2 = 0.7770
(0.01256) (0.009723)
70.1965 22.9329

Q71 = 0.7631*OrderFul, Errorvar.= 0.4176 , R^2 = 0.5824
(0.01538) (0.01628)
49.6161 25.6517

Q72 = 0.7261*OrderFul, Errorvar.= 0.4728 , R^2 = 0.5272
(0.01533) (0.01590)
47.3600 29.7338

Q74 = 0.6766*OrderFul, Errorvar.= 0.5422 , R^2 = 0.4578
(0.01527) (0.01569)
44.3063 34.5702

Q77 = 0.7907*NoErrors, Errorvar.= 0.3747 , R^2 = 0.6253
(0.01303) (0.01043)
60.6858 35.9360

Q78 = 0.9197*NoErrors, Errorvar.= 0.1542 , R^2 = 0.8458
(0.01233) (0.009798)
74.5855 15.7397

Q79 = 0.7981*NoErrors, Errorvar.= 0.3630 , R^2 = 0.6370
(0.01299) (0.01033)
61.4263 35.1420

Q89 = 0.7030*Communit, Errorvar.= 0.5058 , R^2 = 0.4942
(0.01791) (0.02049)
39.2476 24.6890

Q90 = 0.5238*Communit, Errorvar.= 0.7257 , R^2 = 0.2743
(0.01662) (0.01807)
31.5185 40.1661

Q91 = 0.7387*Communit, Errorvar.= 0.4543 , R^2 = 0.5457
(0.01820) (0.02157)
40.5826 21.0619

Structural Equations

Trust = 0.1576*Touch&Fl + 0.1326*Advice + 0.1432*NoErrors + 0.008436*OrderFul + 0.02681*Communit + 0.1320*Privacy
(0.01481) (0.01454) (0.01448) (0.01549) (0.01604) (0.01434)
10.6412 9.1244 9.8941 0.5446 1.6713 9.2031

+ 0.02521*TrustSls + 0.2450*Brand + 0.4802*Content, Errorvar.= 0.6276 , R^2 = 0.3724
(0.01510) (0.01564) (0.01599) (0.02212)
1.6702 15.6695 30.0293 28.3744

Action = 0.6625*Trust + 0.1153*Touch&FI + 0.09821*Advice - 0.01067*NoErrors +
0.07980*OrderFul + 0.03109*Communit

01977*	(0.02212)	(0.01409)	(0.01373)	(0.01360)	(0.01441)	(0.01488)
	29.9515	8.1844	7.1530	-0.7848	5.5385	2.0901

- 0.01977*Privacy + 0.03611*TrustSIs + 0.06468*Brand + 0.07543*Content, Errorvar.=
0.4111 , R^2 = 0.5889

(0.01344)	(0.01400)	(0.01518)	(0.01679)	(0.01924)
-1.4708	2.5785	4.2600	4.4939	21.3720

Goodness of Fit Statistics

Degrees of Freedom = 476
Minimum Fit Function Chi-Square = 14895.0588 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 21646.6262 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 21170.6262
90 Percent Confidence Interval for NCP = (20692.0772 ; 21655.6238)

Minimum Fit Function Value = 3.2715
Population Discrepancy Function Value (F0) = 4.6498
90 Percent Confidence Interval for F0 = (4.5447 ; 4.7563)
Root Mean Square Error of Approximation (RMSEA) = 0.09884
90 Percent Confidence Interval for RMSEA = (0.09771 ; 0.09996)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 4.7917
90 Percent Confidence Interval for ECVI = (4.6866 ; 4.8982)
ECVI for Saturated Model = 0.2464
ECVI for Independence Model = 18.1797

Chi-Square for Independence Model with 528 Degrees of Freedom = 82705.9988
Independence AIC = 82771.9988
Model AIC = 21816.6262
Saturated AIC = 1122.0000
Independence CAIC = 83016.9830
Model CAIC = 22447.6459
Saturated CAIC = 5286.7301

Normed Fit Index (NFI) = 0.8199
Non-Normed Fit Index (NNFI) = 0.8054
Parsimony Normed Fit Index (PNFI) = 0.7392
Comparative Fit Index (CFI) = 0.8245
Incremental Fit Index (IFI) = 0.8246
Relative Fit Index (RFI) = 0.8002

Critical N (CN) = 169.3363

Root Mean Square Residual (RMR) = 0.2306
Standardized RMR = 0.2451
Goodness of Fit Index (GFI) = 0.7763
Adjusted Goodness of Fit Index (AGFI) = 0.7364
Parsimony Goodness of Fit Index (PGFI) = 0.6587

Fully mediated model:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6774*Action, Errorvar.= 0.3756 , R^2 = 0.5499
(0.01016)
36.9798

Q119 = 0.7480*Action, Errorvar.= 0.2387 , R^2 = 0.7009
(0.01482) (0.008742)
50.4866 27.3083

Q122 = 0.6636*Action, Errorvar.= 0.4008 , R^2 = 0.5235
(0.01467) (0.01051)
45.2224 38.1322

Q124 = 0.6821*Trust, Errorvar.= 0.2614 , R^2 = 0.6403
(0.007339)
35.6173

Q125 = 0.6782*Trust, Errorvar.= 0.2699 , R^2 = 0.6302
(0.01209) (0.007466)
56.1176 36.1487

Q126 = 0.7042*Trust, Errorvar.= 0.2128 , R^2 = 0.6997
(0.01188) (0.006675)
59.2928 31.8806

Q2 = 0.8887*Touch&Fl, Errorvar.= 0.2102 , R^2 = 0.7898
(0.01367) (0.01377)
65.0320 15.2645

Q4 = 0.8087*Touch&Fl, Errorvar.= 0.3461 , R^2 = 0.6539
(0.01388) (0.01303)
58.2702 26.5668

Q10 = 0.6361*Touch&Fl, Errorvar.= 0.5953 , R^2 = 0.4047
(0.01428) (0.01422)
44.5548 41.8793

Q19 = 0.5727*Brand, Errorvar.= 0.6720 , R^2 = 0.3280
(0.01551) (0.01652)
36.9323 40.6724

Q21 = 0.8368*Brand, Errorvar.= 0.2997 , R^2 = 0.7003
(0.01592) (0.01870)
52.5612 16.0284

Q22 = 0.7063*Brand, Errorvar.= 0.5011 , R^2 = 0.4989

(0.01566) (0.01646)
45.0955 30.4501

Q27 = 0.8391*Privacy, Errorvar.= 0.2959 , R^2 = 0.7041
(0.01286) (0.01016)
65.2674 29.1237

Q28 = 0.9374*Privacy, Errorvar.= 0.1213 , R^2 = 0.8787
(0.01232) (0.01035)
76.0913 11.7182

Q32 = 0.7104*Privacy, Errorvar.= 0.4953 , R^2 = 0.5047
(0.01345) (0.01189)
52.8246 41.6623

Q35 = 0.6788*TrustSls, Errorvar.= 0.5392 , R^2 = 0.4608
(0.01480) (0.01483)
45.8646 36.3585

Q36 = 0.8393*TrustSls, Errorvar.= 0.2956 , R^2 = 0.7044
(0.01479) (0.01593)
56.7522 18.5583

Q37 = 0.7187*TrustSls, Errorvar.= 0.4835 , R^2 = 0.5165
(0.01480) (0.01478)
48.5676 32.7072

Q42 = 0.8010*Content, Errorvar.= 0.3583 , R^2 = 0.6417
(0.01322) (0.01107)
60.5702 32.3832

Q43 = 0.8957*Content, Errorvar.= 0.1977 , R^2 = 0.8023
(0.01274) (0.01077)
70.3035 18.3511

Q44 = 0.7155*Content, Errorvar.= 0.4881 , R^2 = 0.5119
(0.01364) (0.01229)
52.4600 39.7281

Q53 = 0.7451*Advice, Errorvar.= 0.4449 , R^2 = 0.5551
(0.01326) (0.01117)
56.1988 39.8120

Q54 = 0.8751*Advice, Errorvar.= 0.2343 , R^2 = 0.7657
(0.01260) (0.009764)
69.4417 23.9926

Q55 = 0.8813*Advice, Errorvar.= 0.2233 , R^2 = 0.7767
(0.01257) (0.009755)
70.1290 22.8933

Q71 = 0.7631*OrderFul, Errorvar.= 0.4176 , R^2 = 0.5824
(0.01540) (0.01633)

49.5445 25.5738

Q72 = 0.7250*OrderFul, Errorvar.= 0.4744 , R^2 = 0.5256
(0.01535) (0.01593)
47.2384 29.7848

Q74 = 0.6778*OrderFul, Errorvar.= 0.5406 , R^2 = 0.4594
(0.01528) (0.01571)
44.3511 34.4206

Q77 = 0.7909*NoErrors, Errorvar.= 0.3745 , R^2 = 0.6255
(0.01303) (0.01043)
60.6976 35.9219

Q78 = 0.9196*NoErrors, Errorvar.= 0.1544 , R^2 = 0.8456
(0.01233) (0.009798)
74.5732 15.7549

Q79 = 0.7981*NoErrors, Errorvar.= 0.3630 , R^2 = 0.6370
(0.01299) (0.01033)
61.4250 35.1413

Q89 = 0.7013*Communit, Errorvar.= 0.5081 , R^2 = 0.4919
(0.01792) (0.02047)
39.1456 24.8194

Q90 = 0.5234*Communit, Errorvar.= 0.7261 , R^2 = 0.2739
(0.01662) (0.01807)
31.4897 40.1768

Q91 = 0.7406*Communit, Errorvar.= 0.4515 , R^2 = 0.5485
(0.01824) (0.02167)
40.6080 20.8319

Structural Equations

Trust = 0.1763*Touch&Fl + 0.1499*Advice + 0.1387*NoErrors + 0.02340*OrderFul +
0.03208*Communit + 0.1265*Privacy
03211* (0.01455) (0.01429) (0.01419) (0.01518) (0.01571) (0.01405)
12.1145 10.4900 9.7742 1.5411 2.0411 9.0002

+ 0.03211*TrustSls + 0.2533*Brand + 0.4864*Content, Errorvar.= 0.6078 , R^2 = 0.3922
(0.01479) (0.01538) (0.01583) (0.02165)
2.1705 16.4707 30.7225 28.0743

Action = 0.7837*Trust, Errorvar.= 0.3859 , R^2 = 0.6141
(0.01907) (0.01805)
41.873 21.3824

Goodness of Fit Statistics

Degrees of Freedom = 485
Minimum Fit Function Chi-Square = 15126.8622 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 22121.4767 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 21636.4767
90 Percent Confidence Interval for NCP = (21152.6683 ; 22126.7323)

Minimum Fit Function Value = 3.3224
Population Discrepancy Function Value (F0) = 4.7521
90 Percent Confidence Interval for F0 = (4.6459 ; 4.8598)
Root Mean Square Error of Approximation (RMSEA) = 0.09899
90 Percent Confidence Interval for RMSEA = (0.09787 ; 0.1001)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 4.8920
90 Percent Confidence Interval for ECVI = (4.7858 ; 4.9997)
ECVI for Saturated Model = 0.2464
ECVI for Independence Model = 18.1797

Chi-Square for Independence Model with 528 Degrees of Freedom = 82705.9988
Independence AIC = 82771.9988
Model AIC = 22273.4767
Saturated AIC = 1122.0000
Independence CAIC = 83016.9830
Model CAIC = 22837.6825
Saturated CAIC = 5286.7301

Normed Fit Index (NFI) = 0.8171
Non-Normed Fit Index (NNFI) = 0.8060
Parsimony Normed Fit Index (PNFI) = 0.7506
Comparative Fit Index (CFI) = 0.8218
Incremental Fit Index (IFI) = 0.8219
Relative Fit Index (RFI) = 0.8009

Critical N (CN) = 169.6690

Root Mean Square Residual (RMR) = 0.2310
Standardized RMR = 0.2445
Goodness of Fit Index (GFI) = 0.7725
Adjusted Goodness of Fit Index (AGFI) = 0.7369
Parsimony Goodness of Fit Index (PGFI) = 0.6679

Appendix F

Cross-Validation Tests

Loose Replication Strategy:

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6757*Action, Errorvar.= 0.3939 , R^2 = 0.5368
(0.01478)
26.6548

Q119 = 0.7525*Action, Errorvar.= 0.2484 , R^2 = 0.6951
(0.02131) (0.01253)
35.3159 19.8159

Q122 = 0.6813*Action, Errorvar.= 0.3837 , R^2 = 0.5474
(0.02107) (0.01458)
32.3367 26.3244

Q124 = 0.6939*Trust, Errorvar.= 0.2648 , R^2 = 0.6452
(0.01030)
25.7046

Q125 = 0.7052*Trust, Errorvar.= 0.2407 , R^2 = 0.6738
(0.01677) (0.009793)
42.0412 24.5802

Q126 = 0.7156*Trust, Errorvar.= 0.2181 , R^2 = 0.7013
(0.01665) (0.009348)
42.9814 23.3316

Q2 = 0.8946*Touch&Fl, Errorvar.= 0.1998 , R^2 = 0.8002
(0.01904) (0.01876)
46.9838 10.6503

Q4 = 0.8316*Touch&Fl, Errorvar.= 0.3085 , R^2 = 0.6915
(0.01932) (0.01791)
43.0483 17.2278

Q10 = 0.6276*Touch&Fl, Errorvar.= 0.6061 , R^2 = 0.3939
(0.02008) (0.02006)
31.2497 30.2119

Q19 = 0.5522*Brand, Errorvar.= 0.6951 , R^2 = 0.3049
(0.02189) (0.02355)
25.2279 29.5133

Q21 = 0.8462*Brand, Errorvar.= 0.2839 , R^2 = 0.7161
(0.02250) (0.02670)
37.6108 10.6315

Q22 = 0.7196*Brand, Errorvar.= 0.4822 , R^2 = 0.5178
(0.02215) (0.02336)
32.4944 20.6421

Q27 = 0.7924*Privacy, Errorvar.= 0.3721 , R^2 = 0.6279
(0.01875) (0.01574)
42.2571 23.6379

Q28 = 0.9505*Privacy, Errorvar.= 0.09658 , R^2 = 0.9034
(0.01769) (0.01640)
53.7170 5.8881

Q32 = 0.7149*Privacy, Errorvar.= 0.4889 , R^2 = 0.5111
(0.01918) (0.01714)
37.2662 28.5270

Q35 = 0.6764*TrustSls, Errorvar.= 0.5425 , R^2 = 0.4575
(0.02111) (0.02131)
32.0359 25.4564

Q36 = 0.8573*TrustSls, Errorvar.= 0.2650 , R^2 = 0.7350
(0.02120) (0.02378)
40.4436 11.1434

Q37 = 0.6896*TrustSls, Errorvar.= 0.5244 , R^2 = 0.4756
(0.02112) (0.02128)
32.6552 24.6409

Q42 = 0.8031*Content, Errorvar.= 0.3551 , R^2 = 0.6449
(0.01846) (0.01489)
43.5098 23.8499

Q43 = 0.9061*Content, Errorvar.= 0.1791 , R^2 = 0.8209
(0.01761) (0.01401)
51.4457 12.7858

Q44 = 0.7215*Content, Errorvar.= 0.4795 , R^2 = 0.5205
(0.01909) (0.01686)
37.7878 28.4397

Q53 = 0.7564*Advice, Errorvar.= 0.4279 , R^2 = 0.5721
(0.01864) (0.01543)
40.5807 27.7363

Q54 = 0.8860*Advice, Errorvar.= 0.2149 , R^2 = 0.7851
(0.01768) (0.01359)
50.1019 15.8207

Q55 = 0.8682*Advice, Errorvar.= 0.2462 , R^2 = 0.7538
(0.01783) (0.01364)
48.7012 18.0486

Q71 = 0.7425*OrderFul, Errorvar.= 0.4487 , R^2 = 0.5513
(0.02192) (0.02312)
33.8721 19.4041

Q72 = 0.7286*OrderFul, Errorvar.= 0.4692 , R^2 = 0.5308
(0.02189) (0.02292)
33.2892 20.4753

Q74 = 0.6813*OrderFul, Errorvar.= 0.5358 , R^2 = 0.4642
(0.02177) (0.02249)
31.2930 23.8218

Q77 = 0.7916*NoErrors, Errorvar.= 0.3734 , R^2 = 0.6266
(0.01836) (0.01453)
43.1192 25.7028

Q78 = 0.9237*NoErrors, Errorvar.= 0.1468 , R^2 = 0.8532
(0.01731) (0.01349)
53.3549 10.8870

Q79 = 0.8051*NoErrors, Errorvar.= 0.3519 , R^2 = 0.6481
(0.01826) (0.01426)
44.0864 24.6733

Q89 = 0.6611*Communit, Errorvar.= 0.5629 , R^2 = 0.4371
(0.02630) (0.02979)
25.1403 18.8981

Q90 = 0.5296*Communit, Errorvar.= 0.7195 , R^2 = 0.2805
(0.02453) (0.02658)
21.5876 27.0736

Q91 = 0.7012*Communit, Errorvar.= 0.5083 , R^2 = 0.4917
(0.02689) (0.03158)
26.0795 16.0969

Structural Equations

Trust = 0.1573*Touch&Fl + 0.1197*Advice + 0.1378*NoErrors + 0.003215*OrderFul + 0.04078*Communit + 0.06404*Privacy
(0.01947) (0.01919) (0.01910) (0.02056) (0.02178) (0.01874)
8.0804 6.2388 7.2154 0.1564 1.8726 3.4177

+ 0.04755*TrustSls + 0.2458*Brand + 0.5797*Content, Errorvar.= 0.5374 , R^2 = 0.4626
(0.01987) (0.02064) (0.02235) (0.02746)
2.3933 11.9085 25.9383 19.5706

Action = 0.7885*Trust, Errorvar.= 0.3783 , R^2 = 0.6217
(0.02697) (0.02524)
29.2377 14.9868

Goodness of Fit Statistics

Degrees of Freedom = 485
Minimum Fit Function Chi-Square = 7655.3610 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 10926.0367 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 10441.0367
90 Percent Confidence Interval for NCP = (10104.2835 ; 10784.7630)

Minimum Fit Function Value = 3.3635
Population Discrepancy Function Value (F0) = 4.5875
90 Percent Confidence Interval for F0 = (4.4395 ; 4.7385)
Root Mean Square Error of Approximation (RMSEA) = 0.09726
90 Percent Confidence Interval for RMSEA = (0.09567 ; 0.09884)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 4.8673
90 Percent Confidence Interval for ECVI = (4.7194 ; 5.0183)
ECVI for Saturated Model = 0.4930
ECVI for Independence Model = 18.2911

Chi-Square for Independence Model with 528 Degrees of Freedom = 41564.5597
Independence AIC = 41630.5597
Model AIC = 11078.0367
Saturated AIC = 1122.0000
Independence CAIC = 41852.6700
Model CAIC = 11589.5633
Saturated CAIC = 4897.8745

Normed Fit Index (NFI) = 0.8158
Non-Normed Fit Index (NNFI) = 0.8098
Parsimony Normed Fit Index (PNFI) = 0.7494
Comparative Fit Index (CFI) = 0.8253
Incremental Fit Index (IFI) = 0.8255
Relative Fit Index (RFI) = 0.7995

Critical N (CN) = 167.6069

Root Mean Square Residual (RMR) = 0.2286
Standardized RMR = 0.2408
Goodness of Fit Index (GFI) = 0.7746
Adjusted Goodness of Fit Index (AGFI) = 0.7393
Parsimony Goodness of Fit Index (PGFI) = 0.6697

Tight Replication Strategy:

Global Goodness of Fit Statistics

Degrees of Freedom = 1044
Minimum Fit Function Chi-Square = 22858.0217 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 33117.9563 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 32073.9563
90 Percent Confidence Interval for NCP = (31482.2772 ; 32671.5195)

Minimum Fit Function Value = 3.3472
Population Discrepancy Function Value (F0) = 4.6967
90 Percent Confidence Interval for F0 = (4.6101 ; 4.7842)
Root Mean Square Error of Approximation (RMSEA) = 0.09486
90 Percent Confidence Interval for RMSEA = (0.09398 ; 0.09574)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 4.8724
90 Percent Confidence Interval for ECVI = (4.7858 ; 4.9600)
ECVI for Saturated Model = 0.1643
ECVI for Independence Model = 18.2071

Chi-Square for Independence Model with 1056 Degrees of Freedom = 124270.5586
Independence AIC = 124402.5586
Model AIC = 33273.9563
Saturated AIC = 2244.0000
Independence CAIC = 124919.2875
Model CAIC = 33884.6359
Saturated CAIC = 11028.3920

Normed Fit Index (NFI) = 0.8161
Non-Normed Fit Index (NNFI) = 0.8209
Parsimony Normed Fit Index (PNFI) = 0.8068
Comparative Fit Index (CFI) = 0.8230
Incremental Fit Index (IFI) = 0.8230
Relative Fit Index (RFI) = 0.8139

Critical N (CN) = 345.5370

Group Goodness of Fit Statistics

Contribution to Chi-Square = 7705.5185
Percentage Contribution to Chi-Square = 33.7103

Root Mean Square Residual (RMR) = 0.2287
Standardized RMR = 0.2418
Goodness of Fit Index (GFI) = 0.7736

Moderated Replication Strategy:

Global Goodness of Fit Statistics

Degrees of Freedom = 1001
Minimum Fit Function Chi-Square = 22838.7158 (P = 0.0)
Normal Theory Weighted Least Squares Chi-Square = 33102.7969 (P = 0.0)
Estimated Non-centrality Parameter (NCP) = 32101.7969
90 Percent Confidence Interval for NCP = (31510.1030 ; 32699.4189)

Minimum Fit Function Value = 3.3444
Population Discrepancy Function Value (F0) = 4.7008
90 Percent Confidence Interval for F0 = (4.6142 ; 4.7883)
Root Mean Square Error of Approximation (RMSEA) = 0.09691
90 Percent Confidence Interval for RMSEA = (0.09602 ; 0.09781)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.0000

Expected Cross-Validation Index (ECVI) = 4.8828
90 Percent Confidence Interval for ECVI = (4.7962 ; 4.9703)
ECVI for Saturated Model = 0.1643
ECVI for Independence Model = 18.2071

Chi-Square for Independence Model with 1056 Degrees of Freedom = 124270.5586
Independence AIC = 124402.5586
Model AIC = 33344.7969
Saturated AIC = 2244.0000
Independence CAIC = 124919.2875
Model CAIC = 34292.1332
Saturated CAIC = 11028.3920

Normed Fit Index (NFI) = 0.8162
Non-Normed Fit Index (NNFI) = 0.8130
Parsimony Normed Fit Index (PNFI) = 0.7737
Comparative Fit Index (CFI) = 0.8228
Incremental Fit Index (IFI) = 0.8228
Relative Fit Index (RFI) = 0.8061

Critical N (CN) = 332.3093

Group Goodness of Fit Statistics

Contribution to Chi-Square = 7692.3573
Percentage Contribution to Chi-Square = 33.6812

Root Mean Square Residual (RMR) = 0.2286
Standardized RMR = 0.2406
Goodness of Fit Index (GFI) = 0.7748

Appendix G

Testing of Moderation Variables

Gender: Male

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6372*Action, Errorvar.= 0.4597 , R^2 = 0.4690
(0.01328)
34.6026

Q119 = 0.7471*Action, Errorvar.= 0.2572 , R^2 = 0.6846
(0.01892) (0.01082)
39.4979 23.7746

Q122 = 0.6576*Action, Errorvar.= 0.4246 , R^2 = 0.5045
(0.01833) (0.01271)
35.8772 33.4050

Q124 = 0.6931*Trust, Errorvar.= 0.2700 , R^2 = 0.6402
(0.008502)
31.7551

Q125 = 0.6934*Trust, Errorvar.= 0.2694 , R^2 = 0.6409
(0.01381) (0.008492)
50.2182 31.7229

Q126 = 0.7234*Trust, Errorvar.= 0.2048 , R^2 = 0.7187
(0.01355) (0.007496)
53.3673 27.3171

Q2 = 0.8888*Touch&Fl, Errorvar.= 0.2100 , R^2 = 0.7900
(0.01548) (0.01547)
57.4102 13.5784

Q4 = 0.8068*Touch&Fl, Errorvar.= 0.3490 , R^2 = 0.6510
(0.01574) (0.01467)
51.2615 23.7955

Q10 = 0.6456*Touch&Fl, Errorvar.= 0.5832 , R^2 = 0.4168
(0.01618) (0.01596)
39.8980 36.5328

Q19 = 0.5773*Brand, Errorvar.= 0.6667 , R^2 = 0.3333
(0.01768) (0.01881)
32.6461 35.4406

Q21 = 0.8034*Brand, Errorvar.= 0.3545 , R^2 = 0.6455
(0.01820) (0.02074)
44.1344 17.0923

Q22 = 0.7331*Brand, Errorvar.= 0.4625 , R^2 = 0.5375
(0.01801) (0.01929)
40.7104 23.9809

Q27 = 0.8351*Privacy, Errorvar.= 0.3026 , R^2 = 0.6974
(0.01464) (0.01157)
57.0336 26.1530

Q28 = 0.9321*Privacy, Errorvar.= 0.1312 , R^2 = 0.8688
(0.01404) (0.01169)
66.3748 11.2259

Q32 = 0.7232*Privacy, Errorvar.= 0.4770 , R^2 = 0.5230
(0.01523) (0.01325)
47.4791 35.9983

Q35 = 0.7059*TrustSls, Errorvar.= 0.5017 , R^2 = 0.4983
(0.01641) (0.01595)
43.0234 31.4614

Q36 = 0.8433*TrustSls, Errorvar.= 0.2889 , R^2 = 0.7111
(0.01621) (0.01655)
52.0210 17.4550

Q37 = 0.7399*TrustSls, Errorvar.= 0.4526 , R^2 = 0.5474
(0.01636) (0.01583)
45.2204 28.5849

Q42 = 0.7972*Content, Errorvar.= 0.3645 , R^2 = 0.6355
(0.01499) (0.01241)
53.1709 29.3596

Q43 = 0.9075*Content, Errorvar.= 0.1764 , R^2 = 0.8236
(0.01432) (0.01195)
63.3589 14.7576

Q44 = 0.7142*Content, Errorvar.= 0.4899 , R^2 = 0.5101
(0.01547) (0.01388)
46.1787 35.3084

Q53 = 0.7601*Advice, Errorvar.= 0.4222 , R^2 = 0.5778
(0.01492) (0.01221)
50.9367 34.5884

Q54 = 0.8824*Advice, Errorvar.= 0.2214 , R^2 = 0.7786
(0.01418) (0.01066)
62.2234 20.7668

Q55 = 0.8796*Advice, Errorvar.= 0.2263 , R^2 = 0.7737
(0.01420) (0.01067)
61.9470 21.2089

Q71 = 0.8117*OrderFul, Errorvar.= 0.3411 , R^2 = 0.6589
(0.01590) (0.01518)
51.0486 22.4731

Q72 = 0.7764*OrderFul, Errorvar.= 0.3973 , R^2 = 0.6027
(0.01599) (0.01507)
48.5669 26.3619

Q74 = 0.7369*OrderFul, Errorvar.= 0.4569 , R^2 = 0.5431
(0.01607) (0.01517)
45.8472 30.1144

Q77 = 0.7782*NoErrors, Errorvar.= 0.3943 , R^2 = 0.6057
(0.01499) (0.01236)
51.9144 31.8952

Q78 = 0.9161*NoErrors, Errorvar.= 0.1607 , R^2 = 0.8393
(0.01419) (0.01172)
64.5411 13.7044

Q79 = 0.7912*NoErrors, Errorvar.= 0.3739 , R^2 = 0.6261
(0.01492) (0.01218)
53.0229 30.7097

Q89 = 0.7153*Communit, Errorvar.= 0.4883 , R^2 = 0.5117
(0.02042) (0.02359)
35.0258 20.7011

Q90 = 0.5197*Communit, Errorvar.= 0.7300 , R^2 = 0.2700
(0.01886) (0.02053)
27.5538 35.5530

Q91 = 0.7317*Communit, Errorvar.= 0.4646 , R^2 = 0.5354
(0.02057) (0.02415)
35.5684 19.2386

Gender: Female

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7249*Action, Errorvar.= 0.2789 , R^2 = 0.6533
(0.009743)
28.6261

Q119 = 0.7582*Action, Errorvar.= 0.2111 , R^2 = 0.7314
(0.01494) (0.008954)

50.7529 23.5761

Q122 = 0.6747*Action, Errorvar.= 0.3753 , R^2 = 0.5481
(0.01532) (0.01132)
44.0449 33.1657

Q124 = 0.6773*Trust, Errorvar.= 0.2574 , R^2 = 0.6406
(0.008417)
30.5743

Q125 = 0.6810*Trust, Errorvar.= 0.2491 , R^2 = 0.6506
(0.01393) (0.008272)
48.8827 30.1104

Q126 = 0.6920*Trust, Errorvar.= 0.2248 , R^2 = 0.6805
(0.01382) (0.007865)
50.0839 28.5807

Q2 = 0.8918*Touch&Fl, Errorvar.= 0.2048 , R^2 = 0.7952
(0.01592) (0.01590)
56.0135 12.8823

Q4 = 0.8255*Touch&Fl, Errorvar.= 0.3186 , R^2 = 0.6814
(0.01614) (0.01512)
51.1353 21.0634

Q10 = 0.6227*Touch&Fl, Errorvar.= 0.6122 , R^2 = 0.3878
(0.01673) (0.01683)
37.2103 36.3873

Q19 = 0.5571*Brand, Errorvar.= 0.6896 , R^2 = 0.3104
(0.01805) (0.01937)
30.8617 35.6084

Q21 = 0.8704*Brand, Errorvar.= 0.2424 , R^2 = 0.7576
(0.01837) (0.02212)
47.3847 10.9573

Q22 = 0.6947*Brand, Errorvar.= 0.5174 , R^2 = 0.4826
(0.01810) (0.01876)
38.3752 27.5770

Q27 = 0.8118*Privacy, Errorvar.= 0.3410 , R^2 = 0.6590
(0.01539) (0.01269)
52.7319 26.8800

Q28 = 0.9520*Privacy, Errorvar.= 0.09372 , R^2 = 0.9063
(0.01458) (0.01329)
65.3122 7.0528

Q32 = 0.6993*Privacy, Errorvar.= 0.5110 , R^2 = 0.4890
(0.01593) (0.01442)

43.8833 35.4337

Q35 = 0.6442*TrustSls, Errorvar.= 0.5850 , R^2 = 0.4150
(0.01797) (0.01859)
35.8389 31.4674

Q36 = 0.8551*TrustSls, Errorvar.= 0.2687 , R^2 = 0.7313
(0.01840) (0.02176)
46.4687 12.3473

Q37 = 0.6716*TrustSls, Errorvar.= 0.5490 , R^2 = 0.4510
(0.01802) (0.01860)
37.2623 29.5132

Q42 = 0.8049*Content, Errorvar.= 0.3521 , R^2 = 0.6479
(0.01540) (0.01266)
52.2713 27.8176

Q43 = 0.8935*Content, Errorvar.= 0.2017 , R^2 = 0.7983
(0.01483) (0.01215)
60.2319 16.5959

Q44 = 0.7255*Content, Errorvar.= 0.4737 , R^2 = 0.5263
(0.01588) (0.01407)
45.6762 33.6605

Q53 = 0.7399*Advice, Errorvar.= 0.4526 , R^2 = 0.5474
(0.01563) (0.01335)
47.3385 33.9097

Q54 = 0.8744*Advice, Errorvar.= 0.2355 , R^2 = 0.7645
(0.01486) (0.01175)
58.8400 20.0357

Q55 = 0.8744*Advice, Errorvar.= 0.2355 , R^2 = 0.7645
(0.01486) (0.01175)
58.8382 20.0387

Q71 = 0.6240*OrderFul, Errorvar.= 0.6106 , R^2 = 0.3894
(0.02406) (0.02735)
25.9317 22.3230

Q72 = 0.6285*OrderFul, Errorvar.= 0.6049 , R^2 = 0.3951
(0.02415) (0.02756)
26.0305 21.9536

Q74 = 0.5022*OrderFul, Errorvar.= 0.7478 , R^2 = 0.2522
(0.02198) (0.02364)
22.8436 31.6269

Q77 = 0.8059*NoErrors, Errorvar.= 0.3505 , R^2 = 0.6495
(0.01504) (0.01150)
53.5711 30.4780

Q78 = 0.9254*NoErrors, Errorvar.= 0.1436 , R^2 = 0.8564
(0.01421) (0.01062)
65.1028 13.5237

Q79 = 0.8107*NoErrors, Errorvar.= 0.3428 , R^2 = 0.6572
(0.01501) (0.01142)
53.9923 30.0247

Q89 = 0.6576*Communit, Errorvar.= 0.5676 , R^2 = 0.4324
(0.02141) (0.02403)
30.7182 23.6179

Q90 = 0.5330*Communit, Errorvar.= 0.7159 , R^2 = 0.2841
(0.02012) (0.02180)
26.4952 32.8458

Q91 = 0.7242*Communit, Errorvar.= 0.4755 , R^2 = 0.5245
(0.02217) (0.02646)
32.6683 17.9712

Education: High

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7208*Action, Errorvar.= 0.2847 , R^2 = 0.6460
(0.009018)
31.5729

Q119 = 0.7606*Action, Errorvar.= 0.2036 , R^2 = 0.7396
(0.01380) (0.008157)
55.1138 24.9651

Q122 = 0.6636*Action, Errorvar.= 0.3937 , R^2 = 0.5280
(0.01421) (0.01071)
46.7090 36.7713

Q124 = 0.6798*Trust, Errorvar.= 0.2559 , R^2 = 0.6436
(0.007642)
33.4825

Q125 = 0.6860*Trust, Errorvar.= 0.2422 , R^2 = 0.6603
(0.01267) (0.007419)
54.1356 32.6405

Q126 = 0.6971*Trust, Errorvar.= 0.2175 , R^2 = 0.6908
(0.01256) (0.007039)
55.4988 30.8916

Q2 = 0.8916*Touch&Fl, Errorvar.= 0.2051 , R^2 = 0.7949
(0.01466) (0.01471)
60.8029 13.9404

Q4 = 0.8199*Touch&Fl, Errorvar.= 0.3278 , R^2 = 0.6722
(0.01488) (0.01395)
55.1076 23.4990

Q10 = 0.6284*Touch&Fl, Errorvar.= 0.6051 , R^2 = 0.3949
(0.01537) (0.01538)
40.8848 39.3349

Q19 = 0.5723*Brand, Errorvar.= 0.6725 , R^2 = 0.3275
(0.01653) (0.01759)
34.6103 38.2318

Q21 = 0.8643*Brand, Errorvar.= 0.2530 , R^2 = 0.7470
(0.01675) (0.01984)
51.5882 12.7482

Q22 = 0.6969*Brand, Errorvar.= 0.5143 , R^2 = 0.4857
(0.01656) (0.01711)
42.0799 30.0629

Q27 = 0.8166*Privacy, Errorvar.= 0.3331 , R^2 = 0.6669
(0.01408) (0.01149)
57.9947 28.9995

Q28 = 0.9508*Privacy, Errorvar.= 0.09595 , R^2 = 0.9040
(0.01334) (0.01196)
71.2638 8.0261

Q32 = 0.7027*Privacy, Errorvar.= 0.5062 , R^2 = 0.4938
(0.01460) (0.01312)
48.1329 38.5699

Q35 = 0.6356*TrustSls, Errorvar.= 0.5960 , R^2 = 0.4040
(0.01682) (0.01759)
37.7949 33.8880

Q36 = 0.8388*TrustSls, Errorvar.= 0.2964 , R^2 = 0.7036
(0.01741) (0.02079)
48.1861 14.2526

Q37 = 0.6592*TrustSls, Errorvar.= 0.5655 , R^2 = 0.4345
(0.01688) (0.01764)
39.0563 32.0531

Q42 = 0.8109*Content, Errorvar.= 0.3424 , R^2 = 0.6576
(0.01406) (0.01138)
57.6650 30.0745

Q43 = 0.8972*Content, Errorvar.= 0.1950 , R^2 = 0.8050
(0.01354) (0.01091)
66.2536 17.8648

Q44 = 0.7287*Content, Errorvar.= 0.4690 , R^2 = 0.5310
(0.01453) (0.01276)
50.1421 36.7557

Q53 = 0.7521*Advice, Errorvar.= 0.4344 , R^2 = 0.5656
(0.01426) (0.01193)
52.7445 36.4098

Q54 = 0.8752*Advice, Errorvar.= 0.2340 , R^2 = 0.7660
(0.01359) (0.01055)
64.4200 22.1805

Q55 = 0.8735*Advice, Errorvar.= 0.2371 , R^2 = 0.7629
(0.01360) (0.01055)
64.2390 22.4671

Q71 = 0.6353*OrderFul, Errorvar.= 0.5964 , R^2 = 0.4036
(0.02163) (0.02465)
29.3741 24.1934

Q72 = 0.6368*OrderFul, Errorvar.= 0.5945 , R^2 = 0.4055
(0.02165) (0.02471)
29.4137 24.0546

Q74 = 0.5127*OrderFul, Errorvar.= 0.7371 , R^2 = 0.2629
(0.01988) (0.02144)
25.7958 34.3831

Q77 = 0.8034*NoErrors, Errorvar.= 0.3546 , R^2 = 0.6454
(0.01380) (0.01049)
58.2001 33.8017

Q78 = 0.9293*NoErrors, Errorvar.= 0.1363 , R^2 = 0.8637
(0.01298) (0.009549)
71.5736 14.2776

Q79 = 0.8181*NoErrors, Errorvar.= 0.3306 , R^2 = 0.6694
(0.01372) (0.01025)
59.6477 32.2562

Q89 = 0.6742*Communit, Errorvar.= 0.5455 , R^2 = 0.4545
(0.01963) (0.02223)
34.3421 24.5434

Q90 = 0.5280*Communit, Errorvar.= 0.7212 , R^2 = 0.2788
(0.01831) (0.01986)
28.8402 36.3194

Q91 = 0.7257*Communit, Errorvar.= 0.4733 , R^2 = 0.5267

(0.02015) (0.02395)
36.0165 19.7604

Education: Low

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6335*Action, Errorvar.= 0.4731 , R^2 = 0.4590
(0.01505)
31.4391

Q119 = 0.7413*Action, Errorvar.= 0.2786 , R^2 = 0.6636
(0.02128) (0.01244)
34.8317 22.3934

Q122 = 0.6714*Action, Errorvar.= 0.4083 , R^2 = 0.5247
(0.02065) (0.01394)
32.5078 29.2828

Q124 = 0.6938*Trust, Errorvar.= 0.2732 , R^2 = 0.6379
(0.009552)
28.6037

Q125 = 0.6892*Trust, Errorvar.= 0.2828 , R^2 = 0.6269
(0.01542) (0.009729)
44.6869 29.0639

Q126 = 0.7230*Trust, Errorvar.= 0.2108 , R^2 = 0.7127
(0.01514) (0.008519)
47.7593 24.7406

Q2 = 0.8876*Touch&Fl, Errorvar.= 0.2121 , R^2 = 0.7879
(0.01701) (0.01692)
52.1835 12.5359

Q4 = 0.8109*Touch&Fl, Errorvar.= 0.3425 , R^2 = 0.6575
(0.01728) (0.01610)
46.9248 21.2719

Q10 = 0.6422*Touch&Fl, Errorvar.= 0.5876 , R^2 = 0.4124
(0.01780) (0.01761)
36.0699 33.3650

Q19 = 0.5540*Brand, Errorvar.= 0.6931 , R^2 = 0.3069
(0.01961) (0.02110)
28.2466 32.8444

Q21 = 0.8073*Brand, Errorvar.= 0.3483 , R^2 = 0.6517
(0.02044) (0.02385)

39.4916 14.6038

Q22 = 0.7304*Brand, Errorvar.= 0.4666 , R^2 = 0.5334
(0.02014) (0.02184)
36.2702 21.3638

Q27 = 0.8329*Privacy, Errorvar.= 0.3063 , R^2 = 0.6937
(0.01615) (0.01284)
51.5795 23.8477

Q28 = 0.9297*Privacy, Errorvar.= 0.1357 , R^2 = 0.8643
(0.01550) (0.01298)
59.9791 10.4556

Q32 = 0.7235*Privacy, Errorvar.= 0.4765 , R^2 = 0.5235
(0.01677) (0.01462)
43.1440 32.5999

Q35 = 0.7255*TrustSls, Errorvar.= 0.4736 , R^2 = 0.5264
(0.01752) (0.01635)
41.4046 28.9652

Q36 = 0.8624*TrustSls, Errorvar.= 0.2563 , R^2 = 0.7437
(0.01708) (0.01646)
50.4787 15.5722

Q37 = 0.7657*TrustSls, Errorvar.= 0.4138 , R^2 = 0.5862
(0.01740) (0.01606)
43.9977 25.7567

Q42 = 0.7866*Content, Errorvar.= 0.3812 , R^2 = 0.6188
(0.01663) (0.01402)
47.3160 27.1970

Q43 = 0.9057*Content, Errorvar.= 0.1798 , R^2 = 0.8202
(0.01586) (0.01350)
57.1062 13.3185

Q44 = 0.7136*Content, Errorvar.= 0.4908 , R^2 = 0.5092
(0.01707) (0.01540)
41.8067 31.8675

Q53 = 0.7474*Advice, Errorvar.= 0.4413 , R^2 = 0.5587
(0.01652) (0.01380)
45.2332 31.9763

Q54 = 0.8834*Advice, Errorvar.= 0.2196 , R^2 = 0.7804
(0.01564) (0.01194)
56.4707 18.3885

Q55 = 0.8818*Advice, Errorvar.= 0.2225 , R^2 = 0.7775
(0.01565) (0.01195)
56.3246 18.6241

Q71 = 0.8114*OrderFul, Errorvar.= 0.3417 , R^2 = 0.6583
(0.01748) (0.01666)
46.4210 20.5136

Q72 = 0.7749*OrderFul, Errorvar.= 0.3996 , R^2 = 0.6004
(0.01757) (0.01655)
44.0893 24.1486

Q74 = 0.7399*OrderFul, Errorvar.= 0.4526 , R^2 = 0.5474
(0.01766) (0.01665)
41.8902 27.1821

Q77 = 0.7752*NoErrors, Errorvar.= 0.3990 , R^2 = 0.6010
(0.01663) (0.01401)
46.6129 28.4734

Q78 = 0.9089*NoErrors, Errorvar.= 0.1739 , R^2 = 0.8261
(0.01585) (0.01355)
57.3622 12.8280

Q79 = 0.7778*NoErrors, Errorvar.= 0.3951 , R^2 = 0.6049
(0.01662) (0.01398)
46.8013 28.2691

Q89 = 0.7077*Communit, Errorvar.= 0.4991 , R^2 = 0.5009
(0.02236) (0.02563)
31.6447 19.4722

Q90 = 0.5218*Communit, Errorvar.= 0.7278 , R^2 = 0.2722
(0.02080) (0.02262)
25.0864 32.1681

Q91 = 0.7310*Communit, Errorvar.= 0.4656 , R^2 = 0.5344
(0.02259) (0.02649)
32.3590 17.5800

Income: High

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7307*Action, Errorvar.= 0.2688 , R^2 = 0.6652
(0.01020)
26.3460

Q119 = 0.7695*Action, Errorvar.= 0.1892 , R^2 = 0.7578
(0.01580) (0.009184)
48.7065 20.6006

Q122 = 0.6713*Action, Errorvar.= 0.3830 , R^2 = 0.5405
(0.01646) (0.01235)
40.7861 31.0203

Q124 = 0.6894*Trust, Errorvar.= 0.2450 , R^2 = 0.6599
(0.008883)
27.5847

Q125 = 0.6905*Trust, Errorvar.= 0.2428 , R^2 = 0.6626
(0.01490) (0.008839)
46.3548 27.4641

Q126 = 0.6977*Trust, Errorvar.= 0.2268 , R^2 = 0.6821
(0.01480) (0.008542)
47.1376 26.5563

Q2 = 0.8914*Touch&Fl, Errorvar.= 0.2054 , R^2 = 0.7946
(0.01709) (0.01627)
52.1711 12.6258

Q4 = 0.8073*Touch&Fl, Errorvar.= 0.3482 , R^2 = 0.6518
(0.01746) (0.01568)
46.2439 22.2024

Q10 = 0.6798*Touch&Fl, Errorvar.= 0.5379 , R^2 = 0.4621
(0.01795) (0.01705)
37.8628 31.5566

Q19 = 0.6116*Brand, Errorvar.= 0.6260 , R^2 = 0.3740
(0.01920) (0.01987)
31.8540 31.5068

Q21 = 0.8511*Brand, Errorvar.= 0.2756 , R^2 = 0.7244
(0.01901) (0.02080)
44.7784 13.2482

Q22 = 0.7400*Brand, Errorvar.= 0.4524 , R^2 = 0.5476
(0.01907) (0.01920)
38.8092 23.5703

Q27 = 0.8198*Privacy, Errorvar.= 0.3280 , R^2 = 0.6720
(0.01663) (0.01323)
49.2925 24.7939

Q28 = 0.9515*Privacy, Errorvar.= 0.09469 , R^2 = 0.9053
(0.01571) (0.01350)
60.5647 7.0116

Q32 = 0.7204*Privacy, Errorvar.= 0.4810 , R^2 = 0.5190
(0.01721) (0.01502)
41.8586 32.0180

Q35 = 0.6811*TrustSls, Errorvar.= 0.5361 , R^2 = 0.4639
(0.01988) (0.02063)
34.2524 25.9859

Q36 = 0.8208*TrustSls, Errorvar.= 0.3262 , R^2 = 0.6738
(0.02025) (0.02313)
40.5379 14.1058

Q37 = 0.6495*TrustSls, Errorvar.= 0.5781 , R^2 = 0.4219
(0.01981) (0.02055)
32.7853 28.1367

Q42 = 0.8144*Content, Errorvar.= 0.3367 , R^2 = 0.6633
(0.01669) (0.01338)
48.7906 25.1572

Q43 = 0.8980*Content, Errorvar.= 0.1936 , R^2 = 0.8064
(0.01608) (0.01280)
55.8515 15.1204

Q44 = 0.7305*Content, Errorvar.= 0.4663 , R^2 = 0.5337
(0.01728) (0.01509)
42.2872 30.9024

Q53 = 0.7628*Advice, Errorvar.= 0.4182 , R^2 = 0.5818
(0.01685) (0.01379)
45.2592 30.3332

Q54 = 0.8855*Advice, Errorvar.= 0.2159 , R^2 = 0.7841
(0.01601) (0.01215)
55.2954 17.7741

Q55 = 0.8690*Advice, Errorvar.= 0.2448 , R^2 = 0.7552
(0.01614) (0.01221)
53.8562 20.0524

Q71 = 0.6041*OrderFul, Errorvar.= 0.6351 , R^2 = 0.3649
(0.02406) (0.02656)
25.1039 23.9136

Q72 = 0.6168*OrderFul, Errorvar.= 0.6196 , R^2 = 0.3804
(0.02425) (0.02695)
25.4354 22.9859

Q74 = 0.6045*OrderFul, Errorvar.= 0.6346 , R^2 = 0.3654
(0.02407) (0.02657)
25.1144 23.8848

Q77 = 0.8263*NoErrors, Errorvar.= 0.3172 , R^2 = 0.6828
(0.01613) (0.01148)
51.2372 27.6330

Q78 = 0.9304*NoErrors, Errorvar.= 0.1343 , R^2 = 0.8657

(0.01525) (0.01037)
60.9995 12.9543

Q79 = 0.8306*NoErrors, Errorvar.= 0.3101 , R^2 = 0.6899
(0.01609) (0.01139)
51.6059 27.2259

Q89 = 0.6500*Communit, Errorvar.= 0.5774 , R^2 = 0.4226
(0.02405) (0.02714)
27.0241 21.2752

Q90 = 0.5151*Communit, Errorvar.= 0.7347 , R^2 = 0.2653
(0.02233) (0.02422)
23.0696 30.3298

Q91 = 0.7171*Communit, Errorvar.= 0.4858 , R^2 = 0.5142
(0.02501) (0.03007)
28.6751 16.1567

Income: Low

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6350*Action, Errorvar.= 0.4713 , R^2 = 0.4611
(0.01521)
30.9747

Q119 = 0.7408*Action, Errorvar.= 0.2804 , R^2 = 0.6618
(0.02149) (0.01257)
34.4725 22.3028

Q122 = 0.6780*Action, Errorvar.= 0.3973 , R^2 = 0.5364
(0.02092) (0.01394)
32.4094 28.4921

Q124 = 0.6964*Trust, Errorvar.= 0.2682 , R^2 = 0.6438
(0.009578)
28.0068

Q125 = 0.6891*Trust, Errorvar.= 0.2834 , R^2 = 0.6262
(0.01556) (0.009863)
44.2907 28.7337

Q126 = 0.7234*Trust, Errorvar.= 0.2103 , R^2 = 0.7133
(0.01525) (0.008606)
47.4399 24.4367

Q2 = 0.8870*Touch&Fl, Errorvar.= 0.2132 , R^2 = 0.7868
(0.01725) (0.01709)

51.4337 12.4802

Q4 = 0.8135*Touch&Fl, Errorvar.= 0.3382 , R^2 = 0.6618
(0.01751) (0.01629)
46.4526 20.7579

Q10 = 0.6429*Touch&Fl, Errorvar.= 0.5867 , R^2 = 0.4133
(0.01806) (0.01784)
35.6058 32.8855

Q19 = 0.5447*Brand, Errorvar.= 0.7033 , R^2 = 0.2967
(0.01991) (0.02151)
27.3581 32.6918

Q21 = 0.8044*Brand, Errorvar.= 0.3530 , R^2 = 0.6470
(0.02080) (0.02424)
38.6734 14.5616

Q22 = 0.7410*Brand, Errorvar.= 0.4509 , R^2 = 0.5491
(0.02053) (0.02248)
36.0914 20.0540

Q27 = 0.8332*Privacy, Errorvar.= 0.3059 , R^2 = 0.6941
(0.01640) (0.01306)
50.8130 23.4209

Q28 = 0.9300*Privacy, Errorvar.= 0.1352 , R^2 = 0.8648
(0.01574) (0.01321)
59.0806 10.2309

Q32 = 0.7215*Privacy, Errorvar.= 0.4794 , R^2 = 0.5206
(0.01704) (0.01489)
42.3409 32.1882

Q35 = 0.7249*TrustSls, Errorvar.= 0.4745 , R^2 = 0.5255
(0.01774) (0.01650)
40.8620 28.7613

Q36 = 0.8673*TrustSls, Errorvar.= 0.2478 , R^2 = 0.7522
(0.01725) (0.01656)
50.2665 14.9643

Q37 = 0.7685*TrustSls, Errorvar.= 0.4094 , R^2 = 0.5906
(0.01760) (0.01616)
43.6569 25.3435

Q42 = 0.7867*Content, Errorvar.= 0.3811 , R^2 = 0.6189
(0.01688) (0.01424)
46.6060 26.7644

Q43 = 0.9047*Content, Errorvar.= 0.1816 , R^2 = 0.8184
(0.01611) (0.01370)
56.1589 13.2502

Q44 = 0.7123*Content, Errorvar.= 0.4926 , R^2 = 0.5074
(0.01734) (0.01567)
41.0792 31.4262

Q53 = 0.7443*Advice, Errorvar.= 0.4460 , R^2 = 0.5540
(0.01681) (0.01414)
44.2671 31.5404

Q54 = 0.8803*Advice, Errorvar.= 0.2251 , R^2 = 0.7749
(0.01593) (0.01226)
55.2432 18.3573

Q55 = 0.8826*Advice, Errorvar.= 0.2210 , R^2 = 0.7790
(0.01592) (0.01226)
55.4477 18.0276

Q71 = 0.8155*OrderFul, Errorvar.= 0.3350 , R^2 = 0.6650
(0.01772) (0.01690)
46.0289 19.8270

Q72 = 0.7761*OrderFul, Errorvar.= 0.3977 , R^2 = 0.6023
(0.01782) (0.01676)
43.5404 23.7234

Q74 = 0.7361*OrderFul, Errorvar.= 0.4581 , R^2 = 0.5419
(0.01793) (0.01690)
41.0621 27.1113

Q77 = 0.7748*NoErrors, Errorvar.= 0.3998 , R^2 = 0.6002
(0.01689) (0.01423)
45.8800 28.0835

Q78 = 0.9099*NoErrors, Errorvar.= 0.1722 , R^2 = 0.8278
(0.01608) (0.01377)
56.5854 12.4999

Q79 = 0.7770*NoErrors, Errorvar.= 0.3962 , R^2 = 0.6038
(0.01687) (0.01420)
46.0497 27.9002

Q89 = 0.7080*Communit, Errorvar.= 0.4987 , R^2 = 0.5013
(0.02259) (0.02583)
31.3468 19.3089

Q90 = 0.5256*Communit, Errorvar.= 0.7238 , R^2 = 0.2762
(0.02110) (0.02292)
24.9149 31.5730

Q91 = 0.7290*Communit, Errorvar.= 0.4686 , R^2 = 0.5314
(0.02279) (0.02658)
31.9928 17.6294

Expert: Yes

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7374*Action, Errorvar.= 0.2608 , R^2 = 0.6758
(0.009860)
26.4523

Q119 = 0.7648*Action, Errorvar.= 0.2048 , R^2 = 0.7407
(0.01528) (0.009188)
50.0625 22.2866

Q122 = 0.6801*Action, Errorvar.= 0.3712 , R^2 = 0.5548
(0.01579) (0.01175)
43.0803 31.5994

Q124 = 0.6797*Trust, Errorvar.= 0.2582 , R^2 = 0.6415
(0.008909)
28.9835

Q125 = 0.6823*Trust, Errorvar.= 0.2526 , R^2 = 0.6483
(0.01473) (0.008805)
46.3292 28.6882

Q126 = 0.6960*Trust, Errorvar.= 0.2224 , R^2 = 0.6853
(0.01458) (0.008273)
47.7426 26.8839

Q2 = 0.8965*Touch&Fl, Errorvar.= 0.1963 , R^2 = 0.8037
(0.01671) (0.01665)
53.6592 11.7906

Q4 = 0.8299*Touch&Fl, Errorvar.= 0.3113 , R^2 = 0.6887
(0.01695) (0.01581)
48.9489 19.6817

Q10 = 0.6192*Touch&Fl, Errorvar.= 0.6166 , R^2 = 0.3834
(0.01763) (0.01776)
35.1336 34.7193

Q19 = 0.5740*Brand, Errorvar.= 0.6705 , R^2 = 0.3295
(0.01897) (0.02016)
30.2579 33.2542

Q21 = 0.8581*Brand, Errorvar.= 0.2636 , R^2 = 0.7364
(0.01913) (0.02236)
44.8470 11.7909

Q22 = 0.6990*Brand, Errorvar.= 0.5114 , R^2 = 0.4886

(0.01897) (0.01956)
36.8551 26.1481

Q27 = 0.8124*Privacy, Errorvar.= 0.3400 , R^2 = 0.6600
(0.01627) (0.01351)
49.9192 25.1638

Q28 = 0.9539*Privacy, Errorvar.= 0.09000 , R^2 = 0.9100
(0.01542) (0.01430)
61.8575 6.2927

Q32 = 0.6898*Privacy, Errorvar.= 0.5242 , R^2 = 0.4758
(0.01688) (0.01547)
40.8685 33.8764

Q35 = 0.6314*TrustSls, Errorvar.= 0.6013 , R^2 = 0.3987
(0.01893) (0.01963)
33.3581 30.6316

Q36 = 0.8608*TrustSls, Errorvar.= 0.2591 , R^2 = 0.7409
(0.01942) (0.02314)
44.3313 11.1971

Q37 = 0.6810*TrustSls, Errorvar.= 0.5362 , R^2 = 0.4638
(0.01902) (0.01964)
35.8035 27.3036

Q42 = 0.8010*Content, Errorvar.= 0.3584 , R^2 = 0.6416
(0.01631) (0.01354)
49.1104 26.4646

Q43 = 0.8937*Content, Errorvar.= 0.2013 , R^2 = 0.7987
(0.01570) (0.01304)
56.9201 15.4398

Q44 = 0.7189*Content, Errorvar.= 0.4833 , R^2 = 0.5167
(0.01683) (0.01507)
42.7195 32.0654

Q53 = 0.7374*Advice, Errorvar.= 0.4563 , R^2 = 0.5437
(0.01650) (0.01415)
44.6818 32.2529

Q54 = 0.8743*Advice, Errorvar.= 0.2356 , R^2 = 0.7644
(0.01568) (0.01243)
55.7528 18.9570

Q55 = 0.8750*Advice, Errorvar.= 0.2344 , R^2 = 0.7656
(0.01568) (0.01243)
55.8126 18.8616

Q71 = 0.6148*OrderFul, Errorvar.= 0.6220 , R^2 = 0.3780
(0.02585) (0.02929)

23.7890 21.2344

Q72 = 0.6361*OrderFul, Errorvar.= 0.5954 , R^2 = 0.4046
(0.02629) (0.03038)
24.1960 19.5999

Q74 = 0.4836*OrderFul, Errorvar.= 0.7661 , R^2 = 0.2339
(0.02331) (0.02501)
20.7462 30.6373

Q77 = 0.8027*NoErrors, Errorvar.= 0.3556 , R^2 = 0.6444
(0.01589) (0.01218)
50.5314 29.1951

Q78 = 0.9262*NoErrors, Errorvar.= 0.1421 , R^2 = 0.8579
(0.01498) (0.01120)
61.8211 12.6903

Q79 = 0.8134*NoErrors, Errorvar.= 0.3383 , R^2 = 0.6617
(0.01581) (0.01199)
51.4380 28.2209

Q89 = 0.6499*Communit, Errorvar.= 0.5777 , R^2 = 0.4223
(0.02246) (0.02507)
28.9343 23.0402

Q90 = 0.5426*Communit, Errorvar.= 0.7056 , R^2 = 0.2944
(0.02129) (0.02305)
25.4794 30.6178

Q91 = 0.7213*Communit, Errorvar.= 0.4797 , R^2 = 0.5203
(0.02331) (0.02772)
30.9409 17.3034

Expert: No

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6277*Action, Errorvar.= 0.4704 , R^2 = 0.4558
(0.01290)
36.4624

Q119 = 0.7425*Action, Errorvar.= 0.2591 , R^2 = 0.6803
(0.01837) (0.01043)
40.4098 24.8404

Q122 = 0.6520*Action, Errorvar.= 0.4288 , R^2 = 0.4978
(0.01775) (0.01225)
36.7372 35.0070

Q124 = 0.6895*Trust, Errorvar.= 0.2685 , R^2 = 0.6391
(0.008093)
33.1761

Q125 = 0.6908*Trust, Errorvar.= 0.2658 , R^2 = 0.6422
(0.01317) (0.008049)
52.4546 33.0230

Q126 = 0.7174*Trust, Errorvar.= 0.2082 , R^2 = 0.7120
(0.01295) (0.007196)
55.3906 28.9296

Q2 = 0.8851*Touch&Fl, Errorvar.= 0.2166 , R^2 = 0.7834
(0.01485) (0.01484)
59.6167 14.5967

Q4 = 0.8054*Touch&Fl, Errorvar.= 0.3514 , R^2 = 0.6486
(0.01508) (0.01410)
53.4142 24.9124

Q10 = 0.6461*Touch&Fl, Errorvar.= 0.5825 , R^2 = 0.4175
(0.01549) (0.01529)
41.7233 38.1071

Q19 = 0.5616*Brand, Errorvar.= 0.6846 , R^2 = 0.3154
(0.01694) (0.01816)
33.1446 37.7014

Q21 = 0.8197*Brand, Errorvar.= 0.3281 , R^2 = 0.6719
(0.01758) (0.02057)
46.6252 15.9479

Q22 = 0.7254*Brand, Errorvar.= 0.4738 , R^2 = 0.5262
(0.01730) (0.01854)
41.9347 25.5486

Q27 = 0.8322*Privacy, Errorvar.= 0.3075 , R^2 = 0.6925
(0.01399) (0.01102)
59.4734 27.9104

Q28 = 0.9328*Privacy, Errorvar.= 0.1298 , R^2 = 0.8702
(0.01339) (0.01108)
69.6518 11.7216

Q32 = 0.7293*Privacy, Errorvar.= 0.4682 , R^2 = 0.5318
(0.01452) (0.01252)
50.2425 37.4021

Q35 = 0.7114*TrustSls, Errorvar.= 0.4939 , R^2 = 0.5061
(0.01573) (0.01533)
45.2336 32.2257

Q36 = 0.8416*TrustSls, Errorvar.= 0.2918 , R^2 = 0.7082
(0.01557) (0.01600)
54.0488 18.2301

Q37 = 0.7284*TrustSls, Errorvar.= 0.4694 , R^2 = 0.5306
(0.01571) (0.01528)
46.3695 30.7298

Q42 = 0.7991*Content, Errorvar.= 0.3614 , R^2 = 0.6386
(0.01431) (0.01182)
55.8387 30.5794

Q43 = 0.9072*Content, Errorvar.= 0.1770 , R^2 = 0.8230
(0.01368) (0.01139)
66.3084 15.5410

Q44 = 0.7148*Content, Errorvar.= 0.4891 , R^2 = 0.5109
(0.01477) (0.01324)
48.3873 36.9520

Q53 = 0.7619*Advice, Errorvar.= 0.4195 , R^2 = 0.5805
(0.01425) (0.01164)
53.4531 36.0483

Q54 = 0.8815*Advice, Errorvar.= 0.2230 , R^2 = 0.7770
(0.01356) (0.01020)
65.0039 21.8535

Q55 = 0.8785*Advice, Errorvar.= 0.2282 , R^2 = 0.7718
(0.01358) (0.01021)
64.6936 22.3485

Q71 = 0.8119*OrderFul, Errorvar.= 0.3408 , R^2 = 0.6592
(0.01531) (0.01482)
53.0340 22.9997

Q72 = 0.7654*OrderFul, Errorvar.= 0.4142 , R^2 = 0.5858
(0.01540) (0.01466)
49.6954 28.2632

Q74 = 0.7342*OrderFul, Errorvar.= 0.4609 , R^2 = 0.5391
(0.01546) (0.01472)
47.4963 31.3050

Q77 = 0.7825*NoErrors, Errorvar.= 0.3877 , R^2 = 0.6123
(0.01429) (0.01171)
54.7566 33.1132

Q78 = 0.9162*NoErrors, Errorvar.= 0.1605 , R^2 = 0.8395
(0.01354) (0.01111)
67.6541 14.4441

Q79 = 0.7904*NoErrors, Errorvar.= 0.3753 , R^2 = 0.6247
(0.01425) (0.01160)
55.4641 32.3559

Q89 = 0.7158*Communit, Errorvar.= 0.4877 , R^2 = 0.5123
(0.01962) (0.02273)
36.4788 21.4526

Q90 = 0.5153*Communit, Errorvar.= 0.7345 , R^2 = 0.2655
(0.01805) (0.01967)
28.5509 37.3400

Q91 = 0.7314*Communit, Errorvar.= 0.4650 , R^2 = 0.5350
(0.01976) (0.02326)
37.0141 19.9907

Business: Yes

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6362*Action, Errorvar.= 0.4622 , R^2 = 0.4669
(0.01375)
33.6185

Q119 = 0.7452*Action, Errorvar.= 0.2622 , R^2 = 0.6793
(0.01954) (0.01122)
38.1294 23.3644

Q122 = 0.6602*Action, Errorvar.= 0.4209 , R^2 = 0.5087
(0.01895) (0.01306)
34.8355 32.2325

Q124 = 0.6926*Trust, Errorvar.= 0.2727 , R^2 = 0.6376
(0.008867)
30.7490

Q125 = 0.6909*Trust, Errorvar.= 0.2762 , R^2 = 0.6335
(0.01435) (0.008929)
48.1560 30.9311

Q126 = 0.7217*Trust, Errorvar.= 0.2104 , R^2 = 0.7123
(0.01409) (0.007882)
51.2146 26.6885

Q2 = 0.8905*Touch&Fl, Errorvar.= 0.2070 , R^2 = 0.7930
(0.01592) (0.01592)
55.9251 13.0019

Q4 = 0.8067*Touch&Fl, Errorvar.= 0.3492 , R^2 = 0.6508
(0.01620) (0.01508)
49.8112 23.1585

Q10 = 0.6454*Touch&Fl, Errorvar.= 0.5835 , R^2 = 0.4165
(0.01665) (0.01643)
38.7534 35.5194

Q19 = 0.5772*Brand, Errorvar.= 0.6668 , R^2 = 0.3332
(0.01821) (0.01938)
31.6934 34.4141

Q21 = 0.8082*Brand, Errorvar.= 0.3468 , R^2 = 0.6532
(0.01876) (0.02149)
43.0890 16.1411

Q22 = 0.7276*Brand, Errorvar.= 0.4706 , R^2 = 0.5294
(0.01853) (0.01978)
39.2717 23.7940

Q27 = 0.8352*Privacy, Errorvar.= 0.3025 , R^2 = 0.6975
(0.01507) (0.01191)
55.4079 25.4054

Q28 = 0.9308*Privacy, Errorvar.= 0.1336 , R^2 = 0.8664
(0.01447) (0.01201)
64.3485 11.1244

Q32 = 0.7250*Privacy, Errorvar.= 0.4744 , R^2 = 0.5256
(0.01567) (0.01360)
46.2664 34.8751

Q35 = 0.7099*TrustSls, Errorvar.= 0.4960 , R^2 = 0.5040
(0.01678) (0.01618)
42.3082 30.6641

Q36 = 0.8446*TrustSls, Errorvar.= 0.2867 , R^2 = 0.7133
(0.01653) (0.01663)
51.0782 17.2384

Q37 = 0.7486*TrustSls, Errorvar.= 0.4396 , R^2 = 0.5604
(0.01671) (0.01602)
44.7862 27.4437

Q42 = 0.7933*Content, Errorvar.= 0.3707 , R^2 = 0.6293
(0.01547) (0.01286)
51.2824 28.8158

Q43 = 0.9095*Content, Errorvar.= 0.1729 , R^2 = 0.8271
(0.01475) (0.01238)
61.6624 13.9641

Q44 = 0.7147*Content, Errorvar.= 0.4893 , R^2 = 0.5107

(0.01593) (0.01429)
44.8747 34.2443

Q53 = 0.7589*Advice, Errorvar.= 0.4240 , R^2 = 0.5760
(0.01537) (0.01260)
49.3617 33.6467

Q54 = 0.8827*Advice, Errorvar.= 0.2209 , R^2 = 0.7791
(0.01460) (0.01100)
60.4422 20.0782

Q55 = 0.8794*Advice, Errorvar.= 0.2266 , R^2 = 0.7734
(0.01463) (0.01101)
60.1301 20.5778

Q71 = 0.8130*OrderFul, Errorvar.= 0.3390 , R^2 = 0.6610
(0.01632) (0.01549)
49.8295 21.8834

Q72 = 0.7767*OrderFul, Errorvar.= 0.3968 , R^2 = 0.6032
(0.01641) (0.01540)
47.3298 25.7728

Q74 = 0.7412*OrderFul, Errorvar.= 0.4506 , R^2 = 0.5494
(0.01650) (0.01550)
44.9321 29.0705

Q77 = 0.7786*NoErrors, Errorvar.= 0.3938 , R^2 = 0.6062
(0.01545) (0.01277)
50.3988 30.8268

Q78 = 0.9135*NoErrors, Errorvar.= 0.1656 , R^2 = 0.8344
(0.01466) (0.01215)
62.3282 13.6307

Q79 = 0.7899*NoErrors, Errorvar.= 0.3761 , R^2 = 0.6239
(0.01539) (0.01261)
51.3302 29.8249

Q89 = 0.7138*Communit, Errorvar.= 0.4905 , R^2 = 0.5095
(0.02125) (0.02465)
33.5895 19.8947

Q90 = 0.5135*Communit, Errorvar.= 0.7363 , R^2 = 0.2637
(0.01952) (0.02127)
26.3100 34.6125

Q91 = 0.7265*Communit, Errorvar.= 0.4721 , R^2 = 0.5279
(0.02138) (0.02512)
33.9882 18.7964

Business: No

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7246*Action, Errorvar.= 0.2788 , R^2 = 0.6531
(0.009451)
29.5020

Q119 = 0.7589*Action, Errorvar.= 0.2089 , R^2 = 0.7338
(0.01450) (0.008664)
52.3421 24.1103

Q122 = 0.6720*Action, Errorvar.= 0.3797 , R^2 = 0.5432
(0.01489) (0.01106)
45.1309 34.3256

Q124 = 0.6781*Trust, Errorvar.= 0.2552 , R^2 = 0.6430
(0.008086)
31.5658

Q125 = 0.6832*Trust, Errorvar.= 0.2439 , R^2 = 0.6568
(0.01342) (0.007892)
50.9097 30.9043

Q126 = 0.6944*Trust, Errorvar.= 0.2190 , R^2 = 0.6877
(0.01330) (0.007488)
52.1988 29.2465

Q2 = 0.8897*Touch&Fl, Errorvar.= 0.2084 , R^2 = 0.7916
(0.01550) (0.01549)
57.4205 13.4550

Q4 = 0.8239*Touch&Fl, Errorvar.= 0.3211 , R^2 = 0.6789
(0.01571) (0.01474)
52.4619 21.7779

Q10 = 0.6241*Touch&Fl, Errorvar.= 0.6105 , R^2 = 0.3895
(0.01626) (0.01634)
38.3798 37.3685

Q19 = 0.5567*Brand, Errorvar.= 0.6901 , R^2 = 0.3099
(0.01755) (0.01883)
31.7194 36.6434

Q21 = 0.8656*Brand, Errorvar.= 0.2508 , R^2 = 0.7492
(0.01788) (0.02143)
48.4178 11.7009

Q22 = 0.6994*Brand, Errorvar.= 0.5109 , R^2 = 0.4891

(0.01762) (0.01830)
39.6999 27.9231

Q27 = 0.8131*Privacy, Errorvar.= 0.3389 , R^2 = 0.6611
(0.01494) (0.01230)
54.4136 27.5456

Q28 = 0.9518*Privacy, Errorvar.= 0.09409 , R^2 = 0.9059
(0.01415) (0.01289)
67.2440 7.3001

Q32 = 0.6981*Privacy, Errorvar.= 0.5126 , R^2 = 0.4874
(0.01548) (0.01403)
45.0999 36.5463

Q35 = 0.6422*TrustSls, Errorvar.= 0.5876 , R^2 = 0.4124
(0.01755) (0.01821)
36.5983 32.2680

Q36 = 0.8527*TrustSls, Errorvar.= 0.2728 , R^2 = 0.7272
(0.01803) (0.02146)
47.2973 12.7151

Q37 = 0.6659*TrustSls, Errorvar.= 0.5565 , R^2 = 0.4435
(0.01760) (0.01823)
37.8482 30.5297

Q42 = 0.8085*Content, Errorvar.= 0.3463 , R^2 = 0.6537
(0.01492) (0.01218)
54.2066 28.4194

Q43 = 0.8919*Content, Errorvar.= 0.2046 , R^2 = 0.7954
(0.01439) (0.01170)
61.9661 17.4892

Q44 = 0.7279*Content, Errorvar.= 0.4701 , R^2 = 0.5299
(0.01540) (0.01358)
47.2726 34.6078

Q53 = 0.7416*Advice, Errorvar.= 0.4501 , R^2 = 0.5499
(0.01516) (0.01291)
48.9131 34.8745

Q54 = 0.8746*Advice, Errorvar.= 0.2351 , R^2 = 0.7649
(0.01442) (0.01136)
60.6626 20.7023

Q55 = 0.8749*Advice, Errorvar.= 0.2345 , R^2 = 0.7655
(0.01441) (0.01136)
60.6975 20.6466

Q71 = 0.6218*OrderFul, Errorvar.= 0.6134 , R^2 = 0.3866
(0.02325) (0.02637)

26.7388 23.2621

Q72 = 0.6360*OrderFul, Errorvar.= 0.5955 , R^2 = 0.4045
(0.02350) (0.02698)
27.0589 22.0698

Q74 = 0.5009*OrderFul, Errorvar.= 0.7491 , R^2 = 0.2509
(0.02128) (0.02289)
23.5426 32.7200

Q77 = 0.8046*NoErrors, Errorvar.= 0.3527 , R^2 = 0.6473
(0.01461) (0.01117)
55.0564 31.5764

Q78 = 0.9274*NoErrors, Errorvar.= 0.1399 , R^2 = 0.8601
(0.01378) (0.01028)
67.2949 13.6035

Q79 = 0.8115*NoErrors, Errorvar.= 0.3414 , R^2 = 0.6586
(0.01457) (0.01105)
55.6984 30.8896

Q89 = 0.6634*Communit, Errorvar.= 0.5599 , R^2 = 0.4401
(0.02058) (0.02309)
32.2350 24.2521

Q90 = 0.5369*Communit, Errorvar.= 0.7118 , R^2 = 0.2882
(0.01939) (0.02099)
27.6958 33.9014

Q91 = 0.7299*Communit, Errorvar.= 0.4673 , R^2 = 0.5327
(0.02128) (0.02537)
34.3050 18.4184

Visit: yes

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.6326*Action, Errorvar.= 0.4758 , R^2 = 0.4569
(0.01560)
30.4958

Q119 = 0.7428*Action, Errorvar.= 0.2772 , R^2 = 0.6656
(0.02205) (0.01281)
33.6928 21.6386

Q122 = 0.6780*Action, Errorvar.= 0.3979 , R^2 = 0.5361
(0.02142) (0.01423)
31.6517 27.9546

Q124 = 0.6981*Trust, Errorvar.= 0.2647 , R^2 = 0.6480
(0.009686)
27.3240

Q125 = 0.6910*Trust, Errorvar.= 0.2796 , R^2 = 0.6307
(0.01578) (0.009970)
43.7970 28.0399

Q126 = 0.7225*Trust, Errorvar.= 0.2124 , R^2 = 0.7108
(0.01548) (0.008791)
46.6739 24.1605

Q2 = 0.8890*Touch&Fl, Errorvar.= 0.2096 , R^2 = 0.7904
(0.01756) (0.01742)
50.6201 12.0349

Q4 = 0.8148*Touch&Fl, Errorvar.= 0.3362 , R^2 = 0.6638
(0.01784) (0.01658)
45.6672 20.2695

Q10 = 0.6408*Touch&Fl, Errorvar.= 0.5894 , R^2 = 0.4106
(0.01841) (0.01822)
34.8031 32.3557

Q19 = 0.5337*Brand, Errorvar.= 0.7151 , R^2 = 0.2849
(0.02027) (0.02203)
26.3245 32.4653

Q21 = 0.8020*Brand, Errorvar.= 0.3568 , R^2 = 0.6432
(0.02122) (0.02469)
37.7888 14.4515

Q22 = 0.7555*Brand, Errorvar.= 0.4292 , R^2 = 0.5708
(0.02102) (0.02331)
35.9484 18.4125

Q27 = 0.8344*Privacy, Errorvar.= 0.3037 , R^2 = 0.6963
(0.01670) (0.01326)
49.9669 22.8977

Q28 = 0.9317*Privacy, Errorvar.= 0.1319 , R^2 = 0.8681
(0.01602) (0.01343)
58.1486 9.8212

Q32 = 0.7202*Privacy, Errorvar.= 0.4813 , R^2 = 0.5187
(0.01737) (0.01520)
41.4507 31.6726

Q35 = 0.7323*TrustSls, Errorvar.= 0.4638 , R^2 = 0.5362
(0.01793) (0.01644)
40.8310 28.2189

Q36 = 0.8689*TrustSls, Errorvar.= 0.2450 , R^2 = 0.7550
(0.01739) (0.01630)
49.9552 15.0323

Q37 = 0.7783*TrustSls, Errorvar.= 0.3943 , R^2 = 0.6057
(0.01776) (0.01603)
43.8115 24.5949

Q42 = 0.7881*Content, Errorvar.= 0.3789 , R^2 = 0.6211
(0.01722) (0.01455)
45.7613 26.0378

Q43 = 0.9042*Content, Errorvar.= 0.1825 , R^2 = 0.8175
(0.01646) (0.01407)
54.9430 12.9711

Q44 = 0.7081*Content, Errorvar.= 0.4986 , R^2 = 0.5014
(0.01772) (0.01611)
39.9531 30.9503

Q53 = 0.7415*Advice, Errorvar.= 0.4502 , R^2 = 0.5498
(0.01716) (0.01449)
43.2005 31.0752

Q54 = 0.8790*Advice, Errorvar.= 0.2274 , R^2 = 0.7726
(0.01626) (0.01251)
54.0565 18.1746

Q55 = 0.8860*Advice, Errorvar.= 0.2150 , R^2 = 0.7850
(0.01621) (0.01250)
54.6639 17.1934

Q71 = 0.8206*OrderFul, Errorvar.= 0.3266 , R^2 = 0.6734
(0.01798) (0.01705)
45.6527 19.1521

Q72 = 0.7826*OrderFul, Errorvar.= 0.3875 , R^2 = 0.6125
(0.01809) (0.01692)
43.2667 22.9024

Q74 = 0.7324*OrderFul, Errorvar.= 0.4636 , R^2 = 0.5364
(0.01823) (0.01712)
40.1757 27.0791

Q77 = 0.7762*NoErrors, Errorvar.= 0.3976 , R^2 = 0.6025
(0.01717) (0.01437)
45.2135 27.6733

Q78 = 0.9084*NoErrors, Errorvar.= 0.1749 , R^2 = 0.8251
(0.01634) (0.01377)
55.5871 12.6964

Q79 = 0.7846*NoErrors, Errorvar.= 0.3843 , R^2 = 0.6157

(0.01712) (0.01424)
45.8359 26.9975

Q89 = 0.7013*Communit, Errorvar.= 0.5081 , R^2 = 0.4919
(0.02281) (0.02584)
30.7412 19.6624

Q90 = 0.5289*Communit, Errorvar.= 0.7203 , R^2 = 0.2797
(0.02144) (0.02328)
24.6700 30.9420

Q91 = 0.7409*Communit, Errorvar.= 0.4511 , R^2 = 0.5489
(0.02318) (0.02726)
31.9577 16.5441

Visit: No

LISREL Estimates (Maximum Likelihood)

Measurement Equations

Q118 = 0.7188*Action, Errorvar.= 0.2901 , R^2 = 0.6404
(0.008939)
32.4553

Q119 = 0.7604*Action, Errorvar.= 0.2057 , R^2 = 0.7376
(0.01362) (0.008071)
55.8187 25.4814

Q122 = 0.6602*Action, Errorvar.= 0.4012 , R^2 = 0.5207
(0.01400) (0.01062)
47.1677 37.7790

Q124 = 0.6781*Trust, Errorvar.= 0.2618 , R^2 = 0.6372
(0.007586)
34.5175

Q125 = 0.6855*Trust, Errorvar.= 0.2457 , R^2 = 0.6566
(0.01249) (0.007329)
54.8695 33.5269

Q126 = 0.6988*Trust, Errorvar.= 0.2161 , R^2 = 0.6933
(0.01237) (0.006888)
56.5001 31.3720

Q2 = 0.8905*Touch&Fl, Errorvar.= 0.2070 , R^2 = 0.7930
(0.01434) (0.01441)
62.1067 14.3606

Q4 = 0.8167*Touch&Fl, Errorvar.= 0.3330 , R^2 = 0.6670

(0.01455) (0.01366)
56.1319 24.3818

Q10 = 0.6299*Touch&Fl, Errorvar.= 0.6032 , R^2 = 0.3968
(0.01501) (0.01501)
41.9553 40.1759

Q19 = 0.5802*Brand, Errorvar.= 0.6633 , R^2 = 0.3367
(0.01617) (0.01714)
35.8778 38.6936

Q21 = 0.8660*Brand, Errorvar.= 0.2500 , R^2 = 0.7500
(0.01643) (0.01959)
52.7254 12.7590

Q22 = 0.6819*Brand, Errorvar.= 0.5351 , R^2 = 0.4649
(0.01620) (0.01675)
42.0842 31.9527

Q27 = 0.8166*Privacy, Errorvar.= 0.3332 , R^2 = 0.6668
(0.01374) (0.01120)
59.4222 29.7398

Q28 = 0.9485*Privacy, Errorvar.= 0.1004 , R^2 = 0.8996
(0.01303) (0.01161)
72.7712 8.6473

Q32 = 0.7059*Privacy, Errorvar.= 0.5017 , R^2 = 0.4983
(0.01424) (0.01275)
49.5873 39.3549

Q35 = 0.6338*TrustSls, Errorvar.= 0.5983 , R^2 = 0.4017
(0.01651) (0.01731)
38.3986 34.5629

Q36 = 0.8359*TrustSls, Errorvar.= 0.3013 , R^2 = 0.6987
(0.01714) (0.02058)
48.7631 14.6433

Q37 = 0.6537*TrustSls, Errorvar.= 0.5726 , R^2 = 0.4274
(0.01656) (0.01736)
39.4730 32.9771

Q42 = 0.8088*Content, Errorvar.= 0.3458 , R^2 = 0.6542
(0.01373) (0.01112)
58.8961 31.1019

Q43 = 0.8989*Content, Errorvar.= 0.1921 , R^2 = 0.8079
(0.01320) (0.01063)
68.0833 18.0668

Q44 = 0.7318*Content, Errorvar.= 0.4644 , R^2 = 0.5356
(0.01416) (0.01238)

51.6749 37.5179

Q53 = 0.7553*Advice, Errorvar.= 0.4296 , R^2 = 0.5704
(0.01389) (0.01155)
54.3798 37.1906

Q54 = 0.8789*Advice, Errorvar.= 0.2276 , R^2 = 0.7724
(0.01322) (0.01021)
66.4769 22.2868

Q55 = 0.8707*Advice, Errorvar.= 0.2419 , R^2 = 0.7581
(0.01327) (0.01023)
65.6188 23.6443

Q71 = 0.6195*OrderFul, Errorvar.= 0.6162 , R^2 = 0.3838
(0.02082) (0.02342)
29.7538 26.3064

Q72 = 0.6362*OrderFul, Errorvar.= 0.5953 , R^2 = 0.4047
(0.02107) (0.02402)
30.1989 24.7865

Q74 = 0.5284*OrderFul, Errorvar.= 0.7208 , R^2 = 0.2792
(0.01956) (0.02113)
27.0128 34.1155

Q77 = 0.8015*NoErrors, Errorvar.= 0.3575 , R^2 = 0.6425
(0.01352) (0.01038)
59.2883 34.4282

Q78 = 0.9284*NoErrors, Errorvar.= 0.1381 , R^2 = 0.8619
(0.01273) (0.009546)
72.9295 14.4632

Q79 = 0.8119*NoErrors, Errorvar.= 0.3408 , R^2 = 0.6592
(0.01346) (0.01022)
60.3151 33.3340

Q89 = 0.6792*Communit, Errorvar.= 0.5387 , R^2 = 0.4613
(0.01930) (0.02198)
35.1983 24.5110

Q90 = 0.5232*Communit, Errorvar.= 0.7262 , R^2 = 0.2738
(0.01789) (0.01942)
29.2471 37.3983

Q91 = 0.7207*Communit, Errorvar.= 0.4806 , R^2 = 0.5194
(0.01971) (0.02336)
36.5606 20.5729

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