GOVERNANCE MECHANISMS AS A MEANS OF INCREASING CONSUMER TRUST IN ONLINE EXCHANGES: A SIGNALING PERSPECTIVE

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ABSTRACT

This dissertation examines a current phenomenon of electronic commerce: many consumers seem to be uncomfortable or unwilling in the process of making online transactions. This lack of trust stems in part from the online exchange process itself where consumers are deprived of many traditional cues that they would use to evaluate this process. This research focuses on consumer perceptions of regulatory governance in online exchanges and how signals of governance might act to increase consumer trust in online transactions. An experimental methodology was used to examine the effects of different types of structures on consumer perceptions and to provide direction for public policy makers as well as online businesses and private regulatory entities.

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Don Lloyd Cook

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Chapter Six: Methodology and Research Design

Chapter Seven: Data Analysis and Hypotheses Testing

Listing of Tables and Figures

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CHAPTER 1: ISSUES FOR ELECTRONIC COMMERCE, CONSUMER TRUST AND THE EVOLVING REGULATORY MATRIX

"The roots of education are bitter, but the fruit is sweet."
–Aristotle

Introduction

The purpose of this dissertation is to examine the impact of regulatory governance structures on consumer trust in online exchange environments. Governance structures implementing governmental, quasi-governmental (a public-private hybrid), and private (Bodewyn 1989) regulations are systematically examined in an experimental methodology in order to test their effects on consumer trust in the e-commerce environment. This research brings consumer research principles into a new public policy context (Wilkie 1975; Wilkie and Gardner 1974) and makes these tools available to policy makers evaluating how the regulatory matrix (Cook and Coupey 1995; 1998) should be developed for the online environment.

Too often, regulations are created without adequate information or based on insufficient research (Cook and Coupey 2001). Marketing and consumer behavior research can assist the regulatory process by providing better information and a greater understanding of underlying problems and possible solutions (Wilkie 1975; Wilkie and Gardner 1974; Mazis, Beales, Staelin, and Salop 1981). Expanded research on nonmarket governance (Heide 1994; the term will be explained in more detail, supra) can provide diagnostic information for policy makers trying to protect consumer interests as well as for governments and businesses developing alternative methods of governance. Keeping in mind Professor Andreasen's observation that intervention may be necessary to insure that exchanges are fair, equitable, safe, and contribute to improved social welfare, policy makers need an understanding of the consumer situation that requires empirical rather than merely anecdotal evidence (Wilkie 1975). This helps not only in better understanding the problem but also in trying to determine whether to intervene by means of education, marketing, or legal mechanisms (e.g., Budnitz 2000).

1.1 The Importance of Governance Mechanisms and Consumer Trust in the Growth of Electronic Commerce

In the closing years of the millennium, marketing, business and the U.S. economy as a whole have been fundamentally changed by the phenomenal growth of the Internet and its commercial and highly graphical subcomponent, the World-Wide Web (WWW). The transition has been unparalleled in both scope and controversy (Cook and Coupey 1998). However, the lack of consumer trust in the online environment has often been cited as a stumbling block to even more spectacular growth (Hoffman, Novak and Peralta 1999; Jarvenpaa and Tractinsky 1999; Baker and France 1999). Concern over such issues as the safety of financial information and other privacy issues has been cited as impacting consumer willingness to enter into transactions on the WWW, a problem that Hoffman, Novak, and Chatterjee (1995, p. 9) describe as "critical to mass adoption of the Web."

E-commerce has experienced a period of rapid growth in what is, if not a regulatory vacuum, then certainly a very rarefied atmosphere. From the beginning of commercial growth on the WWW, many of the major regulators have taken the position that the WWW is different from other communications modalities (Langenderfer and Cook, in press; Cook 1998; Cook and Coupey 2001; 1998; Cook 1995), and self-regulation has been promoted as national policy (Clinton and Gore, 1997; more recently, see "Self-Regulation and Privacy Online," FTC, July 1999). This has sometimes led to a perception of the WWW as a sort of "Wild West" frontier environment (Baker and France 1999), in part because of a lack of traditional governance structures. In one Business Week issue devoted to "The Internet Age," Baker and France (1999, p. 158) argued that:

> the settlers—not just the lawmakers—will have to play a role in taming this frontier. Business, in particular, has little choice but to come up with its own

system of rules if it wants to protect property rights and get customers to feel comfortable online. For better or worse, the Net is spawning two parallel and sometimes contending regimes for regulation, [public and private]. (For further general information, see West 1998.)

In recent years the Internet has grown from a relatively small, close-knit network of academics, defense contractors, and government employees who shared research information into a dynamic, growing, mass medium for communication, advertising, and marketing (Richards 1997). The emergence of the World-Wide Web (WWW) as the graphic and interactive component of the Internet has led to large numbers of ordinary citizens going online to gather information, e-mail friends or business associates, and to purchase various types of goods and services. The growth of the Web has been nothing short of explosive. It grew from about 30 million to 65 million between January 1997 and May 1998 (Raney 1998), with high growth continuing for the next several years. As of March, 2000, U.S. and Canadian Internet users numbered just under 137 million (State of the Internet 2000). A large number of businesses as well as consumers have also joined the online movement.

The amount of business conducted on the Internet and WWW grew in tandem with the number of users. Business-to-business (B2B) and business-to-consumer (B2C) transactions amounted to $171.5 billion in 1999 (State of the Internet 2000), with trends indicating higher revenues in the future. Companies such as Dell Computer were quickly reporting over $30 million per day in online sales (Dell 1999), and Apple Computer reported $1.9 million in online sales for its education-oriented product web site during its first day in operation (Reuters 1998). Forrester Research's CEO, George Colony, estimated that 5% of the U.S. Gross Domestic Product may consist of 'Net commerce by the year 2005 (Hof 1998). While these figures may seem minute compared to the trillions of dollars in total U.S. retail sales, it is well worth remembering that only five or six years ago this multibillion-dollar market basically did not exist.

Enthusiasm for the Internet and WWW is not just limited to the private sector; the Clinton administration listed the growth of electronic commerce as one of its key policy initiatives and publicly promoted the use of the Internet and WWW. The Administration has codified its policy goals in the "Framework for Global Electronic Commerce"

(Clinton and Gore 1997), which outlines steps to increase Internet and WWW business worldwide. Similar interest in the legislative branch resulted in the 1996 creation of the Internet Caucus, a bipartisan group of Senators and Congressman dedicated to educating their peers about the Internet and WWW (http://www.netcaucus.org/). Increasingly, electronic commerce has become the subject of Congressional interest (Gottleib 2001), and researchers as well as policy makers are considering how the WWW will be regulated (Cook and Coupey 2001). The current presidential administration also signaled that it regards the growth of the WWW as an important issue, although its formal policy has yet to take shape.

There has been only limited research about consumer reaction to regulatory structures, which can be thought of as the basic "modes of transactions" (Williamson and Ouchi 1981) that provide rules of conduct for consumers and businesses. In the context of business and consumer relationships, it is axiomatic that some type of governance mechanism will exist between the parties, whether it is purely economic (e.g., the business treats the consumer well in order to help assure repeat purchases) or regulatory (e.g., in which a business's treatment of the consumer is constrained by possible sanctions that may be taken against the business if the rules of conduct are not followed). This paper focuses on governmental, quasi-governmental, and private regulatory mechanisms and their effects on consumer trust in online transactions.

Although it seems natural that the issue of whether the existence of regulation (or at least the perception of such) would affect consumer trust in the underlying exchange process, existing research is still in its early stages and is primarily descriptive in nature (e.g., Hoffman, Novak, and Peralta 1999; West 1998). Early progress is encouraging (Jarvenpaa and Tractinsky 1999), but the literature in both marketing and economics seems generally bereft of research. There has been substantial prior research on the regulation of consumer information (Bettman 1975; Beales, Craswell, and Salop 1981; Mazis, Staelin, Beales, and Salop 1981) and such issues as the development of warning labels and safe use information (Bettman, Payne, and Staelin 1986; Magnat, Viscusi, and Huber 1992a; 1992b). There has also been work suggesting the use of information-processing theory in order to examine differences between traditional media and interactive media (such as the Internet and WWW) for purposes of developing appropriate advertising regulation (Cook and Coupey 1998; Cook, Coupey, and Mendoza 2001). These efforts are important as context, but they do not provide substantive guidance for this research.

Similarly, it was also axiomatic that legislation such as the Nutrition Labeling Education Act (NLEA) was intended to provide consumers with information that would allow informed and confident decisions (Moorman 1998), but most NLEA research focused primarily on the extra information that was provided as a result of the regulation and how consumers received, processed, and retained it. For example, Moorman's (1998) excellent article focuses primarily upon how internal and external sources of information flowed into the market and their effects on consumer choice. The focus was on the information provided because of the regulation, not on the regulation itself. This author has not been able to locate any research in marketing, economics, or other related fields that directly addresses the issue of regulation as consumer information. In this context, the existence of regulation (or the perception thereof) may furnish information to the consumer that affects their willingness to trust in the online exchange process. This trust will be examined in the context of privacy protections for the Internet and WWW.

1.2 Policy Issues: Basic Internet and WWW Concerns of Consumers

Although the early growth of electronic commerce has been spectacular, it is still a new medium for consumers and businesses, and, as is the case with all innovative technologies, users have many concerns. Many experts believe that growth is slowing because of the public perception of the Internet and WWW as a place that is unsafe for commerce (Ang 2001). One of the primary concerns is the protection of consumer privacy (FTC Report on Privacy 1999) in the online environment. Though this is a serious concern, many feel that it is more a matter of perception (Cook and Hess 1995) and that the security risks of electronic commerce are blown out of proportion (Ang 2001).

Consumer knowledge and trust are definitely issues with respect to online privacy protection. Consumer concerns about the use of their personal information on the Web has prompted the involvement of both government and business. The Federal Trade Commission (FTC) held several well-publicized workshops dealing with Web privacy issues (for more detailed information, see the FTC web site at http://www.ftc.gov) and promulgated a set of guidelines for businesses regarding the collection of information about children on the Web (Bogino 1999). These guidelines directly influenced recently enacted legislation protecting the online privacy of children (15 U.S.C. Sect. 6501 et. seq.). Similarly, a consortium of businesses has formed TRUSTe (http://www.truste.org/), an organization dedicated to improving industry protection of consumer privacy and to inspiring greater consumer trust in privacy protection and electronic commerce. Described as "an independent, non-profit privacy initiative dedicated to building users' trust and confidence on the Internet and accelerating growth of the Internet industry" (Yahoo 1999), TRUSTe is a particularly interesting example of a highly developed private "seal of approval" regulatory mechanism. The Better Business Bureau Online (http://www.bbbonline.org/businesses/privacy/index.html) touts a similar private program as featuring "verification, monitoring and review, consumer dispute resolution, a compliance seal, enforcement mechanisms, and an educational component" (Yahoo 1999). Both of these programs attempt to increase consumer trust by promoting their online logos as "seals of approval" signifying safe web sites.

While the Clinton administration at least tacitly endorsed the idea of voluntary industry-led privacy initiatives in lieu of regulation (Associated Press 1998), the European Union, in particular, adopted a framework of governmental regulation to protect consumer privacy. From the European perspective, the relative paucity of U.S. regulations to protect privacy and U.S. reliance on industry self-restraint left no alternative except to pressure the U.S. to codify privacy protections or face trade restrictions. For privacy protection efforts, the ability (or lack thereof) of different systems to accommodate consumer requirements for a predictable and stable atmosphere may have a dramatic impact in the ways those systems are perceived by consumers if the private or self-regulatory path is to be maintained.

1.3 Why Study Consumer Perceptions of Regulation? Marketing and Public Policy Perspectives and the Organization of This Dissertation

The conceptualization of regulations as consumer information is a central tenet of this paper and assumes that many, if not most, consumers lack a detailed knowledge of the WWW's underlying regulatory systems and processes. Although not a perfect alternative to full disclosure and informed knowledge of rights and responsibilities, consumers may seek information of a more generalized summary by means of looking for signals that convey information about a system trait or attribute (Shimp and Bearden 1982). In much the same way as warranties (an example of a private regulatory structure) may sometimes signal product quality or reliability (Boulding and Kirami 1993; Weiner 1985), the existence of traditional regulatory governance mechanisms may signal attributes of predictability of results and reduction of risk to consumers. Similarly, if the existence of regulation sends a positive signal of predictability of results and/or the reduction of risk to consumers, the use of alternative (and assumedly private) governance mechanisms may serve the same purpose. For example, TRUSTe is a private regulatory mechanism using the TRUSTe logo as a signal to consumers their privacy will be respected (within the regulations of the TRUSTe program) by any merchant displaying the logo. The TRUSTe logo functions as a "seal of approval" (FTC Report on Online Privacy 1999) that serves to increase consumer trust in the efficacy of the search and transaction process.

In the economic signaling and consumer behavior literature, warranties can sometimes act as signals of product quality (Shimp and Bearden 1982). In the case of online transactions and exchanges, governance does not signal product quality in the traditional sense but, rather, in terms of predictability of results and reduction of risk. For example, our current financial system is subject to high levels of governmental control (Durkin 1988), and consumers are accustomed to operating in this environment. For consumers, merchants, and financial services providers, this regulatory control translates into the "quality" of predictability of results. Very simply, the parties involved know that in most cases taking an action will lead to the expected results. In new economic structures such as the Internet and WWW, consumers may perceive that the normal level of control is not present (Baker and France 1999), and this may make them hesitant to trust the structure, especially regarding issues such as privacy protection. Governmental or private regulation, or some other alternative governance mechanism, may help alleviate those concerns by providing predictability of results for all parties in a transaction.

In order to develop a conceptual and theoretical background that addresses how regulatory mechanisms may function to increase consumer trust, it first will be necessary to examine the literature dealing with governance, regulation, trust, and signaling before discussing the model proposed in this dissertation. This background helps put some of the consumer choice processes in a context that facilitates the development of both business and public policy approaches. These issues are covered in the three succeeding chapters. Chapter five discusses the conceptual model and accompanying hypotheses in detail. Chapter six outlines an experimental methodology based on work by Boulding and Kirmani (1993) and Rao, Qu, and Li (1999) that will be used to test the hypotheses. Chapter seven discusses the results of the study, and chapter eight will conclude with a discussion of possible limitations and directions for future studies.

CHAPTER 2: ECONOMICS OF INFORMATION AND SIGNALS OF QUALITY

Introduction

In situations where consumers are faced with inadequate or incomplete information, they may rely on heuristic devices known as *signals* in lieu of a comprehensive information search. A *signal* is an action or bit of information that enables the receiver to make additional inferences about the product or process that is the subject of the signal. This chapter briefly examines the Economics of Information (EOI) literature that underpins signaling theory and the SEC framework that classifies goods by examining when consumers are able to determine product (or process) quality.

The unique qualities of the online environment have been both boon and bane for consumers. On the one hand, a great deal of information is available at a very low search cost. On the other hand, a consumer's ability to directly observe product or process quality is limited. Additionally, asymmetries of information typically exist between sellers and buyers in any environment. As a result, consumers may use market signals as a way of inferring information about a product or the exchange process. This chapter also discusses the issue of how regulations may act as signals to consumers and the characteristics of the online environment that are conducive to signaling as a prelude to linking signaling with issues of governance and trust.

2.1 The Search, Experience, and Credence (SEC) Framework

Economics of Information (EOI) theory has a rich tradition in marketing and consumer behavior literature and has been examined by numerous researchers. The basis of EOI theory was developed by Stigler (1961), and successive iterations have often focused on the economic dimensions of consumer information search (Nelson 1970; 1974; 1978; Beales and Salop 1982). In this context two important theoretical developments from EOI research are particularly relevant. The first is the so-called "SEC" (Search, Experience, Creedence) framework (Darby and Karni 1973; Ford, Smith and Swasy 1990). The second is market signaling theory (Spence 1974; Boulding and Kirmani 1994; Rao, Qu and Ruekert 1999). Each will be discussed in turn.

The Search, Experience, and Credence (SEC) framework (Nelson 1970; Darby and Karni 1973) classifies goods in terms of the consumer's ability to determine their relative qualities. For search goods, quality can be readily determined prior to purchase; whereas, for experience goods, quality is not readily discernible until after purchase (Nelson 1970, 1974, 1978; Rao, Qu, and Ruekert, 1999). For credence goods (Darby and Karni 1973), quality may not be readily observable to the consumer until well after purchase, if at all. As will be discussed at several points in this thesis, the exchange process may be an issue for the online consumer, and it is likely that the online exchange process will have many properties not immediately obvious to consumers. In situations addressing information privacy, the online exchange process might be characterized as having experience or, in some cases, credence attributes. For example, even if the consumer's privacy expectations are breached, he or she may not be able to determine where or when the breach occurred.

While consumers must deal routinely with acquiring information about sellers and products, the online consumer faces the additional burden of acquiring knowledge about the online exchange process.[1] Evidence that consumers have reservations about online exchanges can be found in studies that have examined consumer concerns regarding online privacy (FTC Online Privacy Study 1999; GVU WWW User Study 1999). Additional indications have surfaced in exploratory research on trust of web sites (Cheskin Research 1999). It would appear that consumers lack confidence in either the online environment or at least in their knowledge of it (GVU Survey, 1999).

In situations where consumers are faced with information asymmetries (informational differences between buyers and sellers (e.g., Akerlof 1970; Kreps 1991), they may search for signals indicating desired qualities (Rao, Qu, and Ruekert 1999). A *signal* can be defined as a bit of information that increases the predictive value of another piece of information (Spence 1974). In the context of this thesis, a more useful definition might be that used by Rao, Qu, and Ruekert (1999, p. 259) whereby "a signal is an action that [an entity] can take to convey information credibly about unobservable product [or process] quality to the buyer. For example, one signal is the offer of a good warranty."[2]

Dawar and Parker (1995) outline five general situations in which consumers may choose to rely on signals for information about product qualities—a method frequently used by consumers as the basis for heuristic rules. Their list includes the reduction of perceived risk (Jacoby, Olson, and Haddock 1971; Olson 1977) and situations in which it is difficult for consumers to assess quality objectively or in which they are not accustomed to allotting time for assessment (Allison and Uhl 1964; Hoch and Ha 1986). Additionally, consumers may utilize signals when they are lacking in expertise and ability to assess quality (Rao and Monroe 1988). Finally, in situations where low involvement is present (Celsi and Olson 1988) or where information is needed and a search preference exists, consumers may be likely to use signals as heuristics to assess quality (Dawar and Parker 1995).

Consumers are likely to use signals as heuristics because they have "neither infinite time horizons nor the incentive to perform thorough comparative studies prior to purchase" (Dawar and Parker 1995, p. 83). Consumers are thus using signals as knowledge heuristics or knowledge substitutes in lieu of a comprehensive information search for attributes and qualities. Examples in the context of regulation and governance would include a consumer's accepting the "FDIC" logo (and the knowledge that accounts are insured) as a substitute for knowing the financial health and management practices of his or her bank or substituting the heuristic signal of a strong warranty for search regarding product quality. Lack of expertise in assessing quality, reduction of risk, and difficulty in assessing quality objectively are all situations that may confront consumers contemplating the online environment.

The literature on signaling has examined a variety of events, statuses, governance structures, and other mechanisms as signals (Dawar and Parker 1995). Brand names (Akerlof 1970; Olson 1977; Ross 1988), price (Leavitt 1953; Milgrom and Roberts 1986; Wolinsky 1983), brand advertising (Milgrom and Roberts 1986), product appearances and features (Nelson 1970; Olson 1977), producer and retailer reputations, and store names (Emons 1988; Olson 1977; Rao and Monroe 1989) all have been found to act as signals of quality to consumers. Although we are primarily concerned here with business-to-consumer activities, early work done in signaling was more likely to address business issues. Spence (1974) focused much of his groundbreaking signaling work on how employers used the education of a prospective employee as a signal of quality. Also in the business-to-business context, new product announcements have been shown to act as signals to competitors and customers (Eliashberg and Robertson 1988; Heil and

Robertson 1991; Robertson, Eliashberg, and Rymon 1995). Similarly, new product and technology signals have been examined for their potential impact on stock prices (Chaney, Devinney and Winer 1991; Wittink, Ryans and Burrus 1982).

Signaling has proven to be the source of a remarkably robust stream of literature, and there is considerable evidence (Calfee and Ford 1988) that consumers use signals as part of an inferential and heuristic strategy when faced with inadequate or incomplete information (Olson and Jacoby 1976; Ford and Smith 1987). However, there has been little direct research into whether or not regulations can act as signals to consumers. Most of the available research has focused on warranties and guarantees in both the business-to-consumer (Shimp and Bearden 1982; Bearden and Shimp 1982; Boulding and Kirmani 1994) and business-to-business contexts (Schurr and Ozanne 1985). As will be discussed in greater depth in the next chapter, both warranties and guarantees are forms of private governance (Boddewyn 1989) closely akin to the use of pledges (Anderson and Weitz 1992) in relational channel governance (Heide 1994). Channel governance provides a rich literature and a useful conceptual lens for viewing the related structures of private, quasi-governmental, and governmental regulations in the business-to-consumer context. Leaving these matters for future discussion, I will briefly review the literature in marketing and related literatures addressing warranties as signals.

2.2 Warranties as Signaling Mechanisms

Researchers in economics (Grossman 1981; Ippolito 1990; Lutz 1989) and marketing (Boulding and Kirmani 1993; Kelley 1988) have examined how warranties may act as signals of quality (Bearden and Shimp 1982; White and Truly 1989) and reliability (Gerner and Bryant 1981; Weiner 1985) for consumers in lieu of more easily discernible intrinsic cues.

Marketing researchers have examined warranties from the perspectives of both buyers and sellers. From a seller's perspective, warranties protect companies from excessive or unreasonable liability (Kendal and Russ 1975; Shimp and Bearden 1982) and can also act as persuasive sales tools (Udell and Anderson 1968; Shimp and Bearden 1982). For consumers, who are the focus of this paper, the reasoning is less clear, but evidence in a number of studies (Bearden and Shimp 1982; Shimp and Bearden 1982) suggests that warranties function as symbols of quality (White and Truly 1989) and reliability (Gerner and Bryant 1981) as well as fulfilling other roles.

Stated in the context of this dissertation, warranties are private governance mechanisms that signal two important qualities to consumers that can be extended to other types of regulations and governance mechanisms. The first is reduction of risk (e.g., quality), and the second is an increased predictability of results (e.g., reliability). Equally important, these signals can address not only the product but also the exchange process between the firm and the consumer. The warranty is designed to promote what Zucker (1986) refers to as institution-based trust. The idea behind institution-based trust is that trust can be provided or purchased (Gefen 1997). The warranty represents a governance mechanism that seeks to ensure that the consumer receives what he or she expected from the exchange process, regardless of other difficulties. In this way the warranty reduces risk and promotes predictability of results.

For example, the practices by which banks clear checks are monitored by such regulatory bodies as the Federal Reserve Board, the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC). These controls act as signals to consumers that they can expect a certain predictability of results and a known level of risk when using checks. In the heavily regulated U.S. financial industry, signs in banks that the accounts are FDIC insured also act as signals to consumers regarding the safety and stability of the institution and the financial processes associated with it. VISA and MasterCard benefit from strong brand awareness as well as federal regulatory requirements, such as the Truth in Lending Act and the Fair Credit Reporting Act, which delineate the information that must be disseminated to consumers as well as the information that can be disseminated about them. The fact that consumers are at least tacitly familiar with the regulatory nature of the financial services market has been the basis for suggestions that regulation actually might increase consumer confidence in payment systems emerging for use on the Internet and WWW (Effross 1997; Report on Electronic Money 1998).

Bearden and Shimp (1982) and Shimp and Bearden (1982) note that warranties might influence consumers in several areas. In finding that warranties act as signals to consumers, they have reached

> [a] tentative conclusion … that warranties influence consumers by representing assurances of product quality and value (Feldman 1976; Olson 1972); by increasing consumers' specific self-confidence (Armstrong, Kendall, and Russ 1975); by reducing consumer's feelings of risk (Perry and Perry 1976) and by increasing satisfaction through dissonance reduction. (Darden and Rao 1977)

Bearden and Shimp (1982) focus on how manufacturer reputation, price, and product warranties affect the risk perceptions of consumers. Although several of their findings were inconclusive, one important result confirmed that warranties provide a type of security signal to consumers. Later work by White and Truly (1989) conceptually replicated and extended the Shimp and Bearden (1982) and Bearden and Shimp (1982) studies, and achieved statistically significant results for hypotheses that had been inconclusive in the previous work. They found that warranties had a significant impact on the consumer's perceptions of financial risk (White and Truly 1989). Financial risk as conceptualized by Shimp and Bearden (1982) and White and Truly (1989) deals with the consumer's risk of adverse financial consequences. This is basically a risk in the exchange process whereby the warranty alleviates the consumer's risk by guaranteeing that he or she receives what was expected from the exchange.

The work of Bearden and Shimp (1982) and White and Truly (1989) also supports the idea of regulations as signals by finding that warrantor reputation and warranty quality affect the consumer's perception of risk. In regulatory terminology (albeit private regulation in this case), *warrantor reputation* and *warrantor quality* also could be termed *regulator reputation* and *regulator quality*.

Weiner (1985) and Kelley (1988) examine whether warranties are accurate signals of product quality for consumers. The Weiner article is especially interesting because it addresses the problems of poorly designed signaling remedies in a public policy context (Beales, Craswell, and Salop 1981; Beales, Mazis, Salop, and Staelin 1981). Weiner notes that the usefulness of signaling remedies possibly could be increased through the use of consumer behavior and related research (Wilkie 1975). Kelley (1988) tested Market Signaling Theory and examined several important public policy implications relating to signaling. Chief among these issues was his untested proposition that research similar to that outlined in this dissertation could be used to determine which types of signals consumers were receiving as a result of information disclosure regulations. More recently, Boulding and Kirmani (1993) returned to the subject of warranties as signals of quality in the information processing paradigm. Their results supported earlier conclusions indicating that warranties could be signals and shed light on the important phenomenon of bonding and its relationship to signaling.

2.3 Warranties and Bonding

Bonding can be thought of as the "glue" that makes a signal credible to the party receiving the signal. For a warranty (or a regulation) to act as a signal, it must be "bonded" (Ippolitto 1990) to the product or process that is the subject of the signal. A bond is credible when the target, in this case the consumer, perceives that sending a false signal would produce negative consequences for the dishonest party. Rao, Qu, and Ruekert note that "a signal is a credible and informative action because those attempting to signal dishonestly would suffer harmful monetary consequences" (1999, p. 260).

In the context of a warranty, a consumer would reason that a strong warranty was a positive signal of product quality because a dishonest seller who used a strong warranty to lure consumers to an inferior product would face high monetary costs in servicing the warranty, thus making dishonesty unprofitable (Boulding and Kirmani 1993; Ippolitto 1990). In the case of a regulation, the regulation would be bonded if the penalties associated with violating it were high enough that consumers would perceive the cost of dishonesty to be more than the firm would be likely to bear (Ippolitto 1990). It is also important to note that both direct and indirect costs will factor into the calculation. A company caught violating a regulation could face consequences other than direct fines or costs in the forms of bad publicity, damaged reputation, or the loss of association in a trade or industry group. Finally, another example of private governance mechanisms is found in the form of contractual "pledges" (Anderson and Weitz 1992). Pledges also can act as signals in the channels environment, and will be discussed in the next chapter as an example of how relational governance structures can furnish insight and a supporting literature for viewing business-to-consumer governance.

Bonding also varies based on the strength of the credibility of the firm or regulator sending the signal and the credibility of the product or regulation (Ippolitto

1990). Boulding and Kirmani's (1993) finding that consumers viewed warranties as positive signals for firms with high bond credibility supports this position. However, the same warranties produced neutral or even negative results for companies with low bond credibility. In a regulatory context, even a strong regulation will not bond with a signal unless the regulator is also perceived as effective (Boulding and Kirmani 1993), meaning that an effective regulation must be issued by a regulator that is also perceived as being effective.

Conclusion

In this chapter, I have illustrated the link between signaling mechanisms and public or private regulatory structures. Both are essentially governance mechanisms creating standardized procedures that act to reduce risk (because all sides are governed by a set of some known rules) and provide some predictability of results for participants (because some redress is typically possible à la Bearden and Shimp 1982). Warranties as well as more traditional types of regulations can be public, private, or some other hybrid, and can have varying degrees of coverage and strength. Finally, both are signals to consumers, conveying information about their rights and responsibilities with respect to the product and the other parties involved in the transaction.

The next chapter will examine the notion of private, quasi-governmental, and governmental mechanisms, and will develop further on the notions of signaling and regulatory governance raised above. I will introduce a framework for classifying the different structures as well as lay the groundwork needed to consider whether regulations can increase consumer trust in the online environment.

CHAPTER 3: THE REGULATORY MATRIX, GOVERNANCE MECHANISMS AND REGULATORY STRUCTURES IN ONLINE EXCHANGES: CONCEPT AND THEORY

> "Consumption is the sole end and purpose of all production; and the interest of the product ought to be attended to, only so far as it may be necessary for promoting that of the consumer.… But in the mercantile system the interest of the consumer is almost certainly sacrificed to that of the product; and it seems to consider product, and not consumption, as the ultimate end and object of all industry and commerce."
> –Adam Smith (*The Wealth of Nations*)

> "The genius and explosive success of the Internet can be attributed in part to its decentralized nature and to its tradition of bottom-up governance. These same characteristics pose significant logistical and technological challenges to existing regulatory models, and governments should tailor their policies accordingly."
> *–Framework for Global Electronic Commerce, 1997*

Introduction

The relationship between businesses and consumers frequently is characterized by information and power asymmetries between the parties, often to the disadvantage of consumers. Different types of protections in the forms of governance mechanisms and regulatory structures exist to mediate these differences and to place consumers in a more equitable position, and they often provide the basis for institutionalized trust. These instruments may be public or private or some intermediate structure, but the purpose remains the same: to provide a level playing field and to increase consumer trust in the exchange process. The channels literature furnishes a framework to examine the various types of regulatory structures and governance mechanisms, both formal and informal, which help form an overarching regulatory matrix. This matrix provides the rules of order for conduct between businesses and consumers. This chapter will establish a typology that distinguishes between types of structures used to govern exchange relationships and particular problems that may affect the online environment.

3.1 Why Study Regulation and Governance?

While there is considerable debate on the form and amount of regulation necessary, some regulation, particularly governmental regulation of business activity, is a generally accepted fact of life (Peterson, Kozmetsky and Ridgway 1984). Researchers in marketing and related disciplines have examined the conceptual (Stern 1971) as well as the concrete (Hahn and Hird 1994) aspects of the regulatory process. The study of regulation and public policy has made many valuable contributions to research regarding the general nature of the regulatory process and the results of regulation (Wilkie and Moore 1999) and deregulation (Kassarjian 1989; Kassarjian and Kassarjian 1988) as well as contributing to more general marketing knowledge (Wilkie and Moore 1999). But, in many ways, fundamental questions have not been answered. (1986, p. 4; see also Boddewyn 1989) noted that, "[d]espite the world's long history of trying to improve on free-market performance, our knowledge of how to design and implement an effective [regulatory] remedy is not very impressive."

The spectacular growth of the Internet and WWW has highlighted the possibility that different approaches to regulation should be examined both in practice (Framework 1997; OECD Report 1999) and in the research arena (Cook and Coupey 1998). In the public policy process, formulation of goals and development of evaluatory procedures often are poorly executed (Wilkie 1974). The imposition of social science research techniques can provide structure and improve this process. For example, Wilkie (1975) proposes the use of information processing theory throughout the regulatory process. He notes that: "[p]rogram evaluation should be viewed as an integral decision stage rather than a post hoc effort; it should be built into the decision process so as both to assist in strategic judgments and to serve as a baseline against which program effects can be amassed" (1974, p. 4).

Campbell (1975) proposes that reforms—or, in the present context, regulations and governance mechanisms—should be developed and promulgated as experiments. Regulations would be designed to address particular issues and then be evaluated by means of scientific testing utilizing the appropriate criteria (Cook Coupey and Mendoza 2001). Based on these results, individual regulations are retained, modified, copied, or eliminated (Campbell 1975). However, this model has been followed rarely, if at all. As noted by Gupta and Lad: “[I]t appears that researchers have focused primarily on the alternative substantive forms that regulation can take and have ignored the alternative institutional arrangements through which rules and standards are/might be set, performance monitored, and correction of deviation from the set rules and standards enforced” (1983, p. 416)

Because the growth of the online environment has raised questions about how and when regulation can be imposed (Framework 1997; Cook and Coupey 1998; Cook, Coupey, and Mendoza 2001), this issue seems particularly appropriate as an extension of public policy research into the areas indicated by Gupta and Lad (1983). A critical issue is the effect that the presence or absence (and type) of regulatory structure will have on consumer perceptions of the online exchange process. By examining how consumers interpret regulatory signals in specific contexts and by experimentally measuring the impact of this information on trust, this paper intends to contribute to a better understanding of how to “design and implement effective remedies” (Carman and Harris 1986, p.64) in an effort to gain insight into more general regulatory issues.

3.2 The Regulatory Heritage of the Internet and WWW

Historically, online environments have enjoyed informal “bottom-up” (Framework 1997) governance of an extremely participatory nature. Pre-WWW online society had a well-developed culture whereby governance consisted primarily of informal norms of behavior that were often rigorously enforced (Richards 1997). For example, a person who used ALL CAPS in a message was considered to be “yelling” and, as such, very impolite. Those guilty of this kind of conduct were attacked frequently by other Netizens in “flame wars,” in which sharp criticism, crude insults, and worse were used to bombard the offending party. In essence, the law of the frontier prevailed (Rose 1995).

The decision to open the Internet and WWW to commerce (Rose 1995) resulted in a huge influx of new citizens who were unaware of the existing norms, and this resulted in a somewhat involuntary retreat from governance by means of frontier justice.

Concern grew for establishing something closer to traditional governance in order to protect consumers in their dealings with net businesses (Baker and France 1999; Rose 1995). The transition was rocky, as two Arizona lawyers who were among the first to advertise through a mass-market electronic mailing (now commonly know as "spamming") found out. Reaction to their early attempt at advertising was both swift and massive. The lawyers were flamed by so many Netizens that their servers were shut down by excess traffic (Nonatan 1994).

However, the current situation of growing electronic commerce likely will require a mix of old and new regulatory structures (Framework 1997; FTC Report on Online Privacy 1999) to cope with the fundamental differences of the Internet and WWW (Cook and Coupey 1998; Cook Coupey and Mendoza 2001). As such, the channels literature provides a natural starting place for considering web governance. As we will see, the predominant types of business-to-consumer governance closely resemble Heide's (1994) conceptualization of nonmarket unilateral governance.

3.3 The Role of Governance in the Exchange Process between Businesses and Consumers

In most situations in which an exchange occurs, there are checks and balances that apply between the parties regardless of whether those parties are two individuals, an individual and a business, or two businesses. These checks and balances may take many forms, ranging from pure market governance—e.g., "complete individualism" (Gupta and Lad 1983), in which the market functions to correct improper conduct of either party—to nonmarket governance—"complete statism" (Gupta and Lad 1983), in which all of the power to regulate the conduct of the parties is held by some governmental entity. All of these concepts can be loosely associated under the general idea of governance defined by Heide (1994, p. 72) as "includ[ing] elements of establishing and structuring exchange relationships as well as aspects of monitoring and enforcement" in the context of a "multidimensional phenomenon, encompassing the initiation, termination and ongoing relationship maintenance between a set of parties." Heide (1994) was describing governance mechanisms that exist between channel members that are businesses. Mechanisms that address the economic responses of the market to deviations from accepted norms are referred to as *market governance* (Heide and John 1992), while mechanisms that are responses or contingencies established by either of the parties (Heide 1994) or by governmental or other regulatory entities (Boddewyn 1989) are considered *nonmarket mechanisms*. This dissertation examines issues related to nonmarket governance forms and consumer trust.

3.4 Purposes of Regulation in Regard to Governance, Relationship Marketing, and the Channels Literature: Governance Structures Applied to the Business-Regulator-Consumer Trichotomy

The basic idea of using different types of mechanisms for exchange governance (Lindblom 1977; Heide 1994) is to regularize and add an aspect of control to the exchange process (Dwyer and Oh 1988). This concept is applied similarly in both business-to-business and business-to-consumer environments. Although not an exact analogy, the basic premises of the business-to-business relational channel paradigm also can be applied to governance in the business-to-consumer environment. In both contexts governance exists as a “mode of organizing transactions” (Williamson and Ouchi 1981; Heide 1994) and a way of adding structure to the exchange relationship.

Businesses often choose different types of governance approaches to reduce asymmetries of power and/or information in channel relationships (Heide 1994) and to decrease risk and uncertainty (Lusch and Brown 1996). Seen in this light, these different approaches create a sort of mediating structure to filter and regulate exchanges between the parties (see Gupta and Lad 1983). The process functions similarly between businesses and consumers.

In the case of market governance, asymmetries of information and power frequently exist between businesses and consumers (Smith 1998). Often, regulations are imposed to reduce these perceived inequities (Smith 1998) and to create mediating structures between the presumably disadvantaged consumer and the business (Gupta and Lad 1983). In practice, although the type of structures and the method by which they are imposed may differ, the purposes are much the same in both business-to-business and business-to-consumer markets. Both the similarities and the differences can be used to highlight the reasoning for attempting to extend the channels view of relational governance into the business-to-consumer environment.

As noted earlier, this thesis is concerned primarily with nonmarket governance. Market governance is identified with Dwyer, Schurr, and Oh's classic example of a discrete transaction as "a one-time purchase of unbranded gasoline out-of-town at an independent station paid for with cash" (1987, p. 12). Heide (1994) has examined a variety of market and nonmarket governance structures emphasizing relational governance and developed a governance trichotomy of market governance, unilateral nonmarket governance, and bilateral nonmarket governance. Unilateral and bilateral governance were considered types of relational governance mechanisms distinct from discrete market governance. In relational exchange, the social and historical context within which exchanges take place is explicitly accounted for, and mutuality of interest is viewed as naturally leading to enforcement of obligations (Heide 1994, p. 74; Dwyer, Schurr, and Oh 1987; Kaufman and Stern 1988). However, business-to-consumer governance structures cannot be classified as being either truly relational or truly discrete in the manner delineated by Heide (1994). Although a governance or regulatory structure may be functional in reducing asymmetries in discrete transactions, its utility lies in the fact that it can regularly perform similar tasks for many consumers over the course of both relatively discrete and relational exchanges. As will be shown in succeeding paragraphs, the relational perspective is probably the closest parallel to what occurs in building business-to-consumer governance structures.

Heide (1994) argues that nonmarket governance is a heterogeneous phenomenon that can be varied systematically. Within that realm of variance, relations can be organized either bilaterally—wherein goals and the policies designed to reach them are cooperatively developed by the parties—or unilaterally, wherein structure is imposed by means of some authority or entity (Heide 1994). Relying to some extent on relational contract theory (Macneil 1978, 1980, 1981), Heide notes that, in situations closer to the relational end of the spectrum, "some deliberate or formalized governance apparatus has been designed to replace the 'invisible hand' of the market" (1994, p. 74).

The governance apparatus cited by Heide (1994) occurs in many forms, some of which are endemic to the business channel relationship and others that also appear in a business-to-consumer context. As an example of the purely business context, Dwyer and

Oh (1988) focused on vertically and contractually integrated systems in the hardware industry. They considered wholesale voluntary chains, independents, and dealer cooperatives whose exchanges were contractually governed. That is, they examined a business-to-business context in which "structure[s] for administering and sustaining exchange systems" were created (Dwyer and Oh 1988). A closer comparison for business-to-consumer governance structures can be found in Anderson and Weitz's (1992) work on the use of pledges in distribution channels. Pledges can be either idiosyncratic investments in the channel relationship or the use of contractual terms to voluntarily constrain certain activities (Anderson and Weitz 1992). From a governance perspective, contractual pledges represent an important example of a self-regulatory structure. Anderson and Weitz note that: "Making pledges constrains the channel member but also commits the channel member to the relationship and provides a strong signal to the other party" (1992, p. 20), and similarly: "Like idiosyncratic investments, these contract terms both commit the channel member and provide a convincing signal to the other party" (20).

The concept of regulatory structures of governance mechanisms acting as signals is fully addressed in the following chapter; for now, it is important to realize that, in both the channels and the business-to-consumer environment, the creation and use of governance apparatus (Heide 1994) focus on providing structure and protection in the exchanges between the parties. Both results represent a move away from pure market governance and toward alternative methods of regulating relationships (Boddewyn 1989). However, it is also important to note some of the differences between business-to-business channels and business-to-consumer governance.

Typically, governance in the business-to-consumer setting is unilaterally imposed on the consumer (and in the case of governmental regulation on both business and consumers) instead of arriving through the bargaining process traditionally supposed under the transaction cost theory, which is often used to analyze channel governance (Heide and John 1992). Enforcement methods are generally specified by the business and agreed to by the consumer in a contractual agreement or, alternatively, imposed on both the business and the consumer by an outside entity, such as a quasi-governmental or governmental agency. However, the important element in both situations is that trust may be increased because the chances for unbounded opportunism are constrained. Both Ganesan (1994, p. 3) and Heide (1994, p.76), respectively, note the effects of these constraints within the channels framework:

> Trust based on a partner's expertise and reliability focuses on the objective credibility of an exchange partner and expectancy held by an individual that the partner's word or written statement can be relied on (Lindskold 1978). This dimension encompasses the consistency, stability, and control over the pattern of behavior exhibited.
>
> A key feature of hierarchical governance in contrast is the use of formalized contingency plans, specifying ex ante categories of environments events and corresponding procedures and contractual obligations (Cyert and March 1963). In addition, the planning process in a hierarchical system is centralized in that the authority to make decisions and specify actions is concentrated within one of the parties.

Constrained opportunism and the resulting decrease in risk and increased predictability of results are the basis for what is referred to as institution-based trust (Gefen 1997; Zucker 1986), which will be discussed at greater length in the next chapter. What is most relevant to the current discussion is Gefen's (1997, p. 43) argument that institutionallybased trust actually has "a formal marketable structure and has institutions and third party guarantors.…" Gefen (p. 43) holds that these mechanisms (in his terminology, *certificates*) are "deliberately intended and used to build trust in the bearer's ability through external guarantors such as universities (Zucker 1986; see also the work of Spence [1974] on education as a signaling mechanism) and state regulators." Basically, the idea is to create structures that will help building trust between transacting parties. Examples of these sorts of mechanisms include medical and law licenses (Robbins 1990; Gefen 1997) and, by implication, the quasi-governmental entities that regulate professional licensing. Institution-based trust can be used to circumvent (thus lowering the cost of) the expensive process-based trust found in many long-term relationships in which trust is gained by repeated activities and exchanges between the parties (Zucker 1986; Ganesan 1994).

One of the key characteristics of institution-based trust, and one of the reasons that it figures into business-to-consumer transactions, is that it presupposes a consistent policy to facilitate a successful exchange. The mechanism should allow exchanges to occur even in circumstances where it might not have been completed (Gefen 1997). An example would be in the case of providing guarantees or insurance. According to Gefen (1997), the tendency of modern heterogeneous societies and economies toward requiring more transactions at greater risks and across greater distances is driving the movement toward institution-based trust. It also encourages the creation of intermediary structures such as escrow and insurance in order to create institution-based trust (Gefen 1997).

Although Gefen (1997) does not cite any direct empirical evidence to support this portion of his thesis, he does cite indirect evidence in the form of two studies in marketing and information systems that support the concept of institution-based trust as well as Zucker's historical documentation (1986). In marketing, Schurr and Ozanne (1985) found that guaranties could be antecedents of trust. In information systems (IS) research, Rada (1996) found more trust in software suppliers who conformed to established standards.

3.5 Developing a Framework and a Typology of Regulations and Governance Structures

Since one of the primary purposes of this dissertation is to examine the signaling effects of different regulations on trust, it is necessary to find a way to classify the different types of structure. To provide a framework within which to conceptualize and organize the various and evolving types of online governance that may exist (and to reduce the confusion of terminology), I have adopted a typology of regulation. The overarching structure that encompasses all exchanges in the environment is referred to as the *regulatory matrix* (Cook and Coupey 1995; 1998; Cook, Coupey, and Mendoza 2001). The regulatory matrix is composed of all formal and informal mechanisms, including public, private, and intermediate structures used to regulate the exchange process. The regulatory matrix as delineated here can be thought of as a more specialized version of Macneil's (1980) four-part social matrix, which consists of effective communication, a currency for exchange, an orderly system to prevent murder and theft, and an enforcement mechanism (Macneil 1980; Dwyer, Shurr and Oh 1987). In much the same way as Dwyer, Schurr, and Oh (1987) considered “the constructive role of buyer-seller conflict” within the channels context, the regulatory matrix can be thought of as a structure that can function to reduce power and information differentials between businesses and consumers. Additionally, it can promote a systematic method of addressing conflicts between businesses and consumers.

In considering such an overarching structure, Streeck and Schmitter (1985) address the issues of the types of societal controls that may affect different types of exchange relationships. They postulate four bases for social control, consisting of a) community standards, or norms; b) market competition; c) state controls; and d) private governance structures. Because each of these methods will work under some circumstances but not under others, Streeck and Schmitter (1985) argue that they are complementary. Each of the particular methods will be more appropriate under different circumstances (Boddewyn 1989). These different institutions, or methods, comprise the range of options that may exist within the regulatory matrix. Briefly, these can be thought of as occupying a continuum ranging from most formal to most informal on one axis and from most private to most governmental on the other (See Figure 3.1).

Figure 3.1

The Regulatory Matrix

	Most	**Governmental**	
Least			**Most**
Formal			**Formal**
	Most	Private	

Governance mechanisms are the three basic types of regulatory paths (each of which will be discussed in detail, supra) hypothesized, and are classified as governmental, quasi-governmental (or intermediate), and private (or self-regulatory). Finally, regulatory structures are the actual rules, codes, laws, contracts, or instruments used to implement the governance mechanism within the regulatory matrix.

At the governmental level, regulation is imposed by legislative edict, executive order, or agency or departmental rulemaking. In the financial services context, for example, this refers to issues such as interest rate caps, required information disclosures, and reporting requirements that establish safety and liquidity. An example in the privacy context is the recent promulgation of privacy rules for children's web sites by the Federal Trade Commission (Clausing 1999) in order to limit the collection of information about children on the WWW.

One advantage of governmental regulation is that regulations are backed with the coercive power of a governmental entity that can apply sanctions to violators (Gupta and

Lad 1983). Another advantage is that the government usually does not have a direct financial stake in the outcome of a regulatory issue. It thus may be seen as somewhat more neutral than a private entity, particularly one that is connected with the product or service being regulated. Disadvantages include possible disruptions of the market, sometimes termed *regulatory failures* (Boddewyn 1989), which may result in decreased efficiency and increased costs to businesses and consumers (Fise 1998).

At the quasi-public level we see private entities performing functions that are often governmental in nature and may in fact serve as regulatory enforcement organizations. Traditionally, state bar associations have fulfilled this latter role by being responsible for the licensing, monitoring, and disciplining of attorneys, even though they are essentially private trade organizations composed solely of attorneys and lacking legal or legislative power except in narrowly defined circumstances. An example more inimical to the Internet and to the development of new types of regulatory structures for the WWW is the creation of the Internet Corporation for Assigned Names and Numbers (ICANN). ICANN describes itself on its web page (http://www.icann.org/) as "the non-profit corporation that was formed to assume responsibility for the IP address space allocation, protocol parameter assignment, domain name system management, and root server system management functions now performed under U.S. Government contract by IANA and other entities."

This non-profit company now has the enormous responsibility of regulating and assigning the issuance of domain names—literally, the numeric and alphanumeric addresses for WWW sites, not just in the U.S. but also worldwide. In this capacity, it is fulfilling a significant role in governing the Internet and WWW. As an intermediate regulatory form, it has a board of governors with quasi-judicial powers and the ability to impose very real sanctions on violators of contractual agreements (http://www.icann.org/), although there are substantial policy disagreements on how these powers should be limited.

Quasi-governmental entities have the advantage of relying on the functional knowledge of actual market participants (Gupta and Lad 1983; Stewart and Thomas 1998) who are presumably in a better position to judge the competency of individuals or entities in that particular market. Quasi-governmental mechanisms can be distinguished by the fact that government agencies usually function in a meta-regulatory (Gupta and Lad 1983) role whereby they exercise a supervisory role over the quasi-governmental entity. A criticism of quasi-governmental entities is that they may be unwilling or unable to effectively sanction members who share the same profession or businesses interests (Stewart and Thomas 1998; Rottenburg 1980) and that this type of regulation increases costs for consumers (Watkins 1997).

Private regulation, sometimes known as industry self-regulation, constitutes a form of private government (Boddewyn 1989). It is private government in that peers rather than outside parties control how the rules are established and enforced. Additionally, rules of behavior are usually accepted voluntarily by participants and self-imposed by the organization (Boddewyn 1989). As noted earlier, the use of private regulation was a policy objective in the Framework for Global Electronic Commerce. Similarly, reports from the Federal Trade Commission (FTC Report on Privacy 1999) and the Organization for Economic Development (OECD) have stressed self-regulatory remedies.

On the macro level, an excellent example of private regulation is found in the activities of TRUSTe, an online, industry-created, self-regulatory entity. TRUSTe uses a system of rules and regulations that focuses on adoption and implementation of a privacy policy, notice and disclosure of that policy, user choice and consent, and data security quality and access (http://www.truste.org). In addition, there is a process for filing consumer complaints as well as monitoring and/or disciplining errant members. Participants who agree (contractually) to abide by the rules and regulations are allowed to display the TRUSTe "trustmark" as shown in Appendix 1. The trustmark has the added feature of allowing consumers to check the TRUSTe web site to make sure that anyone displaying the logo is a legitimate member of TRUSTe. In exploratory work by Cheskin Research (1999), such "seals of approval" were shown to increase trust among users who "knew what they meant."

On a more micro level, warranties offered by an individual firm also can be thought of as private governance. By creating the warranty, the firm contractually obligates itself to operate in a prescribed manner under particular circumstances. However, if a firm fails to follow its self-imposed regulations, the consumer's remedies may be limited. The most obvious remedy, legal action, is frequently more expensive than the warrantied product and may represent more of an illusory remedy. However, warranties and guarantees do establish a regulated pattern of conduct for both parties and as such represent a significant portion of private regulation.

Advantages of private regulation include increased efficiency and lower cost to businesses (Gupta and Lad 1983). As was the case for quasi-governmental regulation, the argument is made that parties more knowledgeable of the individual market will be better informed and better able precisely to direct regulatory efforts to minimize market disruptions. Among the disadvantages of private regulation is the fact that consumers may doubt the basic notion of private self-regulation because of the counterintuitive notion that businesses will act in the best interest of the consumer (Boddewyn 1989; Streeck and Schmitter 1985). Concerns also exist that industries will avoid enforcing discipline on errant firms (Gupta and Lad 1983) or that they will not achieve the same level of effect as more traditional governmental regulatory efforts (FTC Report on Privacy 1999).

The three types of governance structures—governmental, quasi-governmental, and private—can be thought of as being on a continuum ranging from the most private (self-regulation without any form of governmental oversight) to the most governmental (detailed government regulations that control every facet of production and use, as in the case of the nuclear power industry). Examples of completely "pure" forms of the different mechanisms are more likely to be abstract than concrete and are useful mainly as theoretical constructs. However, as noted in Figure 3.1, each of the governance mechanisms also can be considered in terms of the formality or informality of their regulatory structures. A federal agency may issue regulations directly to a particular industry in order to halt some particularly offensive practice, or it may informally advise companies within the industry that regulations will be forthcoming if practices are not altered. Similarly, a quasi-governmental or self-regulatory entity may choose to rely on moral suasion rather than overt enforcement of a minor infraction.

<u>Conclusion</u>

The current model seeks to determine which type of regulatory structure will most increase consumer trust in the online environment. There may be many factors that affect optimal performance of the regulatory structure from the firm's perspective. However, unless consumers believe in and trust the efficacy of these structures, then they are likely to call for stronger and more explicit regulations. This would be a retreat from the innovative private and quasi-governmental structures that are developing and toward more traditional and familiar governmental forms, which begs the question: what type of structure will best fulfill consumers' wants and needs?

In both the channels and the business-to-consumer environments, the creation and use of governance methods are designed to provide structure and protection in exchanges between the parties. Both represent moves away from pure market governance and a move toward alternative methods of regulating the exchange relationship.

It may be especially appropriate to extend the notions of channel governance to the online exchange process. In many instances the only channel members other than the producer and the consumer will be intermediary organizations that exist to facilitate the exchange process. Consumer unwillingness to use credit cards over the Internet and WWW (Ang 2001; Cook and Hess, 1995) is not necessarily symptomatic of a lack of trust in the individual merchant but may represent a lack of trust in the online exchange process. Because of the power and information differential between online businesses and consumers, governance mechanisms must exist to give consumers the opportunity to have greater feelings of trust in the process, the exchange partner, and, in some cases, the product. Signals that indicate the existence of different types of governance mechanisms, including public and private governance mechanisms, should serve to increase consumer trust in these processes.

One of the goals of this thesis is to provide additional evidence that governance mechanisms and regulatory structures can increase institution-based trust. Having examined signaling and governance, I will continue in the next chapter to discuss trust and its antecedents.

CHAPTER 4: INTERMEDIARIES AND INSTITUTION-BASED TRUST: TRUST AND REGULATORY STRUCTURES ON THE INTERNET AND WWW

> "One of the most salient factors in the effectiveness of our present complex social organizations is the willingness of one or more individuals in a social unit to trust others. The efficiency, adjustment, and even survival of any social group depends on the presence or absence of such trust."
> – Rotter (1967, p. 651)

Introduction

Trust is a central construct in marketing theory, and it is virtually axiomatic that trust plays a vital role in business and social interaction when there is a lack of control and a significant risk of failure. Trust has been examined from a variety of perspectives in management, economics, information sciences, social psychology and marketing, among others. In this chapter, the trust literature is examined, with an emphasis toward marketing, sociological, and economic research that points toward different types of trust-building mechanisms and, in essence, different types of trust. The unique qualities of "institution-based trust" are discussed within the context of the particular circumstances that surround electronic commerce and business-to-consumer exchanges on the Internet and WWW. Governance mechanisms and regulatory structures that could be used in creating and increasing trust in online exchanges are examined as a prelude to explicating the conceptual model presented in the following chapter.

4.1 Background and Marketing Research on Trust

The concept of trust has drawn wide attention among many researchers in the social sciences and, in the process, generated an expansive literature. Trust has been examined in diverse fields, such as management (Mayer, Davis and Schoorman 1995), information science (Gefen 1997), economics (Milgrom and Roberts 1992), sociology (Zucker 1986), social psychology (Lindskold 1978; Deutsch 1960), and marketing. However, the very breadth of the literature predicates against a truly comprehensive review. Many dissertations have addressed primarily trust issues (e.g., Gefen 1997), and, by necessity and in the interest of brevity, I will focus only on the aspects of trust most salient to this dissertation.

Trust has become a central construct in marketing theory (Doney and Cannon 1997; Morgan and Hunt 1994; Dwyer, Schurr, and Oh 1987) as well as in the closely related disciplines from which much of the marketing literature has developed. It is frequently invoked in explaining business and social interactions in which there is a lack of control and significant cost of failure (Gefen 1997). Although other disciplines have taken a variety of different approaches, the literature in marketing often pursues two primary "targets" of trust (Doney and Cannon 1997)—namely, industrial buyers and salespeople along with their associated supplier organizations.

Following a similar pattern in related disciplines (see Fukuyama 1995; Mayer, Davis, and Schoorman 1995), much of the research in marketing has focused on defining trust in terms of being a belief as opposed to an intention or a behavior (Moorman, Zaltman, and Deshpande 1992; Gefen 1997). Proponents of increased research on trust and the development of empirical measures of trust (Moorman, Deshpande, and Zaltman 1993; Morgan and Hunt 1994; Doney and Cannon 1997) typically have referred to two schools of thought developed from related disciplines. One school frames trust as a belief, while the second conceptualizes trust primarily as an intention (Dywer and LaGace, 1986; Gefen, 1997). While both approaches draw heavily from social psychology and organizational research for their theoretical underpinnings, each takes a different perspective.

The first perspective focuses on trust as a type of belief and is well summarized by Moorman, Zaltman, and Deshpande's (1992, p. 315) observation that trust can be "viewed as a belief, sentiment, or expectation that results from the partner's expertise, reliability or intentionality." This approach is founded on the very influential work of key social scientists in the area of organization theory and social psychology (Pruit 1965; Rotter 1967; Blau 1964; see also Moorman, Zaltman, and Deshpande 1992). Among marketing researchers, this viewpoint has been followed by Morgan and Hunt (1994), Anderson and Narus (1990), Dwyer and Oh (1987), and Schurr and Ozanne (1985; see also Moorman, Zaltman, and Deshpande in relation to the above citations).

The second school of thought, also heavily grounded in previous social-science research (e.g., Deutsch 1962; Zand 1972), views trust as a behavior or intention. Implicit in this approach is the idea of reliance, involving uncertainty and vulnerability, of one party in the exchange relationship on the other party (Moorman, Deshpande, and Zaltman 1993). Because reliance is central to this concept, trust is not necessary to the relationship unless the trustor faces some uncertainty or exhibits some vulnerability in the exchange (Coleman 1990; Giffin 1967; Schlendker, Hel, and Tedeschi 1973; Moorman, et al. 1992). If there is no vulnerability in the exchange relationship, there is no risk of an adverse outcome, and trust is unnecessary. Alternatively, trust is also unnecessary if no uncertainty is present in the relationship because the trustor has either complete knowledge or complete control of the other party's actions (Moorman, Zaltman, and Deshpande 1992; Moorman, Deshpande, and Zaltman 1993). Moorman et al. (1992, 1993) take the view that both the belief and behavioral components are necessary for the existence of trust in a relationship. While their view has been followed by many of the marketing researchers studying trust, their approach has not been universally followed (e.g., Morgan and Hunt 1994). Table 4.1, below, sets out the definitions of trust utilized in representative marketing research.

Table 4.1

Definitions of Trust in the Marketing Literature

Authors	Definition of Trust	Journal
Schurr and Ozanne (1985, p. 940)	"[T]he belief that a party's word or promise is reliable and that a party will fulfill his/her obligations in an exchange relationship."	*Journal of Consumer Research*
Anderson and Narus (1990, p.45)	"[T]he firm's belief that another company will perform actions that will result in positive outcomes for the firm as well as not take unexpected actions that result in negative outcomes."	*Journal of Marketing*
Moorman, Deshpande and Zaltman (1993, p. 82)	"Trust is defined as a willingness to rely in an exchange partner in whom one has confidence" (same definition used by Moorman, Zaltman, and Deshpande, 1992, in the *Journal of Marketing Research*).	*Journal of Marketing*

Ganesan (1994, p.3)	"Trust is the willingness to rely on an exchange partner in whom one has confidence."	*Journal of Marketing*
Morgan and Hunt (1994, p. 23)	"We conceptualize trust as existing when one party has confidence in an exchange partner's reliability and integrity."	*Journal of Marketing*
Doney and Cannon (1997, p. 36)	"We define trust as the perceived credibility and benevolence of a target of trust."	*Journal of Marketing*

Moorman, Zaltman, and Deshpande (1992) also call attention to two essentially different roles that have been suggested for trust in the marketing literature. On the one hand, trust may be seen as a feature or aspect of relationship quality in conjunction with other variables, such as opportunism and satisfaction (Crosby, Evans, and Cowles 1990), or simply as a feature of relationships (Anderson, Lodish, and Weitz 1987) along with variables such as communications, power, and compatibility of goals (Moorman, Zaltman, and Deshpande 1992). On the other hand, Moorman et al. (1992) follow a slightly different path that treats trust as a "determinant of relationship quality" (p. 315). In this view, cooperation and functionality of conflict are determined by the amount of trust in a relationship (Anderson and Narus 1990). Similarly, perceptions of service quality are determined by credibility, which is composed of trustworthiness, honesty, and believability, according to Parasuraman, Zeithaml, and Berry (1985). Moorman, et al. (1992) also cite Anderson and Weitz (1990) and Mohr and Nevin (1990) for the proposition that trust is a determinant of communication between exchange partners.

4.2 Types and Processes of Building Trust

Although some marketing research has found that trust in an organization is different from trust in an individual (Kennedy, Ferrell, and LeClair 2001; Anderson and Narus 1990), there sometimes has been more focus on different definitions of trust (e.g. Moorman, Deshpande, and Zaltman 1993 vs. Morgan and Hunt 1994) within the traditional contexts than on defining different types of trust. However, the proliferation of different definitions does not negate that there are different categories of trust, and one notable addition to the definition-based research is the work of Doney and Cannon (1997), who identify five processes in trust development in business relationships that arguably could, under the rationale of Zucker (1986), be considered as five different types of trust.[3] The five processes identified by Doney and Cannon (1997) are the calculation, prediction, capability, intentionality, and transference processes. Each process is based on different methods of building trust between parties in an exchange. The authors examined relationships and trust between industrial buyers and their suppliers and salespeople in arriving at these distinctions.

The calculative process takes place when one party in an exchange calculates the relative costs and benefits to the other party of choosing to cheat or to stay in the relationship. In the prediction process, trust is developed based on one party's ability to accurately forecast the behavior of another party. On the other hand, the capability process focuses on making a determination of the other party's ability to meet relevant obligations. In the intentionality process, the words and deeds of the target of trust in the exchange are interpreted by the trustor to determine the target's intentions. Finally, in a transference process, the third-party assessment (or definition) of the target's trustworthiness is transferred by the trustor to the target of trust in the exchange.

Marketing research has shown that trust can act as a governance mechanism (Heide 1994), but there is also an alternative relationship between governance mechanisms and trust—which has not been explored in the marketing literature—whereby intermediary governance mechanisms can create and increase trust. In this instance the existence of an intermediary governance mechanism and a specific regulatory structure can increase trust for the recalcitrant consumer (Zucker 1986) in the online exchange process and possibly in the online merchant as well (Doney and Cannon 1997). Although this may seem to present a tautology at first glance, there are some critical differences that predicate against that position. Doney and Cannon (1997) note that trust can be developed through intermediaries (this may prove particularly important for web-based commerce: Sarkar, Butler, and Steinfield 1995) by use of a transference process. Trust then can be gained through an extension pattern that uses a "third party's definition of another as a basis for defining that other as trustworthy" (Straub and Priest 1976, p. 399). Although it is rarely explicated in this manner, this is part of the theoretical underpinning of web-based "seal-of-approval" programs such as TRUSTe (http://www.truste.org; FTC Report on Online Privacy 1999; Cheskin Research 1999).

Similarly, Ganesan (1994) refers to two dimensions of trust: benevolence and credibility. Benevolence focuses on the exchange partner's intentions and motives. Rather than attribute specific behaviors to the partner, the dimension of benevolence includes attributes in the form of intentions, characteristics, and qualities (Ganesan 1994; Rempel, Holmes, and Zanna 1985). The other type of trust the author refers to, credibility, is based on an objective assessment of the exchange partner's reliability and expertise: "This dimension encompasses the consistency, stability, and control of the pattern of behavior exhibited (Ganesan 1994, p.3). Even though Ganesan (1994) acknowledges two types of trust mechanisms, benevolence, and credibility in his examination of buyer-seller relationships, he stays within Moorman, Zaltman, and Deshpande's (1992, p. 82) basic definition of *trust* as "a willingness to rely on an exchange partner in whom one has confidence." The distinction is that Ganesan recognizes the existence of two types of trust mechanisms that can exist within the framework of this definition.

It is also quite logical to incorporate both categories of trust mechanisms into a definition of trust. Doney and Cannon (1997, p. 36) define trust as "the perceived credibility and benevolence of a target of trust," citing Ganesan (1994) and Kumar, Scheer, and Steenkamp (1995). However, Doney and Cannon (1997) and Ganesan (1994) do not define benevolence in quite the same manner. Doney and Cannon (1997, p. 36) treat benevolence as "the extent to which one partner is genuinely interested in the other partner's welfare and motivated to seek joint gain." Ganesan's (1994) approach is broader, and his conceptualization of benevolence addresses the exchange partner's intentions and motives. In a typical business-to-consumer exchange, the consumer may not believe that the merchant is "genuinely interested in [his] welfare" except as a return customer. However, even though business-to-consumer relationships may operate differently, the consumer still may attribute to the businesses characteristics, qualities, and intentions (Ganesan 1994; Rempel, Holmes, and Zanna 1985) that more generally address whether or not actions taken by the business are benevolent toward the consumer.

A slightly different approach is taken by Jarvenpaa and Tractinsky (1999, p.2), who define *trust* in an online merchant-consumer context as "a belief or expectation that the word or promise by the merchant can be relied upon and the seller will not take advantage of the consumer's vulnerability" (see also Geyskens, Steenkamp, Scheer and Kumar 1996). This definition has much in common with Moorman, Zaltman, and Deshpande's (1992 p. 82) conceptualization of trust as "a willingness to rely on an exchange partner in whom one has confidence." It also reflects a rare definition of trust in a business-to-consumer context and provides an excellent analogy to the online exchange process. Therefore, in this dissertation, *trust* is defined as a consumer's expectation or belief that the online exchange process can be relied upon and that advantage will not be taken of the consumer's vulnerabilities. The nature of online exchanges presents difficulties for consumers who lack confidence in the process because there is very little for them to observe in the way of signals or cues. In this context, the consumer may look for signals that the exchange process can be trusted. The next section explores the use of trust-building mechanisms that may fulfill this role.

4.3 A Different Approach: Institution-Based Trust and the Development of Business-to-Consumer Trust on the Internet and WWW

In many ways the Internet and WWW present a very different way of making transactions when compared to traditional business-to-consumer exchanges. The vast size and scope of the online world can put the potential consumer in touch with millions of different merchants almost instantaneously. Information and products of almost every conceivable type and price are available to the web shopper. However, the consumer may have little or no information about an online merchant in terms of its identity, physical location, or even business legitimacy. Even more daunting is the online exchange process in which consumers must be concerned about the privacy and security of information they transmit and the identity of all of the parties that may participate in the exchange. In one celebrated WWW scam, surfers were enticed to a site promising "Free XXX Images." In fact, they were able to receive some free and presumably "XXX" images, but they also received some software that was surreptitiously downloaded to their computers. This software, without the consumer's knowledge and with no perceptible change in the computer's operation, disconnected the user from his or her Internet Service Provider

(ISP) and reconnected to … the Republic of Moldavia, located in the former Soviet Union. While I am not suggesting that this is a scam that would ensnare the average WWW consumer, it does cast the vast information, entertainment, and shopping milieu that is the WWW in a slightly different light. Consumers in the online world will have to be careful whom they trust, as in any business exchange, but they may not have access to the normal cues and signals that would alert them to potential problems in the unwired world. Alternatively, it may take time and practice, and possibly failures, to learn how properly to interpret the cues and signals that are available. Consumers may be hard pressed to depend on the benevolence of online merchants, even those whom they might trust in an offline environment. Naisbett and Aburdene (1980) described a similar situation as "drowning in information and starved for knowledge."

The chimerical nature of exchange on the Internet and WWW may cause consumers to look for signals that indicate whom they can and cannot trust. More specifically, they may look for a means of assuring themselves that they can safely trust in the online exchange process before they enter into an exchange. For example, just because a consumer trusts L. L. Bean doesn't necessarily mean he will trust L. L. Bean Online if he has reservations about the online exchange system (Cheskin Research 1999). One possible mechanism to alleviate this concern is found in the concept of institution-based trust (Zucker 1986) which focuses on trust tied to formal societal structures.

In a manner not unlike those of Doney and Cannon (1997) and Ganesan (1994), Zucker (1986) posits three types of mechanisms capable of producing trust in an exchange. Trust that is based on past exchange or expected future exchange is known as process-based trust. Examples would include reputation or gift exchange (Zucker 1986). Character-based trust is specific to the person or group, focusing on defining characteristics like ethnicity or family background. The final form of trust-production discussed by Zucker (1986) is the most salient to this dissertation and to the concept of regulatory structures as signals of trust. Institution-based trust exists when (Zucker 1986, p. 53) "trust is tied to formal societal structures, depending [either] on firm-specific attributes (e.g., certification as an accountant) or an intermediary mechanism (e.g., use of escrow accounts)." By this dichotomy Zucker (1986) explicitly recognizes two sub-types of institutional trust production: person- or firm-specific and intermediary mechanisms.

Trust as conceptualized by Zucker (1986) has two major components. The first component is that of background expectations (Schutz 1967), which are understandings of generalized events that are basically taken for granted as normal occurrences, or what is referred to as part of a “world known in common” (Schutz 1967; Zucker 1986). Background expectations are characterized by a regularized set of coding rules and signals commonly held by the community (Zucker 1986) within a common interpretive frame known as reciprocity of perspectives.

The second component of trust as conceptualized by Zucker (1986) includes a context of situation-defining rules, known as constitutive expectations (Garfinkel 1963). Constitutive expectations are characterized by independence (from self-interest) whereby alternative actions take place regardless of individual self-interest (Zucker 1986). Intersubjective memory is present when each organization or individual knows the level of expectations regardless of whether or not content may vary by individual attribute, social position, or other similar characteristics (Zucker 1986; Garfinkel 1963). While constitutive expectations are specific to particular sectors (Zucker 1986), background expectations are general frameworks for behavior and are not situation specific.

Taking a sociological and economic approach that she has pursued with Darby (Zucker, Darby, and Lu 1995), among others, Zucker argues that different societal and economic situations require different modes of trust production and types of trust. Further, she points to her analysis of economic trends and other historical data across an eighty-year (1840-1920) period of U. S. history as support for her theories on trust and trust production. As will be seen below, the conditions that now exist in the developing years of online commerce are very much analogous to the conditions that Zucker (1986) cites as necessitating the implementation of institution-based trust production.

Process-based trust, which is trust dependent on past (e.g., reputation) or expected future (e.g., gift-giving) exchanges, is typically used in sociological and anthropological research wherein small social systems allow a uniformity of expectations regarding what constitutes a fair exchange (Zucker 1986; Levi-Strauss 1969). This becomes more difficult as social systems become more complex and the original uniformity of expectations no longer applies. Either business must be restricted to known individuals or organizations or else formalized mechanisms such as reputation or brand name should be used as a way to interactively maintain trust in subsequent transactions (Zucker 1986; Darby and Lott 1984). Since direct measures of this type of trust would be exorbitantly expensive (Zucker 1986), producers and consumers rely on signals such as brand name. As social complexity and distance increase, process-based trust becomes increasingly difficult to sustain (Zucker 1986).

Characteristic-based trust focuses on individual commonalties and may be relatively general (e.g., sex, nationality, or ethnicity) or specific (e.g., kinship, clan membership). Early organizations in exchange systems developed largely along “family” lines, with ethnic background or relation determining position (Udy 1962). In this situation, “sameness,” or shared background, was used as the basis for this type of society-produced trust. However, this type of trust is difficult to transfer, which makes it difficult to use in complex economies (Zucker 1986).

Institution-based trust differs from characteristic- and process-based trust in that it (Zucker 1986, p. 63) “generalizes beyond a given transaction and beyond specific sets of exchange partners.” It must function in an individual situation as well as being able to function in the same way across a variety of different situations without significant modifications (Zucker 1986). This situation constraint exists for a regulation that must be able to be applied to a specific individual situation as well as being applicable across a broad range of similar situations.

In the case of person- or firm-specific institution-based trust, specific expectations, based on some subculture membership, are expected to hold. These expectations may be based on prior well-developed patterns of socialization (Zucker 1986). Constitutive expectations focus on detailed roles specified by the respective social systems and include recognizable roles such as doctor or attorney. In this situation the signal of trustworthiness may be cued by professional certification (Bledstein 1976; Zucker 1986) or organization membership (Tolbert and Zucker 1983).

While both types of institution-based trust (and sometimes process-based trust) have clear implications for understanding consumer participation in the online exchange environment, I will place more emphasis on intermediary mechanisms. The concept of intermediary mechanisms (such as the example of different types of governance mechanisms from the previous chapter) rests on a concern that is likely to be important to many consumers and businesses. The concern is that a failure in the transaction process will occur (Zucker 1986), with or without either party's necessarily being at fault, that will prevent consummation of the transaction. Since this is a legitimate concern of either (or both) of the parties, introducing a mechanism to govern the terms of the exchange relationship is a signal of responsibility that should increase trust (Zucker 1986). In this same way, a regulatory structure may introduce reduction of risk and predictability of results into the exchange process, thereby increasing trust in the process and possibly between the parties (Zucker 1986; Doney and Cannon 1997). Zucker (1986, p. 64) finds that "willingness to use an escrow company to hold and disburse funds for an addition to a home is not a sign of distrust, but rather produces trust among the parties to the exchange. It simply protects the interests of all parties to the exchange." It shows that the parties (particularly in the case of businesses) are acting reasonably and responsibly in their conduct toward others in the exchange (Zucker 1986). That is, each party is doing everything possible to make sure the exchange is consummated satisfactorily by acting in a responsible manner toward their exchange partners.

The existence of governance mechanisms and particular regulatory structures should create what Zucker (1986) describes as institution-based trust in the online exchange process as a whole, provided both the regulator and regulation are seen as sufficiently effective by consumers. Some or all of the increased trust in the exchange system would also inure to the merchant (Doney and Cannon 1997) through the process of transference. However, it is important to note that the initial object of trust is different in several ways from that of the typical relationship described in the marketing literature.

One of the key characteristics of institution-based trust, and one of the reasons that it figures into business-to-consumer transactions, is that it is based on a consistent policy of facilitating successful exchanges (Zucker 1986; Gefen 1997). As noted above, the mechanism should allow the exchange to occur even in circumstances in which it might otherwise not have been complete, either due to issues between the exchange partners or due to a situation beyond their control (Gefen 1997). According to Gefen (1997), the tendency of modern heterogeneous societies and economies to require more transactions at greater risk and across greater distances is driving the expansion of institution-based trust. It also encourages the creation of intermediary parties and mechanisms (Froomkin 1996), such as insurance, certification, certification agents, and regulation (Zucker 1986), which then generate institution-based trust (Gefen 1997).

Although neither Gefen (1997) nor Zucker (1986), on whom he heavily relies, provide any direct empirical proof for this argument, Gefen does cite indirect evidence in the form of two studies in marketing and information systems research that supported the concept of institution-based trust. In marketing, Schurr and Ozanne (1985) found that guaranties functioned as antecedents of trust. In information systems research, Rada (1996) found more trust in software suppliers that conformed to established standards in that industry. Additionally, Zucker (1996) based her conclusions on institution-based trust on a sociological and economic analysis of historical data collected on economic trends during the period of rapid industrialization in the United States from 1840 to 1920. Zucker argues that process- and characteristic-based trust were disrupted by the U.S.'s rapid growth and industrialization. It is important to note that this was a period during which the industry, population (both from birth and immigration), ethnic diversity, and geographic size of the United States dramatically expanded. Immigration and ethnic diversity disrupted patterns of characteristic-based trust that depended on family and ethnic identification. This, along with the need to do business with increasingly varied and geographically remote exchange partners, also served to disrupt process-based trust. What had been formerly a "world known in common" was now an unfamiliar and rapidly changing environment. Exchanges reliant on process- and characteristic-based trust that were perfectly workable in geographically close and culturally and ethnically familiar environments became increasingly difficult to sustain in a period of rapid social and economic change. Markets that once had been local became national, and, during this period, the national character and composition of the United States quite literally changed forever.

A key issue was the need to make exchanges across traditional group boundaries in the context of firms, occupational groups, and industries. The need to make these types of exchanges set the stage for the growth of institution-based trust to take the place of process- and characteristic-based trust mechanisms that traditionally had regulated exchanges in what was an essentially homogeneous society (Zucker 1986). Zucker notes that (1986, p. 88) "fundamentally, then, the production of trust across 'long' social distances (e.g., between rather than within diverse occupational groups and industrial groups) and across long geographic distances provided the necessary conditions for the emergence of institutionally formal mechanisms of trust production." Structures and events that were influential during this period were the development of financial intermediaries in the service economy, government, professional credentialing, regulation, and the creation of rational bureaucratic organizations (Zucker 1986).

A similar transition is taking place now in the "Wild West" of the Internet and WWW. What historically has been a self-policed world consisting of a relatively homogeneous culture with socially enforced rules and norms (Richards 1997) is rapidly becoming a global economic structure subject to high rates of immigration, rapid expansion, rapidly appearing (and often disappearing) businesses, and uncertainty regarding many of the basic rules of conduct that form the "world known in common" (Zucker 1986). The same conditions that created the potential for institution-based trust in the rapidly industrializing United States now exist on the Internet and the WWW, and Netizens are faced with many of the same difficulties in identifying and trusting exchange partners. This has led to the call for "trusted third parties" (Froomkin 1996) to facilitate e-commerce. As noted earlier, many consumers have reservations about transmitting their personal information over the Internet and WWW, and the position taken here is that one reason may be the lack of institution-based trust mechanisms to act as signals to consumers in a turbulent environment (Achrol 1991). There is some evidence that signals such as "seal-of-approval" programs of private regulation may act to increase consumer trust (Cheskin 1999), but studies to this point are either inconclusive(Gefen 1997), methodologically flawed (Cheskin Research 1999), or not based on empirical data (Zucker 1986). In order to build a conceptual model and testable hypotheses that will help to answer the questions of whether governance mechanisms and regulatory structures can act as signals and trust-producing mechanisms, it first will be necessary to conceptualize what comprise the antecedents of trust in this particular circumstance and under the constraints outlined above.

4.4 Antecedents of Trust in an Online Exchange Environment

Hardy and Magrath (1989) note that trust may vary with tasks, persons, and situations, and it is reasonable to believe that the requisites of trust may be context specific (Smith and Barclay 1997). In examining the willingness of consumers to trust an Internet store, Jarvenpaa and Tractinsky (1999) analyzed several possible antecedents and background variables that might influence trust in the online context. Although several of these variables are not appropriate to the current context and still others did not prove out empirically, attitudes toward computers and direct shopping experience were variables that fit the context of trust in an online exchange process (as differentiated from trust in a specific merchant). As such, these two are proposed as antecedents that must be measured as covariates in order to partial out their effects on trust within the model. WWW Shopping Experience, also suggested by the work of Jarvenpaa and Tracktinsky (1999), was also incorporated into the mode as an additional experience covariate.

Conclusion

New conceptualizations of trust in business-to-consumer relationships allow the examination of how governance mechanisms may influence consumer trust in the online exchange process, particularly where they are dependent on the use of signals to indicate predictability of results and reduction of risk. This chapter sets up the final link in the literature review necessary to develop the conceptual model and set the stage for the creation of hypotheses and development of measurement techniques.

CHAPTER 5: BUILDING THE CONCEPTUAL MODEL

The first section of this chapter delineates the constructs used in the conceptual model, which appears at the beginning of section 5.2. It is followed by a description of the hypothesized relationships between the model constructs, the individual hypotheses, and their supporting rationales. A methodology for analyzing these hypotheses and the results of that analysis are detailed in Chapter 6.

5.1 Definitions of the Model Constructs

5.1a Sources of Regulation

As noted previously, there are three basic types of governance mechanisms (or regulators) that can be sources of regulatory structures: governmental, quasi-governmental, and private governance mechanisms. Governmental regulations are those imposed by a regulatory entity fully controlled by some governmental unit. Governmental regulations can be in the form of administrative rules, directives (Pierce and Gellhorn 1999), or laws enacted by a legislative body. As an example, administrative banking regulations issued by the Office of the Comptroller of the Currency (OCC) are governmental regulations. Private entities that have been given governmental responsibilities and are acting in an administrative or enforcement role are considered quasi-governmental regulators (Boddewyn 1989; Gupta and Lad 1983). The creation of ICANN (the Internet Corporation for Assigned Names and Numbers) to administer and enforce global domain-name practices on the Internet and WWW is an example of a quasi-governmental entity. Frequently, such quasi-governmental entities many be overseen by a more traditional governmental unit acting in a "meta-regulatory" capacity (Gupta and Lad 1983).

In the case of private regulation (Boddewyn 1989), individual companies, groups of companies, or entire industries enforce predetermined standards on the regulated membership. Organizations such as TRUSTe, the Direct Marketing Association (DMA), and Underwriter's Laboratories (source of the familiar "UL" symbol) operate in the capacity of private regulators.

5.1b Types of Regulations

The *type of regulation* is defined as the regulatory structure put in place by a governance mechanism with the goal of providing information and/or inhibiting or enhancing the likelihood of some type of behavior by businesses. Although there is a wide variety of regulatory structures (see generally, Maier, Garman, and Keiser 1998) that governance mechanisms can apply in business-to-consumer interactions, limitations imposed by experimental design and parsimony predicate against considering a large number of alternatives. Accordingly, the three types of regulatory structures examined here are certification/auditing, disclosure, and registration. Registration is a regulatory structure of the type practiced and enforced privately by TRUSTe, whereby organizations that follow prescribed regulatory practices are registered with the governing body that oversees adherence to the regulatory dictates, usually as a precondition for membership and use of the organization's "online seal." Certification takes place when business practices are actively audited and certified by a third party, such as WebCPA or Price-Waterhouse. In this conceptualization, a grievance mechanism will be part of the certification membership agreement, providing consumers with more of a direct remedy in the event of a failed transaction. Organizations utilizing both registration and auditing frequently rely on the use of symbols, also known as "online seals," to communicate their involvement to consumers (see Appendix 1 for a listing of online symbols delineating privacy or security). Disclosure takes place when the business is required to fully disclose its privacy practices as the FTC has done in implementing the COPPA (the Children's Online Privacy Protection Act, 16 C.F.R. § 312), legislation designed to protect the online privacy of minors.

Each of these types of regulations provides a different level of protection for the consumer. In the case of disclosure, protection for the consumer is largely based on the concept of giving the consumer the information necessary to make an informed choice. Registration provides a slightly higher level of protection because regulatory structures are prescribed by the governance mechanism that oversees adherence on the part of member organizations. More protection is provided by certification, where the practices of member organizations are actively audited by the governance mechanism and an arbitration mechanism is available for consumers. The arbitration mechanism represents a more direct remedy for consumers than simply complaining to the governing body.

5.1c Consumer's Attitude Toward External Controls

The construct representing a consumer's attitude toward external controls, such as those exercised through various governance mechanisms and regulatory structures, moderates the relationships between both type and source of regulation and regulatory effectiveness. This construct addresses the consumer's attitudes toward "small governments that allow individuals a maximum of social and economic freedoms with, however, greater risks of hardship and failure, versus … ... Preferences for strong central governments that restrict individual freedoms while attempting to provide security [and economic prosperity]" (Mehrabian 1996, p. 472).

5.1d Perceived Regulatory Effectiveness

The term *regulatory effectiveness* is used in this paper to indicate the consumer's global evaluation of the ability of a particular regulatory structure to reduce risk and increase the predictability of results in the online exchange process. One way to think of this construct from the consumer's perspective is to ask the question, "How well does this regulatory structure protect my interests?" Alternatively, it can also be viewed as the perceived ability of an organizational form (Bigley and Pearce 1998) to protect the consumer's interests. This definition assumes that regulatory effectiveness has two dimensions: regulatory strength and regulator credibility. Regulatory strength is the degree to which a regulatory structure is perceived as providing remedies or assurances to consumers. This is very similar to Shimp and Bearden's (1982, p. 39) construct of *warranty quality*, defined as "the perceived adequacy of coverage and protection."

The other dimension, regulator credibility, addresses the degree to which a consumer believes that a given regulator is able and likely to enforce some regulatory structure (see Shimp and Bearden 1982; and Craig and McCann 1978 for similar reasoning and constructs). In this context, effectiveness is the consumer's global assessment of whether a given regulatory structure provides adequate protection and whether the regulator is able or likely to enforce it. This is why the consumer's attitude toward external controls is expected to moderate the relationship between regulatory effectiveness and the type and source of regulation. Consumers holding positive attitudes toward external controls are expected to favor governmental sources of regulation and more expansive regulatory structures (e.g., Certification), while those with negative attitudes are expected to favor private sources of regulation and more limited types of regulatory structures (e.g., Disclosure).

5.1e Trust in the Online Exchange Process

Trust in the Online Exchange Process is defined in this dissertation as the consumer's (customer's) expectation or belief that the online exchange process can be relied upon and that advantage will not be taken of the consumer's vulnerabilities with respect to the privacy of personal information. This definition is derived from Jarvenpaa and Tractinsky's (1999, p. 12) definition of *trust* as "an expectation or belief that the word or promise of the merchant can be relied upon and the seller will not take advantage of the consumer's vulnerability" (citing Geyskins, Steenkamp, Scheer, and Kumar 1996). This definition is similar in many ways to Moorman, Zaltman, and Deshpande's (1992, p. 315) widely followed conceptualization of trust as "a willingness to rely on an exchange partner in whom one has confidence." The operative definition works well in the online context, in which many consumers have expressed trepidation about entering into Internet and WWW exchange relationships. It also has the advantage of being derived from a definition of trust tested in an online context and having published items available that could be adopted for use in this dissertation. However, these same factors also make it important to clarify what is meant by trust in the online exchange process.

In addition to being multidimensional (Lewicki, McAllister, and Bies 1998; Ganesan 1994) and multi-leveled (Couch and Jones 1997), different types of trust may exist within the same transaction environment. In the same way that trust in a salesperson is not the same as trust in the salesperson's company (Kennedy, Ferrell, and LeClair 2000), trust in an online merchant is not the same thing as trust in the online exchange process (see Fink 2000; Jian, Bisantz, and Drury 2000; Urban, Sultan, and Qualls 2000). A simple example is found in a long-time L.L. Bean customer who refuses to shop at L.L Bean Online. Their distrust is not centered on the company (L.L. Bean) that they have long been doing business with, but rather with the exchange process being conducted online. Researchers examining the interactions between individuals and automated systems also encountered similar issues (Jian, Bisantz, and Drury 2000; Muir and Moray 1996). The intangible nature of WWW commerce reflects challenges of global reach, speed, and quality that have affected many of the "psychological contracts connecting individuals with organizations" (Lewecki, McAllister, and Bies 1998). This has created an environment in which institution-based trust mechanisms (Zucker 1986) such as regulatory structures can increase consumer trust in the online exchange process.

5.2 The Conceptual Model: Hypotheses and Supporting Rationales.

5.2a Introduction

Consumers frequently rely on extrinsic cues to help them make inferences about many types of goods and services when intrinsic cues may be difficult to ascertain (Shimp and Bearden 1982). If a good or service has predominately search or credence attributes (Darby and Karni 1973), consumers may be particularly dependent on the use of such cues, which are more properly known as signals (Spence 1973; Boulding and Kirmani 1993). Additionally, consumers often use signals as information heuristics because they have "neither infinite time horizons nor the incentive to perform thorough competitive studies prior to purchase" (Dawar and Parker 1995, p. 83). Consumers have been found to use a variety of signals as indicators of product and service quality, including brand names (Ross 1988), advertising (Ippolitto 1990), price (Milgrom and Roberts 1986), manufacturer reputation (Cooper and Ross 1985), and warranties (Bearden and Shimp 1982; Shimp and Bearden 1982; White and Truly 1989).

The online exchange process presents consumers with relatively ethereal situations in which they may have minimal access to intrinsic product or service cues. This is particularly true for services such as online privacy protection characterized primarily by credence or experience attributes. In these scenarios consumers are likely to rely on various signals to indicate qualities such as reduced risk and increased predictability of results. Private governance mechanisms and regulatory structures (Boddewyn 1989; Gupta and Lad 1983), such as warranties, have been found to act as signals of quality (Bearden and Shimp 1982; Shimp and Bearden 1982; Kelley 1988) and reliability (Weiner 1985) for consumers.

Research on warranties also has found that consumers frequently view the existence of warranties as a signal for reduced risk of both product and financial failure (Shimp and Bearden 1982). Regulatory structures promulgated by governmental, quasi-governmental, or private mechanisms would perform essentially the same function in terms of risk reduction to "assure consumers that redress is possible" (Bearden and Shimp 1982, p. 230). Regulatory structures also could perform a different function by assuring consumers of predictability of results. For example, this could be accomplished by establishing uniform rules to govern transactions between businesses and consumers in the online exchange process. The existence of regulatory structures should act as institution-based structures (Bigley and Pearce 1998; Zucker 1986) that help to increase consumer trust in the online exchange process by signaling the qualities of reduced risk and predictability of results. The existence of regulatory structures should provide a reassurance for online customers of the same sort that banks have relied on for years by advertising that "all deposits are FDIC insured." In this sense, regulatory structures would serve the same trust-building function that benevolence has served in business-to-business transactions (Ganesan 1994; Doney and Cannon 1997).

5.2b Effects of Type of Regulation on Regulatory Effectiveness

Because institution-based structures may act as trust-building mechanisms (Gefen 1997; Zucker 1986), the type of regulation in force may influence consumer perceptions of regulatory effectiveness. Essentially, regulations act as intermediary mechanisms (Zucker 1986) and as the structure (hence, type—Bigley and Pearce 1998) of the mechanism that will affect consumer perceptions.

Regulatory effectiveness is important in this process, and the role of the regulation as intermediary serves to reassure the consumer that an exchange will be consummated as promised (Zucker 1986; Gefen 1997). The regulation acts to protect consumers from risk perceived in the exchange process and acts as a counter to the aversion to this risk (Simonson and Tversky 1992). On this basis, consumers will assess the effectiveness of a regulation in terms of the protection it provides them either in terms of completing the exchange or in providing redress in the event of an incomplete exchange. Since consumers often seem to feel that "losses loom larger than gains" (Tversky and Kahneman 1991; see more generally Tversky and Kahneman 1973; 1974; Thaler 1985), it is expected that they would perceive regulations that provided a remedy to be more effective than regulations that merely provided disclosures of information about a merchant's business practices or legal/contractual obligations.

By way of example, if the unregulated state represents the status quo ante, the various regulatory statuses then would be defined in terms of the non-regulated state (Simonson and Tversky 1992). A regulation that provided a direct remedy to the consumer in the event of failure to consummate an exchange should be perceived as having a greater ability to reduce risk of loss than a corresponding information-disclosure regulation. The risk of loss would be perceived as being greater with the informational regulation because it does not provide a remedy for the consumer but, rather, provides information that potentially would allow a consumer to make a more informed decision. However, once a decision was made, the consumer would be without any direct remedy should the exchange fail. In terms of regulatory effectiveness, information disclosure regulations might provide informational remedies that would reassure consumers that they had sufficient information to make a decision but not a direct remedy in the event that something happened to disrupt the exchange process. However, the remedy offered under a certification regime would offer more potential for direct remedies to consumers. Therefore, both the context (Payne, Bettman, and Johnson 1992), in the form of regulatory structures, and avoidance of potential loss (Simonson and Tversky 1992; Tversky and Kahneman 1991) would influence the consumer's perception of regulatory effectiveness.

Similarly, consumers are also likely to expect that, if businesses share their own attitudes toward losses, that regulations providing greater sanctions for violating an exchange agreement will affect those businesses the same way they would affect the consumers. Basically if consumers assume that "losses loom larger than gains" (Tversky and Kahneman 1991) for businesses, they would then expect that businesses would have decreased incentives to try and make illicit gains in situations where a regulation provides for greater penalties for the illicit behavior. If the company has a chance to make illicit gains by violating Regulation A or Regulation B, but B has greater penalties than A, the losses from violating B would appear to the consumer to provide the greater disincentive to the business. This is so even though the actual gains might be equal or even greater for the business violating Regulation B net after penalties. Thus we might expect that:

H1: The consumer's perception of Regulatory Effectiveness is affected by the

Type of Regulation, whereby Certification will be perceived as the strongest Type of Regulation and Disclosure as the least effective, with Registration falling in between.

<u>5.2c The Effects of the Source of Regulation on Regulatory Effectiveness</u>

As noted earlier, three main types of governance mechanisms—governmental, quasi-governmental, and private—promulgate regulatory enforcement structures. It is expected that the source of the regulatory structure will influence the consumer's perception of regulatory effectiveness.

Both dimensions of regulatory effectiveness—regulator credibility and regulatory strength—are implicated because private and quasi-governmental mechanisms are often seen as having a pecuniary interest in the subject matter of the regulation (Gupta and Lad 1983; Boddewyn 1989). For example, in this situation, a quasi-governmental entity that is enforcing a regulation promulgated by a governmental entity might be seen as more credible in determining the overall effectiveness of that regulation than a quasi-governmental entity that is enforcing a privately or quasi-governmentally promulgated regulation. In addition, it has been argued that consumers distrust government (ACSI 1999) although a recent American Customer Service Index (ACSI) study found levels of satisfaction with governmental agencies on par with those of their private counterparts. Regulatory agencies (OSHA, FAA) ranked slightly lower on the index, but the ACSI sample included parties whose activities were regulated directly by these agencies (1999). In this situation, regulations will be perceived as more effective when the source of regulation does not have a direct pecuniary (business or financial) interest in the enforcement or subject of the regulation. These regulatory agencies are likely to represent the type of "rational bureaucratic structure" to consumers that Zucker (1986) proposed would serve as institution-based trust production mechanisms.

The known coercive power of governmental mechanisms and their familiar regulatory role in business and society is also likely to affect the consumer's perception of the effectiveness of regulations promulgated by governmental entities relative to other governance mechanisms. They are more a part of the "world known in common" (Zucker 1986) in a regulatory sense, and consumers may look at these mechanisms as producing a more traditional and stronger (West 1997) regulatory structure. Thus, the degree to which a regulatory entity is seen as able and/or likely to provide remedies or assurances to a consumer is also expected to increase the overall perception of regulatory effectiveness. This is analogous to the idea of warranty coverage (Shimp and Bearden 1982; White and Truly 1989) in the signaling literature associated with a trusted brand. A regulator that consumers perceive to be very powerful in terms of protecting their interests would be expected to increase their perception of regulatory effectiveness in the same manner as that found for warranty coverage and perceived risk (White and Truly 1989). Thus:

H2: Governmental Regulators will be perceived as the most effective regulators, and Private Regulators will be seen as the least effective, with Quasi-Governmental Regulators falling in between.

5.2d The Effects of Regulatory Effectiveness on Trust in the Online Exchange Process

The definition of *trust* followed in this dissertation derives from Jarvenpaa and Tractinsky (1999) and Geyskens, Steenkamp, Scheer, and Kumar (1996). Jarvenpaa and Tracktinsky (1999, p.2) developed their definition of trust in an Internet store from their conceptualization of *trust* (Geyskens, et al. (1996) as "a belief or expectation that the word or promise by the merchant can be relied upon and the sellers will not take advantage of the consumer's vulnerabilities." Jarvenpaa and Tractinsky's final definition of trust (in an online store), "a consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller," is clearly context specific but otherwise very similar to that used by Geyskens, et al. (1996). The role of an effective regulatory structure is to provide the consumer with a basis for trusting in the online exchange process.

Doney and Cannon (1997, p. 36), in their definition of trust as "the perceived credibility and benevolence of a target of trust," present one way of looking at this problem. Although the concept of benevolence as "the extent to which one [exchange] partner is genuinely interested in the other partner's welfare and motivated to seek joint gains" (Doney and Cannon 1997, p. 36) is not directly relevant to the discussion of trust in an online exchange environment, the role of credibility is far more applicable. In the present context, credibility is an expectancy that the online exchange process can be relied upon (Doney and Cannon 1997; Linkskold 1978).

It is expected that institution-based mechanisms, such as regulations (Bigley and Pearce 1998; Gefen 1997; Zucker 1986), act to provide credibility and produce trust. In other words, regulations will act to create attributes of credibility that the online exchange process will provide promised results in the minds of consumers. The “reliance” (Doney and Cannon 1997; Linkskold 1978) on the exchange mechanism will be governed by formal bureaucratic structures (Zucker 1986) established in a regulatory framework. This is especially important in an exchange process in which consumers are deprived of many of the traditional product and service cues (Palmer, Bailey, and Faraj 2000) and are making exchanges in unfamiliar environments, often with unfamiliar partners (Bigley and Pearce 1998; Zucker 1986). The substitution of formalized structures for interactive credibility should in turn act to produce trust in the online exchange process.

In order for a regulation to function as a trust-building mechanism, the consumer must perceive it as being effective. Effectiveness is the consumer’s global evaluation of the ability of the particular regulatory structure to reduce risk and increase predictability of results in the online exchange process. How effective a consumer perceives a regulation to be can be said to depend on the answer to the question, “How well does this regulatory structure protect me?” Thus, an effective regulation is one that “protects the interests of [the] parties to the exchange” (Zucker 1986), although we are primarily concerned with the interests of the consumer (and how the consumer perceives those interests) at this juncture. Accordingly, we would expect that:

H3: The greater a consumer’s perception that a regulation is effective, the greater is the consumer’s Trust in the Online Exchange Process.

5.2e The Moderating Influences of the Consumer’s Attitudes Toward External Controls and the Signal Value of Regulation

Depending on the perspective the individual consumer takes, this attitude toward regulation will exert a moderating influence on the relationships between regulatory effectiveness and the type and source of regulation. This effect will be in the positive or negative direction of the consumer's attitudes.

In the same way that consumers have been successfully segmented with respect to their public policy orientations (Durand, Klemmack and Roff 1982), it also should be possible to segment populations in terms of their attitudes toward external controls. Historically, opinion polls have indicated that, while most Americans are opposed to increasing the regulation of business, they also are opposed to decreasing existing levels of regulation (Lipset and Schneider 1987). When questioned about regulation in the area of consumer protection, consumers generally have responded in a more positive manner and generally gave the consumer protection movement and consumer protection laws a high degree of legitimacy (Lipset and Schneider 1987). This is significant in that public opinion on regulation has varied greatly according to context, with such issues as environmental regulations receiving strong support, even in the anti-regulatory Reagan years, and public perception of small business being consistently negative (Lipset and Schneider 1987; Peterson, et al. 1984). With regard to privacy protection, research indicates that, while consumers have significant concerns about privacy protection, they are far less sure about how those concerns should be addressed (Westin 2001).

Mehrabin (1996, p. 472), in research addressing political attitudes, discusses whether consumers would prefer: "a) small governments that allow individuals a maximum of social and economic freedoms—with, however, greater risks of hardship and failure—versus b) preferences for strong central governments that provide security [etc.]." In this dissertation, several items were adapted from the scale Mehrabin (1996) developed to help assess consumer's views on the types and sources of external controls, such as regulations, and how effectively they might perform their roles.

With regard to the relationship between source of regulation and regulatory effectiveness, consumers who have positive attitudes toward external controls likely would see governmental regulators as the most "legal," and hence the most binding, arrangements because they represent the most "formalized bureaucratic structure" (Zucker 1986). Since more formalized structures would signal greater predictability of results and decreased risks to these consumers, we would expect that:

H4: Consumers with a Positive Attitude toward External Controls will perceive Governmental Regulation as the most effective and Private

Regulation as the least, with Quasi-Governmental falling in between. For consumers with a negative Attitude toward External Controls, Private Regulation will be perceived as the most effective, Governmental Regulation as the least, and Quasi-Governmental Regulation falling in between.

Similarly, with respect to the type of regulation, auditing/certification programs, warranties and guarantees have been suggested as trust-building mechanisms (Urban, Sultan, and Qualls 2000; Zucker 1986), and we would expect consumers with positive attitudes toward external controls to favor systems that offered greater protections. Greater predictability of results and decreased risk would be signaled to these consumers such that:

H5: Consumers with a Positive Attitude toward External Controls will perceive Certification as the most effective and Disclosure as the least effective Types of Regulation, with Registration falling in between. Consumers with Negative Attitudes toward External Controls will perceive Disclosure as the most effective and Certification as the least effective Types of Regulation, with Registration falling in between.

5.2f The Influence of Trust in the Online Exchange Process on the Consumer's Willingness to Purchase Online

Zucker (1996) argues that the development of institution-based trust-building mechanisms helped enable the exchange process in a turbulent environment—the rapid industrialization of the United States between 1840 and 1910. Many consumers have cited fear of the Web (Palmer, Bailey, and Faraj 2000) and more specific concerns about privacy (Culnan 1999) as reasons for not shopping online. Similarly, other researchers also have noted that developing consumer trust with respect to matters of privacy is a critical part of online marketing (Urban, Sultan, and Qualls 2000; Hoffman, Novak, and Peralta 1999). Given that regulatory structures such as contracts, authority structures, and standards have been identified as trust-building mechanisms (Borys and Jemison 1989; Palmer, Bailey, and Faraj 2000), we would expect that:

H6: The greater a consumer's Trust in the Online Exchange Process, the greater his or her Willingness to Try Online Purchasing.

5.3 Covariates

Although additional hypotheses are not offered, m review of the available literature led to the conclusion that it would be necessary to include other constructs in the model as covariates, which might otherwise be expected to influence trust in order to partial out their effects. Thus individual hypotheses will not be offered for these covariates.

Work by numerous authors (Jarvenpaa and Tractinsky 1999; Jarvenpaa, Tractinsky, and Vitale 1999; Ganesan and Hess 1997; Morgan and Hunt 1994) has shown that multiple factors can influence trust. Since the focus of this dissertation is on the effects of regulation on trust in the online exchange process, the effects of such other variables must be considered in analyzing this relationship. Accordingly, the review of the trust literature also included selecting appropriate control variables to act as covariates. Since these covariates normally would be expected to predict consumer trust, they must be included to partial out their effects. As will be discussed below, it is possible that some of the covariates may have effects on the way consumers perceive the different types and sources of regulation as well as on regulatory effectiveness.

Particularly useful in determining the appropriate covariates was the work of Jarvenpaa and Tractinsky (1999) and Jarvenpaa, Tractinsky, and Vitale (1999), which examines trust of merchants in an online context. Attitudes toward Computers and Direct Shopping Experience, the covariates included in this dissertation's model, both were factors that Jarvenpaa and Tractinsky found to influence consumer willingness to trust an online merchant. An additional factor, WWW Shopping Experience, also was addressed by Jarvenpaa and Tracktinsky (1999) and included in the model. However, although other factors, such as store size, were found by Jarvenpaa and Tracktinsky (1999) to influence, trust they did not fit into the context of trust in the online exchange process and were not included in the model.

5.3a Direct Shopping Experience

Consumers have differed in their willingness to shop by different methods, and the Internet and WWW represent a new shopping milieu. Consumers who have had previous experience with direct-shopping methods, such as the Home Shopping Network or other television shopping channels, or who have made purchases through catalogs will have had the experience of buying from a retailer who is not physically present. Jarvenpaa and Tractinsky (1999) found that consumers with previous direct shopping experience were more likely to trust an online merchant than those who did not have this type of prior experience. It is expected that prior experience with direct shopping also will make consumers more likely to trust the online exchange process if they have had positive outcomes in their prior direct shopping experiences. They might also use this experience as part of their basis for evaluating the desirability of different types and sources of regulation in the online context.

5.3b WWW Shopping Experience

Jarvenpaa and Tractinsky's (1999) research includes measures for web-shopping risk attitudes as a background variable, and they also indicated that consumers who had previous direct shopping experience were more likely to trust an online merchant. Although trust in the merchant and trust in the exchange process represent two different constructs, their research implied that individuals who had previous WWW shopping experiences (assuming them to be positive) would be more likely to trust online exchange mechanisms. Assuming a negative experience, the reverse might be expected. In either case, previous WWW shopping experience may frame the consumer's evaluation of the need for regulatory protections and the form they should take. In order to provide better experimental control, WWW shopping experience was included as a covariate.

5.3c Attitudes toward Computers

A variety of research has shown that consumers differ in their willingness to utilize new technologies (Dickerson and Gentry 1983), and it might be expected that individuals who are more comfortable using computer technologies would be more comfortable in an Internet/WWW setting. Research by Jarvenpaa and Tractinsky (1999) indicates that consumers who have more positive attitudes toward computer use are more likely to be willing to trust in a web merchant than consumers who have less positive attitudes. Accordingly, it is expected that, all other things being equal, a positive attitude toward computers is likely to promote trust in the online exchange system as well. A positive attitude toward computers also might influence the way an individual looks at different types and sources of regulation.

CHAPTER 6: METHODOLOGY AND RESEARCH DESIGN

Introduction

This chapter introduces the methods and measures to be used in this study. The primary objectives of this study are to determine whether regulatory structures can act as signals that serve to increase trust in the online exchange process, to determine which types of regulatory structures are most effective in this role, to examine the role of consumer regulatory orientation in this process, and to develop further the literature with respect to the development and study of effective regulation in governmental, quasi-governmental, and private governance mechanisms. This chapter discusses the research methodologies used to explore these objectives and the development and refinement of the measures that will be used in this process.

6.1 Choice of Research Design

An experimental design was chosen as the methodological and measurement vehicle for this study. An experimental study was chosen because it enables manipulation of trust-building mechanisms and a comparison of the effects they generate. Since evaluation of regulatory mechanisms was a primary consideration, experimental methodology was considered most appropriate (Babbie 1995) since it had been proposed in the past as an appropriate strategy for studying the impacts of policy decisions (Cook and Scioli 1973). The basic design was a 3 x 3 between-subjects experiment, which allows the properties of signals to be manipulated directly. The focus was directed toward the perception of a regulation as being either effective or not effective as well as the subsequent impact on trust in the online exchange process. The study will employ a 3 (Source of Regulation) x 3 (Type of Regulation) two-way ANOVA design. As seen in Table 6.1 below, this will result in a design of 9 cells representing each possible combination of Source of Regulation and Type of Regulation.

Table 6.1 Experimental Design: Sources and Types of Regulation

Source of Regulation

Cell 1 *Governmental* *Certification*	Cell 2 *Private* *Certification*	Cell 3 *Quasi-Governmental* *Certification*	
Cell 4 *Governmental* *Disclosure*	Cell 5 *Private* *Disclosure*	Cell 6 *Quasi-Governmental* *Disclosure*	Type of Regulation
Cell 7 *Governmental* *Registration*	Cell 8 *Private* *Registration*	Cell 9 *Quasi-Governmental* *Registration*	

Privacy protection regulation was chosen to be the subject of the regulatory manipulations because of the degree of reported interest among consumers (Hoffman, Novak, and Peralta 1999; Westin 2001) and because of the public policy interest in developing privacy protection measures that satisfy the needs of consumers (2001). In order to be able to manipulate the variables of Type of Regulation and Source of Regulation as well as to provide experimental subjects with sufficient information to adequately evaluate the different experimental conditions, a series of "Consumer Reports" type scenarios (Rao, Qu, and Ruekert 1999) was devised. In each of these scenarios, subjects were given information about a different combination of Source of Regulation and Type of Regulation. Thus each scenario describes one of the nine different cells represented in Table 6.1, above: Cell 1—Type: Certification, Source: Governmental; Cell 2 –Type: Certification, Source: Private; Cell 3 – Type: Certification, Source: Quasi-Governmental; Cell 4 – Type: Disclosure, Source: Governmental; Cell 5 – Type: Disclosure, Source: Private; Cell 6 – Type: Disclosure, Source: Quasi-Governmental; Cell 7 – Type: Registration, Source: Governmental; Cell 8 – Type: Registration, Source: Private; Cell 9 – Type: Registration, Source: Quasi-Governmental.

Thus, Source of Regulation is manipulated by providing scenarios in which each of the three possible sources is presented. Type of Regulation is manipulated in the same manner. In each case, the scenario will provide a description of the regulator, which clearly identifies whether it is a governmental, quasi-governmental, or private governance mechanism. The descriptions in the scenarios also will identify whether the regulatory structure used is disclosure, registration, or certification.

The basic model for using these types of scenarios to provide information to subjects was found in the work of Boulding and Kirmani (1993) and Rao, Qu, and Ruekert (1999). In their experimental manipulations, both groups of researchers provided subjects with written descriptions of different scenarios. Both focused on the use of signals to convey information to consumers. Boulding and Kirmani (1993) focused on the signals conveyed by different levels of warranty protection (a private regulatory structure), while Rao, Qu, and Ruekert (1999) were concerned with signals produced as a result of brand alliances. In comparing the experimental procedures in these two papers, the scenarios used by Rao, et al. (1999) were adjudged more appropriate for providing the detailed types of descriptions needed for the manipulations in experiments for this dissertation. Accordingly, the basic structure of their scenarios was used as the model for the form of the scenarios used in this study, even though the subject matter of the scenario was different in nature. A copy of one stimulus used by Rao, et al. (1999) was graciously provided by Dr. Akshay Rao and is included as Appendix 2.

Scenarios that represent each of the experimental conditions in cells 1 through 9 in Table 6.1 were distributed randomly to the subjects along with questionnaires to be answered after they had been directed to read and study the scenarios. This arrangement also follows the pattern utilized by Rao, et al. (1999), who randomly distributed multiple descriptive scenarios to subjects and utilized the same questionnaire across conditions. The traditional pen-and-pencil questionnaires are included in final format as Appendix 3. A more detailed description of the questionnaire will be provided in Section 6.6.

6.2 Source of Regulation and Type of Regulation

The variables of Source of Regulation and Type of Regulation were manipulated as part of the regulatory scenarios provided to each subject. As detailed above, there were a total of nine different scenarios, corresponding to each of the nine different combinations of governance mechanisms and regulatory structures examined. The model for the "Consumer Reports" scenarios used was the method followed by Rao, Qu, and Ruekert (1999) in their examination of signaling in the context of brand alliances. Although this presented a different context, the scenario used by these authors furnished a useful model. [[This author would like to thank Dr. Akshay Rao of the University of Minnesota for providing a copy of a sample scenario that he and his co-authors used in their work.—move to Acknowledgments?]] It is included as Appendix 2. Three of the stimuli used in the experiment are provided in the following section: Governmental Certification, Quasi-Governmental Registration, and Private Disclosure. Since these stimuli are by nature repetitive, it was decided to include only three within this chapter rather than all nine. Complete copies of all questionnaires and stimuli are included in Appendix 3.

6.2a Stimulus for Cell 1: Type: Certification, Source: Governmental

Assume that you are in the market for some new computer equipment. Because the purchase of this equipment is important to you, you are looking at a variety of sources, but you are most interested in shopping online because of the opportunity for more choices and lower prices. Protecting your personal information is important to you, and you want to feel confident in shopping online. Therefore, if you were sure that your information would be protected when you were shopping online, you would be encouraged to use this method.

WebCertificate is an organization that pledges to help protect the personal information of consumers. WebCertificate companies agree to register with WebCertificate and to be subject to certification and random auditing of their personal information-protection policies so that they are in compliance with the standards set up by that organization. They also agree to follow any other policies or standards set up by WebCertificate regarding the protection and handling of personal consumer information. They also agree to abide by WebCertificate's dispute-resolution policy, which provides remedies for consumers unhappy with a WebCertificate member's performance.

You go online to look for your computer equipment and visit the web site of a company that is displaying the WebCertificate logo, and you click on it to find out more. The web site tells you that WebCertificate is a program started by the Federal Office of Consumer Protection for businesses on the Internet and WWW. The WebCertificate program's companies are required to register with WebCertificate and to be subject to certification and random audits of their personal information-protection policies to ensure that they meet the standards developed by that organization. Further, they must comply with any other policies set up by that organization. Consumers can complain directly to the WebCertificate bureau at the Office of Consumer Protection. In addition, they can check the WebCertificate listing, which is maintained by the Office of Consumer Protection, for past consumer complaints by clicking on the WebCertificate logo for a given company. Violations of WebCertificate policies can lead to revocation of registration, the loss of the privilege of using the WebCertificate logo, and being dropped from the WebCertificate registry of companies who are fulfilling the requirements of WebCertificate standards for personal information protection as well as additional review by the government agency.

Interested in finding out more about WebCertificate, you search the Internet for more information, and you find an article on the Consumer Reports web page. Consumer Reports is a magazine that does not accept any advertisements from companies and provides ratings of quality for a large number of products and services ranging from cars to soap. The online article provides the following report on the WebCertificate system:

"Although there is not enough information available to accurately evaluate how well WebCertificate protects consumers, the fact that a governmental agency has developed and is monitoring guidelines for personal information protection should make consumers more comfortable with the idea of making purchases online. Companies want to protect their names, and if the personal information of consumers is not protected, consumers will definitely hold them to blame. The fact that consumers can check the WebCertificate web site for compliance is another factor that could lead to a loss of reputation for companies that do not comply. As a result, offline as well as online sales could suffer."

You return to the company web site and click the WebCertificate Terms and Membership icon right below the WebCertificate logo. It details the company's policies about what information they collect about consumers shopping their site and the circumstances in which it might be provided to other merchants. It also explains the registration and certification procedure the company went through as well as the security precautions used to protect a customer's personal information from unwelcome third parties. Finally, it details the dispute-resolution procedure and the remedies that are available through the WebCertificate Board.

6.2b Stimuli for Cell 5: Type: Disclosure, Source: Private

Assume that you are in the market for some new computer equipment. Because the purchase of this equipment is important to you, you are looking at a variety of sources, but you are most interested in shopping online because of the opportunity for more choices and lower prices. Protecting your personal information is important to you, and you want to feel confident in shopping online. Therefore, if you were sure that your information would be protected when you were shopping online, you would be encouraged to use this method.

WebDisclosure is an organization that pledges to help protect the personal information of consumers. Companies that are WebDisclosure members agree to disclose their policies regarding the way that they use any personal information they obtain from consumers. For example, if they regularly sell information about customers to other merchants or third parties, they must disclose this information to the customer before the customer is required to provide any information to that merchant. In addition, the merchant also must disclose what steps, if any, it takes to safeguard personal information provided by consumers when making a purchase. You go online to look for your computer equipment and visit the web site of a company that is displaying the WebDisclosure logo, and you click on it to find out more. The web site tells you that WebDisclosure was organized by leading private companies doing business on the Internet and WWW. The WebDisclosure companies all agree to disclose their policies for handling and protecting personal consumer information. Consumers can complain about problems or failure to live up to these policies directly to the WebDisclosure Board, composed of member companies. Violation of the disclosure policy can lead to loss of association with WebDisclosure and loss of the privilege of using the WebDisclosure logo.

Interested in finding out more about WebDisclosure, you search the Internet for more information, and you find an article on the Consumer Reports web page. Consumer Reports is a magazine that does not accept any advertisements from companies and provides ratings of quality for a large number of products and services ranging from cars to soap. The online article provides the following report on the WebDisclosure system:

"Although there is not enough information available to accurately evaluate how well WebDisclosure protects consumers, the fact that leading companies have organized it should make consumers more comfortable with the idea of making purchases online. These companies have prestigious brand names, and if the personal information of consumers is not protected, consumers will definitely hold the organizers to blame for the failure. As a result, offline as well as online sales might suffer."

You return to the company web site and click the disclosure policy that is highlighted under the WebDisclosure logo. It details the company's policies about what information they collect about consumers shopping their site and the circumstances in which it might be provided to other merchants. It also details the security procedures used to protect a customer's personal information from unwelcome third parties.

6.2c Stimulus for Cell 9: Type: Registration, Source: Quasi-Governmental.

Assume that you are in the market for some new computer equipment. Because the purchase of this equipment is important to you, you are looking at a variety of sources, but you are most interested in shopping online because of the opportunity for more choices and lower prices. Protecting your personal information is important to you, and you want to feel confident in shopping online. Therefore, if you were sure that your information would be protected when you were shopping online, you would be encouraged to use this method.

WebRegistry is an organization that pledges to help protect the personal information of consumers. Companies that are WebRegistry members agree to register with WebRegistry and to fully disclose and implement WebRegistry's personal information protection guidelines. They also agree to follow any other policies set by WebRegistry and to stay in compliance with any new guidelines or consumer protection rules issued by that organization. Companies must agree to abide by any rulings of the WebRegistry Board regarding consumer complaints, WebRegistry guidelines, or policies.

You go online to look for you computer equipment and visit the web site of a company that is displaying the WebRegistry logo, and you click on it to find out more. The web site tells you that WebRegistry is a private organization of businesses on the Internet and WWW organized in cooperation with government agencies. The WebRegistry companies all agree to register with WebRegistry and to fully disclose and implement the personal information protection standards produced by that organization. Further, they agree to follow other policies set by WebRegistry and to stay in compliance with any new guidelines or standards issued by that organization. Consumers can complain about problems or failure to live up to these policies directly to the WebRegistry Board, which is composed of member companies. Complaints not resolved by this group may be referred to the appropriate governmental agency. Violations of WebRegistry policies can lead to revocation of registration, the loss of the privilege of using the WebRegistry logo, and being dropped from the WebRegistry list of companies with acceptable standards for privacy information protections. Additionally, referral to government agencies may result in additional review.

Interested in finding out more about WebRegistry, you search the Internet for more information, and you find an article on the Consumer Reports web page. Consumer Reports is a magazine that does not accept any advertisements from companies and provides ratings of quality for a large number of products and services ranging from cars to soap. The online article provides the following report on the WebRegistry system:

"Although there is not enough information available to accurately evaluate how well WebRegistry protects consumers, the fact that leading companies have cooperated with the government to develop this registry should make consumers more comfortable with the idea of making purchases online. These companies have prestigious brand names and if personal information is not protected by all of the members, then consumers will undoubtedly hold all of the members to blame, which would affect everyone on the WebRegistry lists. As a result, offline as well as online sales might suffer."

You return to the company web site and click the Guidelines and Policies icon that is highlighted under the WebRegistry logo. It details the company's policies about what information they collect about consumers shopping their site and the circumstances in which it might be provided to other merchants. It also details the security procedures used to protect a customer's personal information from unwelcome third parties. Finally, it provides information on the process for resolving complaints between consumers and merchants and how to contact the WebRegistry Board in the event that an agreement cannot be reached between the parties.

6.3 Questionnaire Development

Because the focus of this experiment was the manipulation of regulatory effectiveness and its effect on trust in the online exchange process rather than scale development, items used in the questionnaires were obtained from existing scales whenever possible and modified only to the extent required by the context of the scenario (e.g., referring to online merchants rather than vendors) and to the extent necessary to make the differing scale items comparable. A slightly different questionnaire was used for each different scenario to reflect the particular regulatory structure used in the accompanying scenario. Each questionnaire contained three distinct sections: manipulation checks, Likert-scale items, and demographic items. Regulatory effectiveness items were obtained from a variety of published scales on trust (e.g., Ganesan 1994; Doney and Cannon 1997; Kumar, Scheer, and Steenkamp 1995; Ganesan and Hess 1998; and Jarvenpaa and Tractinsky 1999). For the demographics section, items were obtained from the surveys utilized in the 11th annual GVU study (1999) conducted by the Georgia Institute of Technology and also with reference to the 1999 American Customer Satisfaction Index (ACSI) studies produced through the joint efforts of the

University of Michigan Business School, the American Society for Quality, and Arthur Anderson. The ACSI measurement and analysis methodology have been widely used in both the private sector and more recently in the government sector. Scale development was directed with the intention of complying with Churchill's (1979) methodology of scale building by examining the relevant items in the available literature. This should also ensure compliance with Cook and Campbell's (1979) conceptualization of construct validity when combined with rigorous pretesting.

6.4 Sample Frame

A sample of working adults drawn from the Atlanta metro area was used as the source for the subject pool in order to obtain a sample of respondents. A total sample of approximately 300 was desired in order to achieve the "rule of thumb" dictate of 30 subjects per experimental cell and to leave sufficient additional surveys to compensate for unusable or illegible responses. Three metro area schools, two public and one private, were involved in the final data collection. The sample was drawn from volunteers supplied by local Parent-Teacher Association (PTA) groups. Each PTA group was provided with a $10 donation for each adult subject that answered the questionnaire. This technique was utilized to help ensure an attentive, motivated group of subjects. Because of the stress placed on computer-learning skills among students, this type of sample also was likely to provide individuals that were computer-aware and sensitive to issues regarding the online exchange process. Out of almost 500 questionnaires that were distributed, 270 were returned, and 241 of those were usable.

6.5 Questionnaire Composition and Item Development

Because of the additional level of complexity inherent in the development of new scales and correspondingly new items for those scales (Butler 1991; Jackson 1984), items from existing published scales were used wherever possible. Demographic items were drawn without modification from the 11th annual GVU (1999) survey on Internet usage, and the 1999 ACSI survey was also used as a reference. In many cases it was necessary to make modifications of those items in order to correspond with the subject matter of this experiment, but modifications were made only to the degree necessary. Sources of the original items are noted in each section.

6.5a Trust in the Online Exchange Process (similar to Jarvenpaa and Tractinsky 1999)

Trust is defined as a consumer's belief that the online exchange process can be relied upon and that advantage will not be taken of the consumer's vulnerabilities. This definition is derived from that utilized by Jarvenpaa and Tractinsky (1999, p.2): "an expectation of belief that the word or promise by the merchant can be relied upon and the seller will not take advantage of the consumer's vulnerability" (see also Geyskens, Steenkamp, Scheer, and Kumar 1996). In an online context, Jarvenpaa and Tractinsky (1999) examined issues related to an Internet user's trust in an online merchant. These items were taken directly from Jarvenpaa and Tractinsky's (1999) scales and modified only to the extent necessary to reflect a user's concerns about trust in the online exchange process—an area the authors explicitly declined to examine—rather than trust in the online merchant directly. Modifications to these items were very minimal.

1) Online shopping would be trustworthy in this situation.
2) I would find it necessary to be cautious in this online shopping situation.
3) I trust that this organization wants to be known as one that keeps promises and commitments.

6.5b Regulatory Effectiveness

"Regulatory effectiveness" is used in this paper as the consumer's global evaluation of the ability of a particular regulatory structure to reduce risk and increase the predictability of results. Difficulties were encountered in trying to find existing measures that addressed this construct; as a result, analogous measures were sought. Three primary and closely related sources were utilized in developing these measures: Jarvenpaa and Tractinsky (1999); Kumar, Scheer, and Steenkamp (1995); and Ganesan (1994). Six items were developed from these sources, with particular reliance on Jarvenpaa and Tractinsky (1999), addressing both the credibility and strength components of regulatory effectiveness. The items presented below were for the Private Certification scenario and hence use specific rather than generic references to the regulator.

1) WebCertificate regulation will help protect me when I am online.

2) I would depend on claims made by WebCertificate as reliable.

3) WebCertificate will be honest in dealing with consumers.

4) WebCertificate will be consistent in terms of their policies toward consumers.

5) With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants.

6) I anticipate that my interests will be protected under the WebCertificate system.

6.5c Attitudes Toward External Controls

These items were taken from Mehrabin's (1996) work on the type of governmental structures that consumers preferred. The only substantive change that was made to these items was to substitute the word "regulator" for "government" in the originals.

1) My ideal type of regulator would be small and only perform a very few essential functions.

2) Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.

3) Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas.

4) A fair society is not possible without strict and fair comprehensive government or industry controls.

6.5d Willingness to Try Online Shopping

The Willingness to Try Online Shopping items were adapted from those used by Jarvenpaa and Tractinsky (1999) and their measures for consumer willingness to trust an online merchant.

1) I would consider purchasing from a merchant that uses the WebCertificate program.

2) It is unlikely that I would make a purchase from a merchant using the WebCertificate system.

3) I would consider using the WWW to shop at an online store that uses the WebCertificate system.

6.5e Covariate Items

Because of the nature of trust in online exchanges, it was decided to include covariate items that might affect a consumer's trust in the online exchange process so that their effects could be parceled out and separated from the primary variables of interest. The two covariates that were included are attitude toward computers and direct shopping experience. These covariate items were developed primarily from Jarvenpaa and Tractinsky's (1999) study of consumer trust in online merchants; where possible, their original measures were used. These three constructs were picked as covariates because both were found (Jarvenpaa and Tractinsky 1999) to influence a consumer's willingness to trust an online merchant, a concept that is similar to a consumer's willingness to trust in the online exchange process itself. Other constructs that Jarvenpaa and Tractinsky used in their model, such as store size, were not appropriate for the context of trust in the online exchange process and, therefore, were not included in the model for this dissertation.

Attitude Toward Computers

1) Computers make work more interesting.
2) I enjoy interacting with computers.
3) Working with computers is fun.
4) I use computers for fun.

Direct Shopping Experience

1) I frequently buy products through television shopping channels.

2) I frequently watch infomercials on television.

3) I frequently buy products from printed catalogs.

WWW Shopping Experience

1) I frequently buy products online.

2) I have purchased goods or services online.

3) I have obtained information online about goods or services that I have purchased elsewhere.

6.6 Pretesting Regime and Manipulations Checks

Because of the nature of the experimental procedure and in order to ensure both face validity and construct validity (Cook and Campbell 1979), extensive pretesting was deemed to be necessary. Initial pretesting involved utilizing multiple faculty and graduate students to review the scenarios and the survey instrument for face validity. Modifications to the scenarios and/or the instrument were made as indicated by the comments of those individuals acting as reviewers. The next step in pretesting was to administer the scenarios and accompanying survey instruments to several groups of individuals. As will be seen in the pretesting results set out below, three different groups were used in pretesting. The majority of the pretesting was accomplished using MBA students at Georgia State University. GSU has the fifth ranked part-time MBA program nationally. The program is composed primarily of adults (average age 32) who possess several years of work experience and are usually employed on a full-time basis. Undergraduates at the State University of West Georgia were also used as subjects for one of the pretests, largely as a matter of convenience. These students could be described as typical for a small, state-run institution. Additional pretesting was accomplished by sacrificing subjects from the eventual pool used for the final questionnaire. After completing multiple pretesting trials with graduates and undergraduates, a decision was made to test the questionnaire in the actual environment in which it would be utilized. Based on these results, final pretesting focused on specific problem areas in order to increase performance in those areas and to assure that the questionnaires were ready for final data collection. At each step, responses were analyzed to further refine the scenarios and questionnaires to ensure that subjects understood them and to make sure that manipulations were strong enough. Comments were solicited from pretest subjects whenever possible, and this data was used as part of the refining process regarding any errors or problems they might have observed in the questionnaire.

Table 6.2 provides a brief summary of the different pretests, where they were conducted, which variables were tested, and the number (and source) of the subjects used in each successive pretest. The individual pretests and the changes made as a result of these pretests are discussed in the sections below.

Table 6.2

List of Pretests and Contents

Pretest #	Location	Variables Tested	Source	N
1	GSU	Manipulation Checks	Grads	14
2	GSU	Complete	Grads	19
3	SUWG	Complete	Undergrads	40
4	Jackson	Complete	PTA Parents	63
5	GSU	Complete	Grads	29
6	GSU	Manipulations, Covariates	Grads	25
7	GSU	Covariates	Grads	31
8	GSU	Attitudes Toward Control, Trust, Willingness to Try	Grads	22
Totals				243

6.6a: Pretest 1

Pretest 1 was conducted using 14 MBA students at Georgia State University. A first examination of the questionnaire data indicated that the subjects were having difficulty understanding the scenarios as demonstrated by their lack of success with the manipulation checks. Table 6.3 illustrates the problems the subjects were having with the scenarios as evidenced by the means and standard deviations of the correct answers on the manipulation checks. Since answers were coded either “1” (correct) or “0” (incorrect), calculating the means and standard deviations provided the most practical way for evaluating the reliability of the manipulation check items (adequate being within 2 standard deviations of the mean).

Table 6.3

Means and Standard Deviations for Pretest 1

Manipulation Check	Mean (Std. Deviation)
Type 1	.64 (.50)
Type 2	.46 (.52)
Type 3	.50 (.52)
Source 1	.43 (.51)
Source 2	.29 (.47)
Source 3	.43 (.51)

As a result of the poor showing on the manipulation checks, it was decided that analyzing the reliability of the dependent, independent, and covariate items would provide little useful diagnostic data, and therefore was not pursued. After these disappointing results, the questionnaires were circulated to several of the doctoral students at Georgia State University for their comments. Based on these comments and further review by the author, the language was changed to make each of the scenarios clearer. For example, the second paragraph of the Registration/Government scenarios was changed from:

> "WebRegistry is an organization that pledges to help protect the personal information of consumers. Companies that are WebRegistry members agree to register with WebRegistry and to fully disclose and implement WebRegistry's personal information protection guidelines. They also agree to follow any other policies set by WebRegistry and to stay in compliance with any new guidelines or consumer protection rules issued by that organization. Companies must agree to abide by any rulings of the WebRegistry Board regarding consumer complaints or WebRegistry guidelines or policies."

to:

> "WebRegistry is a governmental organization that pledges to help protect the personal information of online consumers. Companies that are WebRegistry members agree to register with WebRegistry and to fully communicate and implement WebRegistry's personal information protection guidelines. They must also agree to follow any other policies set by WebRegistry and to comply with any new guidelines or consumer protection rules issued by WebRegistry. Companies must agree to follow any rulings of the WebRegistry Board regarding consumer complaints or WebRegistry guidelines or policies."

While these may seem to be minor changes, they are important in several respects. For example, verbal feedback indicated confusion of terms in the first example paragraph above in which the term "disclose" is used in the description of a registration scenario. Therefore, the nine different experimental scenarios were each re-edited for clarity. While the basic scenarios retained their original content, an effort was made to simplify the phrasing and language used. Redundant wording and ambiguous terms were removed in an effort to improve readability. A second round of pretesting then was performed to assess the effectiveness of the changes to the scenarios with respect to the manipulation checks.

6.6b: Pretest 2

The results on the second pretest (also conducted with MBAs from Georgia State University) showed some improvement over the first with respect to the Source items but not the Type items; and reliability, in the form of Cronbach's alpha at the 0.05 level, was calculated for the items representing the other variables. The results of Pretest 2 for the manipulation check items are shown in Table 6.4 below.

Table 6.4

Means and Standard Deviations for Pretest 2

Manipulation Check	Mean (Std. Deviation)
Type 1	.44 (.51)
Type 2	.56 (.51)
Type 3	.50 (.52)
Source 1	.84 (.37)
Source 2	.72 (.42)
Source 3	.68 (.48)

Based on these results, the questionnaires were re-edited and circulated to several of the doctoral students at Georgia State University to be read for clarity. Several suggestions regarding wording seen as ambiguous or confusing were made and incorporated into the scenarios. Based on a suggestion by Dr. James R. Brown, a short summary was added at the end of each scenario. For example, at the end of the Certification-Governmental scenario:

WebCertificate

-Certification and Auditing of Privacy Protection Programs for Consumers

-Operated by the Federal Office of Consumer Protection

The reliability coefficients also were calculated for other items in the questionnaire, and the results of that analysis are shown in table 6.5. Alpha scores in bold type represent the overall alpha if that item was deleted and italics indicate reverse coding.

Table 6.5

Reliability Testing From Pretest 2

Alpha (Std. Alpha)	**Variables** and Individual Items	Alpha if Item Is Deleted
.7692 (.6586)	**Regulatory Effectiveness**	
	EFF1: WebCertificate regulation will help protect me when I am online.	.6867
	EFF2: I would depend on claims made by WebCertificate are reliable.	.7349
	EFF3: WebCertificate will be honest in dealing with consumers.	.7219
	EFF4: WebCertificate will be consistent in terms of their policies toward consumers	.6886
	EFF5: With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants.	**.8297**
	EFF6: I anticipate that my interests will be protected under the WebCertificate system.	.6926
.1136 (.0597)	**Trust in the Online Exchange Process**	
	TRUST1: Online shopping would be trustworthy in this situation.	-1.0323
	TRUST2R: I would find it necessary to be cautious in this online shopping situation.	**.703**
	TRUST3: I trust that this organization wants to be known as one that keeps promises and commitments.	-.3153
.05848 (.5840)	**Willingness to Try Online Shopping**	
	WILL1: I would consider purchasing from a merchant that uses the WebCertificate program.	**.5893**
	WILL2REV: It is unlikely that I would make a purchase from a merchant using the WebCertificate system.	.2368
	WILL3: I would consider using the WWW to shop at an online store that uses the WebCertificate system.	.5385

.6312	**Attitude Toward External Controls**	
(.6272)	ATTOUT1: My ideal type of regulator would be small and only perform a few essential functions.	**.7159**
	ATTOUT2R: Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.	.2481
	ATTOUT3: Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas.	.6122
	ATTOUT4R: A fair society is not possible without strict and fair comprehensive government or industry controls.	.5474
.6373	**Direct Shopping Experience**	
(.6530)	DIRSHOP1: I frequently buy products through television shopping channels.	.36
	DIRSHOP2: I frequently watch infomercials on television.	**.79**
	DIRSHOP3: I frequently buy products from printed catalogs.	.41
.9095	**Attitude Toward Computers**	
(.9088)	ATCOMP1: Computers make work more interesting.	.8011
	ATCOMP2: I really enjoy interacting with computers.	**.9327**
	ATCOMP3: Working with computers is fun.	.8625
.2005	**WWW Shopping Experience**	
(.2998)	WSHOP1: I frequently buy products online.	**.6186**
	WSHOP2: I have purchased goods or services online.	-.5825
	WSHOP3: I have obtained information online about good or services that I have purchased elsewhere.	.3501

As can be seen with the scoring for the Trust and WWW Shopping Experience Items, there were several entry and coding errors that were corrected before the next pretest. At this point, most of the items seemed to be potentially useful, pending further testing. Since the scenarios and manipulation checks still seemed to be the major problems, other changes were not made at this time.

6.6c: Pretest 3

The third pretest departed from the previous pretesting pattern by utilizing undergraduate students from the State University of West Georgia. This was largely a matter of convenience, but there was also interest in seeing how the changes in the scenarios might change the results when given to a group that was not as commonly used for research purposes. As is seen below in table 6.6, The results for the Type of Regulation manipulation check items had improved, but were still problematic. Source items were slightly better overall, but still not at adequate levels.

Table 6.6

Means and Standard Deviations for Pretest 3

Manipulation Check	Mean (Std. Deviation)
Type 1	.65 (.48)
Type 2	.60 (.50)
Type 3	.60 (.50)
Source 1	.78 (.42)
Source 2	.76 (.43)
Source 3	.84 (.37)

Based on these preliminary findings, several recommendations and proposals for modifying the questionnaire were made to the dissertation chairman. After consultation, it was agreed that a new summary would be provided for the respondents. For example, WebCertificate-Governmental would have a summary of this type:

WebCertificate is a certification and auditing system for protecting consumer information operated by the federal government.

These changes were incorporated in the next round of pretesting. Two additional changes that were made include increasing the font size from 10 point to 12 point and adding a blank line between each of the paragraphs to make the scenarios easier to read and look less cluttered.

Although they are presented here, the Cronbach's alpha scores were computed on a post hoc basis later in the pretesting process because the major focus was still on clearing up the scenarios and manipulation checks. At that time the alphas were computed for the independent variable, dependent variable, and covariate items to determine reliability, although the focus was still primarily on obtaining satisfactory results for the Type and Source of Regulation manipulation check items and improving the scenarios for readability and clarity. Other than reviewing these items again for editing errors and trying to improve the overall readability by making some changes in the font size and layout for reasons of appearance as noted above, these items were basically unchanged at this point. The results appear in Table 6.7 below.

Table 6.7

Reliability Testing from Pretest 5

Alpha (Std. Alpha)	**Variables** and Individual Items	Alpha if Item Is Deleted
.2816 (.2784)	**Regulatory Effectiveness**	
	EFF1: WebCertifcate regulation will help protect me when I am online.	0.1372
	EFF2: I would depend on claims made by WebCertificate are reliable.	-0.0069
	EFF3: WebCertificate will be honest in dealing with consumers.	0.0545
	EFF4: WebCertificate will be consistent in terms of their policies toward consumers	0.3166
	EFF5: With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants.	**0.5706**
	EFF6: I anticpate that my interests will be protected under the WebCertificate system.	0.1273

	WebCertificate system.	
.1993 (.1802)	**Trust in the Online Exchange Process** TRUST1: Online shopping would be trustworthy in this situation. *TRUST2R: I would find it necessary to be cautious in this online shopping situation.* TRUST3: I trust that this organization wants to be known as one that keeps promises and commitments.	-.4658 **.586** -.0143
.6933 (.7108)	**Willingness to Try Online Shopping** WILL1: I would consider purchasing from a merchant that uses the WebCertificate program. WILL2REV: It is unlikely that I would make a purchase from a merchant using the WebCertificate system. WILL3: I would consider using the WWW to shop at an online store that uses the WebCertificate system.	.6465 **.7802** .3531
.5344 (.5398)	**Attitude Toward External Controls** ATTOUT1: My ideal type of regulator would be small and only perform a few essential functions. *ATTOUT2R: Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.*	.4656 .3981

	ATTOUT3: Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas. *ATTOUT4R: A fair society is not possible without strict and fair comprehensive government or industry controls.*	**.5063** .4719
.3025 (.3049)	**Direct Shopping Experience** DIRSHOP1: I frequently buy products through television shopping channels. DIRSHOP2: I frequently watch infomercials on television. DIRSHOP3: I frequently buy products from printed catalogs.	.1198 .4914 -.0689
.7053 (.6783)	**Attitude Toward Computers** ATCOMP1: Computers make work more interesting. ATCOMP2: I really enjoy interacting with computers. ATCOMP3: Working with computers is fun.	.3989 **.9165** .2039
.1802 (.3077)	**WWW Shopping Experience** WSHOP1: I frequently buy products online. *WSHOP2: I have purchased goods or services online.* WSHOP3: I have obtained information online about good or services that I have purchased elsewhere.	**.3174** .1913 .0291

<u>6.6d: Pretest 4</u>

Pretest 4 represented a departure from previous attempts in that a very different sample was used to evaluate the questionnaire. In an attempt to get a more accurate feel for the adequacy of the scenarios and the manipulation checks, a part of the intended actual sample was sacrificed, and approximately 90 questionnaires were delivered to the Parent-Teacher Association at William Jackson Elementary in North Atlanta. The organization was paid $10 per questionnaire returned, and a total of 63 completed questionnaires were returned. There were several basic reasons for using this group. The first was to try and determine whether the difficulty with the scenario was in using students who were "just going through the motions" in an effort to win prize money (cash prizes based on a random drawing were offered for each pretest utilizing students). The second was to get a larger sample for testing in order to give a better evaluation of the items, other than the manipulation checks, and to provide a more realistic test for the questionnaires and scenarios. It was also hoped that this change might produce an opportunity to significantly advance the pretesting process. Finally, it was hoped that this group would be more likely to provide additional written comments about the questionnaires. The results for the Type and Source of Regulation manipulations are presented below in Table 6.8.

Table 6.8

Means and Standard Deviations for Pretest 4

Manipulation Check	Mean (Std. Deviation)
Type 1	.54 (.50)
Type 2	.54 (.50)
Type 3	.65 (.48)
Source 1	.89 (.32)
Source 2	.89 (.32)
Source 3	.90 (.30)

It was felt that the Source items were functioning well at this point, but there were still obvious problems with the Type items. As was hoped, the Jackson Elementary pretest subjects were far more forthcoming with their feedback, and written comments indicated that the phrasing in the Type of Regulation questions was causing confusion. A typical question was rephrased:

"The scenario you just read described a system for protecting consumer information on the Internet and WWW sites of merchants. Using only your memory, what is your recollection of the system that was used?"

The corresponding answers were also changed. Previously a typical answer had read as follows:

_____A system where a company's consumer information protection policies were audited and certified by a third party (sometimes stated as a third party organization).

Several respondents indicated that they were unsure about the identity of the third party mentioned in the answers and hence were confused about the question. Thus, (only) that part of the question that refers to a third party (organization) was dropped. The answer was changed to read:

_____A system where a company's consumer information protection policies were audited and certified.

The alphas for this round were calculated on a contemporary basis with the means and standard deviations for the manipulation checks; results are shown in Table 6.9. At this point, attention was given to determining the usability of these items for final data testing with the questionnaires. As will be seen below, this round of pretesting raised several concerns, particularly with the items for Trust, WWW Shopping, Direct Shopping Experience, and Attitude Toward Outside Controls. The language for these items was reexamined to make sure that there were no errors or inadvertent changes that would have affected the readability and understandability of the items, but no substantive changes were made at that time.

Table 6.9

Reliability Testing for Pretest 4

Item Type	Alpha (Standardized Item Alpha)	Individual Items	Alpha if Item Is Deleted
Regulatory Effectiveness	.6398 (.6470)	EFF1	0.6175
		EFF2	.5137
		EFF3	.5105
		EFF4	.548

		EFF5 EFF6	**.7449** .5663
Trust in the Online Exchange Process	.6018 (.6135)	TRUST1 *TRUST2R* TRUST3	**.5727** .4451 .4994
Willingness To Try Online Purchasing	.6208 (.6728)	WILL1 *WILL2REV* WILL3	.5676 **.6105** .4179
Attitude Toward External Controls	.5248 (.5225)	ATTOUT1 *ATTOUT2R* ATTOUT3 *ATTOUT4R*	**.5103** .4398 .3583 .4867
Direct Shopping Experience	.2738 (.3638)	DIRSHOP1 DIRSHOP2 DIRSHOP3	.0255 **.475** .2232
Attitude Toward Computers	.8157 (.8206)	ATCOMP1 ATCOMP2 ATCOMP3	**.8473** .7612 .6202
WWW Shopping Experience	Not tested due to error	WSHOP1 *WSHOP2* WSHOP3	

6.6e: Pretest 5

After the comments and results from the fourth pretest were evaluated and worked into the questionnaires, another round of pretesting using MBAs at Georgia State University was conducted. For the first time, real progress was made on getting acceptable scores for the Type of Regulation manipulation checks. The Source of Regulation items continued to perform well. The results of these tests are listed in Table 6.10.

Table 6.10

Means and Standard Deviations for Pretest 5

Manipulation Check	Mean (Std. Deviation)
Type 1	.83 (.38)
Type 2	.90 (.31)
Type 3	.83 (.38)
Source 1	.90 (.31)
Source 2	.86 (.35)
Source 3	.83 (.38)

Although there was significant improvement noted, it was felt that there was still room for improvement. After this pretest, since the Type 1 and Type 3 manipulation checks were still barely within two standard deviations of the mean, an effort to further improve these scores was undertaken by changing the items in this version to items 1alt and 3alt. Below, the pre and post versions of the items are listed.

1) The scenarios which you just read described a system for protecting consumer information on the Internet and WWW sites of merchants. Using only your memory, what is your recollection of the system that was used?

_____A system where a company's consumer protection policies were audited and certified.

_____A system where a company was required to disclose their consumer protection policies.

_____A system where a company's consumer protection policies were registered and monitored.

1alt) You just read a scenario that described a system for protecting consumer personal information on the Internet. Using only your memory, which of the answers below best describes this system?

_____*A system where a company's consumer protection policies were audited and certified.*

_____*A system where a company was required to disclose their consumer protection policies.*

_____*A system where a company's consumer protection policies were registered and monitored.*

3) In taking part in this experiment, you were asked to read a scenario that dealt with certain consumer information regulations on the Internet and WWW. Using only your memory, what was your understanding of how the consumer would be protected?

_____Companies would agree to go through a registration process.

_____Companies would agree to disclose their consumer information policies.

_____Companies would agree to go through a process of auditing and certification.

3alt) You were asked to read a scenario about consumer information regulations on the Internet. Using only your memory, which of these answers best describes what companies would do?

_____*Companies would agree to go through a registration process.*

_____*Companies would agree to disclose their consumer information policies.*

_____*Companies would agree to go through a process of auditing and certification.*

Reliability was also assessed for the Likert scale type items designed to measure the dependent and independent variables as well as the covariates. The goal at this point was to look for consistency between the pretests in order to determine what changes, if any, might be needed among these items. Results are listed below in Table 6.11.

Table 6.11

Reliability Testing for Pretest 5

Alpha (Std. Alpha)	**Variables** and Individual Items	Alpha if Item Is Deleted

.4996 (.5353)	**Regulatory Effectiveness** EFF1: WebCertifcate regulation will help protect me when I am online. EFF2: I would depend on claims made by WebCertificate are reliable. EFF3: WebCertificate will be honest in dealing with consumers. EFF4: WebCertificate will be consistent in terms of their policies toward consumers *EFF5: With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants.* EFF6: I anticpate that my interests will be protected under the WebCertificate system.	 0.1372 -0.0069 0.0545 0.3166 **0.5706** 0.1273
.1680 (.2974)	**Trust in the Online Exchange Process** TRUST1: Online shopping would be trustworthy in this situation. *TRUST2R: I would find it necessary to be cautious in this online shopping situation.* TRUST3: I trust that this organization wants to be known as one that keeps promises and commitments.	 -.4658 **.586** -.0143
.8425 (.8516)	**Willingness to Try Online Shopping** WILL1: I would consider purchasing from a merchant that uses the WebCertificate program. WILL2REV: It is unlikely that I would make a purchase from a merchant using the WebCertificate system. WILL3: I would consider using the WWW to shop at an online store that uses the WebCertificate system.	 .6465 **.7802** .3531

.5227 (.4919)	**Attitude Toward External Controls** ATTOUT1: My ideal type of regulator would be small and only perform a few essential functions. *ATTOUT2R: Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.* ATTOUT3: Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas. *ATTOUT4R: A fair society is not possible without strict and fair comprehensive government or industry controls.*	.4656 .3981 **.5063** .4719
.2738 (.3638)	**Direct Shopping Experience** DIRSHOP1: I frequently buy products through television shopping channels. DIRSHOP2: I frequently watch infomercials on television. DIRSHOP3: I frequently buy products from printed catalogs.	.11985 .4914 -.0689
.6963 (.6923)	**Attitude Toward Computers** ATCOMP1: Computers make work more interesting. ATCOMP2: I really enjoy interacting with computers. ATCOMP3: Working with computers is fun.	.3989 **.9165** .2039
.1802 (.3077)	**WWW Shopping Experience** WSHOP1: I frequently buy products online. *WSHOP2: I have purchased goods or services online.* WSHOP3: I have obtained information online about good or services that I have purchased elsewhere.	**.3174** .1913 .0291

6.6f: Pretest 6

At this point, the focus of the pretesting changed somewhat. Because of the success in improving the results on the Type of Regulation and Source of Regulation manipulation check items and the fact that several of the other scales were showing acceptable reliability—if changed slightly (by dropping items)—the final two pretests did not test every item, but instead focused more on "problem areas." Thus, only very minor changes were made to the questionnaires in terms of spacing and arranging text to make the questionnaires more palatable to the readers and, hopefully, easier to follow. However, the complete questionnaire was not tested, and only the scenarios, manipulation checks, and covariate items were included. Results for the manipulation checks are listed below in Table 6.12.

Table 6.12

Means and Standard Deviations for Pretest 6

Manipulation Check	Mean (Std. Deviation)
Type 1	.86 (.35)
Type 2	.82 (.39)
Type 3	.68 (.48)
Source 1	1
Source 2	1
Source 3	.77 (.43)

The results for the Type 1, Type 2, Source 1, and Source 2 were in the acceptable range, but, curiously, the results for Type 3 and Source 3 were not. Verbal feedback from subjects who had taken the questionnaire indicated that they were bothered by the fact that they were being asked to answer so many (Type 3 and Source 3) questions with essentially the same answers. There was thus a temptation to see some sort of a "trick" in the questions that required a different answer than the like items. Accordingly, during this and the subsequent pretest and after consultations with the dissertation adviser, it was decided to decrease the number of Manipulation Check questions to Type 2 and Source 2 questions for the final version of the questionnaire.

The covariate items were also tested during pretest 7. Prior to testing, they had been reexamined and checked for confusing wording and, in the case of the WWW Shopping items, simplified and changed slightly to more clearly differentiate them from the other covariate items. Primarily, however, the focus was on developing enough consistency to determine which items should be dropped and/or replaced to improve the accuracy of the scales. Table 6.13 shows the results.

Table 6.13

Reliability Testing for Covariate Items from Pretest 6

Item Type	Alpha (Standardized Item Alpha)	Individual Items	Alpha if Item Is Deleted
Direct Shopping Experience	.3797 (.4344)	DIRSHOP1	.1634
		DIRSHOP2	**.571**
		DIRSHOP3	.1205
Attitude Toward Computers	.8497 (.8620)	ATCOMP1	.7384
		ATCOMP2	.7748
		ATCOMP3	**.8706**
WWW Shopping Experience	.7217 (7295)	WSHOP1	.5131
		WSHOP2	.58
		WSHOP3	**.7396**

<u>6.6g: Pretest 7</u>

Based on the results of the earlier pretests, it was decided to make some changes to the covariate items; accordingly, only these items were tested. During this pretest, the items for WWW Shopping and Direct Shopping were modified to try and produce respectable levels of reliability. WWW Shopping questions 1, 2, and 3 were replaced with the alternative versions listed in italics below. Similarly, Direct Shopping items 1, 2, and 3 were replaced with the alternative versions listed in italics below. Item WWW2 was left unchanged. Original items were taken from Jarvenpaa and Tractinsky (2000), but reliability on these items was consistently poor. Since the Attitude Toward Computers items had scored consistently well, these were tested in the original form.

WWW1 I frequently buy products online.

WWW2 I have purchased goods or services online.

WWW3 I have obtained information online about goods or services that I have purchased elsewhere.

WWW1I have shopped for goods or services online.

WWW2I have purchased goods or services online.

WWW3 I have used the Internet to get information about products I have bought offline.

DIRSHOP1 I frequently buy products through television shopping channels.

DIRSHOP2 I frequently buy products from printed catalogs.

DIRSHOP3 I frequently watch infomercials on television.

DIRSHOP1 I have bought products through television shopping channels.

DIRSHOP2 I have bought products from printed catalogs.

DIRSHOP3 I sometimes watch infomercials on television.

The results for the alternate versions of the covariate items were tested in the same manner as before, with the students reading the complete scenarios and then answering the individual items. Results are shown in Table 6.14.

Table 6.14

Reliability for Covariate Items

Item Type	Alpha (Standardized Item Alpha)	Individual Items	Alpha if Item Is Deleted
Direct Shopping Experience	.3733 (.3918)	DIRSHOP1	.1375
		DIRSHOP2	**.5297**
		DIRSHOP3	.1635
Attitude Toward Computers	.8789 (.9023)	ATCOMP1	.8728
		ATCOMP2	**.93**

		ATCOMP3	.729
WWW Shopping Experience	.9029 (.9061)	WSHOP1 *WSHOP2* WSHOP3	.8211 .8684 **.8912**

6.6h: Pretest 8

Although performed roughly contemporaneously with Pretest 7, the intention of the final pretest was to focus on the items for two of the "problem" areas in past pretests. Therefore, items for Attitudes Toward External Controls and Trust were tested at this time. The items for the Willingness to Try Online Shopping also were included, but, in view of the previous results, reliabilities were not calculated. The results for this pretest are listed in Table 6.15.

Table 6.15

Reliability For Trust in the Online Exchange Process and Attitude toward External Controls

Item Type	Alpha (Std. Item Alpha)	Individual Items	Alpha if Item Is Deleted
Trust in the Online Exchange Process	.1680 (.2974)	TRUST1 *TRUST2R* TRUST3	-.1074 **.5202** .1017
Attitude Toward External Controls	.7466 (.7478)	ATTOUT1 *ATTOUT2R* ATTOUT3 *ATTOUT4R*	**.7135** .6401 .7022 .6931

As a result of the results from the final two pretests and after consultations with the dissertation advisor, it was decided to make a final set of changes before the questionnaires were distributed for final data collection. These changes are detailed in the next section.

6.7: Additions and Deletions of Items from the Final Questionnaires Based on Pretesting

Based on extensive pretesting, several decisions were made prior to the distribution of the final questionnaires. Because of several comments received during pretesting about the number of questions in the manipulation checks section and its repetitive nature, it was decided to limit the total number of manipulation checks question to four—two relating to type of regulation and two relating to source. Several changes were also made with respect to the covariates. High alpha levels were obtained for the covariates Attitude Toward Computers and WWW Shopping Experience using three items each; however, an unacceptably low alpha level was obtained for Direct Shopping Experience. Since the high alpha levels for Attitude Toward Computers and WWW Shopping could still be maintained with two items instead of three, and in view of the extensive pretesting that had already been done, it was decided to limit these covariates to two items each and to add two additional items for Direct Shopping Experience in an effort to obtain useful data regarding this covariate. In addition, two additional trust items were added using the same scales as sources, giving a total of five items, which are described in the next chapter.

Conclusion

The manipulations available through this type of experimental design, when combined with rigorous pretesting and a suitably large sample, provide unique opportunities for examining and analyzing consumers' reactions to regulatory structures and their resulting impact on trust. In addition, this may allow for the further development of a methodology and would allow more accurate assessment of the effects of regulations before they are implemented as well as evaluating them post-hoc, thus fulfilling Campbell's dictum that regulations could be designed as experiments. The extensive pretesting regime was intended to provide a more reliable point for the analysis of the final questionnaires and full data collection discussed in the next chapter.

CHAPTER 7: DATA ANALYSIS AND HYPOTHESES TESTING

In this chapter the collected data is examined and analyzed and the individual hypotheses are tested. The different statistical methods utilized are outlined and inferences and conclusions supported by the results generated by the data are discussed.

“If you torture your data, it will confess.” Attributed to Dr. Edward Diener, University of Illinois.

7.1 Data Collection and Entry

Data was obtained through parent-teacher organizations (teachers, administrators, and other employees were also allowed to participate) in the metro Atlanta area, essentially constituting a convenience sample. To collect this data, the author attempted contact with various elementary school organizations in the Atlanta, Georgia, school system (the metropolitan Atlanta area has an a population in excess of 4 million) that had achieved recognition for excellence. The rationale for using these schools was that their parent-teacher organizations would probably be more involved and willing to participate in research that would also raise money for their organizations. In addition, several schools in the surrounding suburban counties, primarily Gwinnett and Coweta counties, were also contacted in regard to this research.

Several difficulties were encountered in the process of collecting data. First, although the author received assistance from various individuals, principals, and city council members, many schools did not feel that they could divulge the telephone numbers of parent-teacher representatives; therefore, initial contact was usually made indirectly. This resulted in many delays, missed connections, and missed opportunities. Of the numerous schools where contact with a representative was consummated, only two schools agreed to participate in this research project in spite of the incentive for a $10.00 donation per questionnaire returned. A third school was referred to the author by mutual acquaintances. The three schools that participated in the study were William T. Jackson Elementary School in North Atlanta, E. Rivers Elementary School in the author’s district in Buckhead, and the Our Lady of Victory, a private Catholic school in suburban

Coweta County.

Distribution and collection of the questionnaires were handled by the respective parent-teacher organizations. The questionnaires were distributed to students during classes and were then taken home by the students. Questionnaires were sent one per household and were also to be returned by the students. This method was chosen for two reasons. First, the parent-teacher representatives thought it would be difficult to convene a large-scale meeting to administer the questionnaires. Secondly, concern was expressed about releasing a mailing list of the member parents. Conversely, the parent-teacher organizations did not want to be responsible for addressing and labeling questionnaires for mailing to parents. As a result, the method detailed above was used for distribution. Although this procedure worked reasonably well, several problems were encountered. Approximately 20 questionnaires were returned blank, and an unknown number either did not reach their intended destinations or simply were not returned. Other minor problems of this type also were encountered during the data collection process.

Data collection occurred during April and May of 2001 with some questionnaires still being returned in early June. Approximately 600 questionnaires were distributed in this fashion, of which 278 were returned, yielding a response rate of 46.3%. Of the 278 returned, 241 questionnaires (86.7%) were usable. Questionnaires were discarded only if it appeared that the respondent either had failed to understand the scenario by not answering any of the manipulation check questions correctly or otherwise indicating that their responses would not be useful. Examples of this latter category include situations in which respondents answered every Likert-type scale item identically (e.g. "Strongly Disagree" on every question), failed to answer several pages of the questionnaire, gave multiple answers to the questions asked, or actively stated their disagreement or displeasure with the questionnaire. One such subject answered only the manipulation check questions and then supplied a rather lengthy note stating (among various and sundry other comments): "I will not participate in this. WebCertificate [governmental] is a bad idea, there are already private alternatives. You need to come up with a better idea that doesn't involve the government."

7.2 Sample Demographics and Description

Data regarding the composition and characteristics of the sample (n=241) were collected for sex, ethnicity, marital status, number of children, and household income. The sample population can be described as primarily female (64.3%, n=155) and overwhelmingly Caucasian/White (88.4%, n=213). Not surprisingly, 85.4% of the respondents were currently married, and the largest segment had 2 children (48.9%). Respondents' ages were fairly evenly distributed, with the largest percentages falling between ages 36-40 (26.1%) and 41-45 (29%). Household income tended to be heavily concentrated in the upper brackets, with 51.9% of the sampled household reporting incomes in excess of $100,000 per year, although it should also be noted that 18.2 % of the respondents declined to answer the household income question. More complete data regarding the demographics of the sample population can be found in Appendix 4.

7.3 Data Entry and Coding

Data entry was performed by the author and was entered directly into a SPSS spreadsheet. The descriptive statistics option in SPSS, along with manual checking, was used to examine the data for erroneous entries. Coding was intentionally kept as simple a process as possible. For the manipulation check questions, items were coded "1" for a correct answer and "0" for an incorrect answer. The Type 1, Type 2, Source 1, and Source 2 items[4] were coded in this manner. Likert-type scale items were coded on a 1 to 5 basis with the following values: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree. A "Don't Know" alternative item was also provided at the end of the scale. These entries were simply counted as non-responses; therefore, these values were not initially coded, although the missing values were later filled using the series mean for that particular item. Effectiveness items 1-6, Trust items 1-5, Willingness items 1-3, Attitude Toward External Controls items 1-4, WWW Shopping items 1-2, Direct Shopping items 1-4, and Attitude Toward Computers items 1-2 were also coded in this manner. Items Trust 2, Willingness 2, Effectiveness 5, and Attitude Toward External Controls 2 and 4 were reverse coded (these items are shown in full in Table 7.1, found on p. 114). Demographic items were coded similarly.

7.4 Item Reliability and Selection

After the data was examined and cleaned of extraneous or erroneous entries, the next step in the analytical process was to determine item reliability. The standard Cronbach's Alpha statistic was used to make this evaluation for the Likert-scale type items, and a comparison of means and standard deviations for the manipulation check questions. The Empirical Rule (see e.g. Ott 1993) states that the interval represented by a variable's mean plus or minus two standard deviations contains approximately 95% of the measurements under a normal distribution. As such, the criterion for determining the reliability of the manipulation check items was that, for each item, the mean number of correct answers should be at least twice the standard deviation of that mean. Table 7.1 indicates that this criterion was met for manipulation check items Type 1, Type 2, Source 1, and Source 2.

Table 7.1

Means and Standard Deviations for Manipulation Check Items

	Type 1	Type 2	Source 1	Source 2
Mean (Std. Deviation)	.90 (.30)	.82 (.39)	.91 (.29)	.97 (.35)

The Likert-scale type items comprised the mediating, moderating, and dependent variables as well as the covariate variables. These included the Regulatory Effectiveness, Attitude Toward External Controls, Trust, Willingness, Attitude Toward Computers, WWW Shopping, and Direct Shopping items. The initial goal was to obtain at least the 0.70 level of reliability prescribed by Nunnaly (1978) and others. Where necessary and practical, items were eliminated from further analysis in order to meet this goal. When the final items were identified, the scales were averaged for purposes of analysis and hypotheses testing. A simple arithmetic mean was used to compute the overall score of the variable in question. By way of illustration, the variable for trust was calculated as Trust = (TRUST1 + TRUST4 + TRUST5)/3. Table 7.1 lists the items that were deleted for the variables just discussed. The items for Attitude Toward External Controls, WWW Shopping Experience, and Attitude Toward Computers were all retained, as can be seen in Table 7.2.

Table 7.2 Items Retained or Deleted for Further Analysis

Variable and Overall Alpha	Coding	Item	Alpha if Item is Deleted[5]	Outcome
Regulatory Effectiveness	EFF1	WebDisclosure regulation will help to protect me when I am online.	.4345	Retained
	EFF2	I would depend on claims made by WebDisclosure as reliable.	.3483	Retained
.7815 (.7824)	EFF3	WebDisclosure will be honest in dealing with consumers.	.3485	Retained
	EFF4	WebDisclosure will be consistent in terms of their policies toward consumers.	.3919	Retained
	EFF5R	*With WebDisclosure, I will not find it necessary to be cautious when interacting with online merchants.*	*.7754*	*Deleted*
	EFF6	I anticipate that my interests will be protected under the WebDisclosure system.	.4333	Retained
Trust in the Online Exchange Process	TRUST1	Online shopping will be trustworthy in this situation.	.0922	Retained
	TRUST2	*I am doubtful of WebDisclosure's intentions.*	*.1265*	*Deleted*
	TRUST3	*I would find it necessary to be cautious in this online shopping situation.*	*.6451*	*Deleted*
.6914 (.6931)	TRUST4	WebDisclosure makes me feel safe.	-.0259	Retained
	TRUST5	I trust that merchants will keep their promises and commitments under the WebDisclosure system.	-.0336	Retained

Attitude Toward External Controls .7037 (.7041)	ATTOUT1 ATTOUT2 ATTOUT3 ATTOUT4	My ideal type of regulator would be small and only perform a few essential functions. *Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.* Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas. *A fair society is not possible without strict and fair comprehensive government or industry controls.*	.7020 .5932 .6191 .6224	Deleted Retained Retained Retained
Direct Shopping Experience .6335 (.6387)	DIRSHOP1 DIRSHOP2 DIRSHOP3 DIRSHOP4	I have bought products through television shopping channels." *Looking at catalogs is a convenient way to shop.* *I have bought products from printed catalogs.* I sometimes watch infomercials on television.	.3866 .3963 .3203 .3640	Retained *Deleted* *Deleted* Retained

The questionnaire contained six Regulatory Effectiveness items coded EFF 1-6, with EFF 5 being reverse coded. An initial examination of these items yielded a Cronbach's Alpha (hereafter "alpha") of 0.5231 (standardized alpha 0.5962). However, it was indicated that dropping the reverse-coded EFF5 item would increase the alpha to

0.7510 (standardized 0.7480). Further deletion of items did not yield any improvement; therefore, items EFF 1-4 and EFF 6 were retained.

A total of five Trust items, TRUST 1-5 with Trust 2 being reverse coded, were utilized in the questionnaire, but initial testing yielded an unsatisfactory alpha of 0.2582 (0.3397). Deleting items TRUST 2, and TRUST 3 yielded an alpha of 06914. (0.6931). Deleting additional items actually would have lowered the overall reliability of this scale, and a decision was made to accept a level that was close to the 0.70 level. This result was less than hoped for given the fact that all of the items were adapted from published scales. It had been hoped that pretesting results would be exceeded by utilizing additional Trust items. Although this fell below Nunally's (1978) criterion, it is numerically quite close to the "rule of thumb" 0.70 and acceptable given the exploratory nature of this work.

Willingness items used in the questionnaire consisted of three items coded WILL 1-3, with WILL 2 being reverse coded. The Willingness items yielded an alpha statistic of 0.7535 (0.7627). Because further deletions would have resulted in only marginal improvement, it was decided to proceed at this level and retain all three items. The Attitude Toward External Controls items (ATTOUT 1-4, 2 and 4 being reverse coded), which were adapted from Mehrabian (1996), were retained with the exception of ATTOUT 1, which yielded an alpha level of 0.7037 (0.7041). These items are listed above in Table 7.1.

The covariate items of Attitude Toward Computers, WWW Shopping Experience, and Direct Shopping Experience also were analyzed in a similar fashion. Both WWW Shopping items were retained, and an alpha of 0.8356 (0.8506) was observed. For the two Attitude Toward Computers items, an alpha of 0.7727 (0.7727) was recorded. Consistent with difficulties encountered in pretesting, the Direct Shopping Experience items proved to be problematic. Four Direct Shopping items (DIRSHOP 1-4) were included in the questionnaire, and reliability analysis on these four items indicated an initial alpha level of 0.4289 (0.4316). The best possible result with these items was to drop items DIRSHOP 2 and 3, which yielded an alpha of 0.6335 (0.6387). The Attitude Toward Computers items are listed in Table 7.2 below, while the Direct Shopping Items can be found in Table 7.1.

Table 7.3

Variables Retained Without Changes

Variable	Coding	Alphas and *(Standardized Item Alphas)*	Items
Willingness to Try Online Shopping	WILL1 WILL2REV WILL3	.7683 *(.7737)*	I would consider purchasing from a merchant that uses the WebCertificate program. It is unlikely that I would make a purchase from a merchant using the WebCertificate system. I would consider using the WWW to shop at an online store that uses the WebCertificate system.
WWW Shopping Experience	WWW1 WWW2	.8356 *(.8506)*	I have purchased goods or services online. I have used the Internet to get information about products I have bought offline.
Attitude Toward Computers	ATCOMP1 ATCOMP2	.7727 *(.7727)*	Computers make work more interesting. I enjoy interacting with computers.

Tables 7.3, 7.4, and 7.5 provide additional summary information about the items and variables used in the analysis process. Table 7.3 summarizes the Chronbach's Alphas (and Standardized Item Alphas) for the final scale items utilized in hypotheses testing. Table 7.4 lists the means and standard deviations for each of the summed variables used in the analysis. Finally, Table 7.5 shows the correlation matrix for all independent, dependent, and covariates.

Table 7.4

Final Chronbach's Alphas and (Standardized Item Alpha)

for Scale Items Used in Data Analysis

Scale Items	Chronbach's Alpha (Standardized Item Alpha)
Regulatory Effectiveness (5 items)	.7815 (.7824)
Trust in the Online Exchange Process (3 items)	.6914 (.6931)
Willingness to Try Online Purchasing (3 items)	.7683 (.7737)
Attitude Toward External Controls (3 items)	.7037 (.7041)
WWW Shopping Experience (2 items)	.8356 (.8506)
Attitude Toward Computers (2 items)	.7727 (.7727)
Direct Shopping Experience (2 items)	.6335 (.6387)

Table 7.5

Means and Standard Deviations for Summed Variables

Variable	Trust in the Online Exchange Process	Regulatory Effectiveness	Willingness to Try Online Shopping	Attitude Toward External Controls	Direct Shopping Experience	Attitude Toward Computers	WWW Shopping Experience
Mean (Std. Deviation)	3.3 (.95)	3.38 (.85)	3.79 (.74)	3.47 (.93)	2.03 (.95)	3.90 (.84)	4.04 (.97)

Note: Means and Standard Deviations were computed prior to the replacement of missing values. Scale: 5-point Likert scale.

Table 7.6

Correlation Matrix for All Variables

	WWW Shopping Experience	Attitude Toward Computers	Direct Shopping Experience	Willingness To Try Online Shopping	Regulatory Effectiveness	Trust In the Online Exchange Process
WWW Shopping Experience	1.000 . *241*	.479** .000 *241*	-.005 .935 *241*	.437** .000 *241*	.181** .005 *241*	.165* .002 *241*
Attitude Toward Computers	.479** .000	1.000 .	-.021 .749	.236** .000	.026 .692	.015 .817

	241	*241*	*241*	*241*	*241*	*241*
Direct Shopping Experience	-.005 .935 *241*	-0.21 .749 *241*	1.000 . *241*	-.039 .057 *241*	.011 .871 *241*	.047 .467 *241*
Willingness To Try Online Shopping	.437** .000 *241*	.236** .000 *241*	-.039 .545 *241*	1.000 . *241*	.521** .000 *241*	.563** .000 *241*
Regulatory Effectiveness	.181** .005 *241*	.026 .692 *241*	.011 .871 *241*	.521** .000 *241*	1.000 . *241*	.735** .000 *241*
Trust In The Online Exchange Process	.165* .010 *241*	.015 .817 *241*	.047 .467 *241*	.563** .000 *241*	.735** .000 *241*	1.000 . *241*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Number of observations (*n*) is in italics.

7.5 Hypotheses Testing: Type and Source Hypotheses

H1: The consumer's perception of Regulatory Effectiveness is affected by the Type of Regulation whereby Certification will be perceived as the strongest Type of Regulation, Disclosure as the weakest type, and Registration will fall in between.

H2: Governmental regulators will be perceived as the most effective regulators, Private regulators as the least effective and Quasi-Governmental regulators will fall in between.

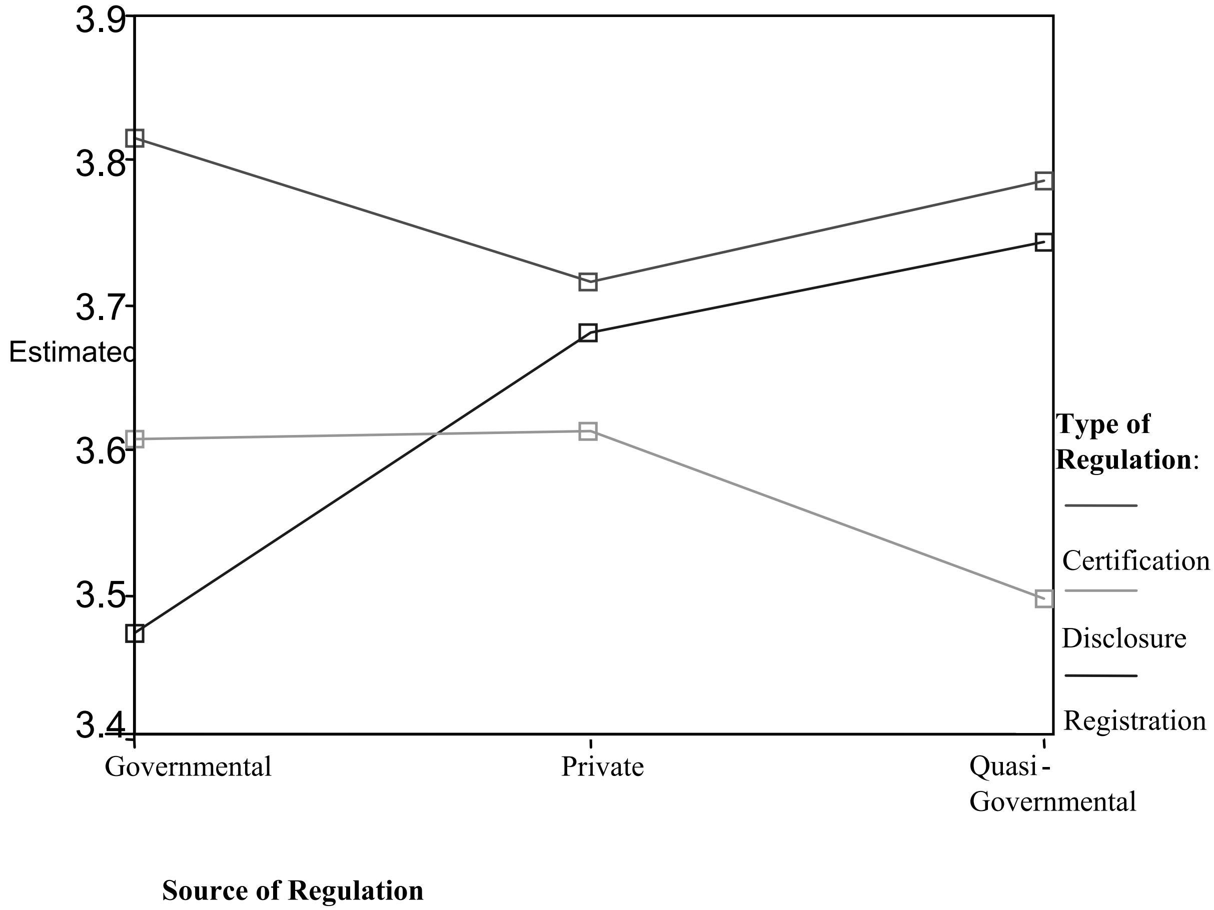
Dummy variables were used in testing both the Type and Source of Regulation hypotheses so that the Type (Disclosure, Registration, and Certification) and Source (Private, Quasi-Governmental, and Governmental) groups could be segregated for analysis. The analysis for these hypotheses involved comparing the means of Regulatory Effectiveness for significant differences between the groups. The initial hypothesis was tested utilizing a two-way ANOVA analysis. Levene's Statistic was used to test the ANOVA assumption of homogeneity of variances, and the descriptive statistics operation was used to insure that the confidence intervals did not include zero. Levene's Statistic tests the null hypothesis that the error variance of the dependent variable is equal across groups. Absent a significant result at the 0.05 level, the null hypothesis is assumed to stand. Confidence intervals that include zero are indicative of poor model fit and are a very low predictor of reliability in that particular instance (Field 2000). As such, both a significant Levene's Statistic and a confidence interval that includes zero should serve as a warning to the researcher as well as signifying the need for different analytical procedures. For the analysis conducted for H1 and H2, Levene's Statistic was insignificant ($F=1.29$, Sig. = .295), indicating equal variances, and none of the relevant confidence intervals included zero. Tables 7.6, 7.7, and 7.8 address both H1 and H2 and are included to assist the presentation of the analysis. Figure 7.1 is a plot of the marginal means, and is included here as a visual reference.

Table 7.7

Means, Standard Deviations, Marginal Means and Number of Observations for All Cells and Conditions

	Governmental	Private	Quasi-Governmental	Marginal Means
Certification	3.82 (.30) *30*	3.71 (.40) *22*	3.79 (.63) *26*	3.78 (.45) *78*
Disclosure	3.61 (.59) *27*	3.61 (.46) *37*	3.50 (.52) *26*	*3.58* *(.51)* *90*
Registration	3.47 (.73) *25*	3.68 (.52) *25*	3.74 (.44) *23*	3.63 (.58) *73*
Marginal Means	3.64 (.87) *82*	3.66 (.46) *84*	3.67 (.55) *75*	3.38 (.85) *241*

Figure 7.1
Estimated Marginal Means of Regulatory Effectiveness



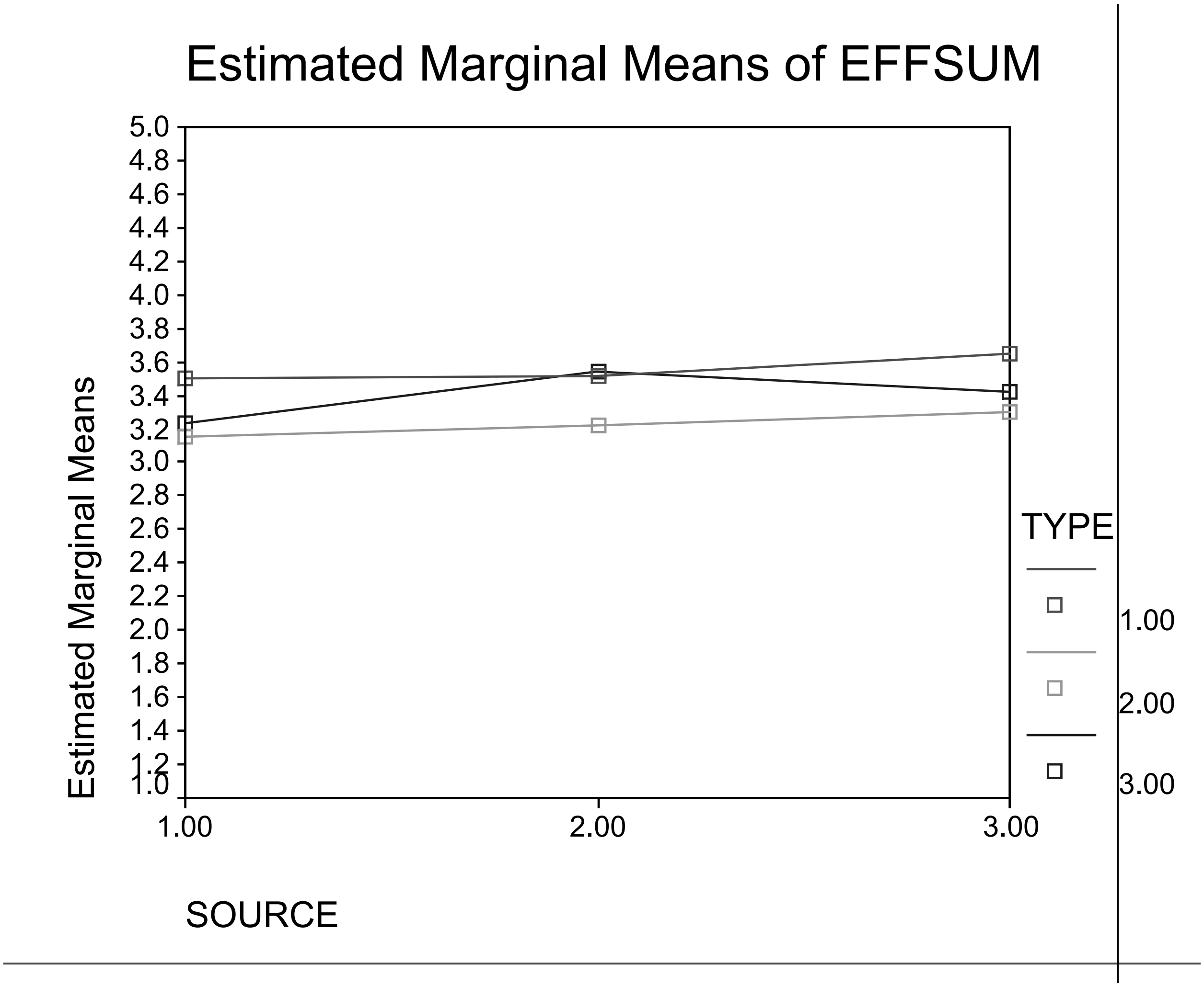


Figure 7.2

Table 7.6 above includes the means, standard deviations (in parentheses), and number of observations in each cell in the experimental design as well as the respective marginal means. The marginal means are plotted in Figure 7.1. Table 7.7 contains the summary ANOVA results for both H1 and H2. Finally, Table 7.8 includes ANCOVA analysis examining the possible role of the covariates.

Table 7.8

Summary ANOVA Results for H1 and H2

Factor	df	SS	MS	F-value
Source of Regulation	2	9.019E-02	4.509E-02	.167
Type of Regulation	2	1.706	.853	3.158**
Source x Type	4	1.264	.316	.325
Error	232	62.651	.270	
Total	241	3290.748		

Notes ** p< .05 R Squared = .047 (Adjusted R Squared = .014)

H1 was tested to compare the mean values of Regulatory Effectiveness for the certification, registration, and disclosure conditions. As seen in the summary table above, significant differences were observed between the different Types of Regulations at the 0.05 level. Subsequent tests using the least significant distance (LSD) operation indicated a significant difference between Certification and Disclosure at the .05 level, with Certification generally being perceived as the most effective regulation and Disclosure as the least effective, thus strongly supporting H1. As can be seen in Table 7.6, the mean value of Registration (the "middle ground" type of regulation) fell between Certification and Disclosure, but was not significantly different than either of these Types of Regulation. H1 is thus strongly supported.

A dummy variable was also used to sort the different Sources of Regulation to test H2. Contrary to the theorized relationship between Perceived Regulatory Effectiveness and Source of Regulation, ANOVA analysis indicated no significant differences in the mean scores for Perceived Regulatory Effectiveness across the different Sources. In fact, the order of the marginal means for the Sources of Regulation was in exactly the opposite order as hypothesized. Private Regulation was perceived as the most effective, Governmental Regulation as the least, and Quasi-Governmental Regulation fell between these two. Therefore, H2 is not supported.

Subsequent analysis utilizing ANCOVA (Table 7.8, below) indicated that, when the covariates were included, both Type of Regulation and WWW Shopping significantly affected Regulatory Effectiveness at the 0.05 level. This finding reinforced the ANOVA finding of the Type of Regulation on the main effect (H1).

Table 7.9

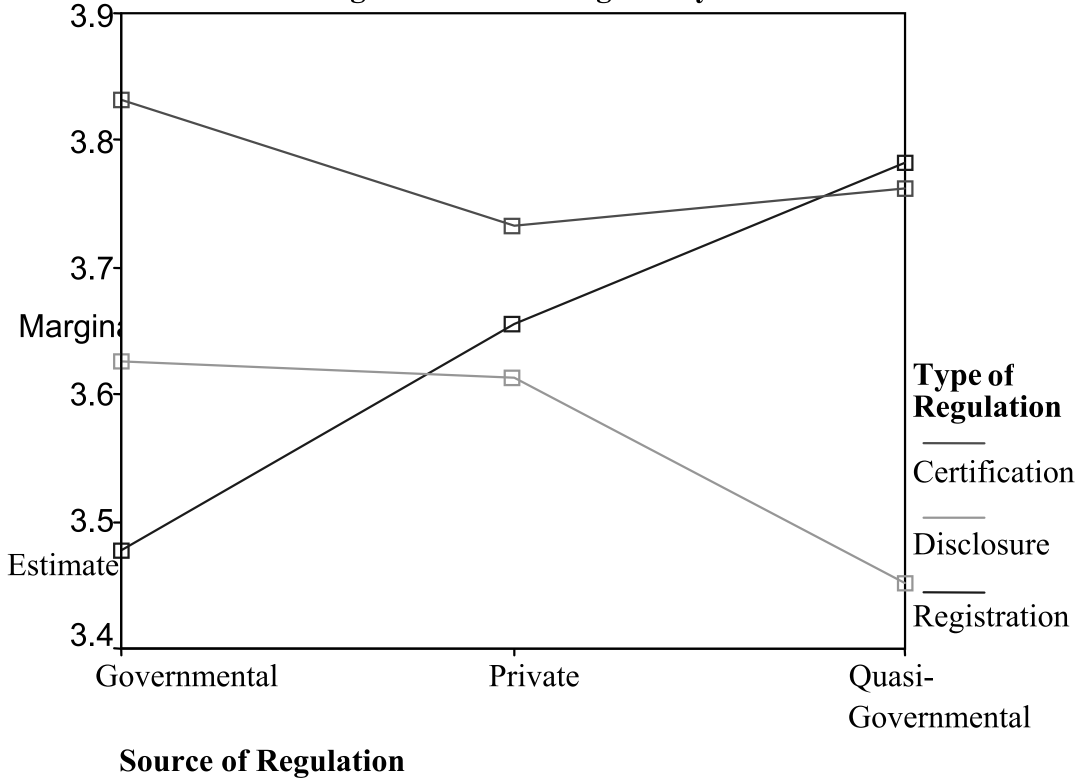
Summary ANOVA Results Including ANCOVA

Source	df	SS	MS	F-Value
Direct Shopping	1	4.554E-02	4.554E-02	.175
Attitude Toward Computers	1	.524	.524	2.009
WWW Shopping Experience	1	2.936	2.936	11.268***
Type of Regulation	2	4.282	2.141	3.553**
Source of Regulation	2	2.322E-02	.045	.956
Type x Source	4	1.702	.425	1.633
Error	229	59.664	.261	
Total	238	3290.748		

Notes ** p< .05 R Squared = .093 (Adjusted R Squared = .049)

*** p<.001

Figure 7.3
Estimated Marginal Means of Regulatory Effectiveness



7.6 Regulatory Effectiveness

H3: The greater a consumer's perception that a regulation is effective, the greater a consumer's Trust in the Online Exchange Process.

The results for H3 were positive with a significant relationship between Regulatory Effectiveness and Trust in the Online Exchange Process being indicated. Regression analysis, summarized in Tables 7.9 and 7.10 (which includes the regression coefficients), indicated that Regulatory Effectiveness was in fact strongly related to Trust (Beta .6030, Sig.=0.000, df=4). In addition, the follow-up correlational analysis in Table 7.10 also showed a strong relationship between these variables (Pearson Correlation = 0.723, $p < .01$). A substantial amount of variance was also explained by these variables, with R Squared = .543 (Adjusted R Squared = .535), even though an examination of the regression coefficients indicated that none of the covariates showed a significant relationship to Trust.

Table 7.10

Regression Coefficients for H3

Variable	Unstandardized Coefficients	Standard Error	Standardized Coefficients	t	Sig.
(Constant)	.520	.313		1.658	.019
Regulatory Effectiveness	.670	.058	.603	11.642	.000
Direct Shopping Experience	-8.042E-03	.051	-.008	-.159	.874
Attitude Toward Computers	5.219E-02	.063	.046	.831	.407
WWW Shopping Experience	6.270E-02	.055	.064	1.131	.259

R Squared = .543 Adjusted R Squared = .535

However, even though regression analysis did not find significant relationships between the dependent variable and the covariates, the correlational analysis shown in Table 7.10 indicates a strong correlation between WWW Shopping Experience and Trust as well as several other interesting relationships. These findings seem to indicate that, although Regulatory Effectiveness is significantly related to Trust in the Online Exchange Process, that WWW Shopping Experience should be included in future iterations of this research. An examination of the correlation matrix in Table 7.10 also indicates that there may be additional relationships that need to be explored between the independent and dependent variables. The table shows that WWW Shopping Experience correlates significantly with both Regulatory Effectiveness and Trust in the Online Exchange process as well as (perhaps not very surprisingly) with Attitude Toward Computers.

Table 7.11

Correlations Between Trust, Effectiveness, and the Covariates for H3

	WWW Shopping Experience	Attitude Toward Computers	Direct Shopping Experience	Regulatory Effectiveness	Trust in the Online Exchange Process
WWW Shopping Experience	1.000 . *241*	.479** .000 *241*	-.005 .935 *241*	.181** .005 *241*	.165** .010 *241*
Attitude Toward Computers	.479** .000 *241*	1000 . *241*	-.021 .749 *241*	.026 .692 *241*	.015 .817 *241*
Direct Shopping Experience	-.005 .935 *241*	-.021 .749 *241*	1.000 . *241*	.011 .871 *241*	.047 .467 *241*
Regulatory Effectiveness	.181** .005 *241*	.026 .692 *241*	.011 .871 *241*	1.000 . *241*	.735** .000 *241*
Trust in the Online Exchange Process	.165* .010 *241*	.015 .817 *241*	.047 .467 *241*	.735** .000 *241*	1.000 . *241*

** Correlation is significant at the 0.01 level (2-tailed). Number of observations (*n*) is in italics.

* Correlation is significant at the 0.05 level (2-tailed).

7.7 Attitude Toward External Controls

H4: Consumers with a positive Attitude Toward External Controls will perceive governmental regulation as the most effective and private regulation as the least, with quasi-governmental falling in between. For consumers with a negative Attitude Toward External Controls, private regulation will be perceived as the most effective, governmental regulation as the least, and quasi-governmental regulation as falling in between.

The results of testing hypothesis H4 are found in Tables 7.11, 7.12, and 7.13 as well as in Figure 7.3. The results show a significant relationship between Attitude Toward External Controls and Regulatory Effectiveness as well as between Regulatory Effectiveness and Type of Regulation. In addition, a significant interaction is also indicated between the Type of Regulation and Attitude Toward External Controls.

Table 7.12

Summary ANOVA Results for H4

Factor	df	SS	MS	F-value
Intercept	1	803.130	803.130	3256.184
Attitude Toward External Controls	20	8.797	.440	1.783**
Type of Regulation	2	1.757	.879	3.563**
Type x Attitude	19	7.477	.394	1.595**
Error	199	49.083	.247	
Total	241	3290.748		

Notes ** $p < .05$ R Squared = .254 (Adjusted R Squared = .100)

Table 7.13

Estimated Marginal Means for Regulatory Effectiveness in Relation to Type of Regulation and Attitude Toward External Controls

Type of Regulation	Attitude Toward External Controls is Positive (>3.5)	Attitude Toward External Controls is Negative (<3.5)
Certification		
Disclosure		
Registration		

Table 7.14

Summary ANOVA Results Including ANCOVA

Factor	df	SS	MS	F-value
Intercept	1	69.072	69.072	293.065
WWW Shopping Experience	1	2.735	2.735	11.605***
Attitude Toward Computers	1	.544	.544	2.307
Direct Shopping Experience	1	.285	.285	1.120
Attitude Toward External Controls	20	9.169	.458	1.945**
Type of Regulation	2	1.874	.937	3.976**
Type x Attitude	19	7.778	.409	1.737**
Error	196	46.195	.236	
Total	241	3290.748		

Notes *** p< .001 R Squared = .297 (Adjusted R Squared = .140)

** p<.05

H5: Consumers with a positive Attitude Toward External Controls will perceive certification as the most effective and disclosure as the least effective Types of Regulation with registration falling in between. Consumers with a negative Attitude Toward External Controls will perceive disclosure as the

most effective and certification as the least effective Types of Regulation, with registration falling in between.

The results of hypothesis testing for H5 did not produce evidence of a significant relationship between Attitude Toward External Controls and Regulatory Effectiveness. In addition, the hypothesized interaction between Source of Regulation and Attitude Toward was not found to be present. As can be seen in Table 7.15, the marginal means indicate that Governmental Regulation was perceived as the most effective and Quasi-Governmental Regulation as the least effective, with Private Regulation falling in between. Once again, this is not in the hypothesized order. Therefore, H5 is not supported.

Table 7.15

Summary ANOVA Results for H5

Factor	df	SS	MS	F-value
Intercept	1	796.608	796.608	2990.932
Source	2	1.976E-02	9.88E-03	.037
Attitude Toward External Controls	20	6.221	.311	1.168
Source * Attitude	19	4.543	.239	.898
Error	199	53.002	.266	
Total	241	3290.748		

R Squared = .194 (Adjusted R Squared = .028)

Table 7.16

Estimated Marginal Means for Source of Regulation

Source of Regulation	Means Where Attitude Toward External Controls is Positive	Means Where Attitude Toward External Controls is Negative
Governmental		
Private		

Quasi-Governmental		

Table 7.17

Summary ANOVA Results Including ANCOVA for H5

Factor	df	SS	MS	F-value
Intercept	1	63.521	63.521	.000
WWW Shopping Experience	1	2.178	2.178	.004
Attitude Toward Computers	1	.273	.273	.306
Direct Shopping Experience	1	2.146E-02	2.146E-02	.774
Source	2	4.793E-02	2.397E-02	.912
Attitude Toward External Controls	20	6.633	.332	.196
Source * Attitude	19	4.225	.222	.635
Error	196	50.769	.259.000	
Total	241	3290.748	.	

R Squared = .228 (Adjusted R Squared = .055)

7.8 Willingness to Try Online Purchasing

H6: The greater a consumer's trust in the online exchange process, the greater his willingness to try online purchasing.

The final hypothesis tested in this dissertation deals with the Willingness to Try Online Purchasing in relation to Trust in the Online Exchange Process and the covariates. This hypothesis was tested using regression analysis in SPSS. Results in Table 7.17 indicate that H6 is supported with a significant relationship between Trust in the Online Exchange process and Willingness to Try Online Shopping (t=2.668, sig.=.008). A significant amount of variance was also accounted for with an R Squared of .463 (Adjusted=.452). In addition, there are several other interesting findings.

As shown in the correlation matrix in Table 7.18, Trust in the Online Exchange Process, WWW Shopping Experience, Attitude Toward Computers, and Regulatory Effectiveness are all significantly related to Willingness to Try Online Shopping at the .01 level. Additionally, a significant relationship is indicated between Trust in the Online Exchange System and WWW Shopping Experience at the 0.05 level. These findings reinforce the regression analysis, and these relationships will be explored further in Chapter 8. In sum, H6 is strongly supported.

Table 7.18

Regression Coefficients for H6

Variable	Unstandardized Coefficients	Standard Error	Standardized Coefficients	t	Sig.
(Constant)	.853	.242		3.518	.001***
Regulatory Effectiveness	.212	.080	.189	2.668	.008**
WWW Shopping Experience	.185	.034	.302	5.438	.000***
Attitude Toward Computers	5.225E-02	.036	.080	1.457	.147
Direct Shopping Experience	-3.176E-02	.027	-.056	-1.162	.247
Trust in the Online Exchange Process	.384	.072	.376	5.317	.000***

Notes ** $p< .05$ R Squared = .463 (Adjusted R Squared = .452)

*** $p<.001$

Table 7.19

Correlation Matrix for H6

	WWW Shopping Experience	Attitude Toward Computers	Direct Shopping Experience	Willingness To Try Online Shopping	Regulatory Effectiveness	Trust In the Online Exchange Process
WWW Shopping Experience	1.000 . *241*	.479** .000 *241*	-.005 .935 *241*	.437** .000 *241*	.181** .005 *241*	.165* .002 *241*
Attitude Toward Computers	.479** .000 *241*	1.000 . *241*	-.021 .749 *241*	.236** .000 *241*	.026 .692 *241*	.015 .817 *241*
Direct Shopping Experience	-.005 .935 *241*	-0.21 .749 *241*	1.000 . *241*	-.039 .057 *241*	.011 .871 *241*	.047 .467 *241*
Willingness To Try Online Shopping	.437** .000 *241*	.236** .000 *241*	-.039 .545 *241*	1.000 . *241*	.521** .000 *241*	.563** .000 *241*
Regulatory Effectiveness	.181** .005 *241*	.026 .692 *241*	.011 .871 *241*	.521** .000 *241*	1.000 . *241*	.735** .000 *241*
Trust In The Online Exchange	.165* .010	.015 .817	.047 .467	.563** .000	.735** .000	1.000 .

Process	*241*	*241*	*241*	*241*	*241*	*241*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Number of observations (*n*) is in italics.

Conclusion

The results of the hypotheses testing indicated that consumers differentiate between regulations based on their type, source, and perceived effectiveness. Effective regulations serve to increase the consumer's trust in the online exchange system and favorably affect their willingness to use the Web as a vehicle for shopping. However, consumer attitudes toward the role of government in the regulatory process have a substantial amount of influence over what constitutes appropriate regulation. All of these issues must also be considered within the context of the characteristics of the particular sample that was used for this research. As is almost always the case in research, every answer generates additional questions, and the next (and final) chapter will focus on these issues.

CHAPTER 8: DISCUSSION OF THE RESULTS. LIMITATIONS OF THE STUDY AND DIRECTIONS FOR FUTURE RESEARCH

"A hard beginning maketh a good ending."
John Heywood

"Lately it occurs to me, what a long strange trip it's been."
R. Hunter, J. Garcia, R Weir and P. Lesh

Introduction

Often in a research project, every answer generates more questions. In this case, the results are mixed, but still offer a contribution to the systematic study of regulatory theory and behavior as well as generating a host of interesting questions about how consumers perceive the regulatory process. Having completed the study, the task now is to start answering the questions generated by these research findings, namely: "What does this information tell us (and not tell us)?" The final chapter in this dissertation focuses on the results, implications, and limitations of this research as well as possible directions for fixture research in this area. The original data analysis and hypotheses testing will be discussed first, and then the results from a post-hoc factor analysis will be addressed. As will be seen later the results of this factor analysis will have to be addressed before future research can continue.

8.1 The Effect of Type of Regulation on Perceived Regulatory Effectiveness

Hl hypothesized that Type of Regulation would be significantly related to Regulatory Effectiveness and that consumers would consider a Certification program to be the most effective Type of Regulation, followed by Registration, with Disclosure being perceived as the least effective Type of Regulation. Each Type of Regulation represented a different level of compliance for participating businesses with Certification being the highest level of compliance and Disclosure being the least demanding method. As hypothesized, the relationship between Type of Regulation and Regulatory

Effectiveness was found to be significant in both the ANOVA and ANCOVA analyses. In addition, subjects found Certification to be the most effective Type of Regulation and Disclosure to be the least effective with significant differences indicated between Certification and Disclosure.

These results suggest that consumers are sensitive to different regulatory mechanisms and that their value as signals will be tied to how consumers perceive those mechanisms in terms of their ability to perform their intended functions. From managerial and policy perspectives, it is important to note that the Type of Regulation most favored by the subjects was Certification, which had the most stringent compliance standard for participating businesses of the three Types. It also required the most active enforcement by a regulatory entity. Conversely, the least favored alternative was Disclosure which was more of a traditional "information" sort of mechanism (e.g. Garretson and Burton 2000; Nelson 1974; Abernathy and Franke 1998) requiring both the lowest standard of compliance for businesses and the least amount of affirmative action on the part of the regulatory entity.

These results imply that where privacy regulations are to be imposed, consumers may prefer more "active" regulatory and enforcement mechanisms to alternatives, which simply provide information with little in the way of enforcement. This becomes particularly interesting in light of the inability of TRUSTe and other private organizations to gain widespread public acceptance of their programs. It might prove beneficial for these organizations to alter their marketing and regulatory strategies to stress their compliance-monitoring and enforcement practices. However, this would also require that they have monitoring and enforcement practices that would be perceived as effective by consumers. Future research will be needed to develop a better understanding of what consumers perceive as sufficient in a given online situation and to determine whether these findings can be extended into areas of regulation other than online privacy.

8.2 The Effects of Source of Regulation on Perceived Regulatory Effectiveness

The second hypothesis (H2) was not supported. It had been expected that Source of Regulation would be significantly related to Regulatory Effectiveness. It was also expected that Governmental Regulation generally would be perceived as the most effective Source of Regulation and Private Regulation as the least. Neither of these hypothesized outcomes was observed. Source of Regulation was not significantly related to Regulatory Effectiveness in either the ANOVA or ANCOVA analyses. Similarly the order of preference for the different Sources in terms of Regulatory Effectiveness was expected to be, from most to least effective, Governmental, Quasi-Governmental, and Private. Instead, the marginal means of the three Sources were so closely clustered that there were no statistical differences between them at either the .05 or. 10 levels.

These results were unexpected, especially to the degree that no portion of the hypothesis was supported, and addressing this issue will be one of the primary focuses of future research extending from this dissertation. Several possible reasons for this finding (or the lack thereof) must be considered in framing the future research, including the idea that this proposition was simply incorrect. Although these results make sense from the perspective that Americans want some sort of privacy protection but are less certain about what it should be and who should be in charge (Westin 2001), the often-strong dialogue about the role of Government in American society seems to suggest that there should be differences in perceptions among different Sources of Regulation (think about issues such as gun control, abortion rights, etc) when they consider the issue important. Two possibilities come to mind, the first of which is that the subject topic of privacy is not an area where strong feelings have developed about what should be done to protect consumers. As discussed earlier, privacy has many of the characteristics of a credence good (Ford, Smith, and Swasy 1990) where it may be difficult for a consumer to determine when or where their privacy was actually violated. Although Americans do have strong opinions that privacy should be protected online (Westin 2001), it is possible that a consensus on how this is to be accomplished has yet to develop.

8.3 The Effects of Perceived Regulatory Effectiveness on Trust in the Online Exchange Process

H3 was one of the hypotheses that dealt most directly with the proposition that regulations can at as signals to consumers that will provide them with additional information. H3 predicted that Regulatory Effectiveness would be significantly related to Trust in the Online Exchange Process, and the results of the experiment strongly supported that hypothesis. The conclusion drawn from these results is that where a regulatory mechanism is perceived as effective it will make consumers more likely to Trust in the Online Exchange Process. The informational signal of an effective regulation acted as a trust-building mechanism for the subjects (Zucker 1986). This finding has important implications for managers and policy makers who may be in a position to provide regulatory signals to consumers. From the managerial perspective this challenges the notion that all regulation is bad and actually has positive implications for private regulatory systems if they can convince consumers that they will be effective in protecting privacy rights. It is worth noting that WWW Shopping Experience exhibited a significant role in the ANCOVA testing, indicating that regulations can act as signals and trust-producing mechanisms even for experienced web shoppers.

For policy makers, these results add credence to the idea that regulations can function as informational signals in and of themselves and fulfill additional informational roles. For both groups it signifies that attention should be paid to the perceived effectiveness of any regulatory regime designed to increase trust. For example, FDIC insurance promotes trust in the banking industry (lost as a result of the Great Depression) even though few consumers actually know the mechanics or specifics of the regulatory mechanism the insurance represents. That is because those consumers perceive it to be an effective means of reducing their risk and increasing the predictability of results in their interactions with their financial institutions. In promoting the growth of eCommerce putative regulators may need to consider not only what the regulation is designed to accomplish but also how to make the public aware of these goals in a manner that demonstrates the potential effectiveness of the regulation. This implies putting more emphasis on the behavioral aspects of regulation upon consumers as well as considering the legal goals and potential effects of a given regulation. For some regulations the focus may be more properly on the formal legal side of the analysis, but for others that deal with sensitive issues such as privacy, future research may be able to tell us when the behavioral side may actually be more important. Future extensions of this research should also address whether this phenomenon is generalizable to other regulatory domains and broader populations.

These findings also signal a significant opportunity for researchers in the behavioral sciences to increase their role in the regulatory process in governmental, quasi-governmental, and private capacities. Social and behavioral scientists are uniquely positioned to provide valuable contributions toward better understanding the regulatory process (e.g. Wilkie and Moore 1999) and how consumers perceive it. Commensurate with the idea of regulating to protect some public interest is the accompanying need to produce regulations that are both efficient and effective in achieving their goals. By understanding how consumers are affected by regulatory signals both of these goals can be promoted.

8.4 The Moderating Effects of Attitude Toward External Controls

Analysis of H4, H5, H6, and H7—which dealt with the moderating effects of Attitude Toward External Controls on the relationships between Regulatory Effectiveness and Type and Source of Regulation—raised some interesting issues. Hypotheses 4 and 5 predicted an interaction between Attitude Toward External Controls and Source of Regulation. They also hypothesized a preference (in terms of Regulatory Effectiveness) for the different Governmental, Quasi-Governmental and Private Sources of Regulation. The hypothesized interaction was not significant even at the more relaxed.10 level. The only modicum of support for this hypothesis was found in the fact that subjects with a negative Attitude Toward External Controls perceived Private Regulation to be the most effective Source of Regulation and subjects with a positive Attitude perceived Governmental Regulation to be the most effective. However, because these results were not statistically significant, this can only be seen as an indication of a possible underlying relationship. No aspects of the hypotheses were supported including the hypothesized second and third most effective Sources for subjects with either a positive or negative Attitude Toward External Controls.

This begs the question of whether the problem was in the hypothesis, the experimental design, the sample or some other area, especially in light of the fact that H2, which also dealt with Sources of Regulation, was not significant. If Source of Regulation is generally not going to be significantly related to Regulatory Effectiveness then it does not seem unreasonable that a moderator such as Attitude Toward External Controls wouldn't have much affect on that relationship. In others words, if H2 is wrong as hypothesized, then it is certainly possible that H4 is incorrect as well.

As was the case with Hl, which also dealt with the relationship between Type of Regulation and Regulatory Effectiveness, the results for H6 and H7 were significant in some aspects. H6 and H7 hypothesized an interaction between Attitude Toward External Controls and Type of Regulation. The hypothesized relationship was found to be significant in both the ANOVOA and ANCOVA analysis and in addition both Attitude and Type of Regulation were significant themselves. The importance of this finding is that a consumer's Attitude Toward External Controls may affect the relationship between Type of Regulation and Regulatory Effectiveness. However, further research will be needed to better understand how this translates into actual preferences for different regulatory mechanisms as can be seen by examining the marginal means in Table 7.14.

H6 and H7 also hypothesized the order of preference for different Types of Regulation in terms of perceived Regulatory Effectiveness depending on the existence of either a positive or negative Attitude Toward External Controls. For those with a positive Attitude it was hypothesized that Certification would be perceived as the most effective Type followed by Registration with Disclosure being perceived as the least effective Type of Regulation. For subjects with a negative Attitude, it was expected that Disclosure would be perceived as the most effective Type of Regulation, followed by Registration, and with Certification being perceived as the least effective Type. The actual results did not indicate any significant differences between the Types of Regulation for subjects with either a positive or negative Attitude Toward External Controls. This is an indication that while Attitude Toward External Controls does interact with Source of Regulation, additional work is needed to address determine whether or not consumers are distinguishing between the Types of Regulations and developing a preference.

Future research should be directed at trying to resolve these issues by examining limitations faced in this experiment as well as possible alternate explanations for the results but since these possible explanations seemed lacking a post-hoc factor analysis was performed that seems to provide indications of a wholly different set of limitations. These limitations will be discussed later in this chapter. However, to maintain continuity, we will first quickly discuss H8.

8.5 The Effects of Perceived Regulatory Effectiveness on Willingness To Make Online Purchases

H8 concerned the outcome variable in this research, Willingness to Try Online Purchasing. If the goal of increasing Regulatory Effectiveness is to promote Trust in the Online Exchange Process then the hoped for result of more Trust is more purchasing. Willingness to Try Online Purchasing was shown to be significantly related to Trust in the Online Exchange Process in H8 and this finding has important implications for both the study of regulatory processes and eCommerce.

While businesses frequently complain (and sometimes with good reason) that they are being stifled by regulation, these results show that regulations can also serve an additional function that actually promotes the goals of business, namely to have consumers actively participating in a marketplace. As suggested by Zucker (1986), in situations where consumers are faced with what they perceived to be increased risk and decreased predictability of results, trust-building mechanisms may allow them to proceed when they otherwise would refrain from making a transaction. The signal sent in this case is that an effective regulation is likely to mean decreased risk and increased predictability of results to the consumer, thus making them more likely to participate in the marketplace. In a situation such as online shopping, where few cues about the business may be available to the consumer and where the Online Exchange Process itself is devoid of most extrinsic cues, regulatory mechanisms may function as necessary trust-building mechanisms. The upshot is that most consumers want to feel relatively secure in their dealings and will look for signals that will increase this feeling. Thus some regulations may be beneficial for business and carry the additional message that by developing effective regulations on their own they may avoid having another entity impose them instead.

8.6 Post-Hoc Factor Analysis and Subsequent Limitations of the Current Research

As a condition of approving the final defense, the committee members requested that a posthoc factor analysis be performed on the items used in the experimental questionnaires. Accordingly, a factor analysis was performed on those items and the results have been reproduced in the table below. The analysis indicated a total of eight factors, in line with Kaiser's (1960) conservative view that factors with initial eigenvalues greater than one should be retained (Field 2000). There was fairly clean separation between the factors with only one item (TRUST3) loading onto more than one factor. The factor loadings for factors 4, 5, 6, and 7 corresponded with the questionnaire items in a fairly straightforward fashion. Items that loaded onto Factor 4 consisted of all of the items drawn from Meharbian's (1996) scale, which were used to measure the construct of Attitude Toward External Controls. Similarly, items representing the construct Attitude for Computers loaded cleanly onto Factor 5. The four items representing the construct Attitudes Toward Direct Shopping loaded onto Factors 6 and 7 with the two items addressing television-shopping loading onto Factor 7 and the two items addressing catalog-shopping loading onto Factor 6.

Issues are much less clear cut when examining Factors 1, 2, 3 and 8 with significant overlap being detected between the items used to measure Willingness to Try Online Purchasing, Regulatory Effectiveness, World-Wide Web Shopping Experience and Trust. Items loading onto Factor 1 consisted three Trust items and three Regulatory Effectiveness items. Factor 2 loadings included one item each from Willingness, Trust, and Regulatory Effectiveness. Items from Willingness to Try Online Shopping (two items), Trust (one item) and Regulatory Effectiveness (one item) also loaded onto Factor 3. Finally, with respect to Factor 8, it showed the two WWW Shopping items loaded onto this factor as well as one Trust item (which also loaded onto Factor 3) and one Regulatory Effectiveness item. Results are presented in Table 8.1 below.

Table 8.1 Web Shopping Experience of the Sample Population

Item	Variable	F 1	F2	F3	F4	F5	F6	F7	F8
I have purchased goods or services online.	W W WSHOP2 .696								
I have shopped for goods or services online.	W W W SHOP 1 .702								
I would consider using the WWW to shop at an online store that uses the WebCertificate stem.	WILL3.589								
It is unlikely that I would make a purchase from a merchant using the WebCertificate stem.	WILL2-.655								
I would consider purchasing from a merchant that uses the WebCertificate program.	WILL I.568								
I trust that merchants will keep their promises and commitments under the WebCertificate stem.	TRUST5 .715								
WebCertificate makes me feel safe.	TRUST4.45 1								
I would find it necessary	TRUST3								

to be cautious in this online shopping situation.	-.556 -.558								
I am doubtful of WebCertificate's intentions.	TRUST2 -.675								
Online shopping would be trustworth in this situation.	TRUST I .780								
I anticipate that my interests will be protected under the WebCertificate system.	EMS .598								
With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants.	EMS .806								
WebCertificate will be consistent in terms of their policies toward consumers.	EFF4C .723								
WebCertificate will be honest in dealing with consumers.	EFF3C .550								
I would depend on	EFF2C.473								

claims made by WebCertificate as reliable.									
WebCertificate regulation will help protect me when I am online.	EFF 1 .792								
I enjoy making purchases through catalogs.	DIRSHOP3 .873								
Looking at catalogs is a convenient way to shop.	DIRSHOP2 .842								
I have bought products through television shopping channels.	DIRSHOPI .803								

Item	Variable	F 1	F2	F3	F4	F5	F6	F7	F8
A fair society is not possible without strict and comprehensive government or industry controls.	ATTOUT4 .728								
Individual freedom and opportunity are greater when government or industry regulators are	ATTOUT3 -.796								

smaller and less able to intervene in social and economic areas.									
Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.	ATTOUT2 .722								
My ideal type o€ regulator would be small and only perform a very few essential functions.	ATTOUT 1 -.653								
I enjoy interacting with computers.	ATTCOMP 1 .816								
Computers make work more interesting.	ATTCOM2 .879								
I often watch infomercials on television.	DIRSHOP4 .851								

The items can also be recategorized by the factors in a more visible fashion as seen below:

Items that loaded onto Factor 1:

1) I trust that merchants will keep their promises and commitments under the WebCertificate system. MUM

2) WebCertificate makes me feel safe. MUM

3) I am doubtful of WebCertificate's intentions. MUM

4) I anticipate that my interests will be protected under the WebCertificate system. (EFFUSE)

5) WebCertificate will be honest in dealing with consumers. (EFFACE)

6) I would depend on claims made by WebCertificate as reliable. (EFFACE) Items that loaded onto Factor 2:

1) I would consider purchasing from a merchant that uses the WebCertificate program. (WILLI)

2) Online shopping would be trustworthy in this situation. (TRUST 1)

3) WebCertificate regulation will help protect me when I am online. LEFT

Items that loaded onto Factor 3:

1) I would consider using the WWW to shop at an online store that uses the WebCertificate system. (WED)

2) It is unlikely that I would make a purchase from a merchant using the WebCertificate system. WILL2

3) I would find it necessary to be cautious in this online shopping situation. (TRUST3)

4) WebCerfficate will be consistent in terms of their policies toward consumers. (EFF4C)

Items that loaded onto Factor 4:

1) Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other. (ATTOUT2)

2) A fair society is not possible without strict and comprehensive government or industry controls. (ATTOUT4)

3) Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas. (ATTOUT3)

4) My ideal type of regulator would be small and only perform a very few essential functions. (ATTOUT 1)

Items that loaded onto Factor 5:

l) I enjoy interacting with computers. (ATTCOMP2)

2) Computers make work more interesting. (ATTCOMP3)

Items that loaded onto Factor 6:

1) I enjoy making purchases through catalogs. (DIRSHOP3)

2) Looking at catalogs is a convenient way to shop. (DIRSHOP2)

Items that loaded onto Factor 7:

1) I have bought products through television shopping channels. (DIRSHOPI)

2) I often watch infornercials on television. (DIRSHOP4) Items that loaded onto Factor 8:

4) I have purchased goods or services online. (WWWSHOP2)

4) I have shopped for goods or services online. (WWWSHOPI)

5) I would find it necessary to be cautious in this online shopping situation. (TRUST3)

6) With WebCertificate, I will not find it necessary to be cautious when interacting with online merchants. (EFF5S)

8.7 Issues Raised by the Factor Analysis

The results of the post-hoc factor analysis serve to illuminate both the limitations of the current study and the opportunities for future research. In addressing the limitations, the post-hoc factor analysis indicates that some of the items were mis-specified with respect to the constructs they were intended to reflect. This will necessitate a full reanalysis of the data since hypotheses testing was previously conducted assuming a more precise mapping of the questionnaire items to the underlying constructs. As the situation now stands, many of the conclusions drawn from the earlier analysis must be reexamined and

reinterpreted. Until this task has been accomplished, conclusions based on the original analysis should be regarded as highly suspect at best, although not without hope.
The potential silver lining in this dark cloud is that the factor analysis identified eight significant factors that seem (at this juncture "seem" is probably the operative word) to closely track the seven underlying variables with of Regulatory Effectiveness, Trust in the Online Exchange Mechanism, Willingness to Try Online Purchasing, Attitude Toward Outside Controls, Attitude Toward Computers, WWW Shopping Experience and Direct Shopping Experience with one small divergence. As noted earlier, several of the factors perfectly matched items with variables, as was true in the case of Attitude Toward External Controls (Factor 4) and Attitude Toward Computers (Factor 5). In addition the items intended to correspond to Direct Shopping were reflected in the two Factors (6 and 7), which, respectively, contained the Direct Shopping Experience items relating to catalog shopping (Factor 6) and television shopping (Factor 7). An initial but very limited early reexamination of the factor analysis data seems to indicate that Factor 1 aligns with the construct of Trust in the Online Exchange Process, Factor 2 with Regulatory Effectiveness, and Factor 3 with Willingness to Try Online Purchasing. Factor 8 is somewhat more problematic but still appears to reflect WWW Shopping Experience. Thus it appears that it may ultimately be possible to remap the items to correctly reflect the underlying constructs and to retest the hypotheses.

That being said, the issues raised by the post-hoc factor analysis represent the most significant and critical limitation to the current study and these issues must be addressed and rectified before any programmatic extensions to this work can be made. The first step in the process would be to use the process suggested by Gerber and Anderson (1982) of having subjects match items with definitions of the underlying constructs to test their efficacy. The next step would be to check the consistency of the realigned items in terms of reliability by determining Chronbach's Alpha. If test subjects successfully match the realigned items (or at least a sufficient number of them to continue) to their intended constructs, then retesting of the hypotheses can proceed. An exploratory analysis of the data indicates that if the items can be successfully realigned with the constructs represented by the Factors, the resulting hypotheses tests may actually be stronger than the original results.

8.8 Future Research

Even though many decisions regarding future research will necessarily depend on the reanalysis of the data from this study, some directions for future research can be discerned. In light of the recent crises in such highly touted companies such as Enron, Global Crossing and Arthur Anderson, the pattern of deregulation that has been present in recent years is receiving new consideration. From these very public events the study of regulation in a variety of contexts has gained new impetus. Attention from the public, media and government has called into question the role of regulations designed to protect consumers. Consequently, marketing researchers have an opportunity to help determine the critical questions of when a regulation should be imposed, how it can balance the needs of the stakeholder groups and what form it should take. From a managerial perspective these findings will be important when trying to fashion a mechanism that will not only protect consumer interest's but one that will also resonate with what consumers desire in that mechanism. For example, if the public is generally hostile to the idea of the FTC creating a registration system for consumer privacy protection, then this may not be an advisable strategy if the goal is to increase consumer confidence in using the Internet and WWW. However, research of this type might also be used in such a situation to determine what sort of protections consumers would value and more importantly that they might feel that they could rely on in the online environment. Tailoring a regulation to address the expectations and desires of consumers as well as the substantive consumer protection issues could open the door for regulations that are developed more precisely and will be better utilized by consumers (Cook and Coupey, working paper). From the business perspective this process might also help to create regulations that are seen as less onerous because they are more narrowly designed for their purpose and would make consumers more comfortable.

Conclusion

Regulatory mechanisms can take a variety of forms and be promulgated by a variety of Sources. Within the boundaries of the regulatory matrix a broad array of possibilities exist for businesses and policy makers and this research provides a place to start examining the interactions between the regulatory mechanisms, the regulatory entities and the businesses and consumers that are affected by their existence. Regulations cannot be simply viewed as the relatively inert creations of lawyers and bureaucrats aiming to achieve particular results but must also be considered in terms of their psychological effects on the consuming public, business and other interested parties. This research suggests that taking the signal value of regulations into effect can provide diagnostic information to regulators in achieving their goals. Future research will hopefully answer the nagging questions about the role of Source of Regulation and the potential for mixed governmental and business regulatory partnerships but the findings in this dissertation provide some early insights into the additional roles and consequences of regulations and the development of regulatory theory in a marketing context.

NOTES

[1] For purposes of this dissertation and for reasons cited in this and succeeding chapters, the primary focus will be on consumer perceptions of qualities of the online exchange *process* rather than solely on qualities of goods.

[2] For purposes of discussion it is well worth noting that many of the warranties purchased by consumers are not necessarily manufacturer warranties, but third-party warranties.

[3] Alternatively, since Zucker (1986) indicated that more than one trust-building process (or type of trust) could be present in any relationship, the processes can also be considered as mechanisms contributing to the overall assessment of trust. The approach taken in this dissertation is that multiple mechanisms can be, and often are, used to create an environment of trust.

[4] Originally, a total of six manipulation check items, three Type of Regulation and three Source of Regulation, were used. After consideration, it was decided to drop this number to a total of four items in order to minimize confusion among the subjects. During pretesting, several subjects had indicated that they were bothered by the fact that they were answering so many questions (six) in the manipulation check section that were so similar in nature. The expressed tendency seemed to be to look for some kind of "trick" that would require an answer other than the obvious one. Thus four items, two Source of Regulation and two Type of Regulation items, were retained.

[5] The alpha coefficients listed are those from the first reliability tests, before any items were removed. Alpha levels for the items changed as items were removed until the final set of items was determined. The alpha levels for these final sets are found in the far left-hand column.

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APPENDIX A:

A SAMPLE OF THE MAJOR SYMBOLS OF ONLINE PRIVACY AND SECURITY PROTECTION

To obtain the *CPA WebTrust* Seal of assurance, (shown here, sample only) a site must meet all the *CPA WebTrust* Principles and Criteria. In addition, the site owner must (1) engage a CPA practitioner, who has been specially licensed by the AICPA to provide the *CPA WebTrust* service and (2) obtain an unqualified report from such practitioner.

APPENDIX B:

SAMPLE STIMULI USED BY RAO, QU, AND RUEKERT (1999)

Stimulus for High Vulnerability and High Observability Condition

Assume that you are in the market for a new TV set for your home. Because the purchase of a TV set is important to you, you would like to ensure that the set you buy is of good quality. In addition, because you live in an area where there are several high-voltage power lines, your reception tends to be good sometimes and not so good at other times. Therefore, if you could find a TV set that gave you good reception at all times, you would be very pleased.

The Calypso is a new TV set that has recently been introduced. It is available in various sizes and has many of the features available in other TV sets. Like its closest competitors, it has a way to control the color on the screen and also has a universal remote that can be used with all your electronic equipment. See the specification sheet on the next page for more information about this TV.

You go to your local electronics store to look at the Calypso. The brochure about the Calypso tells you that it is a joint collaboration with Advantage, an established electronics firm that makes many home electronic products including VCRs, camcorders, stereos, and clock radios. All these products carry the Advantage name. As a result of this collaboration, Calypso TV sets come equipped with a special patented electronic filter. This filter automatically lowers the volume when a commercial comes on. Because you dislike the high volume of commercials, this is an attractive feature for you.

Next to the brochure is a copy of the latest issue of *Consumer Reports* magazine, which is a magazine that does not accept any advertisements from companies and provides quality ratings for a large number of products and services ranging from cars to soap. This issue carries a report about the Calypso TV, and here is what it says:

> "Although there is not enough information available to accurately evaluate the quality of the Calypso TV, *the fact that it is a collaboration with Advantage should make consumers very comfortable with the claims of high quality*. Advantage is a brand name that is associated with many products, and if the Calypso product fails, consumers will definitely blame Advantage for the failure. *As a result, Advantage sales in their other product categories will suffer greatly*....The automatic volume control of commercials is a *very* attractive feature. Try it out when you visit a demonstration center."

You pick up a remote control and turn the Calypso TV set on to a program in progress, and in a few minutes a commercial break occurs. You can see the volume level on the screen, and you notice that the volume does not increase. You try this on another brand of TV set, and notice that the volume is much higher during a commercial. You can hear it, and you can also see it on the volume monitor on the screen. You look at the product brochure and find that there is a 30-day free trial period. So you have the set delivered and installed in your home free of charge. You use the set for 30 days and find that the set works well and all the features perform as you expected.

Relevant Manipulation for Low Vulnerability and Low Observability Condition

> "Although there is not enough information available to accurately evaluate the quality of the Calypso TV, *the fact that it is a collaboration with Advantage should make consumers very comfortable with the claims of high quality*. Advantage is a brand name that is associated with many products, and if the Calypso product fails, consumers will definitely blame Advantage for the failure. *As a result, Advantage sales in their other product categories will suffer greatly*....The automatic volume control of commercials is a *very* attractive feature. Try it out when you visit a demonstration center."

You look at the product brochure and find that the automatic volume control of commercials cannot be observed in the store. The brochure assures you that this feature will work fine when the TV set is installed in your home.

Note: In response to requests from subjects during pretest, a specification sheet with technical product information was also provided. This information was the same in all conditions.

APPENDIX C:

QUESTIONNAIRES ON THE EFFECTS OF REGULATION ON TRUST AND THE ONLINE EXCHANGE PROCESS

Sample Questionnaire and Key

Note:

Page formatting may not be exactly as that for the actual questionnaires.

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A CONSUMER SURVEY OF THE USE OF E-COMMERCE

We are trying to determine how people feel about shopping on the Internet and WWW and about the role of regulation and consumer protection on the Internet and WWW. Please provide answers to the questions posed and make any comments you wish at the end of this questionnaire. To make your job easier, a description of an online market and shopping environment has been provided. Please read this carefully before answering any related questions. All answers will be kept strictly **CONFIDENTIAL**. Your answers will be electronically coded and no name will be associated with any answer.

For the next section please read the following hypothetical description of a web shopping environment before answering the questions. **The description begins below and questions follow immediately afterward. It is important that you read the description very carefully.** For the purposes of the questions, please try to imagine yourself in the situation that is described.

Your Situation

Assume that you are in the market for some new computer equipment. Because this purchase is important, you are looking at several sources, but you are most interested in shopping online because of the opportunity for more choices and lower prices. Protecting your privacy is important to you and you want to feel confident in shopping online. Therefore, if you are sure that your personal information will be protected when you are shopping online you would be pleased.

WebDisclosure is a private organization that pledges to help protect the personal information of consumers. WebDisclosure companies agree to disclose their policies regarding the way that they use any personal information obtained from consumers. They also agree to follow any rulings of the WebDisclosure Board regarding consumer complaints, WebDisclosure guidelines, or policies.

You go on the Web to look for computer equipment and visit the web site of a company displaying the WebDisclosure logo and click on it to find out more. The web site tells you that WebDisclosure was organized by leading private companies doing business on the Internet and WWW. The WebDisclosure companies all agree to disclose their policies for handling and protecting consumer personal information. Consumers can complain about problems or failure to live up to these policies directly to the WebDisclosure Board, composed of member companies. Violators can have their WebDisclosure membership revoked and lose of the privilege of using the WebDisclosure logo.

Interested in finding out more about WebDisclosure, you search the Internet for more information and you find an article on the Consumer Reports webpage. Consumer Reports is a magazine that does not accept any advertisements from companies and provides quality ratings for a large number of products and services ranging from cars to soap. The online article provides the following report on the WebDisclosure system.

"Although there is not enough information available to accurately evaluate how well WebDisclosure protects consumers, the fact that leading companies have organized it should make consumers more comfortable with the idea of making purchases online. These companies have prestigious brand names, and if the personal information of consumers is not protected by WebDisclosure, consumers will definitely hold the members to blame for the failure. As a result, offline as well as online sales might suffer."

You return to the company web site and click the disclosure policy highlighted under the WebDisclosure logo. It explains the company's policies about what information they collect about consumers shopping their site and the circumstances where it might be provided to other merchants. It also details the security procedures used to protect a customer's personal information from unwelcome third parties and explains how to contact the WebDisclosure Board if conflicts arise.

WebDisclosure is a private consumer protection organization that uses a disclosure program to protect consumer information online.

Please Proceed to the Questions on the Next Page

Section 1: Imagine the Following Online Shopping Transaction.

In this section we are trying to determine whether we have provided the appropriate information. Please respond to the following questions without going back and rereading the scenario described above.

1) You were asked to read a scenario about consumer information protection on the Internet. Using only your memory, which of these answers best describes what companies would have to do.

_____Companies would go through a registration process.

_____Companies would disclose their consumer information policies.

_____Companies would go through a process of auditing and certification.

2) Based on the scenario you just read, please tell us from memory (without going back and looking at the scenario) something about the type of regulation described in the scenario.

_____The regulation uses an auditing and certification process.

_____The regulation uses a disclosure process.

_____The regulation uses a registration and monitoring process.

3) Having read this scenario, please tell us from memory (without going back and looking at the scenario) something about the source of the regulation described in the scenario.

_____Is the regulation administered and enforced by a private organization?

_____Is the regulation administered and enforced by a quasi-governmental (industry in cooperation with government) organization?

_____Is the regulation administered and enforced by a governmental organization?

4) Based on your reading of the scenario, how would you describe the consumer protection

mechanism that was used?

_____Protections monitored and enforced by a government organization.

_____Protections monitored and enforced by a private organization.

_____Protections monitored and enforced by a quasi-governmental (private industry in cooperation with government) organization.

For questions 1 - 14 below, please indicate whether these statements about the online shopping situation reflects your feelings.						
Section 2: About the Online Shopping Situation Described Above.	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**	**Don't Know**
1) WebDisclosure regulation will help to protect me when I am online.						
2) Online shopping would be trustworthy in this situation.						
3) I would consider purchasing from a merchant that						

uses the WebDisclosure system.						
4) I would depend on claims made by WebDisclosure as reliable.						
5) I am doubtful of WebDisclosure's intentions.						
6) WebDisclosure will be honest in dealing with consumers.						
7) I would find it necessary to be cautious in this online shopping situation.						
8) It is unlikely that I would make a purchase from a merchant using the WebDisclosure system.						
9) WebDisclosure will be consistent in terms of their policies toward consumers.						
10) WebDisclosure makes me feel safe.						
11) With WebDisclosure, I will not find it necessary to be cautious when interacting with online merchants.						
12) I anticipate that my interests will be protected under the WebDisclosure system.						
13) I would consider using the WWW to shop at an online store that uses the WebDisclosure system.						
14) I trust that merchants will keep their promises and commitments under the WebDisclosure system.						
For questions 1 - 4 below, please indicate whether these statements about online regulators and regulations reflect your feelings.						
Section 3: Regulations and Regulators	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**	**Don't Know**
1) My ideal type of regulator would be small and only perform a very few essential functions.						
2) Regulators are not active enough; we need more laws and regulatory programs to oversee and improve our lives and dealings with each other.						
3) Individual freedom and opportunity are greater when government or industry regulators are smaller and less able to intervene in social and economic areas.						
4) A fair society is not possible without strict and comprehensive government or industry controls.						
For questions 1 - 8 below, please indicate whether these statements about computers and direct shopping reflect your feelings.						

Section 4: WWW, Direct Shopping and Computers.	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**	**Don't Know**
1) I have shopped for goods or services online.						
2) I have bought products through television shopping channels.						
3) I enjoy interacting with computers.						
4) Looking at catalogs is a convenient way to shop.						
5) Computers make work more interesting.						
6) I enjoy making purchases through catalogs.						
7) I often watch infomercials on television.						
8) I have purchased goods or services online.						

Section 5: Demographics and Miscellaneous.

Note: Although questions number 1 through 6 are sensitive questions, the answers can help Internet developers to understand the needs of current Web users.

1.) What is your sex?

__ Male

__ Female

__ Rather not say

2.) How would you classify your ethnic background?

__ Caucasian/White

__ African American

__ American Indian

__ Asian/Pacific Islander

__ Hispanic

__ Rather not say

3.) What is your current marital status?

__ Divorced

__ Living with another

__ Married

__ Separated

__ Single

__ Widowed

__ Rather not say

4.) How many children under 16 years old live in your household?

__ None

__ 1

__ 2

__ 3

__ 4 or more

__ Rather not say

5.) What is your age?

__ 16 - 20 __ 21-25 __ 26-30 __ 31-35 __ 36-40 __ 41-45

__ 46 - 50 __ 51-55 __ 56-60 __ 61-65 __ over 65 __ Rather not say

6.) Please indicate your current **household** income.

__ Under $10,000

__ $10,000 - $19,999

__ $20,000 - $29,999

__ $30,000 - $39,999

__ $40,000 - $49,999

__ $50,000 - $74,999

__ $75,000 - $99,999

__ $100,000 - $150,000

__ Over $150,000

__ Rather not say

THANK YOU FOR YOU HELP! PLEASE RETURN YOUR QUESTIONNAIRE TO THE ADMINISTRATOR. AGAIN ALL ANSWERS ARE CONFIDENTIAL. For questions regarding this questionnaire, please call Don L. Cook, Department of Marketing, Georgia State University, Suite 1300 RCB, University Plaza, Atlanta, GA 30303-3083, (404) 651-4192 or mktdlc@gsu.edu

Additional Comments that you would like to make about this questionnaire can be listed on the back of this page.

APPENDIX D:

DEMOGRAPHIC PROFILE OF THE SAMPLE POPULATION

Sex

	Frequency	Percent
Male (1)	80	33.2
Female (2)	155	64.3
Rather not say	6	2.5
Total	241	100

Race

	Frequency	Percent
Caucasian/White (1)	213	88.4
African American (2)	10	4.1
American Indian (3)	4	1.7
Asian/Pacific Islander (4)	2	0.8
Hispanic (5)	3	1.2
Rather not say	9	3.8
Total	241	100

Marital Status

	Frequency	Percent
Divorced (1)	9	3.7
Living with Another (2)	1	0.4
Married (3)	205	85.1
Separated (4)	2	0.8
Single (5)	15	6.2
Widowed (6)	5	2.1
Rather not say	4	1.7
Total	241	100

Number of Children

	Frequency	Percent
0(0)	31	12.9
1 (1)	30	12.4
2 (2)	116	48.1

3 (3)	36	14.9
4 or more (4)	19	7.9
Rather not say	9	3.8
Totals	241	100

Age

	Frequency	Percent
16-20 (1)	4	1.7
21-25 (2)	1	0.4
26-30 (3)	5	2.1
31-35 (4)	31	12.9
36-40 (5)	63	26.1
41-45 (6)	70	29
46-50 (7)	27	11.2

51-55 (8)	23	9.5
56-60 (9)	7	2.9
61-65 (10)	1	0.4
Over 65 (11)	0	0
Rather not say	9	3.7
Totals	241	100

Household Income

	Frequency	Percent
Under $10,000 (1)	1	0.4
$10,000 - $19,999 (2)	1	0.4
$20,000 - $29,999 (3)	1	0.4
$30,000 - $39,999 (4)	7	2.9
$40,000 - $49,999 (5)	12	5
$50,000 - $74,999 (6)	24	10

$75,000 - $99,999 (7)	27	11.2
$100,000 - $150,000 (8)	41	17
Over $150,000 (9)	84	34.9
Rather not say	44	18.2
Totals	241	100

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Congressional Fellowship: July 1996 - December 1996 Office of the Hon. Congressman Frederick C. Boucher, a founding member of the Internet Caucus. Legislative Assistant with responsibilities including research and analysis of a variety of legal, economic development, Internet, and service problems.

Consultant, Dominion Biosciences, Blacksburg, Virginia, Summer 1995. Responsible for the collection of survey/interview information from subjects.

Attorney (1988-1993) in private practice located in Northwest Arkansas. Diverse practice including criminal, civil, corporate and appellate work. Extensive appellate work including ghostwriting and independent contracting with other attorneys. Appellate cases before the Arkansas Supreme Court and Court of Appeals, Eighth Circuit Court of Appeals, and U.S. Supreme Court. Final position: associate for the Lisle Law Firm, Springdale, Arkansas, an AV ranked civil trial firm.

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Ph.D., Marketing: Virginia Polytechnic Institute and State University, completion, May 2001. Minors: Psychology and Economics

M.B.A. University of Arkansas, Fayetteville, 1994

J.D. University of Arkansas School of Law, 1988

B.S.B.A., Personnel Mgmt. University of Arkansas, Fayetteville, 1985

DISSERTATION

"Governance Mechanisms as a Means of Increasing Consumer Trust in Online Exchanges: A Signaling Perspective." Many consumers seem to be uncomfortable or unwilling in making online transactions. This lack of trust stems in part from the online exchange process itself where consumers are deprived of many traditional cues that they would use to evaluate this process. This research focuses on consumer perceptions of regulatory governance in online exchanges and how signals of governance might act to increase consumer trust in online transactions. Economic signaling literature is used to build a psychological model of the ways in which consumers may react to the presence or absence of different types of governmental, quasi-governmental and private regulations as signals of risk reduction and predictability of results. An experimental methodology is used to examine the effects of different types of structures on consumer perceptions and to provide direction for both public policy makers as well as online businesses and private regulatory entities. Targeted for the *Journal of Marketing*.
Dissertation Chair: Dr. Joe Sirgy, Marketing.
Committee Members: Dr. Reza Barkhi, Accounting
Dr. James R. Brown, Marketing
Prof. Janine Hiller, JD, Finance, Insurance and Business Law
Dr. Julie Ozanne, Marketing

RESEARCH AND PUBLICATIONS

Research Interests
Principal interests include consumer behavior, business-to-business, decision making, regulatory, public policy, and legal issues relating to the development of marketing within interactive media.

Journal Publications
Langenderfer, Jeff and Don Lloyd Cook, "A&M Music et al. v. Napster: "The Shot Heard 'Round the World" or "Not With a Bang But a Whimper?" This paper reviews the litigation between the recording industry and the popular Internet file-swapping service Napster and the implications for the music industry and

copyright in online digital environments. Accepted at the *Journal of Public Policy and Marketing.*
Langendgerfer, Jeff and Don Lloyd Cook (forthcoming), "A Review of Privacy Law in the Online Age: Issues for Marketing, Advertising and Public Policy," This piece is designed to review the evolution of privacy law as it affects marketers and advertisers and to consider the implications of Internet marketing and advertising practices on privacy policy. Accepted for publication at the *Journal of Business Research*.
Littlefield, James, Yequing Bao, Don Lloyd Cook (2000), "Internet Real Estate Information: Are Home Purchasers Paying Attention to It," *Journal of Consumer Marketing*, 17 (7), 575-590.
Cook, Don Lloyd and Eloise Coupey (1998), "Consumer Behavior and Regulatory Dilemmas in Electronic Marketing: Issues and Concerns for Developing Regulation of Consumer Information on the World Wide Web," *Journal of Business Research,* 41 (March) 3, 231-238.
Cook, Don Lloyd, (1998) "Earthquakes and Aftershocks: Implications for Marketers and Advertisers in *Reno vs. ACLU* and the Litigation of the Communications Decency Act." *Journal of Public Policy and Marketing*, 17 (Spring) 1, 116-123.
Hiller, Janine and Don Lloyd Cook, (1998) "From Clipper Ships to Clipper Chips: The Evolution of Payment Systems for Electronic Commerce." *Journal of Law and Commerce,* 17 (Spring), 53-97.

Book Cases
Cook, Don Lloyd (forthcoming), "Outpost.com - Trying to Beat the Odds: Customer Satisfaction as a Path to Profitability," in Steve R. Elliot (ed.), *Electronic Commerce: B2C Strategies and Models*, John Wiley and Sons, Sussex UK.
Cook, Don Lloyd (forthcoming), "UPS Returns on the Web: Many Happy Returns from the Big Brown Machine," in Steve R. Elliot (ed.), *Electronic Commerce: B2C Strategies and Models*, John Wiley and Sons, Sussex UK.

Book Reviews
Cook, Don Lloyd, (book review, 1997), "The Economic Analysis of Mergers by Malcolm B. Coate and A.E. Rodriguez," *Journal of Public Policy and Marketing*, 16 (Fall) 2, 353-356.
Cook, Don Lloyd (book review, 1998), *Protecting Your Company Against Competitive Intelligence*, by John J. McGonagle and Caroly M. Vella. Review for the *Journal of Business to Business Marketing,* 5 (3), 100-102.
Cook, Don Lloyd (book review, 2000), *Regulation and Consumer Protection: Politics, Bureaucracy and Economics, Third Edition*, eds., Kenneth J. Meier, E. Thomas Garman and Lael R. Keiser, Dame Publications, Forthcoming in the *Journal of Consumer Affairs*.

Refereed Conferences

Langenderfer, Jeff and Don Lloyd Cook (2001), "Copyright Policies and Issues Raised by A&M Music v. Napster," forthcoming in Charles R. Taylor and Ronald Paul Hill (eds.), Proceedings of the Marketing and Public Policy Conference, Washington, DC: Villanova University and Portland State University. (Winner of the Best Paper Award)

Cook, Don Lloyd (1995) "The Beginnings of Regulation: Issues of Accessibility, Privacy, and Security on the Information Superhighway," in Pam Scholder Ellen and Patrick Kaufmann (eds.), *Proceedings of the Marketing and Public Policy Conference*, Atlanta, GA: Georgia State University, Vol. 5, 49-62.

Cook, Don Lloyd and Eloise Coupey (1995) "The Marlboro Man in Cyberspace: Legal, Advertising, Ethical and Regulatory Dilemmas Along the Information Superhighway," in Ruby Roy Dholakia and David Fortin (eds.) *COTIM-95 (Communications Technology in Marketing 95) Proceedings*, Kingston, RI: University of Rhode Island.

Cook, Don Lloyd and Ron Hess (1995) "Security: The Last Barrier to Interactive Commerce?" in Ruby Roy Dholakia and David Fortin (eds.) *COTIM-95 (Communications Technology in Marketing 95) Proceedings*, Kingston, RI: University of Rhode Island.

Working Papers

Cook, Don Lloyd, Eloise Coupey and Norma A. Mendoza, "A Framework for the Evaluation and Promulgation of Advertising Regulation for the Internet and World-Wide Web."

Recent actions by the FTC and other federal agencies indicate that regulation of advertising on the Internet and World-Wide Web is an unavoidable issue. Prior research from Campbell, Wilkie, Bettman and others has stressed the contributions that consumer behavior and information processing research can make in assisting regulators and policy makers. This paper examines the legal, marketing and economic issues associated with the regulation of advertising on the Internet and World-Wide Web and develops a model to generate research in the differences between interactive and traditional media and to provide assistance to regulators and policy makers in developing new regulation or in modifying existing regulation to fit the needs of this emerging media. Targeted for the *Journal of Marketing*.

Cook, Don Lloyd, "Marketing, Advertising, Cognitive Science, and the Growth of Interactive Media: A Proposal for Research on Recall and Recognition in the New and Traditional Media."

Individuals react differently to different communications modalities in terms of comprehension, specifically in terms of recall and recognition. This project is intended to study the effects of memory when receiving information from different communications media. A literature review and a basic plan of preliminary research have been completed. Targeted for the *Journal of Consumer Research* or the *Journal of Interactive Marketing*.

Cook, Don Lloyd, and Anita Sigler, "Consumer Rationality and the Economic Psychology of Payment Systems."

This paper examines payments systems from the perspective of economic psychology and addresses the reason why use consumer use of payment systems has not corresponded with traditional economic utility theories. Survey research will be used to determine the reasons that people choose particular payment systems which are apparently not in their best economic interests to use. Targeted for the *Journal of Economic Psychology*.

Coupey, Eloise and Don Lloyd Cook, "Internet Pricing and Intertemporal Choice: A Preliminary Examination of How Pricing Issues Could Be
Used to Frame a Regulatory Dilemma."

This paper examines whether traditional consumer models of expected discounts on purchases with delayed gratification apply in an Internet and WWW contexts. Experimental research will be used to test a variety of pricing structures over different time delays in order fulfillment. Preliminary data has been collected and analyzed. Targeted for the *Journal of Consumer Research.*

Work in Progress

Lothia, Ritu, Don Lloyd Cook and James Boles**,** *"*An Examination of Trust Production in Business-to-Business Relationships over the Internet and WWW: A Multi-Method Approach***."***

> The Internet and WWW present intriguing new issues for how trust is established in B2B relationships, particularly where the parties have little or no prior experience with each other. This research examines different mechanisms that might serve to increase trust between the parties in an online exchange relationship. Survey methodology will be used to determine the types of mechanisms which might be favored by businesses and an experimental methodology will be used to further test the strength of these different mechanisms. Data to be collected from business professionals in purchasing management roles. Targeted for the *Journal of Marketing***.**

Mendoza, Norma, Dan Fisher, Don Lloyd Cook and Jennifer Christie, "Internet Distribution of Copyrighted Digital Content: Consumer Perceptions, Ethical Issues and the Viability of Subscription Models

Napster, Gnutella, Freenet and other WWW services that let consumers obtain free, albeit copyrighted, materials such as songs in MP3 format and movies in DVD format raise questions about the perception of consumers regarding ownership and the existence of an obligation to pay. Qualitative and experimental methodologies will be used to examine consumer perceptions of intellectual property in digital formats and how consumer's reconcile their perceptions of digital intellectual property with more traditional modalities. Targeted for the *Journal of Consumer Research*.

Cook, Don Lloyd, "A Proposition for the Federal Preemption of Marketing and Advertising Regulation of the Internet and World-Wide Web."

The evolution WWW as borderless markets has raised problems for electronic merchants including issues of taxation, consumer protection laws, restrictions on the sale of goods, and even criminal sanctions that differ between states. This paper focuses on and extends a 1989 recommendation by the American Bar

Association that the federal government should take sole jurisdiction and applies Leflar's (1983) choice of law framework as the basis for a practical and theoretically supported model for federal preemption of jurisdiction.
Cook, Don Lloyd and Constance Porter, "God, Man and the Internet in Loudon County, Virginia and Elsewhere: Implications of Emerging Global Patterns of Internet and WWW Censorship."
As the Internet and WWW grow, attempts to control content have increased from the use of blocking software in a Virginia library to a completely government-filtered system being built in China with the assistance of AT&T. This paper examines the increase in censorship in this new media and seeks consumer information, preferably from multiple constituencies, regarding expectations of the need for governmental and private censorship and its perceived consequences. Targeted for the *Journal of Public Policy and Marketing*.
Cook, Don Lloyd and John J. O'Malley Jr. (1998), "Society and the Digital Divide: What Happens to the People Who Miss the Information Revolution?"
The increasing emphasis on the Internet and WWW for everything from providing community and government information to PC banking raises questions about the members of our society who do not or cannot participate in the Information Revolution. Targeted for the *Journal of Macromarketing*.

Conference Participation

Langenderfer, Jeff and Don Lloyd Cook (2000), "Privacy in America: Lost Among the Statutes?" Special Session paper at the Public Policy and Marketing Conference, Washington, DC, June 2000.
Fontenot, Renee and Don Lloyd Cook (1999), "Changes in Channel Relationships: A Signaling Perspective," Special Session paper at the Society of Marketing Advancement Winter Conference October 1999.
Cook, Don Lloyd and Renee J. Fontenot (1999), "Legal and Ethical Dimensions of Electronic Commerce," Special Session paper at the Decisions Sciences Institute Conference, November 1999.
Cook, Don Lloyd and Norma Mendoza (1999), "A Framework for the Evaluation and Promulgation of Advertising on the Internet and World-Wide Web." Special Session paper at the Public Policy and Marketing Conference, May 1999.

Cook, Don Lloyd and John J. O'Malley Jr. (1998), "Society and the Digital Divide: What Happens to the People Who Miss the Information Revolution?" Special Session paper for the 1998 Winter *ISQOLS* conference in Williamsburg, Virginia.

Klein, Lisa and Don Lloyd Cook (1996) "Where's the Information? An Analysis of Advertising Content on the World-Wide Web," in Advertising Effectiveness on the World-Wide Web, Special Session, in Cornelia Pechmann and S. Ratneshwar (eds.) *Society for Consumer Psychology 1997 Winter Conference Proceedings*, St. Petersburg, FL: Society for Consumer Psychology, 73-77.

Invited Presentations
Cook, Don Lloyd, "Where have all the Dot.Coms Gone? Perspectives on

B2C eMarketing," Presented for the Institute for International Business at Georgia State University to visiting delegation from the Sorbonne, September 30, 2000.

Cook, Don Lloyd, "Electronic Commerce and the B2C Marketspace." Presented as part of the annual Retailing Seminar, Georgia State University,

Cook, Don Lloyd, "Marketing and Electronic Commerce: Perspectives and a Research Agenda." Presented to the Marketing Doctoral Colloquium at Georgia State University, April 10, 2000.

Cook, Don Lloyd, "Electronic Commerce and the New Economy," Presented for the Continuing Professional Education Seminar hosted by Beta Alpha Psi, the School of Professional Accountancy and Louisiana Tech University, December 3, 1999.

Session Chair
"Doing Good While Doing More. An Examination of the Challenges Facing Today's Business Organizations," Marketing and Society Track, *American Marketing Association Summer 2000 Marketing Educator' Conference*

"To Regulate or Not to Regulate: Advertising on the Internet and the World-Wide Web." Co-Chaired with Norma Mendoza. 1999 Marketing and Public Policy Conference.

"The Academic Job Market for New Ph.D.'s: Observations, Facts, Myths, and an Interactive Discussion." Doctoral Student Special Interest Group Session, *American Marketing Association Winter 1999 Marketing Educator's Conference.*

"What's It Like on the Interview Circuit? A View from the Hiring Faculty."Doctoral Student Special Interest Group Session, *American Marketing Association Winter 1998 Marketing Educator's Conference.*

Discussant
Closing the Digital Divide: A Roundtable Discussion and a Debate of the Issues, 2001 Public Policy and Marketing Conference, Washington, DC.

The Internet and Public Policy, 2001 Public Policy and Marketing Conference, Washington, DC.

Doing Good While Doing More. An Examination of the Challenges Facing Today's Business Organizations, Marketing and Society Track, *American Marketing Association Summer 2000 Marketing Educator' Conference.*

Legal and Ethical Issues, Marketing and Society Track, *American Marketing Association Winter 1997 Marketing Educator's Conference***.**

Challenges in Managing Ethical Decision Making, Marketing and Society Track, *American Marketing Association Winter 1997 Marketing Educator's Conference.*
A Strategic Marketing Focus for the Future, Special Track Sponsored by the Doctoral SIG, *American Marketing Association Summer 1997 Marketing Educator' Conference*.

TEACHING ACTIVITY AND INTERESTS

Teaching Interests
Marketing Communications, Consumer Behavior, Interactive Marketing, Marketing and Internet Law, Marketing Management, Public Policy in Marketing.

Teaching Experience
Assistant Professor, Georgia State University**,** Business-to-Consumer Electronic Marketing, Fall Minimester, Global eManagement (GEM) EMBA program.
Assistant Professor, Georgia State University, MBA Marketing Management, Spring Semester (two sections).
Assistant Professor, Louisiana Tech University**,** Principles of Marketing, Fall Quarter 3.9/4.0
Assistant Professor, Louisiana Tech University, Consumer Behavior, Winter Quarter, 3.8/4.0
Instructor at Virginia Tech, Internet, Electronic Commerce, and Online Law, Spring 1998 (This course was developed and taught in cooperation with Prof. Janine Hiller) 4.22/5.00.
Instructor at Virginia Tech, Marketing Management, Summer 1997, 4.32/5.00.
Instructor at Virginia Tech, Marketing Communications, Summer 1998, 4.53/5.00
LEXIS/NEXIS Instructor, University of Arkansas Library, January 1994 to August 1994
Lecturer, SBDC Seminars, University of Arkansas, Fayetteville, 1991-1993.
Instructor, Stanley Kaplan LSAT Review Course, Fayetteville, Arkansas 1992.

PROFESSIONAL ACTIVITIES

Professional Marketing Affiliations.
Academy of Marketing Science
American Council on Consumer Interests
American Marketing Association
-Doctoral Student Special Interest Group
-Marketing and Society Special Interest Group
-Technology and Marketing Special Interest Group
Association for Consumer Research
Decision Sciences Institute
Direct Marketing Institute

Society for Consumer Psychology
Society for Marketing Advances
Technology Alliance of Georgia
Professional Legal Affiliations
American Bar Association
-Communications Law Forum
-Law of Science and Technology Section
-Electronic Commerce Payments Section
Georgia Electronic Commerce Association
-Member, E-Taxation Working Group
Member of the Bar
-State of Arkansas (1989)
-U.S. District Court for the Eastern and Western Districts of Arkansas (1989)
-U.S. District Court for the Northern District of Oklahoma (1989)
-U.S. Circuit Court of Appeals for the Eighth Circuit (1990)
-U.S. Supreme Court (1992)
Awards and Activities
Arkansas Volunteer Lawyers for the Elderly, 1989-1993.
Sigma Iota Epsilon, Honorary Fraternity for Excellence in Management, 1995.
Beta Gamma Sigma 1996.
Virginia Tech Congressional Fellowship, 1996.
AMA Doctoral Consortium Fellow, 1998.
Marketing and Public Policy Consortium Fellow, 1999.
Winner of Best Paper Award (with Jeff Langenderfer), 2001 Public Policy and Marketing
Conference.
AMA 2001 Faculty Consortium on Electronic Commerce.
Who's Who in America 2002.

Professional Service

Member, Pennybaker Chair in Electronic and Direct Marketing, Search Committee, Georgia State University.

Member, Technology Policy Committee, College of Business and Administration, Louisiana Tech University.

Member, Undergraduate Assessment Committee, College of Business and Administration, Louisiana Tech University

Member, Accreditation Review Committee, College of Business and Administration,

Louisiana Tech University

Ad Hoc Reviewer, *Information Systems Research*, special issue on E-Commerce Metrics, (2001).

Ad Hoc Reviewer, *Marketing Management* (2000).

Ad Hoc Reviewer, *Journal of Public Policy and Marketing* (1998, 1999, 2000, 2001)

Ad Hoc Reviewer, *American Business Law Journal* Special Issue on Marketing Law (1998).

Reviewer, E-Business in a Networked Environment Track, 2001 Winter AMA Marketing Educators' Conference

Reviewer, Marketing and Society SIG Track, 2000 Summer AMA Marketing Educators' Conference

Reviewer, 2001 Public Policy and Marketing Conference (2001)

Reviewer, 2000 Public Policy and Marketing Conference (1999)

Reviewer, 1999 Public Policy and Marketing Conference (1998)

Reviewer, COTIM 99 Conference (1999)

Reviewer, Marketing and Public Policy Track, AMA Winter 1997 Marketing Conference.

WebMaster, American Marketing Association Marketing and Society Special Interest Group, 2000-2002

Board Member, American Marketing Association Marketing and Society Special Interest Group, 1997-1999.

Electronic Payments Committee, American Bar Association, 1998-1999

President Emeritus, American Marketing Association Doctoral Student Special Interest Group, 1998-1999

President, American Marketing Association Doctoral Student Special Interest Group, 1997-1998.

Vice-President, American Marketing Association Doctoral Student Special Interest Group, 1996-1997.

REFERENCES

Available on Request.