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## **Abstract**

Online trust is growing in importance. Consumers and businesses, feeling the pressure of economic downturn and terrorism, increasingly look to buy from and do business with the most trusted Web sites. Companies' perception of customer trust has steadily evolved from being a construct involving security and privacy issues to a multidimensional, complex construct that includes credibility, emotional comfort and quality. Further, trust online spans the end-to-end aspects of e-business rather than being just based on the electronic storefront. Based on a review of selected studies, we propose a stakeholder theory of trust, articulate a broad conceptual framework of online trust including its underlying elements, antecedents, and consequences, and propose some promising future research avenues in online trust.

**Keywords :** *E-Commerce, E-business, Trust, Privacy, Security, Relationship management*

## **Introduction**

Online trust is growing in importance in both business-to-business (B2B) and business-to-consumer (B2C) e-commerce. A Forrester survey in 2000 found that 51% of companies would not trade with parties they do not trust over the Web. Lack of trust is one of the greatest barriers inhibiting online trade between buyers and sellers who are unfamiliar with one another (Jupiter Consumer Survey Report: Retail 2001). Consumers, feeling the pressure of economic downturn and terrorism, bought mostly from the most trusted sites during the 2001 holiday season (*BusinessWeek* 2001). The importance of online trust has also gone up over the recent past as customers now have more options and information on the Web, making it critical for firms to earn and retain the trust of their current or potential customers. Firms can no longer afford to exploit market inefficiency and uninformed customers. Therefore, understanding how online trust is created and maintained can lead to improved Web sites, sales revenues and profitability.

Companies' view of online trust has evolved over time. When the first Web sites were created, the companies that created them viewed online trust as a construct that dealt with Web site security---the issue of whether a user can feel safe to give his/her credit card and other financial details on the company's Web site. Subsequently, companies' perception of online trust started to include privacy issues---the issue of how comfortable users felt about giving personal information. Today, trust has become much larger than security and privacy on the Web. It is a multidimensional, complex construct that has important antecedents and consequences. Further, trust online spans the end-to-end aspects of e-business than being just based on the electronic storefront.

What exactly is online trust? What is the role of online trust in e-business strategy? How is online trust different from offline trust? How is online trust different for different stakeholders of a firm? What are the underlying elements of online trust? What are the antecedents of online trust? What are the consequences of online trust? How can companies build and maintain trust online? What are some promising areas for future research on online trust? In this paper, we address these questions. We review selected studies, propose a stakeholder perspective of online trust, articulate a broad conceptual framework of online trust including its underlying elements, antecedents and consequences, and propose some promising research avenues in the area of online trust.

### **Online Trust, Offline Trust and e-Business Strategy**

In simple terms, trust can be defined as the belief by one party about another party that the other party will behave in a predictable manner (Luhmann 1979). Two important elements of trust by a focal party about the other party are: (1) the perception of risk and vulnerability by the focal party in dealing with the other party and (2) the expectation that the other party will behave in the interest of the focal party (Rousseau et al. 1998). Trust has been extensively studied in communication, computer science, information systems, management, marketing, philosophy, psychology, and political science since the 1950's. Although each field has its own definition(s), they all have contributed to a better understanding of trust in general. Because our focus is online trust and its business implications for managers, we subsequently review the relevant trust studies in the areas of management, marketing, information systems and e-business and relate them to our focal issues.

e-Business strategy is about using the electronic medium (mainly the Internet) to rearchitect, redesign, reposition, and remarket the firm for competitive advantage in the digital environment. To this end, online trust may be a critical component of a firm's e-business strategy (Urban, Sultan and Qualls 2000). How does online trust influence a firm's e-business strategy? How does it affect its performance? The answers to these questions have not been adequately explored by prior research.

Two types of trust exist: (1) offline trust that involves the offline activities of the firm and its relationships with its customers and other stakeholders and (2) online trust that involves the firm's business activities in the electronic medium, and in particular, its Web site. Although online trust is similar to offline trust in many ways, there are some important distinctions. In offline trust, the object of trust is typically a human or an entity (organization). In online trust, typically, the technology (mainly the Internet) itself is a proper object of trust (Marcella 1999). In a sense, a firm's Web site is its salesperson that needs to build trust with her/his customers (Jarvenpaa et al. 1999). There is, however, some degree of overlap or transfer of trust between the online and offline environments. The areas of overlap, however, have not been examined in detail by prior research.

With the emergence of multiple touch point or multi channel marketing, consistency in online and offline trust and in trust across the multiple touch points is becoming important. For example, customers expect all touch points or channels (e.g., Web, phone, mail, kiosk, email, physical store) to provide accurate and unbiased information, easy navigation (Web site and store layout), and consistent touch (colors, people, personas). Inconsistency among different channels could be a trust buster. For example, if trust on the Web site alone is high, but if the firm is perceived as having

pushy sales people or hard-selling telemarketers, or if the channels do not offer the same information, then online trust might be eroded in the long run.

### **A Stakeholder Perspective of Online Trust**

Online trust and its relationship with its antecedents and consequences can be viewed from the perspectives of multiple stakeholders such as customers, employees, suppliers, distributors, partners, stockholders, and regulators (see Figure 1). Stakeholder theory has attracted considerable attention in recent years (Donaldson and Preston 1995). The theory focuses on managerial decision making in the context of the processes and outcomes of a company's relationships with multiple stakeholder groups that affect and are affected by its decisions (Jones and Wicks 1999). Relationship with each stakeholder group has intrinsic value and no set of interests is assumed to dominate the others.

< Figure 1 about here >

Different stakeholders may have different views and requirements of online trust (see Table 1 for a summary of the orientation of different stakeholders toward online trust). From a customer's viewpoint, a company's Web site may need to be trustworthy for doing business and getting reliable customer information and service. From a supplier's perspective, the key requirements may be efficiency, preservation of confidentiality and preferential access to buyer information. From a distributor's perspective, the central online trust requirement could be channel complementarity. From a stockholder's point of view, trust on a firm's Web site might be related to the accuracy and timeliness of information on firm strategy and performance. From a regulator's standpoint, a trustworthy Web site may well be one that offers transparency with respect to its compliance of regulations. In addition, many of these perspectives may depend on

offline relationships with the stakeholders. For example, a channel member's perception of online trust for a firm may be contingent on the balance of power between the firm and the channel member.

< Table 1 about here >

A key issue in stakeholder theory is economic efficiency (Freeman 1994). Economic efficiency in this context refers to the ability of the firm to manage the interests of its multiple stakeholders. In the context of online trust, because of the divergence of interests of some of the stakeholders, the different stakeholder perspectives cannot be easily aligned for economic efficiency of the firm. Building and maintaining Web sites with high levels of trust with different stakeholders may call for a delicate balancing of the interests of these stakeholders.

An issue related to the stakeholder perspective of online trust is the role of alliances and partnerships in online trust (partner's view of online trust). Online trust can be impacted by online partnerships just as offline trust can be. Conceptually, online trust for one party may increase, decrease or remain the same after a strategic alliance with another party. Consider, for example, the online alliance between AOL and Autoweb, an online automobile selection service. Because AOL is the leading online service provider in the U.S., it enjoys a high degree of trust among online service users and visitors to the AOL Web site. By being the preferred auto selection service on AOL, Autoweb stands to gain a higher level of trust from its stakeholders than when it is not linked to AOL. Autoweb is the second largest online auto selection service (measured in terms of automobiles bought through online services) and thus enjoys a high degree of trust. It is likely that AOL's trust with Autoweb online alliance is somewhat higher than it is



without the alliance. Although online trust for both AOL and Autoweb may increase as a result of the alliance, the extent of changes in online trust for AOL and Autoweb and in general, the direction and magnitude of changes in online trust as a result of online alliances, is an empirical question.

### **A Broad Conceptual Framework of Online Trust**

We develop a broad conceptual framework of trust, its antecedents and its consequences based on past research. Because our focus is online trust and its business implications for managers, we review the relevant trust studies in the management and marketing, information systems, and e-business literatures, although many of them relate to offline trust. In reviewing these studies, we focus on the importance of trust, the definition or elements of trust, its antecedents and its consequences.

#### **Management Literature**

In the management literature, trust is considered important because it is a good predictor of satisfaction (Driscoll 1978), it reduces uncertainty (Mayer, Davis and Schoorman 1995), it is a form of organization control (Creed and Miles 1996), and it is a transaction cost reduction mechanism (Wicks, Berman, and Jones 1999). Trust has been defined in various terms ranging from “the willingness to be vulnerable to the actions of another party” (Mayer et al. 1995) to “the probability one attaches to cooperative behavior by other parties” (Hwang and Burgers 1997). Trust is important, in particular, in the online environment because implementation of a computer mediated technology such as the Internet can impact trust in organizations (Zuboff 1982) and trust is relevant in virtual organizations (Handy 1995).

Much of the work on trust in the management literature relates to trust within and across organizations. Although they apply to trust from the perspectives of employees and organizational entities, they are relevant for customer perspective of online trust as well. In the online context, the definitions in the literature are consistent with customer expectations of the predictability of the firm in offering expected service on the Internet, and the potential consequences of trust on satisfaction and uncertainty reduction are also equally relevant.

### Marketing Literature

The marketing literature has focused on trust primarily in the relationship marketing context because trust has been perceived to be important to a firm's relationship marketing strategy (Doney and Cannon 1997; Dwyer, Schurr and Oh 1987; Ganesan 1994; Kumar 1996; Morgan and Hunt 1994). A frequently used definition is "willingness to rely on an exchange partner in whom one has confidence" (Moorman, Deshpande and Zaltman 1993). Trust can be viewed as both a belief in the trustworthiness of a partner and a behavioral intention to rely on a partner in a situation of vulnerability. Credibility and benevolence are the underlying dimensions of trust (Doney and Cannon 1997; Ganesan 1994; Ganesan and Hess 1997). Credibility refers to the buyer's belief in the seller's expertise to do the job effectively, while benevolence is based on the buyer's belief in the positive intention of the seller (Ganesan 1994). Trust is multidimensional involving two distinct cognitions relating to provider competence and benevolence (Singh and Sirdeshmukh 2000).

The antecedents of a buyer's trust in a seller include the seller's reputation for reliable, consistent and fair behavior (Ganesan 1994), relationship-specific investments

by the seller, the seller's size (Doney and Cannon 1997), the buyer's experience with the seller (Anderson and Weitz 1989; Ganesan 1994), and the incidence of opportunistic behavior by the seller (Morgan and Hunt 1994). Brands are also important to the development of trust in Web based relationship marketing (Davis, Buchanan-Oliver and Brodie 1999). Brand is the trust mark that is the cue for all the past trust generating activity and in the absence of human touch, it can be a symbol of quality and assurance that is capable of building trust.

The consequences of trust are long-term exchange relationship (Ganesan 1994) and cooperation (Morgan and Hunt 1994). Although these positive outcomes exist, trust in a seller firm or salesperson may not affect choice of the seller if factors such as delivery performance, price and product performance are appropriately accounted for (Doney and Cannon 1997). It is, however, possible that price and performance may drive both the buyer's trust in and its choice of the seller. Singh and Sirdeshmukh (2000) show that trust mediates the relationship between agency mechanisms and satisfaction and between satisfaction and loyalty.

In a meta analysis of studies on trust in marketing relationships, Geyskens, Steenkamp and Kumar (1998) show that environmental uncertainty, own dependence, partner's coercive power use, communication and economic outcomes are the primary antecedents of trust, while satisfaction and long-term orientation are the consequences of trust.

When applied to online trust, these studies have important implications. First, credibility and benevolence could be two important underlying dimensions of online trust as well. Second, a firm's reputation, size and a user's past experience with the firm and

its Web site, user's dependence on the firm, and communication between the firm and the user are also potential antecedents in the online context. Finally, satisfaction, commitment, and long-term interactions with the Web site could be some of the consequences of online trust.

### *Information Systems and e-Business Literature*

The information systems and e-business perspective on trust has grown over time. Trust is important in the adoption of new technologies including the Web (Fukuyama 1995). Because of the high uncertainty associated with e-commerce, companies can behave in an opportunistic manner on the Internet, making their behavior unpredictable. Thus, online trust or trust on the Internet is assuming a lot of importance. A summary of selected studies on online trust is shown in Table 2.

< Table 2 about here >

Jarvenpaa et al. (1999) distinguish trust in the early and mature stages of e-commerce. In the early stages, online trust might have more to do with the performance of the technology whereas in the later stages, trust may be dependent more on differences in firms' implementation of Internet technology. Marcella (1999) discusses the deepening of online trust from building trust to confirming and maintaining trust over time. Trust is driven by past experiences, long-term orientation, positive trusting stance, and feeling of control (Jarvenpaa et al. 1999). From a privacy standpoint, trust can be viewed as the customer's expectation that the online business will treat the customer's information fairly. The quantity, quality and timeliness of information can enhance trust (Urban, Sultan and Qualls 2000). Urban et al. (2000), in their testing of virtual personal advisors, found high trust and acceptance for a virtual advisor.

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

Sultan, Urban, Shankar and Bart (2002), in a large scale empirical analysis of 6700 responses on 25 Web sites, uncovered three underlying dimensions of trust, namely, credibility/reliability, emotional comfort and quality of the company. They found that customer perceptions of trust are determined by Web site and consumer characteristics and that trust mediates the relationship between these determinants and customer action behavior. Nine Web site factors, namely, navigation, advice, no errors, fulfillment, community, privacy/security, trust seals, brand and presentation drive trust. Four consumer factors, namely, self-confidence/Internet savvy, past behavior, Internet shopping experience, and entertainment experience also affect trust.

Shankar, Sultan, Urban and Bart (2002) study the role of trust in the relationships among information availability, problem resolution and customer satisfaction in the online support context. They show that trust moderates the relationships between perceived information availability and problem resolution and between problem resolution and customer satisfaction. The positive effects of perceived information

availability and problem resolution on customer satisfaction are significantly enhanced by trust with the online provider.

Trust spans several aspects including browsing, buying, after sales and security according the assessment criteria of Casetrust (University of Hong Kong 2000).

Jarvenpaa, Tactinsky, and Vitale (2000) found that perceived size and perceived reputation determined trust in an electronic store which affected the attitude, risk perception and which, in turn, influenced the willingness to buy in an electronic store.

Lee and Turban (2001) propose that consumer trust in Internet shopping is driven by trustworthiness of Internet merchant, trustworthiness of Internet shopping medium and contextual factors and that individual trust propensity moderated each of the relationships between the antecedents of trust and trust.

Trustworthiness is driven by seals of approval (logos of security firms), branding, fulfillment, navigation, presentation and technology (Cheskin/Sapient Report 1999). These six building blocks can be further divided into 28 specific ways to establish trustworthiness.

Fogg et al. (2001) conducted an empirical study of people's perception of Web site credibility on 1400 students in the U.S. and Europe who evaluated 51 different Web site elements relating to trust. They found that real-world feel, ease of use, expertise, trustworthiness, and tailoring to be the most important factors affecting Web credibility, in that order. These factors were defined and the scale items were designed *a priori* and were not empirically derived.

A few studies have examined the effect of trust on prices and price dispersion on the Internet. In a study of price competition between pure play and bricks-and-clicks e-

tailers across eight product categories, Pan, Shankar and Ratchford (2002) found that online trust had a positive impact on web site traffic in two categories, gifts and flowers and computer hardware, but no significant effects in the other six categories. The effects of trust on prices were insignificant in all the eight categories they studied. In a study of price levels and price dispersion across another eight categories, Pan, Ratchford and Shankar (2001) found that trust is positively associated with prices only in one category, the consumer electronics category. It was not significant in five categories, but negative in two categories, DVD and desktop computers. In all these studies, the operationalization of trust was the number of trust seals that an e-tailer had on its Web site. Therefore, only the security and privacy aspects of trust were addressed.

A problem that runs throughout most of the studies on online trust is the lack of clear distinctions between the underlying dimensions and antecedents of online trust. For example, although Dayal et al. (1999) discuss security, merchant legitimacy and fulfillment as important determinants of online trust, they also allude to them as the core elements of online trust. Elements and determinants of online trust are used interchangeably in many studies. As another example, Fogg et al. (2001) claim that trustworthiness affects credibility, but these two constructs are blurred and not well differentiated. An exception is Sultan et al. (2002) in which the scale items were designed based on consumer reactions to focus group surveys and the dimensions and antecedents are well differentiated and empirically derived.

Based on past research and careful conceptual distinctions among the different constructs, a broad conceptual framework of online trust emerges as shown in Figure 2. The antecedent factors could be classified into three broad groups: (1) Web site

characteristics, (2) user characteristics, and (3) other factors. The other factors include such factors as the online medium and variables involving a combination of Web site and user characteristics. The consequences could be broadly grouped into three categories: (1) intent to act, (2) customer satisfaction and loyalty, and (3) firm performance.

< Figure 2 about here >

### **Implications for How Companies Can Build and Maintain Online Trust**

Based on the antecedents of trust from past studies, trust can be diminished or lost due to problems such as inferior product quality, poor content of the Web site, complex or unintuitive navigation, technology failure(s), inferior customer service, poor response time, and problems in order fulfillment. Companies should avoid these problems and focus on enhancing online trust.

Online trust can be enhanced in several ways. Urban et al (2000) recommend the following ways to building trust online: maximize cues that build web site trust, use virtual-advisor technology to gain customer confidence and belief, provide unbiased and complete information, include information on competitive products and keep promises. Reliability in fulfillment is a key aspect of trust, so firms should increase reliability (Urban et al. 2000). Dayal et al. (1999) suggest that user driven-personalization may be key to enhancing trust at higher levels. The best companies let users set the pace of personalization and of contact from marketers. Trust can be improved by quoting policies of customer satisfaction, returns and refunds (Jarvenpaa et al. 2000). Online trust can be enhanced by giving consumers the opportunity to be anonymous or pseudonymous when engaging in information exchanges and online transactions (Hoffman, Novak and Peralta 1999). In the long-run, online trust can be built mainly by having a balance of



power that signifies a cooperative interaction between an online business and its customers.

Companies should disclose patterns of past performance, provide references from past and current users, get third-party certifications, and make it easy to locate, read and enforce policies involving privacy and security (Schneiderman 2000). Mathew et al. (2001) suggest that trust can be enhanced by credit card loss assurance, product warranty and merchandise return policies, availability of escrow service, ability to schedule human customer service, and availability of user friendly interfaces. Privacy statements and third party involvement can improve trust (Palmer et al. 2000). Because different organizations such as retailer, shipping courier, and bank are involved in an online transaction, online trust may increase if these organizations work well together.

The extent of gain and loss in online trust could be asymmetric. It is difficult to earn, but is easy to lose online trust for firms. While the process of building online trust can be gradual, the process of losing trust can be steep. Trust can be built incrementally through reinforcing encounters with the firm and its Web site. However, with one major failure or setback, this trust could be lost altogether. Even if online trust is strong, it could be lost if offline experience is untrustworthy. Thus, a multi channel strategy to building trust is critical.

### **Future Research Directions**

There are several unexplored areas of online trust that present fertile opportunities for future research relating to online trust. Some of these can be investigated empirically with the availability of data that may not be very difficult to collect. Others, however, can be challenging.

### Relationship with e-business strategy

Although online trust is related to a firm's e-business strategy conceptually, empirical evidence on this relationship is sparse. It would be useful to deeply examine this relationship. There is a notion that a minimum level of trust is needed, but e-business strategy may range from a partially trust-based to a fully trust-based strategy. The degree of trust dependence in e-business strategy may be driven by customer power and competitive intermediaries' influence among other factors. Is a fully trust-based strategy like Travelocity and Orbitz an emerging trend or is it an aberration and we will return to business as usual and minimum levels of trust?

### Relationship with offline trust

What is the interrelationship between online and offline trust? With the trend toward multichannel strategies or bricks-and-clicks approaches by firms, managers need a better understanding of how their online and offline strategies affect online and offline trust and how to improve overall trust. How can firms have a cohesive strategy for building and maintaining trust across all channels?

### Stakeholder perspective

There has not been much empirical research on online trust from the standpoints of stakeholders other than the customers. For example, is a supplier's perception of a trust different a distributor's perception of trust? If so, what implications does it have for Web site design? What are the likely consequences on firm performance? How can these perspectives be aligned and managed for better firm performance?

### Cross-cultural differences

The topic of cross-cultural and international differences in trust perceptions is another ripe area for future research. Are the antecedents of online trust different or do they have different impacts on trust in high versus low context cultures? Are the consequences of online trust different in different cultural contexts? Does the availability of Web sites, extranets and Intranet in local language enhance trust? These issues could be addressed, extending the cross-cultural validation work of Jarvenpaa et al. (1999) in the context of an online retail store.

#### *Role of trust in alliances*

How does customer trust in two parties affect their alliances or partnerships? Can a company with low online customer trust increase its online trust by partnering with another company with a high level of customer trust? Does a firm with high online trust dilute its trust by partnering with a company with low trust? Is there a synergistic effect on the online trust of two companies with high levels of trust?

#### *Online trust and branding*

Although brand is one of the determinants of online trust (Cheskin/Sapient Report 1999; Sultan et al. 2002), often, the impacts of brand and trust on their consequences such as purchase intention and sales are blurred. Future research could focus on ways to tease the impacts of these constructs on consequent constructs.

#### *Online trust and quality*

What is the relationship between quality and trust? How much is trust based on product performance versus based on trust cues on the Web site? How does product use fit into the process of building trust? Can increase in product quality enhance online trust? Are quality enhancements compatible with trust reinforcements over time?

### Online trust and CRM

How does customer relationship management (CRM) fit with trust? Is online trust positively associated with returns on CRM initiatives? Because CRM is focused on targeted customer segments, are communication and interaction with these segments compatible with online trust?

### Methodology

From a methodological viewpoint, we need more studies that use different methodologies. Most of the work has been either conceptual or survey based. The use of clickstream data may also be an important way to track actual behavior as it relates to online trust. Experimental research is an important way in which potential drivers of trust can be controlled and tested. Laboratory research is feasible, but requires tight operationalization of trust related variables and good simulation of trust environments. Field experiments may be more challenging to do because it may require companies to experiment on their real Web sites. Experimentation may require a policy just like privacy that lays out why and how it is done. Most companies are reluctant to undertake significant experimentation on their Web site for fear of customer backlash should some of these changes force customers to relearn their interactions with the Web site, but done right, they are worth doing. Finally, studies that can use a combination of methodologies can potentially explore more advanced facets of online trust.

### **Conclusion**

Online trust is increasingly becoming important in a firm's e-business strategy. Although online trust shares many common elements with offline trust, it is different from offline trust in that technology is an object of trust rather than just the organizational

entity. Online trust can be approached from a stakeholder perspective that takes into account the viewpoints of multiple stakeholders such as customers, employees, suppliers, distributors, partners, stockholders, and regulators. It is a multidimensional construct whose underlying dimensions include credibility, emotional comfort, quality and privacy. The determinants of online trust include Web site characteristics, customer characteristics, and other factors. The consequences include intention to act, satisfaction, loyalty, traffic, price, revenues and profitability. Online trust is a relatively under explored topic that offers several promising avenues for future research including the roles of multiple stakeholders, the impact of strategic alliances, and cross-cultural differences in perceptions of trust.

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**Table 1**  
**Stakeholder Orientation of Online Trust**

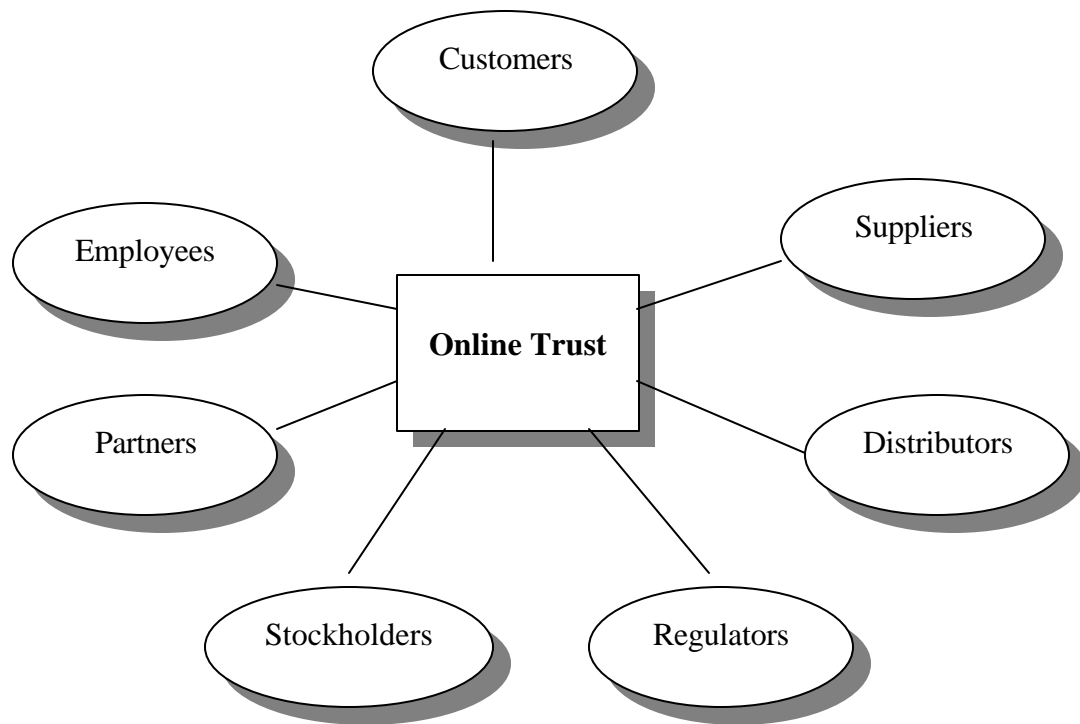
<i>Stakeholder</i>	<i>Orientation</i>
Customer	How trustworthy is the firm's Web site for doing business, making purchases, getting customer information, and getting service? How safe is the transaction and my personal/company information that I give on the web site? How comfortable do I feel in my online experiences with the firm?
Employee	How accurate and reliable is the information to employees? How transparent are the company policies? How competent is the service for employees? How receptive is the company to employee feedback and interactions on the Web?
Supplier	How competent is the company in its Web site interactions with suppliers? How confidential is the information sharing? Do I have preferential access to important information about the buyer? Is the firm trustworthy for online collaboration? Is the online information reliable? Is the online information consistent with offline information?
Distributor	How competent is the company in its Web site interactions with distributors? How confidential is the information sharing? Is the firm trustworthy for online collaboration? Is the online information reliable? Is the online information consistent with offline information? Is the Web site a channel complementor? Are lead referrals accurate, current, and screened for potential?
Partner	Can I expect the firm's Web site to promote my offering? Is my trust enhanced online as a result of the partnership? Do I have preferential access to important information about my partner? Can I depend on the company's Web site to accurately present my information?
Stockholder	How accurate and timely is the information on company's activities and performance? How transparent is the company's strategy and performance on the Web? How complete and unbiased is the information? Can I identify vulnerabilities as well and successes?
Regulator	Is there adequate information on compliance of regulations on the Web site? Is the company transparent online in its compliance of relevant laws? Does the Web site conform to privacy regulations? Do the company and its Web site securely protect financial and credit card information? Do the company and its Web site have a reliable and fair mechanism for addressing failures or violations of regulations?

**Table 2**  
**Review of Selected Studies on Online Trust**

<i>Study</i>	<i>Topic of analysis</i>	<i>Results</i>
Dayal et al. (1999)	Elements of online trust	State-of-art security, merchant legitimacy, and fulfillment are the core elements of online trust while customer control, tone and ambience and consumer collaboration are the differentiating elements.
Jarvenpaa et al. (1999)	Trust in an Internet store: cross-cultural validation	Trust different in early vs. late stage of e-commerce. Trust is driven by long-term orientation, positive stance, and feeling of control.
Cheskins/Sapient Report (1999)	Elements of trustworthiness	Six building blocks of trustworthiness: seals of approval, branding, fulfilment, navigation, presentation and technology.
Hoffman et al. (1999)	How to improve online trust	Environmental control or consumer's ability to control the actions of a Web vendor directly affects perception of security and privacy, key drivers of online trust.
Smith, Bailey, and Brynjolfsson (2000)	Indicators of online trust	Site longevity, selection of items, online community, links to and from other sites, search engine on the site, and privacy are indicators of online trust.
Urban et al. (2000)	How to improve online trust	Provide virtual advisor, unbiased information, keep promises, and offer reliable fulfilment.
Jarvenpaa et al. (2000)	Antecedents and consequences of trust in an Internet store	Perceived size and perceived reputation determined trust in an electronic store, which affected the attitude, risk perception and which, in turn, influenced the willingness to buy in an electronic store. Communication of policies of customer satisfaction, returns and refunds improve trust.
Schneiderman (2000)	How to improve online trust	Past performance, references from past and current users, third-party certifications, and easy to locate, read and enforce policies involving privacy and security improve online trust.
Palmer et al. (2000)	How to improve online trust	Privacy statements and third party involvement can improve trust.
Lee and Turban (2001)	Antecedents of trust	Trustworthiness of Internet merchant, trustworthiness of Internet shopping medium and contextual factors. Individual trust propensity moderated each of the relationships between the antecedents of trust and trust.
Pan, Ratchford and Shankar	Drivers of online price dispersion	Trust is positively associated with prices only in one category, the consumer electronics category.

(2001)		It is not significant in five categories, but negative in two categories, DVD and desktop computers.
Mathew et al. (2001)	How to enhance online trust	Credit card loss assurance, product warranty and merchandise return policies, availability of escrow service, ability to schedule human customer service, and availability of user friendly interfaces.
Fogg et al. (2001)	Drivers of Web site credibility	Real-world feel, ease of use, expertise, trustworthiness, and tailoring are the most important factors affecting Web credibility, in that order.
Sultan, Urban, Shankar and Bart (2002)	Determinants and consequences of online trust	Web site and consumer characteristics drive trust which drives customer web behavior. Trust mediates the effects of Web site and consumer characteristics on Web behavior.
Shankar, Sultan, Urban and Bart (2002)	Role of trust in online customer support	Trust moderates the relationships between perceived information availability and problem resolution and between problem resolution and customer satisfaction. The positive effects of perceived information availability and problem resolution on customer satisfaction are significantly enhanced by trust with the online provider.
Pan, Shankar and Ratchford (2002)	Comparison of web site traffic and price across different types of e-tailers	Trust increases site traffic in two categories (gifts & flowers and computer hardware), but is not significant in six categories. Trust has insignificant effect on price.

**Figure 1**  
**Stakeholders Involved with Online Trust**



**Figure 2**  
**A Broad Conceptual Framework of Antecedents and Consequences of Online Trust**

