

December 2004

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Wei Sha  
*University of Arkansas*

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## Recommended Citation

Sha, Wei, "Examining Mediators of Structural Assurance Constructs in Business-To-Consumer E-Commerce" (2004). *AMCIS 2004 Proceedings*. 484.  
<http://aisel.aisnet.org/amcis2004/484>

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# Examining Mediators of Structural Assurance Constructs in Business-To-Consumer E-Commerce

Wei Sha

Information Systems Department  
Sam M. Walton College of Business  
University of Arkansas, Fayetteville

## ABSTRACT

This study examines the influence of different types of structural assurance on consumer trusting intentions in business-to-consumer (B2C) electronic commerce. Prior research findings regarding how different types of structural assurance impact consumer trusting intentions has been limited. Based on the institution-based trust theory, the organizational justice theory and the psychological contract theory, this study proposes that perceived procedural justice, psychological contract and perceived risk may mediate the influence of different types of structural assurance on consumers' trusting intentions.

## Keywords

Structural assurance, procedural fairness, psychological contract, perceived risk, trust

## INTRODUCTION

B2C electronic commerce (e-commerce) promises new marketing channels through which vendors can gain access to consumers and markets they could not previously reach. However, this promise has not been realized by many web vendors. One possible explanation is that consumers lack confidence about the trustworthiness of web vendors (Hoffman, Novak and Peralta, 1999). Online consumer trust can be separated into two components: trusting beliefs (a web vendor's perceived specific attributes, such as ability, integrity and benevolence) and trusting intentions (consumers' willingness to depend on the web vendor), which can be formulated based on institutional structures (McKnight, Choudhury and Kacmar, 2002a).

Institutional structures consist of different types of formal structures such as third party recognitions, warranties, guarantees and public key infrastructures in B2C e-commerce. The effect of these formal structures is structural assurance (SA), which is defined as the degree to which consumers believe that various formal structural procedures are in place to protect their interests and well-being (McKnight, Choudhury and Kacmar, 2002a). Existing empirical results show inconsistent findings about the influence of SA on consumer trust (McKnight, Choudhury and Kacmar, 2002a; Gefen, Karahanna and Straub, 2003). Furthermore, the underlining mechanism of the influence of SA remains under study. These research findings raise the question as to why SA is significant in explaining online consumer trust in some cases but not in others. Since SA is composed of customers' beliefs about protections from different assurance structures, could it be that different types of assurance structures may have unique influences on consumer trust? If so, what are these types of structures? How are these types of structures related to online consumer trusting intentions?

This paper answers the research calls to further investigate the nature of SA (McKnight, Choudhury and Kacmar, 2002a; Pavlou, 2002; Shapiro, 1987). This investigation is particularly important to managers because web vendors can implement strategies to incorporate assurance structures into their website design to influence online consumer trust. The rest of the paper is organized as follows: first, current research results about the influence of SA on online consumer trust are reviewed; second, a SA model is proposed based on Zucker's (1986) institution-based trust mechanisms theory, the organizational justice theory and the psychological contract theory; and, third, the research method and potential contributions are presented.

## MOTIVATION

Empirical research on the impact of SA on online consumer trust shows a wide spectrum of results. A review of studies which examined the assurance of website design features indicates that the influence of SA on consumers' trusting beliefs and intentions can be strong (Gefen, Karahanna and Straub, 2003); weak (McKnight, Chudhury and Kacmar, 2002b; Sultan, Urban, Shankar and Bart, 2002); mixed (Kimery and McCord, 2002; Kuan and Olson, 2001; Chellappa and Pavlou, 2002); or not significant (McKnight, Chudhury and Kacmar, 2002a; Shek, Sia and Lim, 2003).

Furthermore, there are only a few studies which have examined the psychological process of how SA can influence consumers' purchase intentions. Most researchers propose a direct relationship between SA and criterion constructs, such as intention to purchase (Belanger, Hiller and Smith, 2002); trusting beliefs (Gefen, Karahanna and Straub, 2003; Pavlou, 2002; Kuan and Olson, 2002); trusting intentions (Kimery and McCord, 2002); or both trusting beliefs and intentions (McKnight, Choudhury and Kacmar, 2002b).

### **TYPES OF STRUCTURAL ASSURANCE**

Zucker's (1986) institution-based trust theory which used the mid-1800s to the early-1900s as the context suggests that institutional structures can be used to build trust to expedite business transactions when familiarity is lacking. Four types of formal institutional structures were used to produce trust (Zucker, 1986). The first type was a company's internal "written rules and a formal hierarchy that produced trust between employers and employees" (Zucker, 1986, p.55). The second type was the service provided by professional certifications to assure trustworthiness when informal reputation is hard to assess. The third type was the service provided by service sectors, such as finance, insurance, real estate, legal service and governments, which "arose to bridge transactions between firms and between individuals and firms" (Zucker, 1986, p.55). The fourth type was the framework of regulation, legislation and specific rules regarding every transaction. These four types of formal structures facilitated the production of institution-based trust and American economic development when there was no easy indication of either reputation or individual characteristics.

The B2C e-commerce environment closely resembles the business environment in the mid-1800s to the early-1900s. In B2C e-commerce, about 75% of the dot-com companies fail in their first two years of existence (Nataraj and Lee, 2002). Under these circumstances, building a stable, trusting relationship with a web vendor becomes very difficult. As transaction participants chose to rely on formal, institutional structures in the volatile, pre-1920 period, customers today may need to depend on the formal, institutional structures as their safety net to provide a sense of assurance when they shop online. Based on Zucker's institution-based trust theory, the institutional structures in B2C e-commerce can be separated into four types: 1) vendor specific guarantees, 2) seals of approval, 3) credit card guarantees, and 4) legal legislations and technological protections.

The effect of these formal structures on consumer online trust is conveyed through website design features (Gefen, Karahanna and Straub, 2003). Website designers can use customer service policies, third party certification seals, and advanced encryption technologies to relay SA information to consumers (Pavlou, 2002; Pavlou and Gefen, 2002). Since each customer's perception of the effect of these structures may vary, there may be four types of perceptions about these institutional structures. Perceived vendor-specific guarantee is defined as the degree to which a customer believes that a web vendor's own customer service policies are in place to protect the customer's interests and well being. Perceived seal of approval guarantee is defined as the degree to which a customer believes that seals of approval from accreditation agencies can protect the customer's interests and well being. Perceived credit card guarantee is defined as the degree to which a customer believes that guarantees from credit card companies can protect the customer's interests and well being. Perceived legal and technological protection is defined as the degree to which consumers believe that legal and technological protections are in place to make the Internet a safe environment in which to transact business. This research proposes that these perceptions may constitute the four types of SA which can influence consumer online trusting intentions through a set of mediators.

### **MEDIATORS OF SA**

#### **Perceived Justice**

The vendor specific guarantees may influence consumer trust through procedural justice. The organizational justice theory emphasizes the role of fairness in the workplace and proposes a three-dimensional perceived justice construct, i.e. distributive justice, procedural justice and interactional justice (Niehoff and Moorman, 1993). This study examines procedural justice, which is related to whether there are fair policies and regulations in place to distribute the rewards (Niehoff and Moorman, 1993). The reasons to concentrate on procedural justice are threefold. First, research has examined the influence of procedural justice in the brick-and-mortar retailing environment. It is important to validate the possible application of existing theory in the virtual retailing environment. Second, procedural justice can be manipulated easily by online merchants. Third, it might be difficult to judge distributive justice and interactional justice before the completion of an online transaction. On the other hand, procedural justice can be formed based on understanding a vendor's customer service policies before a transaction is completed. Since procedure justice is related to a company's policies, it is not expected that the other three types of SA, legal legislations and technological protections, seals of approval, and credit card company guarantee, will influence procedural justice. Research has shown that procedural justice has a higher influence on trust than other dimensions

of the perceived justice construct (Pillai, Schriesheim and Williams, 1999). When consumers observe procedural fairness from a firm, they tend to trust the firm more by revealing their private information and tend to continue in the relationship (Culnan and Armstrong, 1999). Therefore, procedural justice is hypothesized to mediate the influence of perceived vendor specific guarantee on trusting intentions.

### Psychological Contract

Psychological contract is defined as “an individual’s belief in mutual obligations between that person and another party such as an employer (either a firm or another person)” (Rousseau and Tijoriwala, 1998). The foundation of psychological contract is mutuality, which means one party of the exchange relationship believes that there is a mutual understanding regarding each other’s responsibilities (Rousseau, 2001). Online vendors frequently make promises like, “100% satisfaction guarantee,” full refund, quality products, protection of privacy, and correct product information, etc. These promises are frequently illustrated through vendors’ customer services policies, icons, and text information within their websites. Consumers may form beliefs that the online vendors should keep their promises if they purchase from those online vendors. Therefore, psychological contract is hypothesized to mediate the influence of vendor guarantees on trusting intentions.

### Perceived Risk

Perceived risk is defined as a consumer’s cognitive evaluations of the risky nature of possible decision outcomes (McKnight, Choudhury and Kacmar, 2002b). When consumers intend to purchase from unknown web vendors, the potential purchases may have some serious negative consequences, such as not receiving the right product, being overcharged or being spammed, which could cause consumers to suffer monetary, time, or emotional losses. Institutional mechanisms can mitigate these risks by ensuring a high cost for unlawful behavior, building a financial safety net for consumers, providing a perception of competence and sense of security (Pavlou, 2002; Gefen, Karahanna and Straub, 2003; Pavlou and Gefen, 2002). Different types of SA can reduce the intrinsic risks and subsequently increase the likelihood of subsequent trusting behaviors (McKnight, Choudhury and Kacmar, 2002b; Grazioli and Jarvenpaa, 2000). Therefore, perceived risk is hypothesized to mediate the influence of perceived seals of approval, perceived credit card guarantees and perceived legal legislations and technological protections on trusting intentions.

See Figure 1 for a graphical depiction of the proposed model and hypotheses.

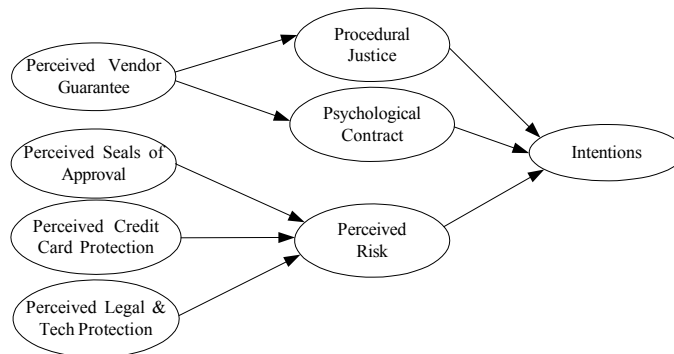


Figure 1 The Structural Assurance Model

### METHOD

The proposed SA model will be validated through data collected using an experimental research method. The constructs will be operationalized and measured based on existing validated scales. The experimental subjects will be students enrolled at a Midwestern university. Students will be asked to respond to a situation in which they need to shop for gifts online for their significant others. They can visit an online vendor to select a gift which they would be interested in purchasing. At the end, students will be instructed to answer the questions based on their beliefs or opinions about the online store. Data will be analyzed using Structural Equation Modeling techniques.

## EXPECTED CONTRIBUTION

This paper answers explicit calls to further examine the nature of SA and its relationship with other constructs such as trusting beliefs and intentions. This research may confirm the multi-facet characteristic of SA and the intervening mechanism of the influence of SA on consumer trust. The results of this research may provide another step toward better understanding of the nature and mechanisms of online institutional trust. Practitioners can also benefit from this study in terms of building customer trusting intentions through customer service policies and third party certifications. Customer service policies often receive less attention as evidenced by the fact that these policies are either limited in content or merely in standard form. Seals of approval are often used in an obscure fashion. This research may provide evidence that web vendors should better utilize institutional structures to improve customer relations by increasing consumer trust.

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