

Psychological Contract Violation in Online Marketplaces: Antecedents, Consequences, and Moderating Role

Paul A. Pavlou

Anderson Graduate School of Management
University of California, Riverside
900 University Ave, Anderson Hall 010
Riverside CA 91251
(213) 268-2259 (Phone) / (951) 827-9370
paul.pavlou@ucr.edu

David Gefen

Management Department
LeBow College of Business
Drexel University
101 N. 33rd St. / Academic Building
Philadelphia, PA 19104-2875
(215) 895-2148 (Phone) / (215) 895 2891 (Fax)
gefend@drexel.edu

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ABSTRACT

This study examines the nature and role of psychological contract violation (PCV) in online marketplaces, a critical factor that has been largely overlooked by previous research. Applied to buyer-seller relationships, PCV is defined as a buyer's perception of having being treated wrongly regarding the terms of an exchange agreement with an individual seller. PCV with individual sellers is proposed as a formative first-order construct driven by the occurrence of fraud, product misrepresentation, contract default, delivery delay, and failure to follow product guarantees and payment policies. PCV with an individual seller is proposed to prompt a generalized perception of PCV with the entire community of sellers in a marketplace.

PCV with the community of sellers is hypothesized to negatively affect buyer transaction behavior in a marketplace by directly impacting transaction intentions, price premiums, trust, perceived risk, and the perceived effectiveness of institutional structures. PCV is also hypothesized to act as a moderator, transforming the buyers' initial trust-based mindset to one more centered on perceived risk. Finally, PCV is hypothesized to attenuate the positive impact of trust on transaction intentions, while reinforcing the negative impact of perceived risk on transaction intentions. It is also proposed to attenuate the impact of the perceived effectiveness of institutional structures on trust, while strengthening its negative effect on perceived risk. As a means of preventing PCV, the buyers' positive experience and the sellers' favorable past performance are hypothesized to make PCV with the community of sellers less likely.

A combination of primary and secondary longitudinal data from 404 buyers in eBay's and Amazon's online auctions support the proposed hypotheses, validating PCV as a central element of buyer-seller relationships in online marketplaces. Interestingly, ex post facto results show that buyers with higher perceptions of PCV with the community of sellers are *less* likely to experience PCV with an individual seller in the future.

Implications for buyer-seller relationships in online marketplaces and the PCV literature are discussed. Also discussed is how the increasing number of buyers who experience PCV in online marketplaces extends the literature that has been largely developed based on buyers who had not experienced PCV.

Keywords: Psychological Contract Violation, Trust, Risk, Online Auction Marketplaces, Institutional Structures.

1. INTRODUCTION

Contracts have long been essential in buyer-seller relationships, and they have been recently shown to facilitate buyer-seller transactions in online marketplaces (Pavlou 2002). The academic (Berenstein and Campbell 2002, Gibbons 2002, Wijnholds and Little 2001) and practitioner (EC 1980, eCommerce 2004) literatures have mainly paid attention to the *legal* component of contracts, largely neglecting their *psychological* component. Psychological contracts are broader in nature than legal contracts, and they include perceptual, unwritten, and implicit terms that cannot be explicitly incorporated in a legal contract. Based on the literature that has validated the fundamental role of on psychological contract violation (PCV) and its potentially destructive impact on organizational relationships (e.g., Morrison and Robinson 1997, Niehoff and Paul 2001, Pate and Malone 2000, Pugh *et al.* 2003, Robinson 1996, Rousseau 1989), we propose that PCV should be central to our understanding of buyer-seller relationships in online marketplaces.

Examining psychological contracts in buyer-seller relationships has several advantages over studying purely legal contracts. First, buyers are rarely aware of all of the explicit rules written in legal contracts, and they do have an implicit understanding of the seller's transactional obligations. Therefore, even if the explicit contract rules may have not been violated, buyers may still perceive that their expectations have not been adequately met and still feel that PCV has occurred. Second, even if certain legal obligations are breached, buyers may not necessarily perceive a contract violation, especially when the problem is acceptably resolved. In sum, the objective violation of explicit legal obligations may not be as accurate as the buyer's individual perceptions of PCV. Moreover, buyers are the primary drivers of transactions in online marketplaces, and their own subjective perceptions are thus the most relevant for understanding and predicting their behavior.

While PCV has primarily been examined within in the context of organizational relationships, this study proposes an extension of PCV to buyer-seller relationships in online marketplaces. The logic behind the proposed extension is that online marketplace transactions are also governed by psychological contracts. This is in line with recent IS research where PCV has been applied to IT outsourcing inter-firm relationships (Koh, Ang, and Straub 2004), also extending the original context of previous PCV research.

Extending the literature (Rousseau 1989) to buyer-seller relationships in online marketplaces, PCV with an individual seller is defined here as a buyer's beliefs of having being treated wrongly regarding the terms of an exchange agreement with a seller. A buyer may perceive PCV if an individual seller fails to adequately fulfill its contractual obligations, due to fraud, product misrepresentation, contract default, delivery delay, or renegeing on product guarantees and payment policies. While these sources of PCV often have severe consequences in online marketplaces (IFCC 2003), the very nature and role of PCV have, alas, remained "hidden." Most importantly, we argue that PCV due to a single incident with an individual seller influences the buyer's overall perception of PCV with the community of sellers as a group. In turn, PCV with the community of sellers is then examined (rather than with an individual seller) since buyers seldom interact with the same seller more than once (Pavlou and Gefen 2004). In sum, to build a more comprehensive understanding of buyer-seller relationships in online marketplaces, we believe it is imperative to examine the nature, antecedents, consequences, and moderating role of PCV with the community of sellers and how it is influenced by PCV with an individual seller. This is what this study seeks to accomplish.

Drawing upon the literature, the study first describes the theoretical origins of psychological contracts and the nature of PCV with an individual seller in online marketplaces. It then proposes that PCV due to an individual seller creates a perception of PCV with the community of sellers as a group. The impact of PCV with the community of sellers is then examined on five key factors that have been shown to influence a buyer's actual transaction behavior in online auction marketplaces - transaction intentions, price premiums, trust, perceived risk, and the perceived effectiveness of institutional structures. In addition to its direct influences, PCV with the community of sellers is proposed to shift the buyer's relative emphasis away from trust toward perceived risk. Accordingly, PCV with the community of sellers is hypothesized to attenuate the positive impact of trust on transaction intentions, while reinforcing the negative role of perceived risk on transaction intentions. Moreover, PCV with the community of sellers is proposed to attenuate the trust-building potential of a set of institutional structures - feedback technologies, escrow services, credit card guarantees, and trust in the intermediary. It is also proposed to reinforce the mitigating role of institutional structures on perceived risk. Finally, we propose two antecedents - buyer positive past experience and sellers' positive past performance - that reduce the likelihood of PCV with the community of sellers.

In what follows, Section 2 reviews the literature on psychological contracts, the nature and sources of PCV with an individual seller, and the extension of PCV to buyer-seller relationships in online marketplaces. Section 3 proposes the outcomes of PCV with the community of sellers, Section 4 describes its moderating role, and Section 5 introduces its antecedents. Sections 6 and 7 describe the study's research methodology and results, respectively. Finally, Section 8 discusses the study's contributions and implications.

2. THE NATURE OF PSYCHOLOGICAL CONTRACT VIOLATION

2.1 What is a Psychological Contract?

Contracts are important features of exchange agreements. Contracts bind the transacting parties and regulate their activities (Farnsworth 1962). Apart from their widely-examined economic and legal aspects, contracts also have a psychological component (Macneil 1980), which is inherently perceptual and deals with implicit details and perceived obligations, beyond those that can be explicitly described in formal legal terms. Following the Social Exchange Theory (SET) (Blau 1964), the *perceptual, unwritten, and implicit* nature of psychological contracts is their defining attribute (Argyris 1960), which distinguishes them from legal contracts (Weick 1979). In fact, since all contracts are inherently incomplete (Macneil 1980), the psychological component is an inevitable aspect of virtually all contracts (Rousseau and Parks 1993). Formally stated, a psychological contract exists when one party believes that another party is obligated to perform certain behaviors (Rousseau 1989). Therefore, psychological contracts are much broader than economic and legal contracts, and include several perceptual aspects that cannot be formally incorporated into legal contracts.

There are several ways to categorize psychological contracts (Sels *et al.* 2004). A widely accepted typology views contracts as either transactional or relational (Rousseau 1995, Rousseau and Tijoriwala 1998). Compared to relational contracts, transactional contracts are more explicit in nature and describe each party's contractual obligations. Given the transactional nature of buyer-seller relationships in online marketplaces and their relatively specific contractual obligations, this paper focuses predominantly on *transactional* contracts. From a buyer's standpoint, transactional contracts consist of the buyer's perceptual beliefs about the seller's contractual obligations. Based on real-life auction regulations and practical empiricism, a seller's basic obligations that constitute the basis of psychological contracts in online marketplaces are shown in Table 1.

Table 1: Basic Seller Obligations that Constitute the Psychological Contract

• Deliver the product purchased in a timely manner using the shipping method promised.
• Deliver an item that is identical to the one described and shown in the product advertisement.
• Follow the payment policy promised and accept payment from the buyer.
• Follow the conditions of sale and honor a return or a refund promise.

2.2 The Nature of Psychological Contract Violation

PCV may occur when people think they are not getting what they expect from a contractual agreement (Morrison and Robinson 1997, Niehoff and Paul 2001, Pate and Malone 2000, Pugh, Skarlicki and Passell 2003, Robinson 1996).¹ It is important to note that PCV typically occurs due to a disconfirmation of expectations regarding a specific contract. PCV typically revolves around actual instances of contract violation, or due to misunderstandings regarding the exact contractual obligations. Without loss of generality, PCV can occur due to two primary causes: *reneging* and *incongruence*. Reneging occurs when there is an explicit and undisputed contract violation. Incongruence occurs when there are different expectations or understanding about the agreed-upon obligations, even when there is no explicit contract violation.

Reneging is when a party knowingly fails to meet its obligations because of opportunism or mere incompetence (Morrison and Robinson 1997). An example of reneging is a seller who promised a product in good faith, but she has been forced to delay delivery or default due to an unforeseen reduction in product availability. Reneging can also occur when the obligated person is intentionally unwilling to fulfill her promises. For example, when a seller knowingly advertises a better product than the one she intends to deliver. Reneging may occur also when a seller disregards promises, even if these were initially made in good faith. For instance, a seller may promise to uphold a warranty, but she then decides to abandon the original promise.

In contrast, *incongruence* occurs when the two parties have different understandings about their contractual obligations (Morrison and Robinson 1997). For example, a seller may think that she has fulfilled the buyer's obligations, but the buyer believes otherwise. Incongruence is often the result of complex and ambiguous contracts, differences in cognitive frameworks, divergent cognitive schemata, and poor communication regarding contract obligations.

¹ While Robinson and Morrison (2000) differentiate between psychological contract "breach" and psychological contract "violation" (thereby distinguishing between feelings and perceptions), we follow Rousseau's (1989) original *unitary* conceptualization of PCV.

In summary, both reneging and incongruence create a discrepancy, real or perceived, between a party's expectations and her actual experience, thereby potentially causing PCV.

2.2.1 Psychological Contract Violation with Individual Sellers

PCV is analyzed at two distinct, yet related, levels: at an *individual seller* level and at a *community of sellers* level. PCV with an individual seller is defined as a buyer's perception of having being treated wrongly regarding the terms of an exchange agreement with a seller. PCV with an individual seller is likely to occur in online marketplaces due to multiple reasons: (1) buyers and sellers typically have incongruent goals; (2) they do not engage on a personal, face-to-face level; (3) they are rarely familiar with each other; (4) they often have cultural differences; and (5) they may have different understanding of their respective contractual obligations.

Table 2 shows six common sources of PCV with an individual seller based on a thorough review of the academic (Ba and Pavlou 2002, Koh *et al.* 2004, Resnick, *et al.* 2000, Snyder 2000), and practitioner (Bernstein 2000, Collins 2001, Gross 2003, Ho 2003, IFCC 2003, O'Donnell and Swartz 2003) literature, as well as practical guidelines from eBay's marketplace,² Amazon Auctions,³ and the popular third party providers Pay Pal,⁴ SquareTrade,⁵ and BuySafe.⁶ These six proposed sources are not exhaustive, but they are posited as representative of what commonly causes PCV in online marketplaces.

Table 2: Common Sources of Contract Violation with Individual Sellers in Online Marketplaces

1. <u>Fraud</u> : Failure to deliver the product purchased (e.g., actual quality deception, selling counterfeit products).
2. <u>Product Misrepresentation</u> : Delivery of an item that is different from the one described in the product advertisement.
3. <u>Contract Default</u> : Refusal to accept payment and to send the product.
4. <u>Product Delivery Delay</u> : Failure to use the shipping method promised and to send the product in a timely manner.
5. <u>Product Guarantees</u> : Offering a return or a refund policy and then failing to acknowledge product guarantees.
6. <u>Payment Policy</u> : Refusal to follow the payment policy and accept certain forms of payment.

While these seller behaviors may not always amount to a legal breach, and they may not necessarily be deliberate malicious behaviors, they may often result in PCV. For example, PCV may occur because of discrepancies in what constitutes a timely product delivery, how closely the product is to the one posted, and because of ambiguity about payment and refund policies. However, these behaviors may not necessarily result in PCV. As Niehoff and Paul (2001) explain, only salient problems typically result in PCV; minor problems are often not viewed as PCV. Moreover, ex post successful problem resolution can prevent PCV. Consequently,

² <http://pages.ebay.com/help/confidence/isgw-fraud-protection.html>

³ <http://www.amazon.com/exec/obidos/tg/browse/-/537868/104-9369442-3643113>

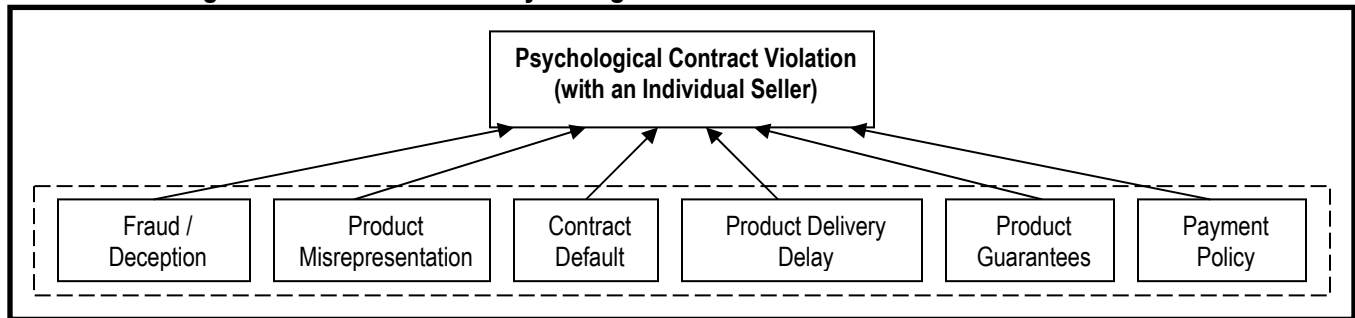
⁴ http://www.paypal.com/cgi-bin/webscr?cmd=_protections-buyer-outside

⁵ www.squaretrade.com

⁶ <http://www.buysafe.com/whatisbuysafe.asp>

PCV with individual sellers and its underlying six sources are viewed conceptually as dichotomous (binary) variables. The proposed first-order formative model describes the six proposed sources of PCV with an individual seller (Figure 1).

Figure 1. The Sources of Psychological Contract Violation with an Individual Seller



As shown in Figure 1, PCV with an individual seller is proposed as a first-order formative construct formed by buyer perceptions of (a) fraud, (b) product misrepresentation, (c) contract default, (d) product delivery delay, (e) failure to acknowledge product guarantees, and (f) refusal to follow payment policy by a seller. The rationale for the proposed formative model is twofold. First, consistent with the conceptualization of the proposed sources of PCV, any of these six seller behaviors can single-handedly or in some combination cause the perception of PCV with an individual seller. Second, the six underlying sources of PCV are not necessarily related. For example, misrepresenting a product has nothing to do with its late delivery. This type of construct is best represented in a formative model.⁷ Therefore, a formative model is proposed to most accurately and parsimoniously capture the multi-dimensional nature of PCV.

2.2.2 Psychological Contract Violation with the Community of Sellers

A major finding from the literature is that PCV changes people's emotions and attitudes, not only toward the party who they perceive did them wrong, but also toward other parties who are perceived as belonging to the same group (Pate and Malone 2000). This generalization may occur even if it is tenuous, such as from one employer to other unrelated employers (e.g., Pugh *et al.* (2003)), or from one service provider to

⁷ Latent constructs can be of two types – reflective or formative. Reflective ones (which constitute the majority of latent constructs) assume that the latent factor ‘causes’ the underlying measurement items. Formative constructs are conceived to be ‘caused’ by the underlying measurement items where each lower-order item represents a distinct contribution to the higher-order latent construct. Please see Diamantopoulos and Winklhofer (2001) and Edwards (2001) for a review.

others (e.g., Folkes and Patrick (2003)). PCV *changes* what Pugh et al. (2003, p. 202) call one's "mental model" about exchange relationships in general. This is also consistent with the IS literature that shows that people often blame unrelated others just because they are perceived as being similar to the ones who caused harm (Piccoli and Ives 2003).

Applied to online auction marketplaces, buyers who perceive PCV with an individual seller during a single transaction are likely to generalize their perceptions toward the entire community of sellers that operate in a marketplace under the auspices of a third-party auction intermediary (e.g., eBay or Amazon Auctions).⁸ The proposed generalization generates a sense of PCV with the community of sellers as a group, which is defined as a buyer's overall perception that the seller community has generally failed to fulfill its contractual obligations. Consequently, PCV with the community of sellers is viewed as an aggregate continuous variable that results from the one-time occurrence of PCV with individual sellers.

This generalization is quite realistic in impersonal online marketplaces where buyers mostly transact with new sellers every time, and where buyers rarely engage in repeated transactions with the same sellers. Participating in a marketplace with unknown sellers and not having the opportunity to observe how other sellers behave, buyers learn the rules of the marketplace primarily from their own experiences. Having encountered an occurrence of PCV, buyers may logically conclude that the problematic seller they transacted with is representative of the community of sellers, and such opportunistic seller behaviors may be common in the specific marketplace. This generalization is reflected in one of our survey respondent's feedback comment: "I sent payment and never got the item. Very bad seller. Won't buy from eBay again." In sum, generalizing an individual seller's opportunistic behavior to the entire community of sellers results in the following hypothesis:

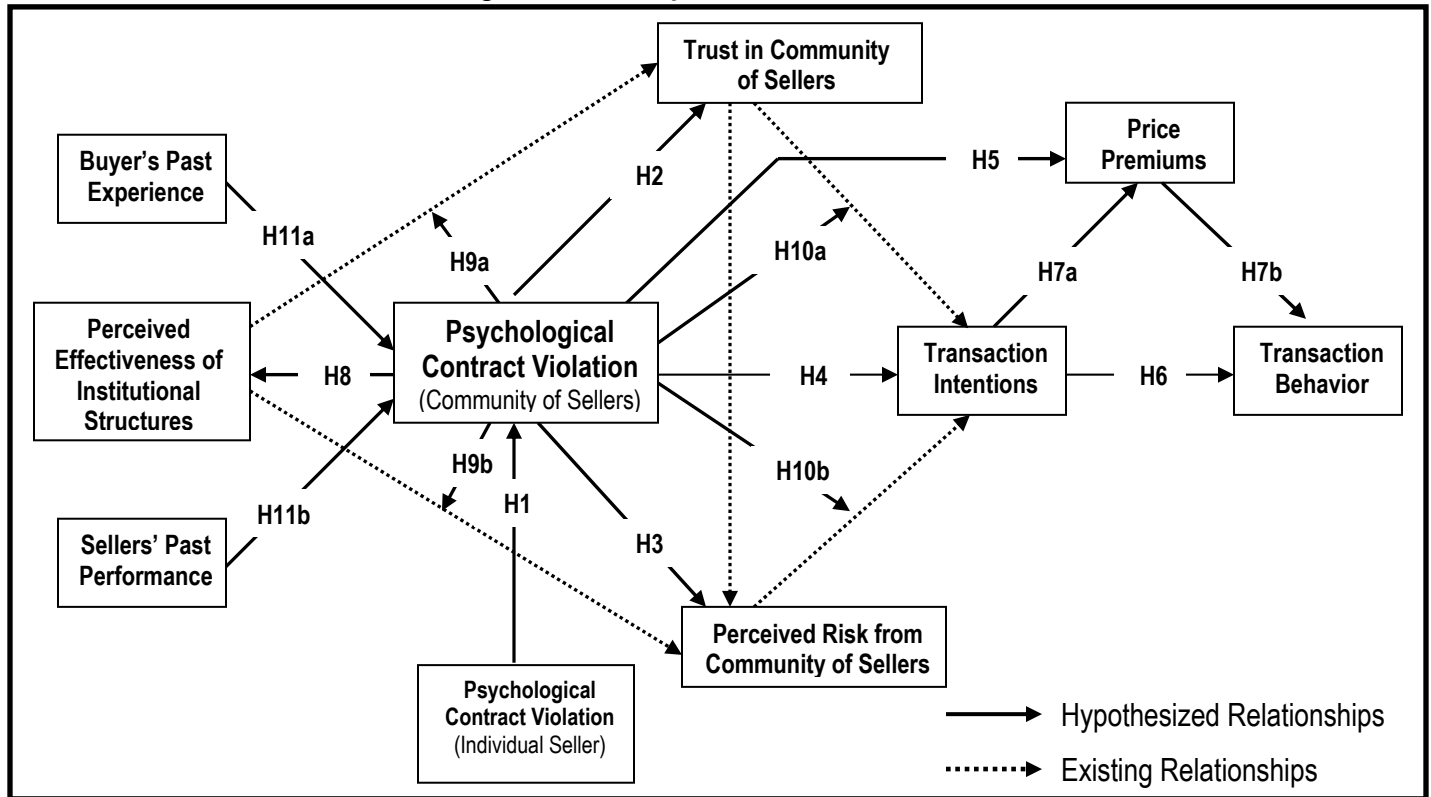
H1: Psychological contact violation due to an individual seller in a marketplace positively influences psychological contract violation with the entire community of sellers in the online marketplace.

⁸ Some caution should be taken about the extent of the proposed generalization, which should not be liberally extended to tenuously related sellers, such as sellers in physical markets. The proposed generalization depends on the degree of similarity among sellers. In related research based on the notion of perceived entitativity (Stewart 2003), trust transference requires the trustor to perceive a strong link between the known party and the trustee to whom trust is transferred. Also, according to balance theory (Heider 1958), attribution from one person to a group increases as the perceived connection between the person and group increases. Accordingly, the proposed generalization focuses on sellers in a specific marketplace, and it does not generalize outside the marketplace.

2.3 Overview of the Proposed Research Model

The proposed research model is shown in Figure 2. The direct effects of PCV with the community of sellers on trust, perceived risk, price premiums, institutional structures, and transaction intentions and behavior are introduced in Section 3 and its moderating role in Section 4. The mitigating effects of buyer past experience and sellers' past performance are introduced in Section 5.

Figure 2. The Proposed Research Model



3. CONSEQUENCES OF PSYCHOLOGICAL CONTRACT VIOLATION

The literature has generally linked PCV to a set of negative outcomes. PCV has been shown to degrade organizational citizenship behavior (Robinson and Morrison 1995), create a perception of injustice (Pate and Malone 2000), and generate feelings of betrayal, resentment, and anger (Rousseau 1989). Also, PCV reduces job satisfaction, trust, commitment, and employee retention (see Sels et al. 2004 for a review). Extending the PCV literature from employer relationships to buyer-seller relationships in online marketplaces, we propose a set of consequences of PCV with the community of sellers.

3.1 Psychological Contract Violation & Trust

Trust is the belief that the trustee will fulfill the trustor's expectations without taking advantage of its vulnerabilities (Gefen 2000, Lewis and Weigert 1985, Luhmann 1979, Mayer, Davis and Schoorman 1995). Trust in the community of sellers is defined as a buyer's belief that future transactions with sellers in the marketplace will occur in a manner consistent with their confident expectations. This trust is based on the belief that the community is composed of sellers with appropriate rules of conduct and transaction behavior. As such, it increases buyer intentions to transact with the community of sellers (Pavlou and Gefen 2004).

Trust is a binding element of social exchanges. In social exchanges, people take it for granted, without resorting to meticulous cognitive calculations, that others will behave in a trustworthy manner. Therefore, people generally enter new relationships with a high degree of initial trust (McKnight *et al.* 1998), even though there may be little rational justification for such high trust (Rotter 1967). Similarly, PCV theory argues that people are initially trusting of others, but it adds that the maintenance of psychological contracts is critical to sustaining this initial trust (Niehoff and Paul 2001). PCV, as a negative retrospective appraisal of past problems with individual trustees ruins trust (Robinson 1996, Robinson *et al.* 1994) since it shows that the trustees did not meet their expected obligations (Niehoff and Paul 2001). Applied to online marketplaces, PCV ruins a buyer's beliefs that sellers will behave in a manner consistent with their confident expectations. Therefore, PCV is hypothesized to erode the initial trust that buyers have in the community of sellers.

H2: Psychological contract violation with the community of sellers decreases buyer's trust in the community of sellers.

3.2 Psychological Contract Violation & Perceived Risk

PCV is also proposed to influence perceived risk. Perceived risk - the subjective belief of suffering a loss in pursuit of a desired outcome (Featherman and Pavlou 2003) - is a key element of buyer-seller relationships (Bauer 1960, Chiles and McMackin 1996, Dowling and Staelin 1994, Mitchell 1992, Taylor 1974). Applied to the community of sellers, perceived risk is defined as the buyers' subjective belief that there is a probability of suffering a loss when pursuing transactions with the community of sellers. Perceived risk has been shown to reduce the buyers' inclination to engage in online transactions (Jarvenpaa, Tractinsky, and Vitale 2000) and in online marketplaces (Pavlou 2002, Pavlou and Gefen 2004).

Generally, when PCV occurs, people lose the good faith that originally started the relationship, and they replace it with cynicism toward the focal and other similar relationships (Rousseau and Parks 1993). PCV also creates a sense of betrayal and unfair treatment, and it thus increases people's need to monitor the relationship (Niehoff and Paul 2001). Extrapolating to online marketplaces, PCV with the community of sellers causes buyers to pay more attention to potential adverse outcomes related to new and potentially opportunistic sellers, thereby increasing their perceived risk from transacting with the community of sellers.

H3: Psychological contract violation with the community of sellers increases buyer's perceived risk from transacting with the community of sellers.

3.3 Psychological Contract Violation & Transaction Intentions

The literature suggests that employees who experienced PCV are less likely to engage in favorable organizational behaviors (Robinson and Morrison 1995) and have increased intentions to quit the organization (Robinson *et al.* 1994). Extending these findings to online marketplaces, buyers with increased perceptions of PCV with the community of sellers would be less likely to transact with the community of sellers as a group. Transaction intentions are defined as the buyer's intention to engage in online exchange relationships with the community of sellers. Since people generally lose faith in the favorable intentions of others after PCV occurs (Rousseau and Parks 1993), such buyers are likely to refrain from transacting with the community of sellers in online marketplaces. This is also in accordance with the Theory of Planned Behavior (TPB) (Ajzen 1991) where behavioral intentions are negatively influenced by unfavorable past experiences.

H4: Psychological contract violation with the community of sellers reduces buyers' intentions to transact with the community of sellers.

3.4 Psychological Contract Violation & Price Premiums

Price premiums are defined as the higher than average prices that buyers are willing to pay for an identical product. In online marketplaces, price premiums are the additional monetary amount paid for a product above the average price received by multiple sellers for a perfectly duplicate product (Ba and Pavlou 2002).

For online marketplaces to succeed, they must differentiate among sellers and reward better ones with price premiums. A lack of differentiation may cause reputable sellers to flee the marketplace since their superior quality could not be signaled to justify their additional investments in providing higher quality. Without

such differentiation, the marketplace would become a *market of lemons* where only low-quality sellers would linger (Akerlof 1970). Indeed, buyers have been shown to offer price premiums to superior sellers to reward them for mitigating transaction uncertainties (Ba and Pavlou 2002). In contrast, lower-quality sellers often have to accept price discounts to compensate buyers for the higher uncertainty they assume.

Accordingly, buyers who perceive a higher degree of PCV with the community of sellers are more likely to perceive less utility from their transactions with the community of sellers. This reduced utility would make it more likely for them to view transactions with the community of sellers as low quality and uncertain. In economic terms, with less expected utility, these buyers would be less willing to offer a price premium to any specific seller. The following hypothesis is thus proposed:

H5: Psychological contract violation with the community of sellers results in lower price premiums for an identical product.

3.5 Transaction Intentions, Price Premiums, and Actual Transaction Behavior

To accurately predict a buyer's actual transaction behavior, two direct antecedents are proposed – transaction intentions and price premiums. Their inter-relationships are described below:

3.5.1 Transaction Intentions & Actual Transaction Behavior

TPB posits that a behavioral intention is the primary antecedent of actual behavior (Ajzen 1991). Following a deductive logic, transaction intention is likely to influence future transaction behavior, as also shown in the Technology Acceptance Model (Davis 1989), e-commerce (Pavlou and Fygenson 2006), and online marketplaces (Pavlou and Gefen 2004). Thus, the following hypothesis is proposed:

H6: Transaction intentions increase a buyer's actual transaction behavior with the community of sellers.

As Pate and Malone (2000) empirically showed, perceptions following the occurrence of PCV are enduring in nature. Maintaining similar behavioral intentions over time is necessary because for transaction intentions to consistently influence behavior, intentions must remain relatively constant (Ajzen 1991). Therefore, a long-held relationship between intentions and behavior is expected to hold for all buyers.⁹

⁹ The intention-behavior relationship is not expected to hold for buyers that experience a PCV because PCV is hypothesized to negatively influence buyer intentions (H4). However, H6 is expected to generally hold for the entire buyer population since typically only a few buyers experience PCV. In fact, our ex-post investigation shows that only 6% of the buyers who had not experienced PCV before, reported a PCV occurrence during the following four months (see Section 7.6 for more details).

3.5.2 Price Premiums & Actual Transaction Behavior

Given the dynamic pricing scheme of online auctions, for buyers to win an auction and actually transact with a seller, they must compete with other buyers by offering higher price bids than other buyers. Even if a price premium is product and seller specific, buyers who are generally willing to reward sellers with higher price premiums are more likely to win auctions and thus engage in actual transactions with sellers. Hence:

H7a: Price premiums increase a buyer's actual transaction behavior with the community of sellers.

3.5.3 Transaction Intentions & Price Premiums

Behavioral intentions are motivational factors that reflect how hard people are willing to attempt to undertake a behavior (Ajzen 1991). If buyers have a strong willingness to transact with sellers, they will be more likely to offer a higher price to win the auction and initiate the transaction. This suggests that:

H7b: Higher transaction intentions result in higher price premiums for an identical product.

3.6 Psychological Contract Violation & Perceived Effectiveness of Institutional Structures

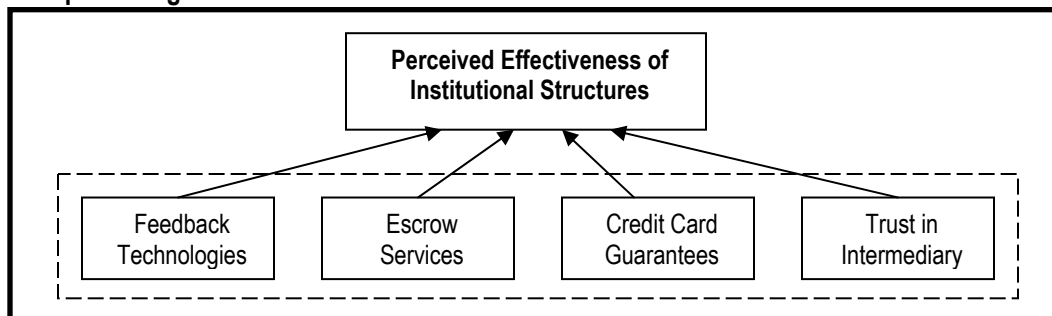
Online marketplaces have introduced institutional structures with the aim of enhancing buyers' trust and reducing their perceived risk, both in individual sellers (Reichheld and Scheffer 2000), and also in the community of sellers (Pavlou 2002, Pavlou and Gefen 2004). Institutional structures set the rules of conduct and provide a basis for cooperative buyer-seller transactions (Zucker 1986). The perceived effectiveness of institutional structures is defined as the extent to which a buyer believes that appropriate conditions are in place to facilitate successful transactions with the community of sellers (Pavlou and Gefen 2004).

There are four key institutional structures in online marketplaces (Pavlou and Gefen 2004). These are (1) feedback technologies, (2) escrow services, (3) credit card guarantees, and (4) trust in the intermediary.

Feedback technologies are buyer-driven reputation systems that accumulate and disseminate information about sellers' past trading behavior. These IT systems provide information about the reputation of sellers (Resnick *et al.* 2000) by allowing buyers to post their experiences with sellers (Dellarocas 2003). The perceived effectiveness of feedback technologies is defined as the extent to which a buyer believes that the feedback system in an online marketplace is able to provide accurate and reliable information about the past transaction

behavior of sellers in the marketplace. By accumulating and disseminating information about past transactions with particular sellers, these technologies provide buyers with an important tool to avoid opportunistic sellers. Escrow services, such as PayPal are third-party services in which a third party authorizes payment only after the buyer receives and approves of the goods (Wolverton 2002). The perceived effectiveness of escrow services is defined as the extent to which buyers believe that escrows are able to guarantee that their transactions with the sellers in a marketplace will be fulfilled in accordance with their expectations. Credit card guarantees, such as those provided by VISA or MasterCard, create a legally-supported third-party structure that safeguards transactions by providing some protection to the buyer (Wolverton 2002). The perceived effectiveness of credit card guarantees is defined as the extent to which buyers believe that the available protection from a credit card company will protect them from opportunistic sellers. Trust in the intermediary is defined as the belief buyers have that an intermediary (e.g., eBay or Amazon) will institute and enforce fair rules and procedures in its marketplace in a manner which is competent, reliable, and honest, and will also provide recourse for buyers to deal with opportunistic seller behavior. The effectiveness of online marketplaces is reflected in the buyers' trust in the intermediary (Snyder 2000).

Figure 3. Proposed Higher-Order Nature of the Perceived Effectiveness of IT-Enabled Institutional Structures



In terms of the exact nature of the 'perceived effectiveness of institutional structures' construct, we propose a *formative* second-order model (Figure 3). In a formative higher-order model, the first-order constructs do not reflect the second-order construct as in regular scales. Rather, each construct represents a unique aspect that contributes a new aspect to the higher order construct (Chin 1998, Gefen *et al.* 2000). A formative model is more appropriate in this case because the four institutional structures are not expected to be highly inter-related. Nonetheless, even if the proposed four structures may be unrelated to each other, (with each

handling a unique type of institutional guarantee), all factors combine to serve the same overall purpose of providing institutional guarantees in the online marketplace. The proposed model is a parsimonious view that is theoretically amenable (through the second-order factor that may relate to other variables), and also managerially relevant (through the first-order factors that online marketplaces can readily influence).

PCV with the community of sellers is proposed to make buyers less reliant on institutional structures. When buyers experience PCV with an individual seller and then generalize it to the seller community (H1), their good faith in the institutional structures which they initially leveraged to transact is likely to be reduced too. Having experienced how these structures did not adequately protect them in the past, these buyers would be less likely to perceive the institutional structures as effective. In an analogous manner, a person who has been robbed often has less faith in the police of that community (the institutional structure) because of its prior failure to provide adequate safety. Therefore, the perceived effectiveness of institutional structures is proposed to be negatively influenced by the perception of PCV with the community of sellers.

H8: Psychological contract violation with the community of sellers in a marketplace decreases the buyer's perceived effectiveness of the marketplace's institutional structures.

4. MODERATING ROLE OF PSYCHOLOGICAL CONTRACT VIOLATION

An important conclusion in the literature about PCV is that it forces people to reassess their worldview, causing them to change their decision-making mode from a trust-based one toward a suspicious or risk-based one (e.g., Robinson 1996). As Pate and Malone (2000) report in their analysis of disgruntled former employees, the occurrence of PCV makes employees more skeptical and cynical, and less likely to trust future employers (p. 30). Also in SET (Blau 1964), uncooperative behaviors, such as those that closely resemble PCV, transform trusting relationships into distrusting ones. Also, from a *cognitive dissonance theory* standpoint (Festinger 1957), which has long been extended to consumer behavior (e.g., Cohen and Goldberg 1970), PCV could be viewed as an inconsistency between a buyer's initial expectations about a transaction and the buyer's actual experience. Applying cognitive dissonance to PCV, buyers are likely to change their positive perceptions to negative ones in an attempt to preserve their cognitive consistency. Finally, according

to the *disconfirmation of expectations theory* (Oliver 1980), a disconfirmatory experience, such as PCV, would lead to a change in the buyers' mindset from initially favorable beliefs to a subsequent negative affect (Dunfee, Smith, and Ross 1999).

Extending these theories to online marketplaces, we propose that PCV with the community of sellers transforms the buyers' relative reliance from trust to perceived risk. This is hypothesized below in terms of moderating (1) the antecedents (institutional structures) and (2) the consequences (transaction intentions) of trust and perceived risk.

4.1 The Moderating Role of PCV on the Impact of Institutional Structures on Trust and Risk

Trust is determined to a large extent by effective institutional structures (Fukuyama 1995, Zucker 1986), as it has been shown in online marketplaces (Pavlou and Gefen 2004). The effect of institutional structures can be viewed either through the lens of SET or through the lens of agency theory, as discussed below:

First, viewed through the lens of SET, institutional structures generally build buyer trust when sellers are perceived to be cooperative and are duly worthy of the buyers' trust (Gefen *et al.* 2003b). Following SET, institutional structures could be viewed as a set of informal guidelines (Luhmann 1979) that lack explicit rules (Kelley and Thibaut 1978). According to SET, institutional structures could be *solely* viewed as trust-building mechanisms and *not* as risk-reducing mechanisms.

Second, an alternative view of institutional structures is to view them through the lens of *agency theory*, which has been applied to buyer-seller relationships (Bergen *et al.* 1992, Mishra *et al.* 1998, Prendergast 2002, Singh and Sirdeshmukh 2000). Agency theory aims to explain economic exchanges among potentially opportunistic parties, arguing that each party strives to maximize its economic utility and minimize its risk (Eisenhardt 1989). From a buyer's standpoint, transaction risks involve adverse selection and moral hazard due to seller's information asymmetry advantages and fears of seller opportunism. Applied to online marketplaces, effective institutional structures reduce perceived risk through signals and incentives (Ba and Pavlou 2002). Signals can identify opportunistic sellers, and thus prevent adverse selection. Signals can also provide incentives for sellers not to act opportunistically by taking advantage of buyer long-term preferences to transact with reputable sellers. In doing so, they reduce moral hazard.

Integrating the premises of SET and agency theory, institutional structures have the potential to impact both trust and perceived risk, depending on whether the buyers have a trust-building or a risk-reducing decision-making mode. Buyers who have lower perceptions of PCV with the community of sellers would tend to employ institutional structures primarily to build trust in the community of sellers. This is because buyers who have not experienced PCV with an individual seller have no reason to rethink their initial trust-building decision-making mode (McKnight *et al.* 1998). On the other hand, buyers with higher perceptions of PCV with the community of sellers would tend to use institutional structures primarily to reduce their perceived risk, and not to build trust. Having experienced PCV with an individual seller and presumably having become more cautious as a result, these buyers would operate in a risk-minimizing, as opposed to a trust-building, mode. Consequently, they will employ the institutional structures primarily to reduce risk, thereby enhancing their risk-minimizing potential. In other words, the reduced importance of trust due to PCV (as suggested by H2) will make buyers pay less attention to trust-building, while the increased importance of perceived risk due to PCV (as suggested in H3) will make buyers pay more attention to risk reduction. Thus, the perception of PCV with the community of sellers is proposed to weaken the trust-building potential of institutional structures, and instead strengthen their risk-reducing potential. Therefore, the following two hypotheses are proposed:

H9a: PCV with the community of sellers *negatively* moderates (attenuates) the relationship between the perceived effectiveness of institutional structures and the trust in the community of sellers.

H9b: PCV with the community of sellers *positively* moderates (reinforces) the negative relationship between the perceived effectiveness of institutional structures and the perceived risk from the community of sellers.

4.2 The Moderating Role of PCV on the Impact of Trust and Risk on Transaction Intentions

As described above, SET and agency theory suggest two different perspectives on online transactions. SET views transaction relationships as based on trust and the cooperation it entails, whereas agency theory views these transactions on the basis of perceived risk where cooperation is minimal. The application of SET to e-commerce suggests that buyers tend to view transaction relationships as social exchanges, and they largely rely on trust to guide their transaction behavior (Gefen 2000). However, once a person's trust is broken, suspicion takes over and trust becomes a lesser factor in determining her behavioral intentions (Blau 1964).

PCV in the community of sellers is proposed as a prime cause of this transformation since it reduces the buyers' emphasis from trust-building to risk reduction.

In general, buyers rely on both trust and perceived risk when forming their transaction intentions (Pavlou and Gefen 2004). According to TPB (Ajzen 1991), people have a small set of salient accessible beliefs that they draw upon to form their behavioral intentions. While both trust and perceived risk are such salient accessible beliefs, their relative influences on transaction intentions depend on past experiences. PCV in the community of sellers is one such significant past experience that shifts the weight from trust to perceived risk. Having experienced PCV with an individual seller and generalized this experience to the community of sellers (as suggested by H1), such buyers would assign less salience on trust and more salience to perceived risk. Accordingly, PCV with the community of sellers is hypothesized to transform the buyers' trust-based stance (as expected by SET) to one based on risk (as expected by agency theory).

H10a: PCV with the community of sellers *negatively* moderates (attenuates) the relationship between trust in the community of sellers and buyer intentions to transact with the community of sellers.

H10b: PCV with the community of sellers *positively* moderates (reinforces) the negative relationship between perceived risk from the community of sellers and buyer intentions to transact with the community of sellers.

5. ANTECEDENTS OF PSYCHOLOGICAL CONTRACT VIOLATION

Since PCV with the community of sellers has the potential for adverse effects, it is of practical and theoretical importance to identify how it can be mitigated. Two reducers of PCV are herein proposed: (1) the *buyer's positive past experience* and (2) the *sellers' positive past performance*. A buyer's past experience is defined as the quality of the buyer's *own* encounters with particular sellers in a marketplace. Through their past experience with a small number of sellers, buyers can form a general opinion about the seller community (Tirole 1996). Sellers' past performance is defined as a buyer's general knowledge about the average performance of sellers in the specific marketplace. Sellers' past performance is easily communicated among buyers, and it serves as a proxy for the overall reputation of sellers in a marketplace.

It is important to distinguish between a buyer's past experience and their perception of sellers' past

performance, on one hand, and PCV, on the other. The buyers' past experience and their assessment of the sellers' past performance denote a broad sense of satisfaction with the seller community. In contrast, PCV with the community of sellers denotes a specific perception regarding the extent to which the community of sellers (as a group) have communally failed to fulfill their contractual obligations.

As PCV with the community of sellers typically results from PCV with an individual seller, buyers who previously had positive experiences with sellers and have a favorable opinion about their performance are less likely to perceive PCV with an individual seller as a PCV regarding the community of sellers as a group. Such buyers are likely to give sellers the benefit of the doubt, assuming that a problematic transaction might have been an isolated incident. A delayed delivery, for example, is more likely to be perceived as an unfortunate remote incident rather than a malicious violation, especially if most previous deliveries were on time. Moreover, such buyers are more likely to ex ante prevent any misunderstandings and ex post rectify any unfortunate incidents. This argument is consistent with Morrison and Robinson (1997) who argue that content people are likely to ignore small discrepancies in the contractual agreements and not perceive them as PCV. Finally, buyers with positive experiences in a marketplace often feel as members of a community. Thus, they may view an opportunistic seller as a "bad apple" and not generalize her actions to the rest of the community of sellers.

Accordingly, since PCV primarily exists primarily in the eye of the beholder (Rousseau and Parks 1993), buyers with positive past experiences and favorable perceptions about the sellers' performance are less likely to perceive PCV with the community of sellers, as hypothesized below:

H11a: A buyer's positive buyer experience decreases the perception of psychological contract violation with the community of sellers.

H11b: Sellers' positive past performance decreases the perception of psychological contract violation with the community of sellers.

CONTROL VARIABLES

Buyers' Positive Past Experience: As shown by previous research (Pavlou and Gefen 2004), a buyer's own past experience positively influences future intentions (Ganesan 1994), reduces perceived risk, and builds trust (Blau 1964, Gefen 2000, Luhmann 1979).

Sellers' Positive Past Performance: As shown by previous research (Pavlou and Gefen 2004), outstanding seller performance also contributes to willingness to transact (Reichheld and Schefter 2000), increases trust, and reduces perceived risk (Gefen 2002).

Number of Past Transactions: The number of a buyer's past transactions in the marketplace is controlled since past transactions are likely to build a habit, and thus have an impact on behavioral intentions (Chaudhuri 1999, Gefen 2003). Also, as a matter of sampling, the more past transactions a buyer has, the higher the probability of coming across an opportunistic seller, and the more likely she could have experienced PCV.

Trust Propensity: Trust in general is also the product of trust propensity, which is invariant across situations and results from socialization (Gefen 2000, Whitener *et al.* 1998). Propensity to trust increases trust in online contexts (Gefen 2000) and in online marketplaces (Pavlou and Gefen 2004), and it is thus controlled for.

Feedback Ratings: In a dynamic pricing scheme such as in online auctions, buyers are often willing to bid higher when the seller has positive feedback ratings because these sellers guarantee a successful transaction (Ba and Pavlou 2002). However, sellers with negative ratings can expect to need to sell at a discount because of their negative transaction history. The role of feedback ratings on price premiums is thus controlled for.

Auction Bids: The number of auction bids (number of unique buyers in an auction) is expected to raise prices given the dynamic nature of online auctions. The role of auction bids on price premiums is thus accounted for.

6. RESEARCH METHODOLOGY

6.1 Measure Development

Wherever possible, measurement items were based on existing scales. The preliminary instrument was pilot tested for clearness, following Churchill (1979). All survey items were measured on Likert-type scales anchored at 'strongly disagree' (1), 'strongly agree' (5), and 'neither agree nor disagree' (3), (Appendix 1). The sources of these measures are summarized in Table 3.

The number of past buyer transactions was captured objectively from each marketplace's website that reported the number of each buyer's transactions. 'Actual transaction behavior' was measured four months later based on the how many auctions the respondents won during this period, as objectively reported by the marketplace. Following Ba and Pavlou (2002), a measure for a price premium was calculated by subtracting the mean price of each product from each item's final auction price, divided by the product's mean price.

Table 3. Source of Survey Items

Measure	Source
Transaction Intentions	Ajzen (1991) and Pavlou and Gefen (2004)
Trust in the Community of Sellers	Ohanian (1991), adapted to the population of sellers (Pavlou 2002)
Perceived Risk from the Community of Sellers	Jarvenpaa et al. (2000)
Perceived Effectiveness of Feedback Technologies	Pavlou (2002)
Perceived Effectiveness of Escrow Services	Pavlou and Gefen (2004)
Perceived Effectiveness of Credit Card Guarantees	Chellappa and Pavlou (2002)
Trust in the Intermediary	Pavlou (2002), adapted to reflect the intermediary (eBay/Amazon)
Sellers' Past Performance	Pavlou and Gefen (2004)
Buyers' Positive Past Experience	Pavlou and Gefen (2004)
Trust Propensity	Gefen (2000)

6.2 Operationalization of Psychological Contract Violation

Given the central role of PCV in the proposed study and its novel extension to online marketplaces, special care was given to its operationalization and measurement, as described below:

6.2.1 PCV with the Community of Sellers

Following Robinson, Kraatz, and Rousseau (1994), three direct survey items asked buyers to assess their overall degree of contract fulfillment with the community of sellers in the auction marketplace. Such a global continuous measure of a lack of PCV is consistent with Robinson (1996) and Rousseau (1989) who view PCV an overall evaluation of how well one's psychological contract has been fulfilled.

6.2.2 PCV with an Individual Seller

This construct was assessed with both survey items and also with secondary data from each marketplace:

Self-reported Survey Measures: First, following Robinson and Morrison (1995, 2000), three dichotomous survey items asked buyers to indicate whether they perceived PCV with any seller in the marketplace (Appendix 1).

Post-Purchase Feedback Ratings for Sellers: Second, all quantitative (positive or negative) feedback ratings left by buyers to sellers following each buyer's completed purchase were examined. Data on completed transactions are publicly available on eBay's and Amazon's auction marketplaces, including buyers' feedback ratings for sellers they transacted with. Special care was paid to assess feedback ratings left for transactions that occurred *prior* to the buyers' responding to the survey instrument. An occurrence of PCV was classified if the buyer left a negative rating to a seller to describe their transaction. This secondary perceptual measure is consistent with the literature (e.g. Ba and Pavlou 2002, Resnick *et al.* 2000) since a negative rating virtually always denotes a significant problem since buyers are encouraged to resolve minor issues with sellers before posting a negative rating. Buyers thus resort to a negative rating only when a significant contract violation

occurred that was not properly resolved. Indeed, negative ratings are rare (Resnick and Zeckhauser 2002). Positive feedback ratings were assessed as no sign of PCV, thus creating a dichotomous measure.

Content Analysis of Feedback Comments for Sellers: Similar to other PCV studies (e.g., Robinson *et al.* 1994), the specifics of a PCV in an online marketplace could not be fully captured with survey items or quantitative (positive and negative) ratings. To overcome this limitation, a *content analysis* was conducted to evaluate the underlying meaning of the feedback comments left by buyers to characterize their past transactions. Content analysis transforms the substance of qualitative information with an objective quantification of the underlying content using systematic techniques (Weber 1990).¹⁰ Given that the “hidden” nature of PCV can perhaps be uncovered with the feedback comment left by buyers in response to problematic transactions, each buyer’s feedback comments *prior* to completing the survey instrument were collected and analyzed.

To uncover the occurrence of PCV with content analysis, two independent coders were recruited and underwent a training sequence. First, each coder was individually provided with a large list of real-life comments (however, not those from the sample’s buyers) that should be classified as PCV and its six underlying sources. These comments reflected instances of the proposed six underlying sources of contract violation (Table 2), and a list of actual feedback comments was provided for each source (Appendix 2). Second, the coders were asked to find other comments from seller feedback profiles (not from the final list) that reflect PCV and its six sources. Third, the coders had a meeting with one of the authors where the spirit of the comments that should be coded as PCV was discussed. This meeting created additional comments for the occurrence of PCV and each of its six underlying sources, and a reference sheet was created. Fourth, for practice, each coder analyzed 100 randomly-selected feedback text comments, noted the occurrence of PCV, and classified under each of the six sources of PCV. Following this pretest, the two coders met with one of the authors to discuss any coding inconsistencies. This resulted in a comprehensive set of PCV comments that the two coders had available during the actual coding. Finally, the coders noted the occurrences of PCV for all feedback comments left by each of the 404 buyers, and classify these sources under each of the six proposed categories. To ensure an independent coding and a credible inter-rater reliability score, the coders did not communicate during the coding procedure. Inter-rater reliability (internal consistency) between the two coders

¹⁰ A meaningful content analysis must specify a reproducible, exhaustive, mutually exclusive coding scheme to reliably translate the content into a quantitative measure. Mutual exclusivity means that each comment can only be placed in a one category.

was .91 for overall PVC, and above .77 for each of the six underlying sources, thus exceeding Weber's (1990) reliability condition (.70). The coding scheme is deemed reliable because of the high inter-rater reliability on the categorization of feedback comments and the few disagreements among the coders.

Summary: In sum, the findings from the three methods for capturing PCV are consistent and highly-correlated. The average of the three survey items correlates at .91 ($p < .001$) with the secondary feedback ratings and at .95 ($p < .001$) with the content analysis of secondary feedback comments. The quantitative ratings and qualitative comments are also highly correlated ($r = .93$, $p < .001$). Therefore, these five independent dichotomous measures were pulled together to form a multi-item scale for PCV with individual sellers (Cronbach's $\alpha = .98$).

6.2.3 Underlying Sources of PCV with an Individual Seller

As described in Table 2, six seller behaviors (fraud, product misrepresentation, contract default, delay, product guarantees, and payment policy) were identified as potential sources of PCV with individual sellers. Six binary survey items were used to capture if buyers had experienced any of these six seller behaviors. To validate the direct survey items, we contrasted each of the reported survey items with the negative feedback comments with each source of PCV. For each of the six proposed sources of PCV, the correlation between the reported survey item and the content analysis of the feedback comments was at least .85.

6.3 Survey Administration

The research model was tested with data from buyers in eBay's and Amazon's auction marketplaces, which together span about 70% of the online auction market share (Wolverton 2001). To identify active auction buyers and associate them with their past and future transaction behavior, feedback ratings and comments, and price premium given for a recent transaction, we collected data from 1,031 completed auctions for six standardized products (camcorder, $n = 72$; Ipod, $n = 434$; palm pilot, $n = 134$; camera, $n = 122$; movie DVD, $n = 168$, music CD, $n = 101$) from Amazon's and eBay's auction marketplaces over two weeks ($n = 318$ from Amazon, $n = 713$ from eBay). Two graduate assistants carefully inspected the posted descriptions of these products to assure that they were pure duplicates (brand new, sealed, and not refurbished) to avoid product-related variations within each product category. Completed auctions whose products did not clearly specify these characteristics were ignored. From each completed auction, we collected data on the final auction price, the seller's positive and negative feedback ratings, the number of auction bids, the buyer's number of past transactions, and the buyer's feedback ratings and comments for all his/her past transactions.

Emails were sent to the 1,031 buyers that won these completed auctions, inviting them to participate in a survey study. The email explained the purpose of the study and asked the invited buyers to click on a URL link which brought up the web-based survey instrument (Appendix 1). The email mentioned that the results would only be reported in aggregate to assure the respondents' anonymity. To receive a high response rate and not to appear as spam, each email was personalized by being addressed with the buyer's name and by referring to the product they recently won. The respondents were also offered a chance in a raffle with several monetary prizes. Finally, they were promised a summary report of the study. Following two email reminders, of the 318 emails sent to the Amazon buyers, 134 responses (42% response rate) were obtained; of the 713 emails sent to eBay buyers, 270 responses (38% response rate) were attained, together yielding a total of 404 responses (39% response rate). The response rate is quite high because (a) the email communication was personalized, (b) the respondents recently participated in an auction transaction, (c) there were substantial monetary prizes, and (d) the respondents were very interested in the study with 98% requesting the study's results and 91% volunteering to participate in related studies in the future.

Non-response bias was assessed by verifying that (a) the respondents' demographics are consistent with current Internet consumers (<http://www.4webpower.com/demographics.html>), and (b) by verifying that early and late respondents were not significantly different (Armstrong and Overton 1976). Early respondents were those who responded within the first week (54%). The two groups for both marketplaces were compared based on their demographics (age, gender, education, annual income, and Internet experience). All t-test comparisons between the means of the two groups for both marketplaces showed insignificant differences. Descriptive statistics for the buyer population are shown in Table 4.

Table 4. Demographic Characteristics of Buyer Population

Site	Past Transactions (STD)	Average Age (STD)	Gender	Annual Income (STD)	Experience (Years) (STD)
Amazon	12(33)	38.4(17.1)	52% Men	\$41,2400 (27,640)	5.0 (1.8)
eBay	18(48)	40.7(15.8)	56% Men	\$39,780 (25,010)	6.1 (1.7)

7. RESULTS

We used Partial Least Square (PLS) to analyze our data. PLS employs a component-based approach for estimation purposes (Lohmoller 1989) and can readily handle formative factors (Chin *et al.* 2003). PLS also places minimal restrictions on the sample size and residual distributions (Chin *et al.* 2003). In general, PLS is better suited for explaining complex relationships as it avoids two problems: inadmissible solutions and factor indeterminacy (Fornell and Bookstein 1982). This sentiment is further echoed by Wold (1985) who writes: "In

large, complex models with latent variables PLS is virtually without competition." (p. 590). We thus chose PLS to accommodate the presence of large number of variables, formative factors, and moderating effects.

The data from both marketplaces were pooled together since the results from the two samples were not significantly different.¹¹ Wilk's Lambda was .99 ($F=.31$; $p\text{-value}=.96$)¹² and the Chow statistic was .21 ($p>.99$).¹³ Considering the resemblance between the two marketplaces, this was expected. To double check, we performed a separate data analysis on each sample and got virtually identical results. Therefore, the results reported here are based on the statistical analysis of the pooled data from both marketplaces.

7.1 Measurement Validation

Reliability was assessed using internal consistency scores, calculated by the composite reliability scores (Werts, Linn, and Joreskog 1974).¹⁴ Internal consistencies of all variables are considered acceptable since they all exceed .90. Convergent and discriminant validity is shown when the PLS indicators (a) load much higher on their hypothesized factor than on other factors (own-loadings are higher than cross-loadings), and (b) when the square root of each factor's Average Variance Extracted (AVE) is larger than its correlations with other factors (Chin 1998, Gefen and Straub 2005, Straub, Boudreau, and Gefen 2004).

Table 5. Descriptive Statistics, Correlation Matrix, and Average Variance Extracted of Principal Constructs

Constructs	Mean (STD)	Reliability	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Actual Transaction Behavior	5.1 (3.3)	n/a	1.0												
2. Transaction Intentions	4.0 (1.0)	.98	.68**	.99											
3. Price Premiums	0.0 (1.0)	n/a	.44**	.39**	1.0										
4. PCV (Individual Seller)	0.4 (0.5)	.98	-.25**	-.27**	-.19**	.93									
5. PCV (Seller Community)	4.0 (0.9)	.97	-.36**	-.41**	-.30**	.44**	.97								
6. Trust	3.7 (0.9)	.95	.40**	.50**	.27**	-.23**	-.62**	.93							
7. Perceived Risk	2.9 (1.0)	.96	-.30**	-.37**	-.18**	.44**	.51**	-.51**	.97						
8. Trust-PCV Interaction	15.4 (16)	.99	-.14*	-.37**	-.11*	.18**	.38**	-.27**	.20**	.95					
9. Risk-PCV Interaction	12.5 (14)	.98	-.21**	-.31**	-.19**	-.33**	-.46**	.67**	-.24**	-.60**	.97				
10. Institutional Structures	3.6 (0.9)	.86	.35**	.52**	.29**	-.29**	-.49**	.58**	-.47**	-.05	.26**	.70			
11. Institutional Structures*PCV	14.8 (17)	.95	-.10*	-.11*	-.17**	.14**	.30**	-.30**	-.49**	.43**	-.35**	-.20**	.79		
12. Sellers' Past Performance	3.5 (0.9)	.90	.42**	.61**	.23**	-.20**	-.58**	.58**	-.46**	-.12*	.33**	.53**	-.06	.92	
13. Buyer's Past Experience	3.9 (0.9)	.93	.38**	.55**	.23**	-.36**	-.70**	.65**	-.12*	-.24**	.30**	.57**	-.23**	.58**	.96

Note: ** denotes significant correlations at the $p<.01$ level. * at $p<.05$ level. The diagonal elements (in bold) represent the AVE.

¹¹ A canonical discriminant analysis could not classify the data back into their original samples since 99% of the cases were classified into one of the two groups.

¹² The Wilk's lambda criterion measures the difference between groups, and it was .99 suggesting virtually no difference.

¹³ The Chow test is a statistical test for structural change, which determines whether the coefficients in a regression model are the same in separate sub-samples. The Chow test is an application of the F-test, and it requires the sum of squared errors from three regressions - one for each sample period and one for the pooled data.

¹⁴ For the first-order factors, the reliability scores are: $(\sum \lambda_i)^2 / [(\sum \lambda_i)^2 + \sum \text{Var}(\varepsilon_i)]$, where λ_i is the indicator loading, and $\text{Var}(\varepsilon_i)=1-\lambda_i^2$. For the second-order construct of institutional structures, an approximate procedure was used that multiplies the standardized loadings of the first-order factors with the standardized loadings of the second-order factor (Kumar, Scheer, and Steenkamp 1995).

The first test was performed using the PLS confirmatory factor analysis procedure,¹⁵ where all items loaded well on their respective factors, which are much higher than all cross loadings (omitted for brevity). Second, as shown in Table 5, the square root of all AVEs is much larger than all other cross-correlations. Jointly these findings suggest adequate convergent and discriminant validity.

To overcome the concern of *common method bias* in the survey design, we first included several reverse-scored items in the principal constructs to reduce acquiescence problems (Lindell and Whiney 2001). Second, common method variance was assessed after the data were collected using Harman's one-factor test (Podsakoff and Organ 1986). In this test, all the principal constructs are entered into a principal components factor analysis. Evidence for common method bias exists when a single factor emerges from the analysis, or one general factor accounts for the majority of the covariance in the interdependent and dependent variables. Since each of the principal constructs explains roughly equal variance, the data do not indicate substantial common method bias. Third, a partial correlation method was employed, following Podsakoff and Organ (1986). The first factor from the principal components factor analysis was entered into the PLS model as a control variable on all dependent variables (trust, perceived risk, transaction intentions, and transaction behavior). This factor is assumed to "contain the best approximation of the common method variance if it is a general factor on which all variables load" (p. 536). This control factor did not produce a significant change in variance explained in any of the dependent variables, indicating lack of common method bias (Podsakoff *et al.* 2003). Fourth, we run a modified test of Lindell and Whitney's (2001) procedure in which a conceptually unrelated variable (termed a *marker* variable) is ex ante measured within the survey instrument, and it is used to adjust the principal constructs in the model for common method bias. However, since we did not ex ante measure an unrelated construct (to economize on survey items), we instead used *trust propensity* as the marker variable (which is an indirect, not an unrelated variable to PCV). Any significant correlation among any of the items of PCV and any of the trust propensity items could be an indication of common method bias as the two constructs are theoretically unrelated, and their correlations should thus approximate zero. Since, the average correlation

¹⁵ Confirmatory factor analysis in PLS is performed in two steps (Agarwal and Karahanna 2000). First, the own-construct loadings are obtained. Second, the cross-loadings are obtained by calculating the correlation of the weighted sum of the own-construct indicators (standardized latent variable scores) with all other indicators.

among their items was $r=.02$ (average p -value of .47), there was no evidence of common method bias. Finally, the study's ultimate dependent variable (transaction behavior) and several principal constructs (e.g., past transactions, price premium) were measured with secondary data that are distinct from the primary survey data. In summary, all preceding tests suggest that common method bias does not seem to be a problem in this study.

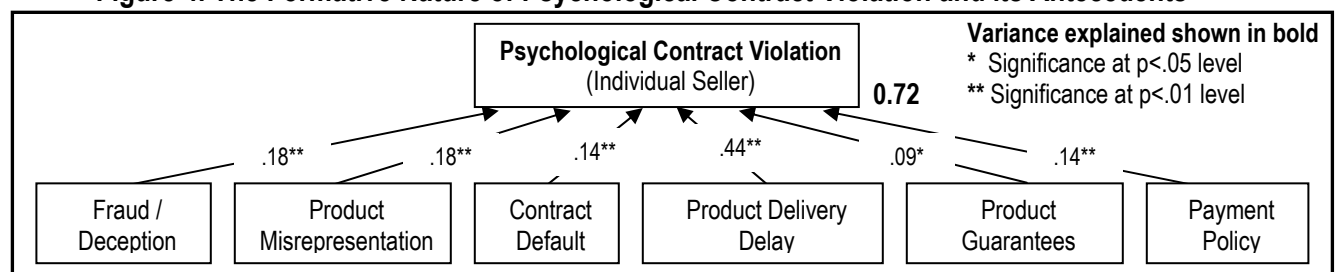
Multicollinearity among the external beliefs is not a serious concern since all relevant checks (eigenanalysis, tolerance values, VIF) did not suggest any evidence of multicollinearity. Similarly, no evidence of heteroscedasticity was detected. Finally, outlier analysis did not indicate any influential outliers.

7.2 The Nature and Sources of Psychological Contract Violation

As shown in Figure 4, the six proposed formative indicators of PCV due to an individual seller are significant. These formative indicators are estimated by modeling the paths from the individual items to the 5-item reflective PCV construct in a regression format (Chin 1998). As the six sources of PCV are significant and jointly explain a substantial amount of the variance of PCV with an individual seller, the proposed nature of PCV is supported.

PCV with an individual seller has a significant impact on PCV with the community of sellers ($b=.22$, $p<.01$), even after accounting for two significant antecedents of PCV (buyer past experience and sellers' past performance). Since these three factors are significant predictors of PCV, H1 and H11a and H11b are supported.

Figure 4. The Formative Nature of Psychological Contract Violation and its Antecedents



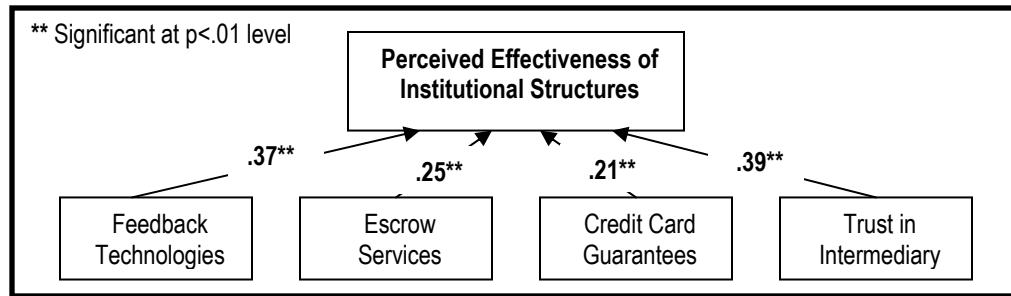
7.3 Institutional Structures

To estimate the proposed second-order model of the perceived effectiveness of institutional structures, we modeled the coefficients (γ_i) of each first-order factor to the latent second-order factor using a principal components factor analysis, following the procedure of Diamantopoulos and Winklhofer (2001, p. 270):

$$\text{Institutional Structures} = \gamma_1 \times \text{Feedback} + \gamma_2 \times \text{Escrows} + \gamma_3 \times \text{Credit Cards} + \gamma_4 \times \text{Trust in Intermediary}$$

The results shown in Figure 5 suggest that all first-order factors are significant.

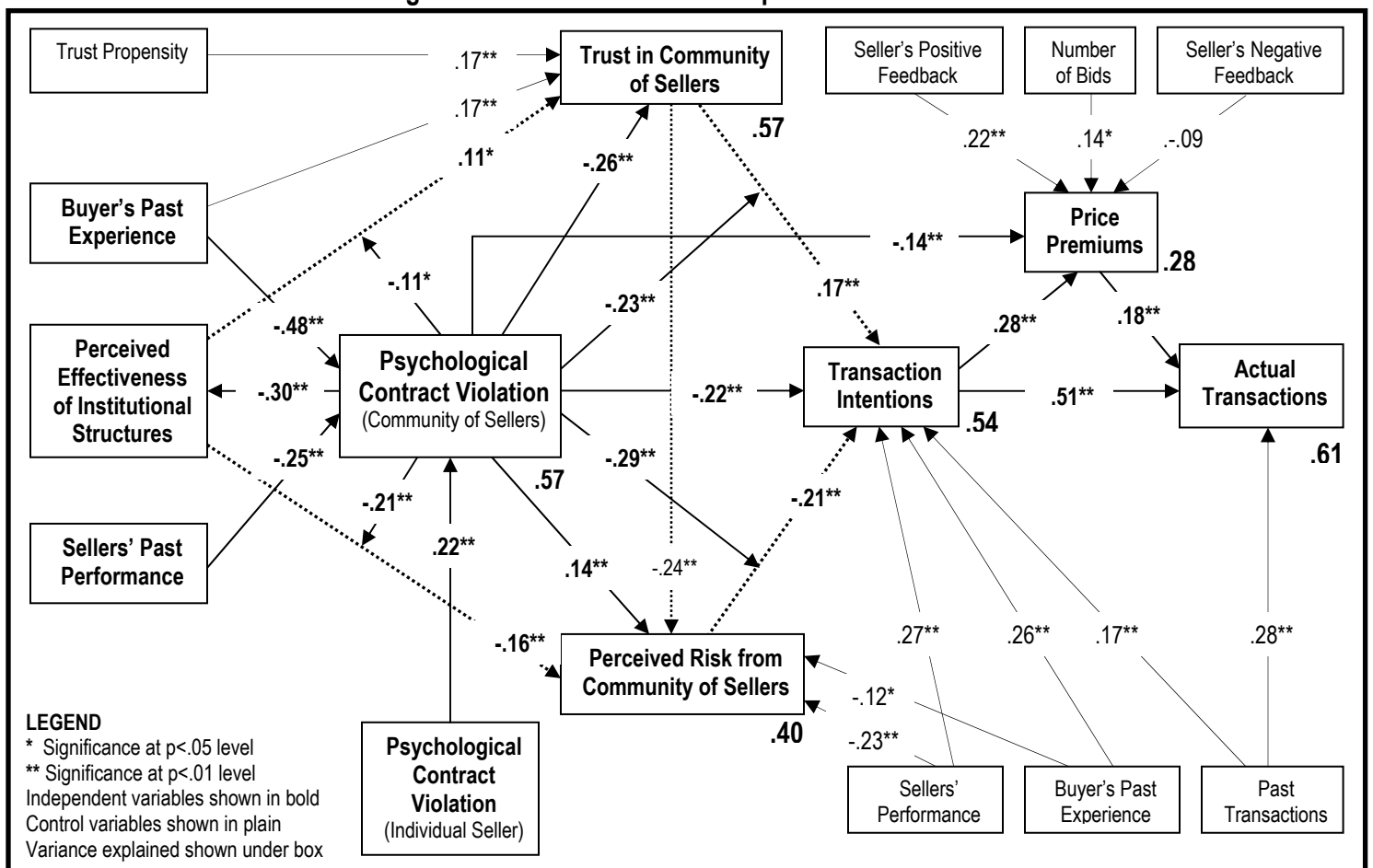
Figure 5. Results on the Formative Nature of the Perceived Effectiveness of Institutional Structures



7.4 Testing the Structural Model

The standardized PLS path coefficients are shown in Figure 6. All interaction variables were computed following the procedure of Chin et al. (2003) by cross-multiplying the *standardized* items of each construct. For clearer exposition, since each construct's item loadings are well above .80, all item loadings are omitted. Only significant effects are shown in Figure 6.

Figure 6. PLS Results for the Proposed Research Model



As shown in Figure 6, the direct effect of PCV with the community of sellers on trust ($b=-.26, p<.01$), perceived risk ($b=.14, p<.01$), transaction intentions ($b=-.22, p<.01$), price premiums ($b=-.14, p<.01$), and institutional structures ($b=-.30, p<.01$) are significant, thus supporting H2, H3, H4, H5, and H8 respectively. As hypothesized, transaction intentions strongly influence actual transaction behavior, thus validating H6. Price premiums partially mediate the impact of transaction intentions on behavior, validating H7a and H7b.

It is important to stress the high degree of explained variance in actual transaction behavior ($R^2=61\%$), and that this construct was measured with objective archival data from each marketplace.

7.5 Testing the Moderating Role of Psychological Contract Violation

The moderating role of PCV with the community of sellers also received support. In particular, PCV with the community of sellers attenuates the trust-building role of institutional structures ($b=-.11, p<.05, \Delta R^2=5.4\%$), while it reinforces their negative impact on perceived risk ($b=-.21, p<.05, \Delta R^2=6.6\%$). These results support H9a and H9b. Furthermore, PCV with the community of sellers negatively moderates the role of trust in transaction intentions ($b=-.23, p<.01, \Delta R^2=10\%$), while it reinforces the impact of perceived risk on intentions ($b=-.29, p<.01, \Delta R^2=11\%$), thus supporting H10a and H10b.

The tests for the moderated relationships were conducted by following Carte and Russell (2003), initially testing whether the variance explained due to the moderated effects is significant beyond the main effects, using the following **F-statistic** (p. 481):

$$F(df_{\text{interaction}}-df_{\text{main}}, N-df_{\text{interaction}}-1) = [\Delta R^2 / (df_{\text{interaction}}-df_{\text{main}})] / [(1 - R^2_{\text{interaction}})/(N-df_{\text{interaction}} - 1)]$$

Tests comparing the R^2 values between the main and interaction effects were also performed using **Cohen's f^2** , following Chin *et al.* (2003):

$$\text{Cohen's } f^2 = R^2(\text{interaction model}) - R^2(\text{main effects model}) / [1 - R^2(\text{main effects model})]$$

As shown in Table 6, all F-statistics are significant and the Cohen's f^2 moderating size effects are sizeable (following the guidelines of Chin *et al.* (2003)), thereby supporting the proposed moderating effects of PCV.

Carte and Russell (2003) warn against the interpretation of main effects in the presence of moderating effects using *interval* scale measures, recommending instead the use of *ratio* scale measures. Ratio scales are constant scales with ordered data and a natural zero. Although PCV with the community of

sellers is not an ideal ratio scale in the sense that each value is a natural ratio of another value, it still has a natural zero (no experience of PCV) and can so be viewed as an adequate ratio scale measure. In fact, more than 85% of the buyers who did not experience PCV with an individual seller (PCV=0) reported a 1 or a 2 (with minimum=1) on the continuous 5-point scale of PCV with the community of sellers. It thus becomes possible to interpret both the moderating and also the main effects of PCV with the community of sellers.

Since non-linear (quadratic) effects for the predictor variables may confound the proposed moderators (Carte and Russell 2003), we included quadratic (X^2) factors as additional predictor variables in the three PLS models that included moderating effects (transaction intentions, trust, and perceived risk). The results showed that none of the quadratic factors was statistically significant and that none explained a substantial amount of variance. Therefore, fears of quadratic confounds were alleviated. This was expected since none of the correlations among the predictor variables was extremely high, nor there was evidence of multicollinearity.

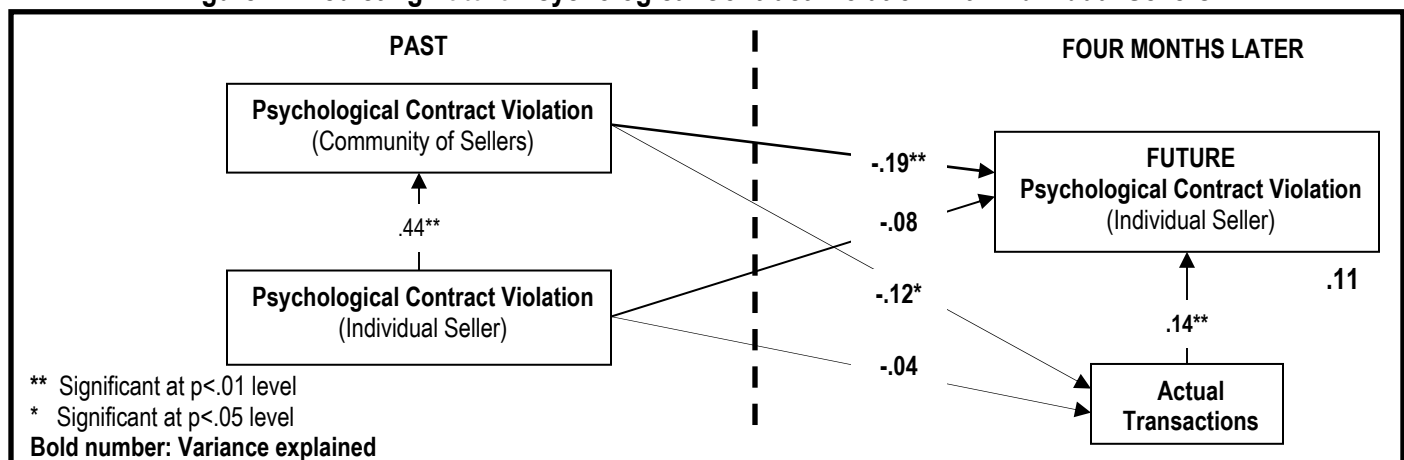
Table 6. F-statistics and Cohen's f^2 of the Proposed Interaction Effects

Hypothesis	Interaction Effect	F-statistic	Cohen's f^2	Effect Size
H9a	Psychological Contract Violation X Institutional Structures on Trust	1.12 ($p < .05$)	.11	Medium
H9b	Psychological Contract Violation X Institutional Structures on Perceived Risk	1.02 ($p < .05$)	.07	Small-Medium
H10a	Psychological Contract Violation X Trust on Transaction Intentions	1.52 ($p < .01$)	.20	Medium-Large
H10b	Psychological Contract Violation X Perceived Risk on Transaction Intentions	1.67 ($p < .01$)	.22	Medium-Large

7.6. Ex Post Analysis of Psychological Contract Violation

The results suggest that two distinct decision-making modes drive transactions: one based on trust and one based on risk. To test which mode is *less* likely to result in future occurrences of PCV with individual sellers, we observed the future occurrence of PCV (as measured by analyzing the feedback ratings and comments) four months after the 404 buyers participated in our survey instrument ($n=26$ buyers experienced PCV, 6% of total).

Figure 7. Predicting *Future* Psychological Contract Violation with Individual Sellers



As shown in Figure 7, the perception of PCV with the community of sellers significantly predicts whether buyers will experience PCV with an individual seller in the future ($b = -.19$, $p < .01$), even accounting for the number of actual transactions during the following two months ($b = .14$, $p < .01$). PCV with the community of sellers also significantly influences future transactions ($b = -.12$, $p < .05$). Since PCV with the community of sellers is a proxy for whether buyers use a trust-based versus a risk-based decision-making mode, buyers that transact based on a risk-based mode are *less* likely to experience PCV with an individual seller in the future compared to buyers that transact using a trust-based mode as a decision guide.

Finally, consistent with the study's overall conceptualization of PCV with the community of sellers as a key mediator, the impact of PCV with individual sellers on both the future occurrence of PCV ($b = -.08$, n/s) and also on future transactions ($b = -.04$, n/s) is *fully* mediated by PCV with the community of sellers (Figure 7).

8. DISCUSSION

8.1 Key Findings

The study has several key findings: First, it introduces the concept of PCV in an individual seller and identifies its underlying sources. Second, it extends PCV to the community of sellers, which has a significant theoretical and practical relevance as buyers seldom transact with the same seller again in online auction marketplaces. Using both primary and secondary data to measure the dual nature of PCV, the results support the hypothesized impact of PCV with an individual seller on the entire community of sellers. Third, it proposes and validates the impact of PCV with the community of sellers on a set of key factors that impact buyer actual transaction behavior in online marketplaces – trust, perceived risk, price premiums, transaction intentions, and institutional structures. Fourth, it supports the moderating role of PCV with the community of sellers on the relative impact of institutional structures on trust and perceived risk, and also on the role of trust and of perceived risk on transaction intentions. Fifth, longitudinal data confirm that buyer intentions do influence actual transactions over time, validating the long-term behavioral effects of PCV, integrating the mediating role of price premiums, and explaining a substantial amount of the variance in actual transaction behavior. Sixth, the study identifies two key antecedents of PCV with the community of sellers – buyer's past experience and sellers' performance – which can counter the effect of PCV caused by an individual seller. Finally, the *ex post facto* results suggest that buyers with higher perceptions of PCV with the community of

sellers are less likely to suffer PCV with individual sellers in the near future. In sum, these findings identify and bring to bear the “hidden” nature and role of PCV in buyer-seller relationships in online marketplaces.

8.2 Contributions and Implications for Theory and Research

The study’s findings have several theoretical and practical implications. First, from a descriptive standpoint, PCV represents an additional key element of buyer-seller relationships in online marketplaces that has, alas, been ignored in the literature. The integration of PCV also results in a more predictive model that better explains actual buyer transaction behavior in online marketplaces. Second, the study extends the PCV literature from employment relationships to buyer-seller relationships, shedding light on the underlying sources of PCV and its extension to the community of sellers as a group. Third, it has implications for integrating the role of price premiums in online marketplaces. Fourth, it clarifies how institutional structures help shape online buyer behavior, and how they are shaped by PCV. Finally, it has implications for the longitudinal study of online buyer behavior.

8.2.1 Implications for Buyer-Seller Relationships in Online Marketplaces

The study’s primary contribution is to introduce PCV from a “hidden” element of online buyer behavior (as portrayed by past research) to a central construct with both direct and moderating effects on key drivers of online transaction behavior. Given that the success of online marketplaces hinges to a large extent on their effective institutional structures (Pavlou and Gefen 2004), integrating the direct and moderating role of PCV into the nomological network through which institutional structures enable transactions adds to our better understanding of buyer-seller relationships in online marketplaces. While past research has warned about the possible adverse effects of seller opportunism in online marketplaces (Ba and Pavlou 2002), these effects have not been adequately examined. The increasing number of instances of seller opportunism in today’s marketplaces challenges the long-held assumption that past buyer experiences can remain a “hidden” factor, calling for the introduction and formal examination of PCV in the study of online buyer-seller relationships.

While the negative direct effects of PCV with the community of sellers may suggest its purely destructive role at first brush (as the literature has suggested), a closer examination suggests that a higher perception of PCV with the community of sellers prevents the occurrence of PCV with individual sellers in the near future. This finding suggests that buyers who place perceived risk at the core of their decision-making are *less* likely to

experience PCV in the near future (controlling for the fact that they engage in fewer transactions with sellers). On the other hand, buyers who place trust as the basis of their transactions are more likely to experience PCV, perhaps because they are less alert to the potential of seller opportunism. PCV apparently prevents buyers from relying on often unwarranted or over-confident trust beliefs to drive their transaction behavior, implying that a rational assessment of perceived risk may prevent future transactions with potentially opportunistic sellers. Having experienced PCV in the past, buyers perhaps become more vigilant, and they strive to transact with higher-quality sellers. This suggests that decision-making on the basis of SET may be more naïve or dangerous compared to decision-making on the basis of agency theory. This beneficial impact of PCV suggests that it is not purely 'evil', but it may have positive aspects (despite its past negative effect due to the specific incident). The constructive role of PCV also explains the relative role of institutional structures on trust and perceived risk. Essentially, it heightens the buyers' use of institutional structures to reduce their risk perceptions, thereby preventing them from transacting with potentially opportunistic sellers in the future. Extending these findings to employment relationships, PCV may have a positive impact on *future* contractual agreements, such as preventing employees from blindly trusting new employers, encouraging them to better understand their job contract, and insisting on explicit written promises from their employers.

Trust and risk beliefs are established key determinants of online buyer behavior. Yet, their relative impact on transaction intentions and how this impact may change over time has remained an open research question. For example, some authors claim that perceived risk is a major factor (e.g., Jarvenpaa *et al.* 2000), while others claim that it is only a minor one (Gefen 2000). To help resolve this debate, this study shows that buyers who experienced PCV are more likely to act as principals that view sellers as potentially opportunistic agents (and thus place perceived risk at the core of their decision-making), whereas buyers who did not experience PCV are more likely to view sellers as social exchange partners (and place trust at the basis of their transactions).

8.2.2 Implications for Research on Psychological Contract Violation

While the PCV literature has focused primarily on employer relationships, this study extends the literature to buyer-seller relationships and its long-term implications on online buyer behavior. Most important, while the literature has exclusively examined *dyadic, one-to-one* relationships, the proposed 'community of sellers' level

extends the literature to a *one-to-many* context. This extension is particularly relevant in today's IT-enabled environments where IT transforms many one-to-one contexts into one-to-many ones, such as online auction marketplaces (e.g., eBay, Amazon Auctions), online shopping portals (e.g., Yahoo! Shopping, Amazon zShops, Froogle), online travel agencies (e.g., Priceline, Hotwire, Orbitz), reporting sites (e.g., BizRate, CNET), and price comparison portals (e.g., PriceScan, PriceGrabber). This extension is especially relevant in these settings because buyers that experience PCV with an individual seller are highly unlikely to transact with the same seller again. In this sense, our study shows that PCV, even if caused by an individual seller, it could have serious implications, not only for the specific dyadic relationship, but also for the community of sellers as a whole. Even if this finding has been herein shown to apply to online auction marketplaces, there is little reason to doubt its applicability to other contexts, such as those studied in the PCV literature or other contexts.

In terms of understanding the exact impact of PCV, the results suggest that PCV is a quasi-moderator. Quasi moderators interact significantly with the predictor variables, and they are also related to the dependent variables. This quasi-moderating role of PCV is evident on trust, perceived risk, price premiums, and transaction intentions, perhaps the three most important variables in predicting buyer transaction behavior in online marketplaces (Pavlou and Gefen 2004, 2005). Most importantly, this study links the perceptual nature of PCV with two objective and fundamentally important variables – actual transaction behavior and price premium. In doing so, this study validates the real economic impact of PCV on objectively assessed variables.

In terms of predicting the sources of PCV in online marketplaces, following a thorough literature review, this study identified six common seller behaviors that often cause PCV with individual sellers. The proposed formative model also sheds light on the relative frequency of the underlying sources of PCV. Interestingly, *product delivery delay* appears to be the most common source of PCV. This is perhaps because delivery time is an important differentiating means among sellers. Also, opportunistic sellers often intentionally delay product delivery to take advantage of the time-value of money, especially for time-sensitive products, such as electronics, music, and media (such as Ipods, cameras, camcorders, palm pilots, CDs, DVDs in this study). Moreover, this study introduces two types of experiences – buyers' positive past experience and sellers' past performance – that counter the generalization from PCV with an individual seller to the community of sellers.

Finally, this paper also makes a contribution to the measurement of PCV. While the literature has largely used perceptual survey items to assess the occurrence of PCV, this study uses a combination of primary survey items and secondary data from archival sources of feedback ratings and comments.

8.2.3 Implications for Price Premiums in Online Marketplaces

To prevent a 'market of lemons' where only low-quality sellers linger (Akerlof 1970), online marketplaces need to reward high-quality sellers with price premiums. Price premiums that differentiate among sellers represent a very important element for the survival, maintenance, and success for online marketplaces. Therefore, identifying their influential antecedents is essential. PCV is one such new antecedent.

From a predictive perspective, this study shows that price premiums, in addition to transaction intentions, is another important antecedent of actual transaction behavior in online marketplaces. This finding helps increase our understanding of the variance explained in online buyer transaction behavior.

8.2.4 Implications for the Role of IT-Enabled Institutional Structures

Consistent with Orlikowski's (1996) 'duality of technology' theory that argues that technology can be used differently by users with different experiences to accomplish their respective objectives, this study advances our understanding of how and why different buyers perceive and employ particular IT systems for different uses. This study thus extends the duality of technology theory to the unique context of online marketplaces to suggest that different types of buyers (users), defined by their previous experience of PCV, employ the same technology in very distinct ways (e.g., trust-building versus risk reduction).

8.2.5 Longitudinal Implications

With few exceptions (i.e., Robinson *et al.* 1994), the literature has used cross-sectional studies that restricted the understanding of the longitudinal role of PCV. As this study attests, PCV has long-term effects over an extended time period, implying its long-term effects. In addition, past research on IT adoption has mostly assumed that a behavioral intention to use IT is a key predictor of objective use. Little research, however, actually collected objective longitudinal data to enhance our understanding of user behavior in online environments. This is necessary because the literature has questioned the strength of this relationship with objective, as opposed to self reported usage data (Straub *et al.* 1995). By showing how intentions result in actual behavior, this study contributes to the IS literature where longitudinal studies are few and sparse.

8.3 Implications for Practice

Despite the potentially suspect role of PCV in online marketplaces, there are still no practical guidelines to prescribe how PCV can be reduced. As a first step, this study suggests that sellers should avoid engaging in specific behaviors that could trigger PCV (Table 2), while ensuring that their basic seller obligations are fulfilled (Table 1). Moreover, drawing from the literature, sellers should assure that all buyers accurately understand the respective transactional obligations and maintain reasonable expectations. Sellers must pay close attention to define the transaction contract and make their promises clear and explicit. In addition, the posted description of the auctioned product must be accurately described. Also, given that transaction problems may be rectified before they develop into PCV, sellers should proactively prevent buyer complaints. Finally, sellers should attend to and be aware of the psychological contract and avoid inadvertently reneging on their transaction obligations through negligence or disregard.

Since PCV caused by an individual member of the seller community could have serious repercussions for the community of sellers as a whole, both the marketplace's management and each seller individually (and perhaps other entities that aim to encourage online buyer transactions, such as public policy officials) should strive to prevent PCV. Since trust-driven relationship-based exchanges are obviously easier to manage than exchanges that are driven by risk and fears of opportunism, third parties must also engage in the prevention of PCV and take steps to avoid misunderstandings from materializing into PCV.

Finally, the introduction of PCV also has practical implications in terms of managing different buyer populations. This distinction is realistically possible through the negative feedback ratings, which have been shown to be a good measure of whether the buyer experienced PCV with an individual seller. Rather than viewing buyers as an undifferentiated mass, sellers should recognize that the primary objective of buyers who experienced PCV is to reduce risk and fears of opportunism, while buyers who did not experience PCV mainly aim to build trust. This practical distinction, which can be easily made by examining the feedback buyers posted for sellers in the past, could help sellers better direct their buyer-recruiting efforts.

8.4 Limitations & Suggestions for Future Research

This study suggests that there are two decision-making modes by which buyers form their transaction intentions. On the one hand, the perceived risk mode reduces the likelihood to experience PCV in the future.

On the other hand, the trust-based mode facilitates a higher number of future transactions. Given that each mode has its own advantages and disadvantages, future research could examine the optimum reliance on trust and perceived risk that can simultaneously achieve many, yet safe transactions.

Although two key ways of mitigating PCV with the community of sellers have been identified and tested (buyer's positive past experience and the sellers' positive past performance), identifying additional antecedents could increase understanding of how to prevent the occurrence of future PCV with individual sellers. This is especially important since achieving superior experiences and sellers' performance are not easily manipulated and require lengthy and costly investments by the community of sellers as a whole. Possibly, richer buyer-seller communication can reduce PCV through the exchange of information about each party's reciprocal obligations and through assurances that both parties do have the same realistic expectations.

While PCV in this study has been examined solely from the buyer's perspective, psychological contracts are *reciprocal* in nature. Even if sellers may enjoy some information asymmetry advantages, they are still vulnerable to buyer opportunism, and they may also have psychological contracts based on expectations about how buyers should behave. Future research could examine PCV from a seller's viewpoint.

Finally, the data come from only two auction marketplaces (eBay and Amazon Auctions). Even if these two major marketplaces together account for over 70% of the online auction market (Wolverton 2001) and thus tentatively support the generality of the results, examining the proposed model in other auction marketplaces is necessary to strengthen the study's external validity.

9. CONCLUSION

This study sheds light on the "hidden" nature, antecedents, consequences, and moderating role of PCV in online marketplaces, contributing to our enhanced understanding of buyer-seller relationships and online buyer behavior in general. Integrating PCV in the proposed nomological network helps clarify the process by which institutional structures facilitate buyer transactions through trust, perceived risk, transaction intentions, and price premiums.

We hope that this study will encourage researchers to identify and examine the potentially influential role of PCV in other IT-intensive environments where the occurrence of PCV could inform and extend existing inter-relationships and challenge currently long-held theories.

REFERENCES

1. Agarwal, R. and E. Karahanna, "Time Flies When You're Having Fun: Cognitive Absorption and Beliefs about Information Technology Usage," *MIS Quarterly*, 24, 4, (2000), 665-694.
2. Ajzen, I., "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes*, 50, (1991), 179-211.
3. Akerlof, G., "The Market for 'Lemons': Quality under Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, 84, (1970), 488-500.
4. Armstrong, J.S. and T. Overton, "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, 19, (1976), 396-402.
5. Argyris, C. *Understanding Organizational Behavior*, Dorsey Press, Homewood, IL, 1960.
6. Ba, S. and P.A. Pavlou, "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior," *MIS Quarterly*, 26, 3, (2002), 243-268.
7. Bauer, R., *Consumer Behavior as Risk Taking*, Chicago, IL, (1960), 384-398.
8. Berenstein, G.L and C.E. Campbell, "Electronic Contracting: The Current State of the Law and Best Practices," *Intellectual Property & Technology Law Journal*, 14, 9, (2002), 1-11.
9. Bergen, M., S. Dutta and O. Walker, "Agency Relationships in Marketing: A Review of the Implications and Applications of Agency and Related Theories," *Journal of Marketing*, 56, July, (1992), 1-24.
10. Bernstein, J., "Internet Auction Fraud," *FBI*, February 14, 2000.
11. Blau, P.M., *Exchange and Power in Social Life*, Wiley, New York, 1964.
12. Carte, T. and Russell, C., "In Pursuit of Moderation: Nine Common Errors and Their Solutions," *MIS Quarterly*, 27, 3, (2003), 479-501.
13. Chaudhuri, A., "Dose Brand Loyalty Mediate Brand Equity Outcomes?" *Journal of Marketing Theory and Practice*, 7, (1999), 136-146.
14. Chellappa, R. and P.A. Pavlou, "Perceived Information Security, Financial Liability, and Consumer Trust in Electronic Commerce Transactions," *Journal of Logistics Information Management*, 15, 3, (2002), 35-42.
15. Chiles, T.H. and J.F. McMacking, "Integrating Variable Risk Preferences, Trust, and Transaction Cost Economics," *Academy of Management Review*, 21, 1, (1996), 73-99.
16. Chin, W.W., "Issues and Opinions on Structural Equation Modeling," *MIS Quarterly*, 22, 1, (1998), 7-16.
17. Chin, W.W., B.L. Marcolin and P.R. Newsted, "A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic Mail Adoption Study," *Information Systems Research*, 14, 2, (2003), 189-217.
18. Churchill, G., "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research*, 16, 1, (1979), 64-73.
19. Cohen, J. and M. Goldberg, "The Dissonance Model in Post-Decision Product Evaluation," *Journal of Marketing Research*, 7, 3, (1970), 315-321.
20. Collins, A. "FBI Web Fraud Report: Auction Sites Rank as Top Offenders," *Business Week*, March 7, (2001).
21. Davis, F., "Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology," *MIS Quarterly*, 13, 3 (1989), 319-340.
22. Dellarocas, C., "The Digitization of Word-of-Mouth: Promise and Challenges of Online Feedback Mechanisms," *Management Science*, 49, 10, (2003), 1407-1424.
23. Diamantopoulos, A. and H.M. Winklhofer, "Index Construction with Formative Indicators: An Alternative to Scale Development," *Journal of Marketing Research*, 38, 2, (2001), 269-277.
24. Dowling, G. and R. Staelin, "A Model of Perceived Risk and Intended Risk-Handling Activity," *Journal of Consumer Research*, 21, (1994), 119-134.
25. Dunfee, T.W., N.C. Smith, and W.T. Ross "Social Contracts and Marketing Ethics," *Journal of Marketing*, 63, 3, (1999), 14-33.
26. EC, "EC Convention on the Law Applicable to Contractual Obligations (Rome 1980)," Rome, Italy (1980).
27. eCommerce, *Institute for eCommerce Report*, "Ecommerce Law Links," (2004).
28. Edwards, J.R. "Multidimensional Constructs in Organizational Behavior Research: An Integrative Analytical Framework," *Organizational Research Methods*, 4, 2, (2001), 144-192.
29. Eisenhardt, K.M., "Agency Theory: An Assessment and Review," *Academy of Management Review*, 14, 1, (1989), 57-74.
30. Farnsworth, E.A., *Contracts*, Little Brown, Boston, MA, 1962.
31. Featherman, M. and P.A. Pavlou, "Predicting E-Services Adoption: A Perceived Risk Facets Perspective," *International Journal of Human-Computer Studies*, 59, 4, (2003), 451-474.
32. Festinger, L.A., *Theory of Cognitive Dissonance*, Row Peterson, New York, NY, 1957.
33. Folkes, V.S. and V. Patrick, "The Positivity Effect in Perceptions of Services: Seen One, Seen Them All?" *Journal of Consumer Research*, 30, 1, (2003), 125-137.
34. Fornell, C. and F.L. Bookstein, "Two Structural Equation Models: LISREL and PLS Applied to Consumer Exit-Voice Theory," *Journal of Marketing Research*, 19, (1982), 440-452.
35. Fukuyama, F., *Trust: The Social Virtues and the Creation of Prosperity*, The Free Press, New York, NY, 1995.
36. Ganesan, S., "Determinants of Long-Term Orientation in Buyer-Seller Relationships," *Journal of Marketing*, 58, 1, (1994), 1-19.

37. Gefen, D., "E-commerce: The Role of Familiarity and Trust," *Omega*, 28, 5, (2000), 725-737.
38. Gefen, D. "Customer Loyalty in e-Commerce," *Journal of the Association for Information Systems* (3:1), 2002, 27-51.
39. Gefen, D., "TAM or Just Plain Habit: A Look at Experienced Online Shoppers," *Journal of End User Computing*, 15, 3, (2003), 1-13.
40. Gefen, D., E. Karahanna and Straub D.W., "Potential and Repeat e-Consumers: The Role of and Trust vis-à-vis TAM," *IEEE Transactions on Engineering Management*, 50, 3, (2003a), 307-321.
41. Gefen, D., E. Karahanna and D.W. Straub, "Trust and TAM in Online Shopping: An Integrated Model," *MIS Quarterly*, 27, 1, (2003b), 51-90.
42. Gefen, D. and Straub, D.W., "A Practical Guide to Factorial Validity Using PLS-Graph: Tutorial and Annotated Example," *Communications of the Association for Information Systems*, 16, 5, (2005), 91-109,
43. Gefen, D., D. W. Straub and M-C. Boudreau, "Structural Equation Modeling and Regression: Guidelines for Research Practice," *Communications of the AIS*, 4, 7, (2000), 1-70.
44. Gibbons, L.J., "Creating a Market for Justice; a Market Incentive Solution to Regulating the Playing Field: Judicial Deference, Judicial Review, Due Process, and Fair Play in Online Consumer Arbitration," *Northwestern Journal of International Law & Business*. Chicago, 23, 1, (2002), 1-64.
45. Gross, G., "FTC Cracks Down on E-Auction Fraud," 2003, May 1, (2003), <http://www.pcworld.com/news/article/0,aid,110535,00.asp>
46. Heider, F., *The Psychology of Interpersonal Relations*, John Wiley and Sons, USA, 1958.
47. Ho, D., "Feds Crack Down on Internet Auction Fraud," (2003),
48. Holsti, O., *Content Analysis for the Social Sciences and Humanities*, Addison-Wesley, Reading MA, 1969.
49. IFCC, IFCC 2002 Internet Fraud Report : January 1, 2002 - December 31, 2002, *The National White Collar Crime Center*, USA, 2003.
50. Jarvenpaa, S., N. Tractinsky and M. Vitale, "Consumer Trust in an Internet Store," *Information Technology and Management*, 1, 12, (2000), 45-71.
51. Kelley, H.H. and J. W. Thibaut, *Interpersonal Relations: A Theory of Interdependence*, John Wiley and Sons, New York, NY, 1978.
52. Koh, C., S. Ang, and D. Straub, "IT Outsourcing Success: A Psychological Contract Perspective," *Information Systems Research*, 15, 4, (2004), 356-373.
53. Kumar, N., L.K. Scheer, and J.-B. Steenkamp "The Effects of Perceived Interdependence on Dealer Attitudes," *Journal of Marketing Research*, 32, (1995), 348-356.
54. Lewis, J. D. and A. Weigert, "Trust as a Social Reality," *Social Forces*, 63, 4, (1985), 967-985.
55. Lindell, M.K. and D.J. Whitney, "Accounting for Common Method Variance in Cross-Sectional Research Designs," *Journal of Applied Psychology*, 86, 1, (2001), 114-121.
56. Lohmoller, J.B., "The PLS Program System: Latent Variables Path Analysis with Partial Least Squares Estimation," *Multivariate Behavioral Research*, 23, 1, (1989), 125-127.
57. Luhmann, N., *Trust and Power*, John Wiley and Sons, London, 1979.
58. Macneil, I. *The New Social Contract: An Inquiry into Modern Contractual Relationships*, Yale University Press, New Haven, CT, 1980.
59. Mayer, R.C., J.H. Davis and F.D. Schoorman, "An Integrative Model of Organizational Trust," *Academy of Management Review*, 20, 3, (1995), 709-734.
60. McKnight, D.H., L.L. Cummings and N.L. Chervany, "Initial Trust Formation in New Organizational Relationships," *Academy of Management Review*, 23, 3, (1998), 473-490.
61. Mishra, D.P., J.B. Heide and S.G. Cort, "Information Asymmetry and Levels of Agency Relationships," *Journal of Marketing Research*, 35, (1998), 277-295.
62. Mitchell, V-W, "Understanding Consumers' Behavior: Can Perceived Risk Theory Help," *Management Decision*, 30, 2, (1992), 26-31.
63. Morrison, E.W. and S.L. Robinson, "When Employees Feel Betrayed: A Model of How Psychological Contract Violation Develops," *Academy of Management Review*, 22, (1997), 226-256.
64. Niehoff, B. and R. Paul, "The just Workplace: Developing and Maintaining Effective Psychological Contracts," *Review of Business*, 22, (2001), 5-8.
65. O'Donnell, J. and J. Swartz, "Officials get 'dead serious' about Net auction fraud," *USA Today*, May 1, 2003.
66. Ohanian, R., "The Impact of Celebrity spokespersons' perceived image on Consumers' Intention to Purchase," *Journal of Advertising Research*, (1991), 45-64.
67. Oliver, R., "A Cognitive Model for the Antecedents and Consequences of Satisfaction," *Journal of Marketing Research*, 17, (1980), 460-469.
68. Orlikowski, W., "Improvising Organizational Transformation over Time: A Situated Change Perspective," *Information Systems Research*, 7, 1, (1996), 63-92.
69. Pate, J. and C. Malone, "Enduring Perceptions of Violation," *Human Resource Management International Digest*, 8, 6, (2000), 28-31.
70. Pavlou, P.A., "Institutional Trust in Interorganizational Exchange Relationships: The Role of Electronic B2B Marketplaces," *Journal of Strategic Information Systems*, 11, 3/4, (2002), 215-243.
71. Pavlou, P.A., "Consumer Acceptance of Electronic Commerce – Integrating Trust and Risk with the Technology Acceptance Model," *International Journal of Electronic Commerce*, 7, 3, (2003), 69-103.
72. Pavlou, P.A. and M. Fygenson, "Understanding and Predicting Electronic Commerce Adoption: An Extension of the Theory of Planned Behavior," *MIS Quarterly* (2006) (forthcoming).

73. Pavlou, P.A. and D. Gefen, "Building Effective Online Marketplaces with Institution-based Trust," *Information Systems Research*, 15, 1, (2004), 37-59.
74. Piccoli, G. and B. Ives, "Trust and the Unintended Effects of Behavior Control in Virtual Teams," *MIS Quarterly*, 27, 3, (2003), 365-395.
75. Podsakoff, P.M., S.B. MacKenzie, J. Lee, and N.P. Podsakoff, "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology*, 88, 5, (2003), 879-903.
76. Podsakoff, P.M., and Organ, D. "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management*, 12, 4, (1986), 531-544.
77. Prendergast, C., "Consumers and Agency Problems," *The Economic Journal*, 112, 478, (2002), 34-51.
78. Pugh, S.D., D.P. Skarlicki and B.S. Passell, "After the Fall: Layoff Victims' Trust and Cynicism in Re-employment," *Journal of Occupational and Organizational Psychology*, 76, 2, (2003), 201-212.
79. Reichheld, F.F. and P. Scheffer, "E-Loyalty: Your Secret Weapon on the Web," *Harvard Business Review*, 78, 4, (2000), 105-113.
80. Resnick, P. and R. Zeckhauser, "Trust among Strangers in Internet Transactions: Empirical Analysis of eBay's Reputation System," In *The Economics of the Internet and E-Commerce*, M.R. Baye (Ed.), JAI Press, Greenwich, CN, 2002.
81. Resnick, P., R. Zeckhauser, B. Friedman and K. Kuwabara, "Reputation Systems," *Communications of the ACM*, 43, (2000), 45-48.
82. Robinson, S.L., "Trust and Breach of the Psychological Contract," *Administrative Science Quarterly*, 41, 4, (1996), 574-599.
83. Robinson, S.L., M.S. Kraatz and D.M. Rousseau, "Changing Obligations and the Psychological Contract: A Longitudinal Study," *Academy of Management Journal*, 37, 1, (1994), 137-152.
84. Robinson, S.L. and E.W. Morrison, "Psychological Contracts and OCB: The Effect of Unturned Obligations on Civic Virtue Behavior," *Journal of Organizational Behavior*, 16, 3, (1995), 289-298.
85. Robinson, S.L. and E.W. Morrison, "The Development of Psychological Contract Breach and Violation: A Longitudinal Study," *Journal of Organizational Behavior*, 21, 5, (2000), 525-546.
86. Rotter, J.B., "A New Scale for the Measurement of Interpersonal Trust," *Journal of Personality*, 35, (1967), 651-665.
87. Rousseau, D.M., "Psychological and Implied Contracts in Organizations," *Employee Responsibilities and Rights Journal*, 2, 1, (1989), 121-139.
88. Rousseau, D.M. and J.M. Parks, "The Contracts of Individuals and Organizations," In *Research in Organizational Behavior*, L.L. Cummings and B.M. Staw (Eds.), JAI Press, Greenwich, CT, 1993.
89. Rousseau, D.M., *Psychological Contracts in Organizations*, Sage Publications, Thousand Oaks, CA, 1995.
90. Rousseau, D.M. and S.A. Tijoriwala, "Assessing Psychological Contracts: Issues, Alternatives, and Measures," *Journal of Organizational Behavior*, 19, (1998), 731-744.
91. Sels, L., M. Janssens, and I. Van den Brande, "Assessing the Nature of Psychological Contracts: A Validation of Six Dimensions," *Journal of Organizational Behavior*, 25, (2004), 461-488.
92. Singh, J. and D. Sirdeshmukh, "Agency and Trust Mechanisms in Consumer Satisfaction and Loyalty Judgments," *Journal of the Academy of Marketing Science*, 28, 1, (2000), 150-167.
93. Snyder, J.M., "Online Auction Fraud: Are the Auction Houses doing all they should or could do to stop online fraud?," *Federal Communications Law Journal*, 52, 2, (2000), 453-472.
94. Stewart, K.L., "Trust Transfer on the World Wide Web," *Organization Science*, 14, 1, (2003), 5-17.
95. Straub, D., Boudreau, M.-C., Gefen, D., "Validation Guidelines for IS Positivist Research," *Communications of the Association for Information Systems*, 14, (2004), 380-426.
96. Straub, D., M. Limayem and E. Karahanna, "Measuring System Usage: Implications for IS Theory Testing," *Management Science*, 41, 8, (1995), 1328-1342.
97. Taylor, J., "The Role of Risk in Consumer Behavior," *Journal of Marketing*, 38, (1974), 54-60.
98. Tirole, J., "A Theory of Collective Reputations (with Applications to the Persistence of Corruption and to Firm Quality)," *Review of Economic Studies*, 63, 1, (1996), 1-22.
99. Weber, R.P., *Basic Content Analysis*, Sage Publications, London, U.K., 1990.
100. Weick, R.H., *The Social Psychology of Organizing*, Addison-Wesley, Reading, MA, 1979.
101. Whitener, E.M., S.E. Brodt, M.A. Korsgaard and J.M. Werner, "Managers as Initiators of Trust: An Exchange Relationship Framework for Understanding Managerial Trustworthy Behavior," *Academy of Management Review*, 23, 3, (1998), 513-530.
102. Wijnholds, H. and M.W. Little, "Regulatory Issues for Global E-Tailers: Marketing Implications," *Academy of Marketing Science Review*, 2001, (2001), 1-15.
103. Wold, H., "Partial Least Squares," In *Encyclopedia of Statistical Sciences*, in S. Kotz and N. Johnson (Eds.), Wiley, New York, NY, 1985, 581-591.
104. Wolverton, T., "eBay riding Net auction industry's wave," *CNET News*, 2001, <http://news.com.com/2100-1017-269211.html?legacy=cnet>
105. Wolverton, T., "eBay brings escrow aboard," *CNET News*, 2002, http://news.com.com/2102-1017_3-898154.html?tag=st.util.print
106. Zucker, L., "Production of Trust: Institutional Sources of Economic Structure, 1840-1920," *Research in Organization Behavior*, 8, (1986), 53-111.

Appendix 1: Survey Measurement Items

Actual Transaction Behavior	
- Actual number of buyer transactions as <i>objectively</i> reported by Amazon's/eBay's auction marketplace during the following four months -	
Transaction Intentions	
Given the chance, <u>I predict that I would consider bidding for products</u> from sellers in Amazon's/eBay's auctions in the near future.	
Given the opportunity, <u>I intend to place a bid</u> in Amazon's/eBay's auctions.	
Psychological Contract Violation (with Individual Seller)	
Survey Item1 - "Have you ever experienced a <u>significant disagreement</u> with any specific seller in Amazon's/eBay's auctions? (Yes/No)."	
Survey Item2 - "Have you ever experienced a <u>significant transaction problem</u> with any specific seller in Amazon's/eBay's auctions? (Yes/No)."	
Survey Item3 - "Have you ever experienced a <u>significant contract violation</u> with any specific seller in Amazon's/eBay's auctions? (Yes/No)."	
Secondary Feedback Ratings - Whether buyer had left negative feedback rating to any past transaction with a seller in each marketplace prior to survey	
Secondary Feedback Comments - Content analysis of all feedback comments to past transactions with sellers in each marketplace (see Table 2)	
Sources of Psychological Contract Violation (with Individual Seller)	
1. (Fraud): "Have you ever experienced a <u>fraudulent attempt</u> (e.g., collecting money and not delivering the product, product quality deception, selling counterfeit products) by any specific seller in Amazon's/eBay's auctions?" (Yes/No)	
2. (Product Misrepresentation): "Have you ever received a product that <u>significantly differed</u> (e.g., cheaper, lower quality, damaged, used product) from a seller's posted description in Amazon's/eBay's auctions?" (Yes/No)	
3. (Contract Default): "Have you ever experienced <u>contract default</u> (e.g., refuse to receive payment and deliver product) by any seller in Amazon's/eBay's auctions?" (Yes/No)	
4. (Delay): "Have you ever experienced a <u>significant product delivery delay</u> in Amazon's/eBay's auctions?" (Yes/No).	
5. (Product Guarantees): "Have you ever had any seller in Amazon's/eBay's actions <u>fail to acknowledge product guarantees</u> (e.g., product refund, return, warranties)?" (Yes/No)	
6. (Payment Policy): "Has any seller in Amazon's/eBay's actions <u>refuse to acknowledge its payment policy</u> (refuse certain forms of payment)?" (Yes/No)	
Psychological Contract Violation (with Community of Sellers)	
In general, sellers in Amazon's/eBay's auctions have <u>failed to meet their contractual obligations</u> to me during our transactions.	
In general, sellers in Amazon's/eBay's auctions have <u>done a good job of meeting their contractual obligations</u> to me during our transactions (reverse).	
In general, sellers in Amazon's/eBay's auctions have <u>fulfilled the most important contractual obligations</u> to me during our transactions (reverse).	
Trust in the Community of Sellers	
Sellers in Amazon's/eBay's auctions are in general reliable.	
Sellers in Amazon's/eBay's auctions are in general competent.	
Sellers in Amazon's/eBay's auctions are in general honest.	
Sellers in Amazon's/eBay's auctions are in general trustworthy.	
Perceived Risk from Community of Sellers	
There is a <u>considerable risk</u> involved in participating in Amazon/eBay auctions.	
There is a <u>high potential for loss</u> involved in participating in Amazon/eBay auctions.	
My decision to participate in Amazon's/eBay's auctions is <u>risky</u> .	
Perceived Effectiveness of Institutional Structures	
Feedback Technologies: I feel confident that Amazon's/eBay's feedback mechanism gives <u>accurate information</u> about the auction <u>sellers' reputation</u> .	
Feedback Technologies: I believe that the feedback mechanism in Amazon's/eBay's auctions is <u>effective</u> .	
Escrow Services: The escrow service in Amazon's eBay's auction marketplace <u>guarantees that I will get what I pay for</u> .	
Escrow Services: The escrow service in Amazon's eBay's auction marketplace <u>protects me from an inappropriate behavior of sellers</u> .	
Credit Card Guarantees: I believe my credit-card company will <u>protect me in case of problematic transactions</u> with sellers in Amazon's/eBay's auctions.	
Credit Card Guarantees: I am confident that my credit card <u>payments are safe in case of disputed purchases</u> from sellers in Amazon's/eBay's auctions.	
Trust in Intermediary: As an auction host/intermediary, Amazon/eBay can be <u>trusted at all times</u> .	
Trust in Intermediary: As an auction host/intermediary, Amazon/eBay has <u>high integrity</u> .	
Trust in Intermediary: Amazon/eBay is a <u>competent and knowledgeable auction host/intermediary</u> .	
Sellers' Performance	
On average, please rate the performance of Amazon's/eBay's auction sellers in terms of <u>competitive pricing</u> .	
On average, please rate the performance of Amazon's/eBay's auction sellers in terms of <u>timeliness of product delivery</u> .	
On average, please rate the performance of Amazon's/eBay's auction sellers in terms of <u>offering high quality products</u> .	
Buyer's Positive Past Experience	
My <u>past experience</u> in Amazon's/eBay's auction marketplace was positive.	
In general, I have been <u>satisfied with the sellers</u> in Amazon's/eBay's auction marketplace.	
Sellers in Amazon's/eBay's auction marketplace <u>did a good job in the past</u> .	
Trust Propensity	
I usually trust sellers unless they give me a reason not to trust them.	
I generally give sellers the benefit of the doubt.	
My typical approach is to trust sellers until they prove I should not trust them.	

Appendix 2. Sample Feedback Comments of the Sources of Psychological Contract Violation

Fraud: Failure to deliver the product purchased, actual quality deception, selling counterfeit products
<ul style="list-style-type: none"> Over 7 weeks, no delivery, no response to my emails. Check cashed 6 weeks ago. Fraud! Payment sent. Item not received 47 days later. Seller does not respond. BUYER BEWARE!!! Never received merchandise, buyers beware! Don't get sucked in! I sent payment and never got item. VERY BAD SELLER. Won't buy from eBay again. I have sent several Emails. You have been paid but I have not seen merchandise for 2 months. Fraudulent seller! Ripped me off \$66!! Sold fake product. Huge liar, scammer. Beware! This is a fake coin and the authenticity papers are all fakes!! Avoid this seller. Basketball with Lakers signatures is not authentic, cheap imitation...
Product Misrepresentation: Deliver an item that is different from the one described in the product advertisement
<ul style="list-style-type: none"> Horrible seller! 1.5 months to get product. Overcharged for shipping and the product is broken! Charged \$12 when only cost \$1.90, also misled on color by photo of auction. Missing box, not brand new as advertised, not Nordstrom (from Nordstrom Rack). Not honest seller! Missing accessories from pack, not as advertised, no contact. Computer had an Intel Celeron processor, not Pentium III as advertised in auction. Promised a systemwide airline upgrade but it is only good for full-fare economy. Won't take back. Memory stick is not functioning at all. Seller does not reply to my emails for refund.
Contract default: Refusal to accept payment and send product
<ul style="list-style-type: none"> Phone listing is untrue, he does not reply. I have reported transaction problem to eBay Never sent item. Sent 30 e mails to get money back. I would not do business again Never contacted me or replied to my emails about an auction I won. Never sent payment info, terrible to try to do business with, why even bother? This person refused to contact me and then left me negative feedback. Poor seller!!!
Product Delivery Delay: Fail to use the shipping method promised, resulting in a substantial product delay
<ul style="list-style-type: none"> Outrageous shipping, seller charged me \$24.00 for overnight delivery that was shown to be \$3.85 on package! Item shipped incomplete after a very long wait; I have not received balance despite several emails. Paid extra postage on delivery on top of £10.50, item was missing name tag too Seller did not send next day delivery and gift came after 10 days with regular shipping. Paid extra for shipping insurance and seller did not insure item that came slightly broken. I had to wait 2.5 months to receive camera that I paid \$350. Seller all clumsy excuses. Amazon now sells for \$250. Promised two-day express delivery and sent international surface mail. It took 4 weeks to come to Portugal.
Product Guarantees: Offer a return or a refund policy and fail to acknowledge product guarantees
<ul style="list-style-type: none"> Product received broken. Seller won't refund my money despite warranty. Seller won't refund money despite his: 100% MONEY BACK GUARANTEED, 100% AUTHENTICITY GUARANTEED Item came slightly damaged but seller won't replace or refund monies. Camera has a defect and seller did not include manufacturer's warranty information. Says he does not have them!!! I did not like product but seller won't take back despite money back guarantee. Furniture is scratched and seller wants me to pay \$80 for shipping and restocking fee.
Payment Policy: Refusal to follow payment policy (reject certain forms of payment, even if initially accepted)
<ul style="list-style-type: none"> Terrible Transaction. Seller refused to accept PayPal, and I got robbed. Unable to ship to me paid in Sept. - Still waiting for refund - almost 2 months. Seller refused to accept credit card and forced me to use cashier's check. I won't do business again with seller. While he says he accepts escrow, he refused to allow it and I stopped payment. Beware for potential fraud! Seller had to sell at low price and now does not accept my cashier's check.