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Abstract

In the context of electronic commerce (eCommerce), trust is critical to business relationship, because no transaction will take place before a buyer trusts an unknown online seller. However, little has been known about the nature of online trust. In this paper, we propose a framework to categorize the transactional contexts within which trust takes place. Based on this framework, we then review the literature and examine the special nature of online trust. The theoretical foundations are offered to explain the major antecedents of online trust. Finally the future research issues of online trust that are challenging the research community are identified.

Keywords

eCommerce, online trust, medium effect, signaling effect, trust transference, initial trust

Introduction

Trust as a social phenomenon has been studied in the psychology (Deutsch 1958, 1960, Tyler 1990), sociology, economics (Williamson 1993, Sobel 1985), marketing, and management literatures. Sociologists view trust as an interpersonal phenomenon rather than an individual trait or a game-theoretical behavior, and therefore must be conceived as a property of collective units (Lewis & Weigert 1985, Barber 1983, Luhmann 1979). Such dyadic view of trust is very important because it entails further research that views trust as an antecedent that leads to the dynamics of ongoing dyads. For example, following the sociological thinking, marketing researchers found trust to be the critical variable to the distribution channel relationship (Doney & Connon 1997, Ganesan 1994) and the customer relationship management (Dwyer et al. 1987; Garbarino & Johnson 1999). A buyer's trust in a seller leads to commitment (Morgan & Hunt 1994) and loyalty (Ratnasingham 1998).

Trust in the online environment is claimed to be more pressing compared to its offline counterpart. Since the outcome of a transaction is typically deemed more uncertain online, the need for trust grows. It is regarded as one of the most important prerequisites for eCommerce success (Hoffman & Novak 1996, Torkzadh & Dhillon 2002). Lack of trust is identified as one of the greatest barriers inhibiting online trading (Cheskin 1999; Hoffman et al. 1999). When a customer trusts an online store, she may then start to interact with the vender and eventually buy the product, relieve personal information, and use the service offered by the vendor (McKnight & Chervany 2001-2002, McKnight et al. 2002b). Trustworthiness can even give the online vender a price premium as a competition advantage (Ba & Pavlou 2002).

However, it is very difficult to build trust in the online environment because of the impersonal nature of online transaction and the technical issues such as security.

The objective in this research is to provide a theoretical foundation for understanding the online trust. For this purpose, we proposed a framework to examine trust in the different transactional contexts, with a focus on eCommerce. This framework helps us to identify the special nature of the online trust, regarding why and how the online trust develops. With this framework, we reviewed the literature and provided an integrated theoretical foundation of online trust. Finally, we pointed out some future research directions.

The Nature of Trust

Even though our focus is on the transactional context, our understanding of trust inherits the findings from studies in other non-transactional contexts. That part should be the core traits of the trust concept. On the top of it, the antecedents, and the consequences of trust may differ from context to context. In this section, we will review the core concept of trust.

The Concept of Trust

There are numerous definitions of trust. Psychologists see trust as a personal trait, sociologists view it as a social structure, and economists believe it is an economic-choice mechanism. However, researchers seem to agree that trust implies potential risk taking behaviors and thus is the "willingness to be vulnerable" (Mayer et al. 1995, Lewis & Weigert 1985, Luhmann 1988, Rousseau et al. 1998). Such willingness to be vulnerable is not necessarily blind; rather, more or less, it is based on some evidence of the trustee's trustworthiness and the contextual factors when the trustor is dependent on the trustee for some resources or actions. The evidence and the contextual factors lead to so-called predictability (Dasgupta, 1988, Good, 1988, & Rotter, 1967) and institutional assurance (Shapiro, 1987; Zucker 986). Since the evidence is typically not sufficient, trust is the willingness to be vulnerable based on only limited evidence to make a "leap in faith" (Lewis & Weigert 1985). However, being the "willingness", trust is not the actual behavior, but rather the intention (Mayer et al, 1995). Based on the reasoned action theory of Fishbein and Ajzen (1975), McKnight et al. (2002a) further delineated the differences among the trust belief, trust intention, and trust behavior. It is obvious that the trust intention is what Mayer et al. defined as the "willingness", while the trust belief is the trustworthiness of the trustee, i.e., the competence, benevolence and integrity, as Mayer et al. (1995) summarized them. The dependence path is that belief leads to intention which in turn leads to behavior. In this paper, we will use the term "trust" or "trust relationship" to imply all aspects (belief, intention and behavior) of trust; and the term "trust consequence" refers to the buyer's intention to adopt certain action or the actual action.

Given the many arenas where trust is on the stage, different aspects of trust have been emphasized. For instance, in the transactional relationship, parties trust each other with a more rational assessment of the other's ability and a calculation of risk (Doney & Cannon 1997), while in the interpersonal context, the feeling and love to another can be dominant (Lewis & Weigert 1985). The most widely used classification of trust is probably the cognition- and affect-based trust, which emphasizes the evidence-seeking mental process or the affective inclination respectively.

The Dynamics of Trust

Trust is by no means a static concept. A trust evolution process can be staged as initial trust, trust stabilization, and trust dissolution (Jones & George 1998, Rousseau 1998). We define initial trust as the trust one party has to another before they engage in the first trust behavior, for example, the trust an online buyer has before she actually buys a product from the seller. We define the dissolution/declining stage as the period since a party senses the first betrayal behavior of another. The stage in between is the mature stage. The nature of trust varies not only to the social settings of the relationship, but also to the life cycle of it. At the initial trust stage, the "conditional trust" (Jones & George 1998) or the cognitive trust (McKnight & Chervany 2002, Rousseau 1998) is more salient as the parties are looking for evidence to evaluate each other. As time goes by and the relationship matures, they start to regard each other as "us", and a shared sense of community develops (Sabel 1993, Lewis & Weigert 1985). The emotional component of trust increases. Trust can also fail under betrayal and failure to provide promised service by one party (Mishra 1996).

A Trust Framework in the Transactional Context

It is expectable that at the different stage and in the different context of a dyadic relationship, the reasons and the ways a party trusts another may differ. Based on the understanding of trust in general, we confine ourselves to the transactional context where one party (the trustor, typically the buyer) trusts another (the trustee, typically the seller) and engages in business interactions.
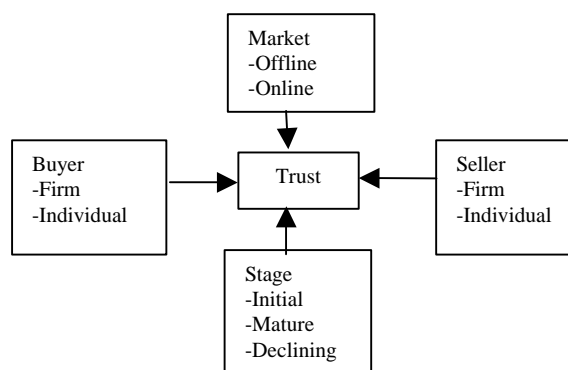

Figure 1. A framework of trust in the transactional context

Based on the trust research in general and researches in the transactional context in particular, figure 1 gives the framework of our categorization of the transactional contexts for trust. First, there are a buyer and a seller engaging in the trust relationship. Both party's characteristics may affect the trust relationship. Then, the contextual factors can also affect trust. The most important and direct contextual factor is the market where the transaction is taking place. For example, trust could be affected by the regulation, general business moral, and technology and communication infrastructure of the market. The last dimension is the stage of the relationship. The central piece is the trust itself (the trust belief, trust intention, and trust behavior).

Trust is essentially context-dependent regarding its antecedents and its consequences. In the transactional context, in order to study a particular trust relationship, we have to examine each combination of the seller, buyer, market, and the stage of the relationship. The combinations can be categorized as follows. First, both the buyer and the seller can be either a firm or an individual, resulting in three major scenarios, i.e., B2B, B2C, and C2C. Here we also assume the buyer is the trustor and the seller is the trustee, though this does not have to be the case. The market environment can be categorized as offline and online with each having a connotation for the legal assurance, the technology and media infrastructure, the spatial distance, and the business process. Finally, the relationship can be at the initial, mature, or the declining stage. By further combing the buyer, the seller, the market, and the time dimension, we can group the trust researches and examine the different set of antecedents and consequences for each scenario.

Appendix 1 and 2 give a summary of some representative trust researches in the offline and online transactional context respectively. Some observations can be drawn from these tables. First, in the offline environment, more research was done for the mature trust relationship, while in the online case, initial trust attracted more attention. This is understandable because the eCommerce opens a window for a buyer to have a large pool of new sellers to choose from which were not available before. Neither offline nor online research investigated the trust at the declining stage. Another interesting finding is that B2B trust is a more popular topic offline, while B2C research is almost dominant in the online environment.

In the offline environment, the antecedents of trust for B2B and B2C scenarios seem to be similar. Both business buyers and individual buyers treat the previous experience and satisfaction as indicators of trustworthiness. However, in the online environment, a quite different set of antecedents was proposed. As the individual buyers are looking for reputation, web design, and service quality, business buyers will also consider the market mechanism such as monitoring and feedback system (Pavlou 2002).

The most salient contrast that this framework reveals is the difference between offline and online trust. This difference arises from the special contextual factors of the online environment. We will examine this difference in more details in next session.

Theoretical Explanations of Online Trust

By comparing the online and offline trust, we observed that the online market factors (e.g., Ba & Pavlou 2002, Pavlou 2002) and the use of web medium for presentation (Shankar et al. 2002, McKnight et al. 2002b) emerge as key variables. A natural question to ask is why these factors are brought to the spotlight? Previous researches have given some intuitive explanations for each antecedent. However, an integrative view is not yet available. In this section, we offer an integrative theoretical explanation of why these antecedents come into the picture and how they are related. We posit that these antecedents are related to three fundamental factors that are particularly prominent in the online environment, namely, the Internet medium, the seller's web presentation, and the reference effect.

The Medium Effect

To understand online trust, we must first understand the Internet medium. Internet is a new communication medium which also acts as a marketing channel. As a marketing channel, communication is one of its basic functionalities (Kotler 1997, Stern et al. 1996). Comparing

to the offline shopping environment, the online environment is less personal and dynamic, even though it opens a broader channel of many to many communication (Hoffman & Novak 1996). Based on the media richness theory (Daft & Lengel 1986), media differ in their capacity to support the number of senses, the visual display quality, the aural presence, and the interactivity. These differences make certain medium good for one task but not for another. Media richness theory expects a richer medium to be better at supporting an uncertain and equivocal task (Daft et al. 1987). It is reasonable to assume that some shopping task can be too complicated to be handled by Internet medium alone. For example, the Internet may not be good for fresh food shopping because of its inability to give the look and feel of the product. More generally, products with less structured attributes and the "experience products" (products that can be evaluated only after use, such as apparels) may not fit the online market. Internet cannot satisfy an "experience shopper's" need either who enjoys the process more than the product.

Complementary to the media richness theory, the social presence theory (Short & Christie 1976) offers another explanation that the limited medium capacity reduces the intimacy and immediacy feeling with the other party because of less "social cues" available, such as gesture and facial expressions. Given that any human communication is ultimately both an information exchange and a relational exchange (Watzlawick et al. 1967), the Internet may be a good medium for information exchange, but a less effective one for relational exchange.

The low social presence and media richness are the fundamental cause of the lack of trust online. In an excellent review of these communication theories, Walther (1992) proposed that a lean media is *not* unable to support rich social and relational interactions, but rather, it takes more time. It is this "slowness" that conflicts the other benefits of online shopping which are supposed to be "swift", for example, convenient, travel-saving, and time-saving. This fundamental influence is so far less attended in the online trust research with the only exception of (Gefen & Straub 2001), which argued that social presence can affect trust building.

The effect of the web medium on trust is twofold. First, because of the low social presence and media richness, a buyer is more sceptical of the online sellers as a whole. Therefore, trust in a specific seller is affected by the buyer's general trust in the whole trading environment. Second, the Internet medium affects trust through the seller's web presentation and the third party reference, as we will explain in next section. Web presentation refers to the effects the web design and presentation have on the buyer's trust; and the reference effect means the buyer is seeking the trustworthiness of the seller from a third party or their own experience with the seller in other circumstances.

The Web Presentation Effect

The effect of the Internet medium on the seller's web presence is twofold. First, for most new and potential customers, webpage is the first and the only window to know the seller. Consequently, both the technical design and the service design of a web site become important factors. Many researchers have already found the technical web design and usability affect business performance (e.g., Torkzadeh & Dhillon, 2002, Palmer 2002, Kim et al. 2002, Agarwal & Venkatech 2002). This line of research has its root in the technology acceptance model (Davis 1989) with an implicit assumption that an online customer is also a computer system user. Therefore, the ease of use, the usefulness of the system, the information quality, and the system quality all suddenly influence the buyer's perception of

the seller. McKnight et al. (2002b) did find empirical evidence that the web design affects a buyer's trust. Regarding the service design, user as customer naturally values the service quality. Gefen (2002) found some service quality measurements to be related to the buyer's trust. But the link between the online service design elements and the perceived service quality is still missing.

How do the technical design and service design affect trust? The underlying reason is that the web presentation is now a signal to the buyer of the seller's unobservable qualities. A professional web site implies sincerity in the eCommerce and care for the customer. It also signals the technical and financial strength of the company. A lenient return policy, like the warrantee (Kelley 1988), is a pledge the seller made to signal its ability and goodwill. The buyers are also ready to interpret such signals. Some preliminary evidence on the signaling effect of return policy is available in (Bonifield et al. 2002).

On the other hand, the signaling effect of the web presentation is discounted by the web medium. Unlike in the offline environment, where a physical store front is a strong evidence of sincerity, a web store is a cheaper signal. Because it is not difficult to design a descent web site, and it is easy to make false promises online, the buyers are aware of potential exploitation by the dishonest seller. The signaling theory requires a signal to be costly to be valuable (Spence 1973).

The Reference Effect

Again because of the medium use, now the buyer finds many new sellers who give only a very limited amount of information about themselves. Since the signal from the seller is also deemed as less reliable because of the information asymmetry, the buyer has to desperately search for the seller's information in other impartial sources in order to verify its claims and to collect additional information. The reference group and reference experience set in to fill the gap. Online reference groups include the virtual community, the consumer report, the expert review articles, and the certificate endorsers like Verisign and TRUSTe. The most influential one is probably the customer testimonial. The eBay reputation system (Ba & Pavlou 2002) is a good example. Similarly, there is rating system on Yahoo!shopping, bizrate.com and many others. These market makers hold impartial evaluation of many sellers and can have a strong influence on the buying behavior because of the word-of-mouth effect that leads to the transference of trust (Doney & Cannon 1997, Stewart 1999). A conceptual review on online reference is available in (Senecal & Natel 2002).

Another form of reference is the seller's reputation. Reputation is defined as "a collective representation of firm's past actions and results that describes the firm's ability to deliver valued outcomes to multiple stakeholders" (Fombrum & Riel 1997). Good reputation enhances trust because it conveys the information of past actions and ability. Reputation is also a good signal because it is a perception by the public, hence impartial. Though word-of-mouth can be a part of the reputation, reputation has a broader coverage that conveys also the image of the company, its financial soundness, its market power, its social responsibility (Fombrum & Riel 1997, Fombrum & Shanley 1990), and the brand name (Chaudhuri & Holbrook 2001). Reputation has been treated as an antecedent of trust (Jarvenpaa et al. 2000, Doney & Cannon 1997). But the definition used in prior studies was quite narrow. It was defined as the seller's "honesty and concern of customer" (Jarvenpaa et al. 2000, Doney & Cannon 1997), which is very similar to the benevolence dimension of trust. More extensive works are needed to study the relationship between reputation and the online trust.

Reputation affects trust in still another way because reputation is valuable. Company image and reputation are viewed as an intangible asset having a measurable asset value in accounting (Riahi-Belkaoui et al. 1992). Reputation entails premium prices, easier access to capital markets, and higher status in the industrial social systems for a company (Fombrum & Shanley 1990). A company is unwilling to jeopardize its reputation with opportunistic behaviors.

Finally, a buyer can refer to her offline experience with the seller in making the online shopping decision. This is essentially experience-based trust (Shapiro & Cheraskin 1992, LeWicki & Bunker 1996) and is applicable only to those who had offline experience with the seller before. For example, a buyer may be more willing to shop with WalMart.com than ABC.com because she had the experience with the local WalMart stores. It is because of such reference experience, the comparison between a pure click strategy and the brick-and-mortar one is possible. To the best of the authors' knowledge, no trust research on this issue is published.

In summary, the use of Internet medium affects the seller's social presence, and makes web page an influential instrument to signal trustworthiness. It also drives the buyer to search for additional assurance from reference groups and reference experiences. These are the medium influences on trust antecedences.

The Effect of Medium on the Dynamics of Trust

The medium also affects the dynamics of trust. It is well known in the computer mediated communication that the use of computer systems can increase a group's use of factual information rather than participants' preference (Clapper, et al. 1991, Huang, et al. 1993). A buyer is likely to evaluate a seller in a more rational fashion because of the unavailability of personality data and the unreliability of the available signals. We expect the trust to be "colder" online than offline, especially at the initial stage. From the cognitive and affective dichotomy, the affective trust is more difficult and slower to build online than offline, though it is still possible (Walther 1992). In fact, the majority of online trust researches focused on the cognitive trust.

Not only the affective trust may come slower, the importance of antecedents may change over time as well. As a buyer gets used to the web pages, the web presence probably will no longer be a critical element. In the same token, if personal experience is available, reference group, privacy concern, and third party certificates fade out. After all, what matters most to the buyer is the seller's behavior, such as punctual delivery, promise keeping, and good product quality; the web presence and the reference information are more for initial trust building than for the trust maintenance.

Future Research Directions

Online trust, as a new member in the trust family, is still not well-understood. However, researches in the past years do give us a lot of information about it, as summarized in Appendix 1 and 2. In the light of the trust framework in the transactional context, we identified the future directions that we believe are worthwhile and summarized them into the following propositions.

First, the initial online trust building process is not understood completely. Doney and Cannon (1997) enumerated five cognitive processes of trust development in the offline environment; McKnight et al. (1998) and Bigley and Pearce (1998) identified three. However, these processes are not geared towards initial online trust. Based on our analysis of online trust building, we propose:

Proposition 1. For prospect online buyers, the trust in the online seller is built up through the signalling effect of the seller's web presence, the reference effect from third party and experience with the seller in other marketing channels, and the general trust in the environment.

Second, in contrast to the offline trust research, most online trust researches dealt with essentially initial trust when the buyer has no or little experience with the seller before. As the buyer has more experience with the seller, the importance of the antecedents we identified above may change. Drawing on the offline trust research which focuses more on the mature stage of trust, the previous experience, service satisfaction, customization, and communication might become the dominant factors, while the technical web design and the third party reference may be in the shadow. Prior customer experience can be concisely summarized in the satisfaction of service. Therefore, service satisfaction overshadows web design as trust matures. Satisfaction is perceived through online service. For an online seller, the online service crystallizes in two components, the online service design and the interpersonal customer support. Gefen (2002) found that service quality is sensed by the buyer, but it was not explored what constitutes such service quality perception.

Proposition 2a. As prospect online buyers become experienced buyers with an online seller, service satisfaction will be a new significant factor of trust.

Proposition 2b. For experienced online buyers with an online seller, customer satisfaction is more important than the technical web design and the third party reference in affecting trust.

Proposition 2c. For experienced online buyers with an online seller, customer satisfaction is formed based on the service design online and the interpersonal customer support.

Third, it is not clear yet what are the distinct consequences of trust and satisfaction. Both trust and satisfaction are claimed to be the antecedents of purchase intention and loyalty. But which factor is more important to each consequence? Garbarino and Johnson (1999) found that trust is more relevant to long term relationship while satisfaction is more predictive of purchase intention.

Proposition 3. Online trust in a seller can better predict the customer loyalty, while customer satisfaction can better predict the purchase intention.

Similarly, the importance of cognitive and affective trust may change over time. As we discussed above, a new online buyer may more rely on the rational and cognitive process to evaluate a seller at the very beginning. But to be a committed or loyal customer, cognitive trust is not enough. An affective component is critical to the long-term relationship. How do the cognitive and affective components develop over time, and what are the factors leading to affective trust, are interesting questions to be answered.

Proposition 4a. As the online buyers become more experienced with an online seller, the cognitive aspect of trust decreases, while the affective aspect of trust increases.

Proposition 4b. For a same seller, it is slower for its online buyers to build affecitive trust than for its offline counterparts.

Few researcher looks at the online B2B trust. Pavlou (2002) looked at a very special case of a buyer's general trust in the eBay market. At the company to company level, no research is available. If satisfaction is the major factor of trust for a mature business relationship, it should apply to both the online and offline scenarios. Coupled with the conjecture that the web presence becomes less relevant as the relationship matures, we predict the online B2B trust will be the same as the offline one.

Proposition 5. For two companies in the B2B eCommerce, the antecedents of trust will be the same as in the offline environment when the relationship is mature.

Finally, why does a buyer desert a seller and never come back? The declining stage of trust is largely forgotten in both the online and offline research. If the trust is lost, a customer is lost. Maintaining an existing customer is claimed to be much cheaper and more profitable than gaining a new customer, but we still do not know the causes of the distrusting behavior.

Conclusion

There are three main contributions in this research: a framework to understand trust in the different transaction contexts, streamlined theoretical foundation of online trust development, and the future research topics.

The framework is based on the general trust research and trust research in the transactional context in particular. Different combinations of the buyer, seller, and the market properties, together with the stage of the relationship, constitute a specific circumstance for trust.

Based on the framework, we examined the special nature of online trust and provide theoretical explanations. Compared to the offline trust, online trust has some unique antecedents. We theorized these antecedents as the consequences of the use of Internet medium. The Internet medium, because of its limited richness and capacity in conveying social presence, lends the Internet web site a special instrument for the seller to signal its trustworthiness. But the signaling effect of the web site is discounted by the medium. The limited amount of information the medium offers also makes the buyer searching for reference groups and reference experience for her online purchasing decision. The medium use also has an implication on the dynamics of online trust, as the initial and returning customers may look for different signs of trustworthiness.

Finally, we proposed some future research issues based the framework-based literature review and the theoretical foundation. These future researches will help piece together the puzzle of online trust.

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Appendix 1. Offline trust research in the transactional context

Type	Stage	Research	Antecedents	Trust	Consequence
B2B	Mature	Doney & Cannon 1997 (Sales manager vs. supplier firm and sales person)	Supplier's reputation and size, willingness to customize, confidential information sharing, and length of relationship; Salesperson's expertise, power, likability, similarity, business/social contact, length of relationship	general trust (trust as a uni-dimensional construct. Same below.)	Purchase choice and future interaction
	Mature	Andaleeb 1996 (Student simulation)	N/A	general trust	satisfaction, commitment
	Mature	Swan et al. 1999 (Meta-analysis, customer vs. salesperson)	Salesperson's benevolence, competence, likability/similarity, selling techniques, experience, firm	general trust	Satisfaction, positive attitudes, intentions, actual actions
	Mature	Morgan & Hunt 1994 (Member firms of NTDRA)	Shared values, opportunistic behavior, communication	reliability	Relationships commitment, cooperation, functional conflict, decision uncertainty
	Mature	Ganesan 1994 (Retailers vs. suppliers)	Supplier's specific investment, reputation, experience with, satisfaction	credibility, benevolence	Long-term orientation
	Mature	Geyskens et al. 1999 (meta-analysis)	Conflict, non-economic satisfaction	general trust	commitment
B2C	Initial & Mature	Garbarina & Johnson 1999 (Theatre goers)	Actor satisfaction, actor familiarity, play attitudes, theater attitudes	general trust	Future intention, commitment
	Initial & Mature	Singh & Sirdeshmukh 2000 (Conceptual)	satisfaction, price fairness, performance evaluation	competence, benevolence	Satisfaction, loyalty
	Initial	McKnight et al. 1998 (Conceptual)	Disposition to trust, cognitive process, institution-based trust	benevolence, competence, honesty, predictability	N/A

Appendix 2. Online trust research in the transactional context

Type	Stage	Research	Antecedents	Trust	Consequence
B2B	Initial	Pavlou 2002 (Small biz vs. general sellers in auction market)	Market monitoring, accreditation, legal bonds, feedback, and norms	credibility, benevolence	Satisfaction, risk perception, continuity
B2C	Initial	McKnight et al. 2002a, 2002b (Students vs. fictitious legaladvice.com)	Vender reputation, website quality, structural assurance	ability, benevolence, and integrity	Intention. Follow advice, share personal information, buy service
	N/A	Pavlou & Gefen 2002 (Auction market)	Buyer-driven certification, auction-house escrow	general trust	Perceived risk, Satisfaction,
	Initial	Cheung & Lee 2001 (Students vs. web store)	Security control, privacy control, integrity, competence, third part y recognition, legal framework, propensity to trust	general trust	Perceived risk
	Initial	Grazioli & Jarvenpaa 2000; Jarvenpaa et al. 1999; Jarvenpaa et al. 2000 (students vs. real web stores)	Vender size, reputation	general trust	Attitude, willingness to buy
	Initial & Mature	Gefen 2000 (Students vs. Amazon.com)	Familiarity, trust disposition	general trust	Inquire, purchase
	Mature	Gefen 2002 (Students vs. amazon.com)	Tangibles, empathy, reliability, responsiveness, assurance (SERVQUAL)	general trust	Risk perception, loyalty
	N/A	Bhattacherjee 2002 (Students vs. Amazon.com)	Familiarity	ability, benevolence, integrity	Willingness to transact
	N/A	Gefen & Straub 2001 (students vs. Travelocity.com)	Social presence	general trust	Purchase intention
	Initial	Belanger et al. 2002 (Students vs. web stores)	Privacy, security, website attributes	trustworthiness	Purchase intention
	N/A	Yoon 2002 (Students buying simulation)	Transaction security, website properties, navigation functionality, and personal variables	general trust	Purchase intention
C2C	Initial	Ba & Pavlou 2002. eBay buyer vs. eBay seller	eBay rating, both positive and negative	credibility	Price premium

Note: The general causal relationship is the antecedents leading to the trust belief which in turn leads to the consequences. The actual relationships tested vary from paper to paper. Refer to the original paper for details.