

WORKING PAPER SERIES

Navigating the Online Market in a Culture of Confucianism:
the Impact of Process Flexibility on Online Trust

by

Lihua Huang

Sulin Ba

Xianghua Lu

12-01



SCHOOL OF BUSINESS
UNIVERSITY OF CONNECTICUT
STORRS, CONNECTICUT

Navigating the Online Market in a Culture of Confucianism: the Impact of Process Flexibility on Online Trust

Lihua Huang*, Sulin Ba†, and Xianghua Lu*

* School of Management, Fudan University, Shanghai, China

† School of Business, University of Connecticut, CT, USA

Abstract: The success of e-commerce companies in a Confucian cultural context takes more than advanced IT and process design that have proven successful in Western countries. The example of eBay's failure in China indicates that earning the trust of Chinese consumers is essential to success, yet the process of building that trust requires something different from that in the Western culture. This article attempts to build a theoretical model to explore the relationship between the Confucian culture and online trust. We introduce a new construct – process flexibility – as a particularly important factor in online trust formation in the Chinese cultural context. A survey was conducted to test the proposed theoretical model. This study offers a new explanation for online trust formation in the Confucian context. The findings of this article can provide guidance for companies hoping to successfully navigate the Chinese online market in the future.

Keywords: Trust; Confucianism; Process Flexibility; Online Market; Culture

Navigating the Online Market in a Culture of Confucianism: the Impact of Process Flexibility on Online Trust

INTRODUCTION

In the last decade, there has been an outbreak of electronic commerce (e-commerce) activities enabled by the Internet and other information technologies. This outbreak has potentially opened a world- wide market to many international companies. One of the biggest potential markets is China. According to clickz.com, China has the biggest Internet population in the world - 513million in January 2012.

However, having advanced information technology that can enable companies to reach more customers is only the first step. Significant barriers still exist for companies to successfully penetrate the Chinese market. One of the most prominent examples that illustrate this point is eBay. Being one of the biggest and most successful e-commerce companies in the U.S., eBay entered the Chinese market in 2002, confident to take on the fast growing Internet market in China. However, after spending a whopping \$100 million on its Chinese site, eBay pulled out of the Chinese market in late 2006. One factor often cited as the key reason of eBay's failure in China is the lack of consumer trust in eBay and its online marketplace (SinoCast 2007). An analyst at the China Market Research Group observed that "foreign Internet companies have been a failure in China in large part because they try to bring the exact same practices that made them successful in the US" (McKenzie 2007)). eBay's experience clearly demonstrates that their U.S. strategy, which lead to their huge success in the Western market, does not automatically translate into success in a different market with a very different culture.

In contrast, the biggest competitor of eBay in China, Taobao.com, has been hugely successful. Taobao is the largest consumer electronic commerce company in China. Taobao

reported in February 2012 that its transaction volume (gross merchandise volume) reached RMB 485.6 Billion (US\$76.6 billion) in 2011, a 240% year-on-year increase in the last five years. Taobao's transaction volume for 2011 exceeded the sales volume of China's largest mass retailer, and equals approximately 1.89% of China's total retail trade in 2011, according to statistics released by the Chinese Ministry of Commerce.

The sharp contrast between the two companies' stories in China raises some interesting questions: what factors contributed to the success of Taobao and the failure of eBay? If lack of consumer trust in eBay is cited as one of the key contributing factors to eBay's pullout from the Chinese market, what did Taobao, as a platform provider, do to earn the consumer trust that is critical to their success? These questions lead to our study which explores why mainstream e-commerce models and prescriptions, derived primarily from the US context, are poorly suited to contemporary China. We attempt to provide an explanatory theory that identifies key variables and models relationships between those variables. The theory aims primarily to explain observed phenomena, but may also help to provide guidance for companies hoping to successfully navigate the Chinese online market in the future.

Practically all transactions require an element of trust, especially those conducted in an uncertain and impersonal environment such as the Internet. In the last few years, there has been an increasing amount of research on the impact of trust on e-commerce (Ba et al. 2002; Dellarocas 2003; Eckel et al. 2006; Pavlou 2003), what factors influence trust formation on the Internet (Kim et al. 2006; Koufaris et al. 2004), and how to increase consumer trust online (Bolton et al. 2004; Pennington et al. 2003). However, despite increasing acknowledgement of the importance of trust for Internet activities, *the renewed interest has only spurred studies mostly from the western perspective*. Most of the studies have rallied around U.S. consumers

purchasing from U.S.-based online merchants. The global nature of the Internet raises questions about the robustness of trust effects across cultures. Tan and Chee (2005) speculate that culture may also affect the antecedents of consumer trust; that is, consumers in different cultures might have differing expectations of what makes a web merchant trustworthy. In fact, earlier researchers (e.g., Doney et al. 1998) have postulated on possible interconnections between trust in general and national cultures. For example, Yamagishi and Yamagishi (1994) show that interpersonal trust is lower in a “tight” society like Japan than in a “loose” society like the United States.

In this research, we investigate trust building from the perspective of platform providers such as eBay and Taobao on which buyers and sellers carry out business transactions. We attempt to answer the following research questions: (1) how does the Chinese Confucian culture affect consumer trust formation? (2) which factors in the Confucian culture are particularly relevant to trust formation in the impersonal environment of the Internet? (3) what can a platform provider do from a system point of view to build trust and attract customers to their platform?

This study makes important contributions to both research and practice. From a research perspective, this study explores trust formation in a context (i.e., the Internet) that is incongruent with the underlying culture. The impact of those cultural factors on *online* trust building has not been explored by the literature. From a practical point of view, those competing or collaborating with Chinese businesses will benefit from this research because it helps them understand the factors important to Chinese consumers when they engage in online transactions.

The rest of the paper is organized as follows. Section 2 briefly summarizes the literature on trust and outlines the influence of the Confucian culture on trust formation in China. We formulate our Confucian culture-based research hypotheses and present our research model in

Section 3. Our research methodology and study results are presented in Section 4. Section 5 concludes the paper with research and practical implications of the study.

RESEARCH BACKGROUND ON THE CHINESE CONFUCIAN CULTURE AND TRUST

A large body of literature has examined the impact of trust in the online environment (Ba et al. 2002; Ba et al. 2003; Choi et al. 1997; Eckel et al. 2006; Jarvenpaa et al. 1999; Kim et al. 2006). The literature asserts that some of the important sources of trust in the business world include familiarity and values (Coleman 1990; Williamson 1993). Familiarity through social interactions, which can lead to trust or mistrust, is not present in most Internet-based electronic transactions. Values-based trust comes from institutional structures that encourage confidence in trustworthy behavior and goodwill. However, the institutional structures in the online world, especially in the Chinese market, are not yet well developed. The lack of familiarity and value-based trust is especially detrimental to the growth of electronic commerce in a society where the culture traditionally emphasizes close-knit relationships and shared values, such as the Chinese society.

Another source of trust is calculativeness: Trading parties form their trust perceptions based on a sober assessment (a calculation) of the other party's costs and benefits of cooperating versus cheating (Ba et al. 2002; Dasgupta 1998; Hart et al. 1998; Williamson 1993). When agents have a reputation of being trustworthy, they can expect to receive benefits for their investment in reputation. Calculativeness-based trust has been shown to be particularly important and effective in the western society in non-repeated online exchanges (Aiken et al. 2006; Ba et al. 2002; Garbarino et al. 2003). This form of trust is usually impersonal and relies

on reputation information and economic reasoning. It remains a question though whether calculativeness-based trust can effectively induce consumer trust towards Internet merchants in a Confucian society that emphasizes social interactions and interpersonal relations.

In addition to trust towards one's transaction partners, in the online environment, trust towards the platform provider is also important (Pennington et al. 2003). This is the type of trust this research focuses on. The Western literature has examined the role of structural assurance (or institutional trust) in establishing consumer trust towards individual sellers. For example, Pavlou and Gefen (2004) demonstrate the effectiveness of institutional mechanisms such as online escrow services, feedback mechanisms, and credit card guarantees in promoting trust in the community of sellers. Our study, however, focuses on consumers' trust towards the platform provider itself, not the sellers selling on the platform. In addition, we examine trust towards the platform provider from an angle that has not been examined in the Western literature, based on the Chinese cultural elements that play a dominating role in people's behavior.

Hofstede (1980) defines culture as "the collective programming of the mind which distinguishes one group or category of people from another." Individuals from different backgrounds are exposed to different traditions, customs, and social norms, which together, among other things, form a culture.

The Chinese culture is strongly influenced by Confucianism, whose central theme is the attainment and maintenance of harmony in society (Cazal 1994). Harmony is achieved through appropriate interpersonal relationships and social interactions. Scholars have noted that social interactions between individuals in a Confucian-influenced society are marked by strong affective and relational underpinnings (Farh et al. 1998; Tan et al. 2005), which lead to group orientation and collectivism in the society. Group orientation emphasizes ties of kinship and

close personal relationships. Tight social networks in which commitments made to groups predominate over self-interests foster strong collectivism in that collectivists clearly favor and trust in-group people such as family and friends (Casimir et al. 2006). Individuals identify themselves with reference to others around them and are very concerned about in-group members. Correspondingly, they have a natural trust toward those in the same social network. On the other hand, they tend to be indifferent toward those who do not belong to the in-group and are therefore much less likely to trust them (Morsbach 1972).

Such a cultural tradition is directly contradictory to the Internet environment. On the Internet, people are “loosely” connected, maybe through some common interests such as an online game. However, the anonymous nature of the Internet makes it hard for users to really know who is on the other side of the interaction (Ba 2001; Neumann 1997). In this online world, people can no longer identify with each other through a set of shared traditional values. Moreover, the global nature of the Internet breaks down the traditional social boundaries around which “in-groups” form. Online users are no longer merely interacting with their families, friends, or neighbors. They face a vast array of people with different backgrounds, beliefs, and connections. That may be why only 6.1% of Chinese Internet users surveyed by the China Internet Network Information Center express their trust towards the Internet (CNNIC 2007). How should online users reconcile the difference between their cultural tendencies and the new Internet environment in which they operate? What mechanisms should a transaction platform provide in order to address this issue?

Although (and partly because) it has been periodically re-interpreted to serve as a political legitimating agent, Confucianism continues to hold considerable sway in the contemporary Chinese social milieu (Martinsons et al. 1997). The Confucian culture’s emphasis

on “virtue building,” which views the virtue of a person as a necessary component in successful interactions, leads to the strong belief of “rule by man” which permeates many facets of the Chinese society, from regime building to business transactions(Jenco 2010; Peerenboom 2002). Some even go as far as claiming “Virtue is the substance; laws are merely instrumental.”(Jenco 2010). This belief results in the reliance on *Guanxi* (connections) as the basis of trust (Chen et al. 2004). *Guanxi* are relationships or connections between two or more people (or organizations) in which each can prevail on the other(s) for help. *Guanxi* connections, or personal relationships, are the preferred information networks for the Chinese. Information on new products, new technologies, and new market possibilities is often accumulated by socializing with friends and acquaintances(Martinsons et al. 1997). Even in the age of the Internet and online commerce where people often encounter and interact with strangers as a necessity of doing business, when people seek information, they tend to turn to establishing “connections” rather than relying on formal, impersonal, or abstract information sources (Redding 1995). Trust is built up and maintained on a one-to-one basis rather than systematically. This leads to distinctive in-groups and moderates the use of bureaucratic regulations.

A rule-based system with stringent policing underpins commerce in the United States. In contrast, the belief of “personal rule of man” leads the Chinese to rely greatly on *Guanxi* (Martinsons 2008; Seligman 1999; Xin et al. 1996). People tend to do business with those that they know and trust – family, friends, classmates and others in their in-groups. In-group members tend to share key information selectively in order to maintain both their competitive advantage and flexibility (Burrows et al. 2005). Information is exchanged through personal communications that are difficult to codify (Martinsons et al. 1997). Therefore, business transactions are often relationship-based commerce as characterized by personal trust (rather

than systemic trust) and private information. Personal relationships are the preferred sources of business information and there is a great degree of reliance on informal and primarily verbal rather than formal (written) communications.

RESEARCH MODEL

In this section, we present a research model that encompasses the elements that contribute to online trust building in the Chinese cultural environment. These elements are reflected in a set of constructs that are important to a platform provider to facilitate the trust building process.

Process Flexibility and Perceived Control

Manufacturing strategy research has long focused on the competitive performance implications of the processes used to manufacture products. Ba and Johansson (2008) argue that in the online environment, technology and the business processes embedded in the technology have a greater significance than human interaction on customers' perceived service value from interacting with the website. Earlier studies have also shown in the service delivery context that the process capabilities of a system – what the system can do and what the outcomes of the interaction are – have a greater impact upon service quality than people capabilities – the knowledge and skills possessed by employees interacting with customers (Roth et al. 1995).

A study by Meuter, Ostrom, Roundtree et al (2000) indicates that process failure and poor process design are among the major factors leading to a customer's dissatisfactory evaluation of service in a technology-based service encounter. In the Internet environment, the technology typically is the website which embeds the business processes through which customers conduct transactions. Therefore we focus on the process perspective of a transaction platform.

Specifically, the process is conceptualized as a configuration of technological capabilities through which the platform provider responds to customer needs.

In western culture, the primary source of trust is the universal or systemic rule by law. However, in Chinese culture, personal rule of man (“*Renzhi*”) has been the tradition for thousands of years. Martinsons and Westwood (1997) argue in their discussion of how Chinese companies view information systems that the high context Chinese culture explains the suspicion of formal communication systems and the lack of explicit or enforceable rules. Because of the strong desire to establish *Guanxi* (connections) which is considered a key component in any business transactions, and the desire to be able to control how *Guanxi* is established, Chinese consumers have a high demand for process flexibility in terms of how an online transaction platform allows them to be engaged in the transaction.

Process flexibility is a concept that has been extensively discussed in the manufacturing literature. It commonly refers to the ability to respond effectively to changing circumstances (Gerwin 1987; Gupta et al. 1991) using the existing set and amount of resources without a major set up (Sethi et al. 1990). In the IS literature, there has also been some discussions on process flexibility in the software development context. For example, Nidumolu and Knotts (1998) define process flexibility as the speed with which an organization’s software development approach can respond effectively to changes in the organization’s environment. Palanisamy (2003) describes IS flexibility as the capacity of the information systems to change or to adapt and adjust in response to new conditions, demands, or circumstances from the organization.

In our research context, we define process flexibility as the ability of the platform provider to produce and adapt to diverse customer requirements. There can be multiple dimensions to process flexibility, customizability being one commonly mentioned in the

literature. For example, drawing upon manufacturing sources, Levitt (1976) uses the words “standardized” and “customized” to define the poles of a service process continuum.

Customizability is also a key dimension of a process-based view in the software process engineering research (Nidumolu et al. 1998). It is defined as the ability of the software development approach to be tailored to the specific needs of individual projects. In the research stream of online purchase, customizability refers to two different meanings: (1) customization of the information content delivered to customers based on their browsing and click behavior; and (2) transaction process customization—customization of the purchase transaction process to fit each customer’s needs (Thirumalaia et al. 2011). In our context, we will mainly focus on the latter part of customizability, which is the platform provider’s ability to customize transaction procedures according to individual customers’ transaction needs.

Customizability can be achieved by designing open and modular technologies. The configurability of modular structures enables the transaction process support variety in the formation of human capacity of action (Kocaballi et al. 2011). Kahle (2008) defines “openness of technology” as “the degree to which it empowers users to take action, making technology their own, rather than imposing its own foreign and inflexible requirements and constraints.” With the high quality of customization, customers may opt to reconfigure or customize processes according to their own needs, which leads to higher ownership in the transaction.

Customizability also makes the platform less isolated in the continuous usage. When customers use the system, they are actually designing their process in the role of a designer (Aanestad 2003). Aanestad describes this activity as “design in use.” This co-evolution eventually tunes the relationships between the platform and the customers.

One important factor that has been identified by marketing researchers to have a considerable impact in a service process is perceived control (Hui et al. 1991), which is described as the amount of control that a customer feels he has over the process or outcome. In this research, we define *perceived control* as the amount of control the customer has on the transaction platform in terms of navigating through the website and determining the transaction outcome.

Hui and Bateson(1991) conclude that perceptions of control affect customer feelings in a variety of situations. Given the Chinese consumers' suspicion of systemic rules and great desire for "personal rule by man," which has its root in the Confucian culture, Chinese consumers are particularly sensitive to perceived control. We hypothesize that:

H1: The process customizability offered by a platform provider is positively correlated with the consumers' perceived process control.

Another important dimension in process flexibility is interactivity. Redding (1995) recognizes that personalism – a reliance on interpersonal bonding as the basis of transaction – plays a major role in how Chinese people conduct business. This personalism is deeply rooted in the Confucianism teaching of attainment and maintenance of harmony in society (Cazal 1994). This emphasis leads to the formation of tightly-knit groups or social networks in which trust among the in-group members is high. However, people are much less likely to trust those who do not belong to the same in-group, resulting in the society as a whole a low-trust society.

Chinese consumers tend to make decisions based on a combination of intuition and experience (Martinsons et al. 1997). On the Internet, it is no longer feasible to maintain a close personal network in the traditional sense. However, people's cultural tendency of relying on interpersonal bond as the basis for transactions and not trusting "outsiders" does not lessen.

Therefore, being able to interact with a transaction partner directly in various ways provides an assurance that there is a direct relationship with the other party, which enables a consumer to *experience* the transaction more closely and to feel a certain degree of control over the process. Indeed, Taobao rapidly gained C2C market share from eBay by enabling potential buyers and sellers to communicate directly and establish personal trust with an embedded instant-messaging service (Ou et al. 2008). We therefore hypothesize that:

H2: The interactivity offered by a platform provider is positively correlated with the consumers' perceived process control.

Perceived Process Control and Trust

The relationship between perceived control and trust has been well documented in the western literature and studied in various contexts. For example, Kim, Kim and Hwang (2009) demonstrate that to the extent that online consumers form favorable beliefs about online vendors through their *perceived control* over their actions, they become more likely to attempt to initiate the trust building process. Milne and Boza (1999), in their study of how to manage consumer information in the context of database marketing, assert that perceived control leads to consumers' increased trust in the vendor. In a study of the impact of online privacy statement, Arcand et al (2007) demonstrate that the mere presence of a privacy statement has a positive influence on perceived control, which leads to increased trust in the cyber merchant. In the Chinese society, as Martinsons and Westwood (1997) argue, the primary basis for trust is the personal rule of man. When a consumer feels more in control, he feels he is "running the show" and determining the outcome of the transaction, then he is more likely to trust the platform provider that enables him to practice "personal rule." We therefore hypothesize that:

H3: Perceived process control is positively correlated with consumers' trust in the platform provider.

Structural Assurance and Trust

Previous studies have shown structural assurance to be a vital mechanism in promoting online trust in Anglo-American societies (McKnight et al. 2002; Pavlou et al. 2004; Sha 2009; Wingreen et al. 2005). Structural assurance means one believes that structures like guarantees, regulations, promises, legal recourse, or other procedures are in place to promote success (Shapiro 1987; Zucker 1986). Structural assurance is also referred to as institutional trust. Institutional mechanisms are mechanisms, such as feedback features, escrow services, and credit card guarantees, that are implemented or created by third parties to create conditions that will facilitate transaction success (Pavlou et al. 2004). Structural assurance is, in short, systemic rules that are designed to promote trust. However, as we mentioned before, Chinese consumers are suspicious of rigid rules but prefer person-to-person interactions that allow them a certain degree of personal control. Therefore, how well structural assurance works in the Chinese society remains unclear. We include this construct in our study to compare and contrast how a well-established mechanism in trust building in the Western society works in a different cultural environment. We hypothesize that:

H4: Structural assurance offered by a platform provider is positively correlated with consumers' trust in the platform provider.

Trust and Transaction Behavior

The relationship between trust and transaction behavior has been established in abundance in the Western literature (Gefen 2002; Jarvenpaa et al. 1999; Pavlou 2003; Pavlou et al. 2004). Consumers in the Chinese Confucius culture also believe trust to be an antecedent to

many business transactions (Martinsons et al. 1998) 1. Although companies like eBay or Taobao are only platform providers, not a direct party of a business transaction, literature on trust transfer asserts that when one entity is trusted, an unknown entity perceived to be related to the trusted entity will become trusted too (Stewart 2003). Therefore we believe that consumers' trust in Taobao will likely transfer to sellers on Taobao, resulting in increased transaction behavior.

Hence:

H5: Consumers' trust in the platform provider is positively correlated with their transaction behavior.

Control Variable: Trust Propensity

Trust in the platform provider is also the product of general trust propensity. Trust propensity is formed through socialization and life experience and is invariant across situations (Whitener et al. 1998). Gefen (2000) and Pavlou and Gefen (2004) both show that propensity to trust increases one's trust in general in online contexts. We therefore control for its effect on trust in the platform provider.

Figure 1 presents our conceptual model and research hypotheses.

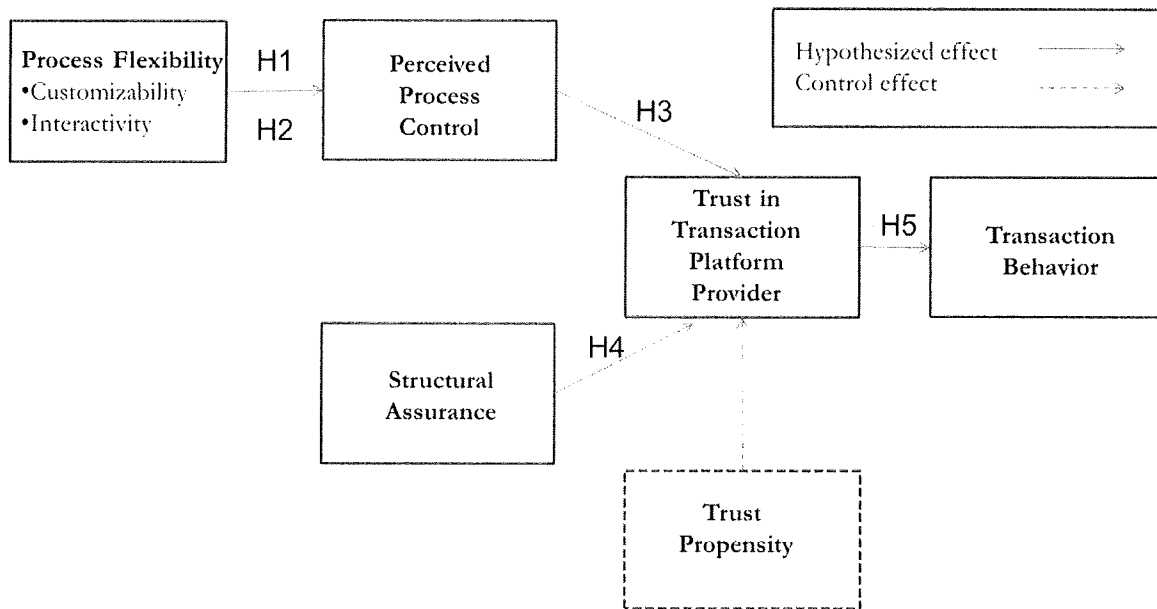


Figure 1: Conceptual Model and Research Hypotheses.

METHODOLOGY

Data was collected using an online survey of Taobao customers and other online shoppers. Where possible, validated scales were used to measure the constructs of the study. Perceived process control, structural assurance, trust in transaction platform provider, and transaction behavior were measured using scales adapted from existing literature. The two dimensions of process flexibility – customizability and interactivity – were adapted from literature on processes in the Internet context.

Research Design

Since most of the scale items used are from the English language literature, and our study subjects were Chinese consumers, all the items were independently translated into Chinese by eight researchers (five doctoral students and three professors), then consolidated in a group meeting.

The Chinese survey instrument was then distributed in a pilot study to 20 Taobao customers. We asked for the respondents' opinions on the clarity of the questions and ran reliability analyses of the construct indices. Minor wording changes were made to reflect the common usage of terms in the Chinese context. The revised instrument was then translated back to English by two researchers who were not involved in the instrument development. The translation was largely consistent with the original version, thus providing face validity of the Chinese version of the instrument. The final instrument consisted of 24 items in a 5-point Likert scale (strongly disagree to strongly agree) and 13 demographic questions. Table 1 shows the measurement items.

Table 1: Constructs and items	
Measurement Items	Sources
CU: Customizability	Nidumolu and Knotts (1998)
CU1	Taobao allows its customers to dictate how the transaction process is offered.
CU2	Taobao changes how its transaction service is offered for each customer (e.g. shipping address, anonymous purchase, and so on).
CU3	Taobao allows its users to customize the transaction steps (e.g. payment time) according to their own needs.
IN: Interactivity	Merrilees and Fry(2003)
IN1	Taobao offers good two-way communication for buyers and sellers.
IN2	It is easy for users to interact with others on Taobao.
IN3	Taobao helps me to participate, learn and act.
CO: Perceived Process Control	Bateson and Hui (1992) (1992); Wu (2006)
CO1	Users has control over how to transact on Taobao's platform.
CO2	When using the Taobao platform, users can control how to complete the transaction by themselves.
CO3	When using the Taobao platform, it's difficult for the users to accomplish the transaction as they like.
CO4	When using the Taobao platform, all the transaction process (e.g. contact, payment, shipping) are under the control of the users.

TR: Trust in Platform Provider	Pavlou and Dimoka (2006)
TR1	Taobao is competent and effective in handling my transactions.
TR2	Taobao is interested in my well-being, not just its own.
TR3	Taobao would keep its commitments.
TR4	I believe that Taobao would act in my best interest.
TR5	Taobao is likely to be reliable.
TR6	If there is a problem with my transaction, Taobao will help me.
BE: Transaction Behavior	Self-developed
BE1	On average, how many times do you transact on Taobao during a month?
BE2	How many times have you transacted on Taobao during the last year?
SA: Structural Assurance	McKnight etc. (2002)
SA1	In general, the Internet is a robust and safe environment in which to transact business.
SA2	The Internet has enough safeguards to make me feel comfortable using it to transact personal business.
SA3	I feel assured that legal and technological structures adequately protect me from problems on the Internet.
SA4	I feel confident that encryption and other technological advances on the Internet make it safe for me to do business there.
IT: Individual Trust Propensity	Pavlou and Gefen (2004)
IT1	I generally trust others, unless there is sufficient reason not to trust him / her.
IT2	I usually assume people are honest.

After the questionnaire was finalized, we contacted the manager of Taobao's Bulletin Board Service (BBS) who then posted the link to our questionnaire at the top of all postings. The BBS is an online community for discussions about online shopping experience on Taobao. The users of this community are either sellers or buyers on Taobao. During the one-week period

when the survey link was displayed, the link was clicked 6321 times, and 459 completed questionnaires were returned. In order to avoid the potential sampling bias of only using data from Taobao's BBS users, we also tried to collect data from other online shopping communities by posting our questionnaire link on two online shopping forums in China, which resulted in 62 additional questionnaires. Among the total of 521 responses, 50 of them were incomplete and discarded, rendering 471 valid questionnaires in the study. We compared the results from these two different sources and did not find significant differences, which eliminates concerns of sampling bias. The demographic distribution of the respondents is displayed in Table 2. Most of our respondents were highly educated young people (more than 60% respondents were aged below 30, and had university degrees or higher) and experienced online shoppers. More than half of them had over one year of online shopping experience, online over 8 hours a day. In addition, there were more female respondents than male ones.

Table 2: Respondents demographic information		
Attribute	Number	Percentage
Age (467)		
<18	4	0.85%
18-30	352	74.74%
>30	111	23.56%
Gender (471)		
Male	221	46.92%
Female	250	53.08%
First transaction on Taobao till now (471)		
>5Y	52	11.04%
3Y-5Y	124	26.33%
1Y-3Y	173	36.73%
0.5Y-1Y	63	13.38%

<0.5Y	59	12.53%
Highest education finished (469)		
Middle school	27	5.73%
High school	110	23.35%
Undergraduates	191	40.55%
Graduates	131	27.81%
Other	10	2.12%
Average frequency of shopping online (times per month) (441)		
<10	355	75.37%
10-20	35	7.43%
20-30	12	2.55%
30-40	16	3.40%
40-50	0	0%
>50	23	4.88%
First online shopping experience till now (471)		
>5Y	44	9.34%
3Y-5Y	144	30.57%
1Y-3Y	173	36.73%
0.5Y-1Y	53	11.25%
<0.5Y	57	12.10%
Monthly income (in RMB) (471)		
>10k	38	8.07%
5k-10k	37	7.86%
3k-5k	73	15.50%
2k-3k	97	20.59%
<2k	226	47.98%
Average time spent online per day (470)		
>8 Hours	298	63.27%
5-8 Hours	89	18.90%
2-5 Hours	56	11.89%

1-2 Hours	22	4.67%
<1 Hours	5	1.06%
Average frequency of visiting Taobao (times per month) (436)		
<100	298	63.27%
100-200	27	5.73%
200-300	16	3.40%
300-400	13	2.76%
400-500	12	2.55%
>500	70	14.86%
Average frequency to transact on Taobao (times per month) (442)		
<10	250	53.08%
10-50	103	21.87%
50-100	30	6.37%
>100	59	12.53%
Number of transactions on Taobao during last year		
<50	209	44.37%
50-100	53	11.25%
100-200	57	12.10%
200-300	21	4.46%
300-400	14	2.97%
>400	67	14.23%
Highest price of product bought on Taobao (471)		
>10k	10	2.12%
5k-10k	21	4.46%
3k-5k	19	40.34%
1k-3k	83	17.62%
0.5k-1k	66	14.01%
300-500	75	15.92%

100-300	124	26.33%
<100	73	15.50%

Notes: A few respondents skipped some demographic information, but fully answered the measurement questions. These questionnaires were included in our final dataset.

Data Analysis

Structural Equation Modeling was used in the study to accommodate multi-stage modeling and latent variables. The PLS method, generally considered to be an effective method to test a theory at an early stage, was used to assess the measurement model and the structural model. The open-source software, SmartPLS 2.0, was used to analyze the data in the study.

Common method variance can be a potential source of bias in survey based research. One of the procedures commonly used to test for the presence of common method bias in a data set is Harman's one-factor test (Podsakoff et al. 2003). If a single factor is obtained from an exploratory factor analysis or if one factor accounts for a majority of the covariance in the independent and dependent variables, then the threat of common method bias is high. Our factor analysis yielded six factors using the principal component factor analysis, which explained 71.3% of the total variance. The first factor explained 34.3% of the total variance, indicating that no single factors could explain most of the variance. Therefore, we conclude that common method bias is not a cause for concern in our sample.

Content validity involves the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured. In this research, the items for each variable were carefully selected from previous measurement scales in the related literature, and modified according to the particularity of the online shopping environment. Small-scale interviews and pre-test were conducted after the preliminary design of

the questionnaire. A panel of experts was invited to review the items and comment on the questionnaire, which improved the content validity of the research.

Confirmatory factor analysis was conducted to measure reliability and construct validity of this model. Different from exploratory factor analysis, which aims to build new theory by uncovering the underlying structure of a relatively large set of variables, confirmatory factor analysis seeks to determine if the number of factors and the loadings of measured variables on them conform to what is expected on the basis of pre-established theory. As shown in Table 3, the composite reliability was over 0.7 for all the constructs, which means all the constructs had good internal consistency in this research. In addition, according to Hair, Anderson and Tatham (1998), based on our sample size, a factor loading over 0.30 would be considered significant at a .05 significance level. All the factor loadings exceeded the threshold (see Table 3) and were significant ($p < 0.001$), providing evidence of convergent validity (Anderson et al. 1988).

Table 3: Factor analysis and composite reliability			
Construct	Item	Standardized factor loading	Composite reliability
Interactivity	IN1	0.8003	0.8301
	IN2	0.7539	
	IN3	0.8064	
Customizability	CU1	0.7546	0.8164
	CU2	0.8073	
	CU3	0.7558	
Structural assurance	SA1	0.6434	0.849
	SA2	0.7767	
	SA3	0.8105	
	SA4	0.8196	
Transaction	BE1	0.993	0.9932

behavior	BE2	0.9936	
Trust in platform provider	TR1	0.7869	0.9345
	TR2	0.8603	
	TR3	0.887	
	TR4	0.8744	
	TR5	0.7881	
	TR6	0.8336	
Perceived process control	CO1	0.7395	0.8402
	CO2	0.8009	
	CO3	0.7067	
	CO4	0.7654	
Individual trust propensity	IT1	0.8915	0.8536
	IT2	0.8335	

The variance extracted test was used to establish discriminant validity. As shown in Table 4, this study meets the requirement that the square root of every construct's AVE (the diagonal elements in Table 4) be bigger than the correlation between the construct and other constructs.

Table 4: Construct correlation and discriminant validity							
	AVE	BE	CO	IT	PF	SA	TR
BE	0.9865	0.9932	0	0	0	0	0
CO	0.5302	0.0362	0.7281	0	0	0	0
IT	0.7447	0.0426	0.4272	0.8630	0	0	0
PF	0.8177	0.0576	0.6693	0.458	0.9043	0	0
SA	0.5865	0.0826	0.5772	0.4608	0.5996	0.7658	0
TR	0.7044	0.0642	0.5899	0.3272	0.6778	0.605	0.8393

Structural model analysis aims to estimate and statistically test path coefficients, and calculate the R square. SmartPLS 2.0 was used to test the correlation between the constructs, and

bootstrap was adopted in this study to test the statistical significance level of the path coefficients (Figure 2).

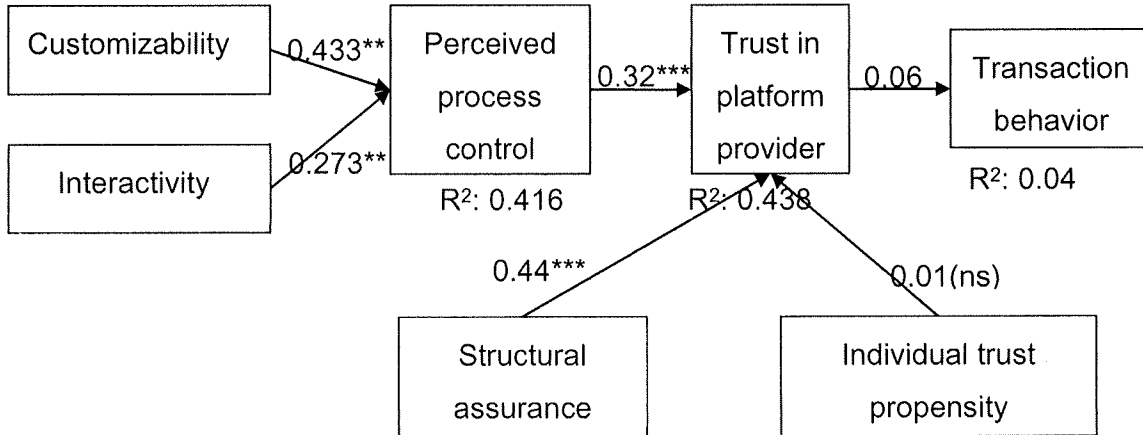


Figure 2: Path Coefficients of the Structural Model

Note: *** $p < 0.001$. ** $p < 0.05$.

Figure 2 shows that both process customizability and interactivity have a significantly positive impact on perceived process control, supporting H1 and H2. These two constructs together explain more than 40% of perceived process control change. This result indicates process flexibility plays an important role in how much control Chinese users perceive they have in their online transaction process on Taobao. H3 is also supported, suggesting a strong connection between process design and perceived trust. If the design of the transaction process can increase the perceived control, then it will in turn improve the perceived trustworthiness of the transaction platform.

In order to verify the mediation effect of perceived control between process flexibility and trust, we conducted the Sobel test. The Sobel test is a method of testing the significance of a mediation effect, i.e., whether the indirect effect of the independent variable on the dependent variable through the mediator variable is significant. We used the formula of MacKinnon and Dwyer (1995) to calculate the z value of the Sobel test: $z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)$ (see

figure 3). The z-value of perceived control is 7.4 ($p=0.002$) between process customizability and trust, and 4.34 ($p=0.032$) between process interactivity and trust. Both suggest the mediation effect of perceive control indeed exists.

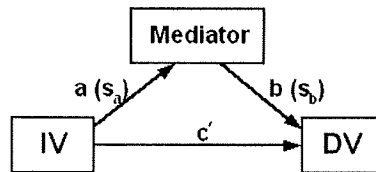


Figure 3. The Mediation Effect.

The PLS result also suggests H4 is supported, that structural assurance has a positive effect on a user’s trust in the platform provider. This finding is consistent with that in studies conducted in the western context. Interestingly, that trust does not necessarily translate into action – that is, users do not necessarily engage in more transactions because of the trust in Taobao. In addition, the control variable individual trust propensity is not significant in terms of its impact on trust in the platform provider. This may be explained by the fact that the Chinese society is a low-trust society. An individual’s propensity to trust is confined within the tight social groups an individual belongs to.

Discussion

Overall, our theoretical model and most of the hypothesis were supported or partially supported by the data collected in the survey. We find that customization and interactivity both have a significant effect on perceived process control. Customization allows the users to experience the flexibility of the process to a great extent. When a transaction platform takes into account users’ individual situations, and designs the process or make adjustments to accommodate individual user needs, users would find the whole process understandable, familiar, and convenient. For example, if users can select their own payment or delivery methods

or change their mind at any transaction step, they will feel that they not only have control over which product to buy, but also how to buy the product.

At the same time, interactivity is also an important component of process flexibility. Interactivity allows users to communicate not only with sellers and the platform provider, but also with other users to obtain information about a certain product or seller, which meshes well with the Chinese consumers' cultural tendency to establish "connections" through which to seek information.

Secondly, the results indicate that there is a significant association between users' perceived process control and their trust in the platform provider, Taobao, which supports our theoretical conjecture. Previous research suggests that when users perceive to have control in the transaction *process* they would feel more control over the *results* of the transaction and be more willing to believe they would get the expected results (Arcand et al. 2007; Kim et al. 2009) (. By allowing more user control, a platform provider can engender more trust from the users and attract more users to the platform. This is crucial for Taobao's business model as Taobao does not charge any transaction fees. The only revenue is from advertising on the website. Therefore, user trust in Taobao creates more traffic to the Taobao platform, which in turn generates advertising revenue.

The fact that perceived control plays an important mediating role between process flexibility and user trust in the platform provider is important to the design of the transaction platform. Perceived control effectively connects the platform's process design with customers' trust. While it may be hard to design a process that directly leads to customer trust, it is more intuitive to design a process that gives a higher level of control to the users.

Lastly, it is surprising that our data doesn't support the hypothesis that trust would lead to actual purchase. This result is contrary to that from previous trust studies which demonstrates trust could lead to purchase intention which subsequently converts to actual purchase behavior (Ba et al. 2002; Gefen et al. 2003; Mahmood et al. 2004). We believe this difference is attributable to the cultural difference. Huff and Kelley (2003), in a comparison study of trust in seven countries, demonstrate that interpersonal trust is higher in individualist cultures (e.g., Germany and the United States) than in collectivist cultures such as Hong Kong and Taiwan. Child (1998) notes the low level of trust prevalent in Chinese society. Therefore, although a platform provider such as Taobao might be able to earn users' trust, the trust is limited to Taobao itself and does not automatically extend to specific sellers in a low trust society such as China. This result is significant and particularly reflects the impact of cultural differences on trust formation and trust transference.

IMPLICATIONS AND CONCLUSION

The objective of this study is to investigate what factors in the Chinese Confucian culture affect customers' online trust formation. We build a theoretical model to explore the relationship between the Confucian culture and online trust. A new construct – process flexibility – is proposed as the most relevant factor in online trust formation from the perspective of platform providers in the Chinese cultural context. A survey was conducted to test the proposed theoretical model. Our findings provide several important insights from both the theoretical perspective and practical perspective.

Theoretical Implications

The theoretical implications of this study are multifold. First, we extend the online trust research into the context of Chinese culture. While most of previous trust-related literature either focuses on trust formation in the western context or emphasizes the importance of interpersonal *Guanxi* in the Confucian culture (Chua et al. 2009), this study illustrates that the belief of “rule by man” which leads to reliance on *Guanxi* as a precursor to business transactions can actually be accommodated even in the impersonal context of Internet-based e-commerce. Through the design of flexible transaction processes, a platform provider can deliver the sense of control to their users. Compared with western customers, Chinese customers, deeply ingrained in the culture of Confucianism, have a higher level of demand for control before they trust and do business with others. This demand does not relent in the online environment. Although the trust formation process in Chinese culture is incongruent with the often times impersonal nature of electronic commerce, the success of Taobao shows e-commerce providers can incorporate the demand into the system process design to give the level of control Chinese consumers require.

Second, this study offers a new explanation for online trust formation. We propose two new constructs, namely process flexibility and perceived process control, in the study of online trust. To the best of our knowledge, this paper is the first to introduce the process factors into online trust research. Although this construct is extracted from the Chinese culture, it may be applicable in other cultural contexts as well. Process flexibility enables us to associate customers’ online trust behavior with the system design of an e-commerce platform, therefore could guide e-commerce platform providers to improve the friendliness and attractiveness of their system in terms of customizability and interactivity.

Lastly, this study also enriches the concept of process flexibility. Most previous research on process flexibility is in the areas of manufacturing, supply chain management, and software development (Upton,1997; Chou, Teo, Zheng, 2008; Chou , Chua, Teo, Zheng, 2011). This paper broadens the dimensions of process flexibility to include process customizability and process interactivity according to the characteristics of e-commerce platforms. These two dimensions match the classical definition of process flexibility in terms of “range and response” (Chou et al. 2010) often used in manufacturing, but extend their application to the online transaction process context.

Practical Implications

Our study also has important implications for business practice. First, this research will help western managers gain a better understanding of the factors important to Chinese consumers when they engage in online transactions. The example of eBay in China suggests it is not a trivial task to persuade Chinese consumers to adapt to a western company’s transaction environment/process, however well suited it is with the western culture of “systemic control.” Chinese consumers did not like the eBay business model that worked so well in the western world because it did not allow them the flexibility to interact with individual sellers on the eBay platform and to customize their individual transaction process, all of which were important for their sense of control. It is this sense of control that matches the deeply ingrained belief in “rule by man” which is essential for them to establish trust towards the platform provider. Failing to provide that, eBay was unable to attract sufficient traffic to their site and consumers flocked to Taobao as Taobao emerged with a better process that fit the Chinese consumers’ culture-based innate demand for process flexibility. In short, culture not only matters in traditional business (Chua et al. 2009), but is also essential for online business.

Second, the positive effects of process flexibility and perceived process control call for more attention on online transaction process design. Our research opens up the “black box” of a system and identifies two specific dimensions: customizability and interactivity. These two dimensions provide concrete guidance to system designers as they develop e-commerce systems that aim to attract Chinese consumers. Although scholars have long advocated the importance of cultural intelligence (Earley et al. 2003), our research applies the concept to e-commerce system design and demonstrates how to embed cultural intelligence into a system. As China becomes an ever more important online market for many western companies, this research is a timely bridge from the realization of the importance of culture to the actionable step of designing systems that actually reflect and respect the cultural traditions which are crucial to their success in this new market.

As mentioned earlier, one interesting finding of this research is that consumer trust in the e-commerce platform provider Taobao does not seem to transfer to individual sellers doing business on Taobao. This finding may also partially explain eBay’s failure in China. eBay’s initial revenue model depended on transaction fees. Even if users of eBay had trusted eBay because of the structural assurance eBay provided, their trust would not have necessarily extended to the sellers and converted to actual transactions. Without the transactions, eBay would have no revenue. Taobao, on the other hand, understood the gap between a user’s trust in the company and a user’s trust in the sellers, and decided not to depend on transaction fees as its revenue source. Instead, Taobao’s revenue model is purely advertising based. As long as users trust Taobao and are willing to come to Taobao, marketers will advertise on Taobao’s platform. From a long-term perspective, however, this revenue model may not be sustainable. Companies need to understand that trust doesn’t easily transfer in a low-trust society such as China. For

long-term success, Taobao and other platform providers need to cultivate trust not only towards themselves but also towards sellers on the platform, and design processes and features that help extend user trust to other parties on the same transaction platform.

Limitations and Future Research

This study is not without its limitations. There are several ways to extend this research. First, we extract the constructs “process flexibility” and “perceived control” from the Confucian culture, and test their impact on trust in the Chinese cultural context. However, we don’t have evidence to show these two constructs are not important in the western culture context. A comparison study carried out in the two different cultures will shed light on a better understanding of the underlying mechanism in the relationship between process flexibility and online trust. Second, we only investigate the impact of one factor in the Confucian culture, the belief of “rule by man”, on online trust. As a rich and profound culture, the impact of Confucianism on trust is far from being fully understood. For example, the importance of the “hierarchical power structure” concept (Hofstede 1980) in Confucianism may impact the working mechanism of institutional trust, rendering a different type of institutional trust that is effective in the Chinese culture. As the online market becomes ever more global, cultural awareness must be translated to concrete actions that actually enable online systems to accommodate the cultural difference and consequence. We believe much more research work should be done in this area in the future.

References:

Aanestad, M. 2003. "The camera as an actor: Design-in-use of Telemedicine Infrastructure in Surgery," *Computer Supported Cooperative Work* (12), pp 1-20.

- Aiken, K. D., and Boush, D. M. 2006. "Trustmarks, objective-source ratings, and implied investments in advertising: investigating online trust and the context-specific nature of Internet signals,," *Academy of Marketing Science Journal* (34:3), pp 308-323.
- Anderson, J. C., and Gerbing, D. W. 1988. "Structural equation modeling in practice: a review and recommended two-step approach,," *Psychological Bulletin* (103:33), pp 411-423.
- Arcand, M., Nantel, J., Arles-Dufour, M., and Vincent, A. 2007. "The impact of reading a web site's privacy statement on perceived control over privacy and perceived trust," *Online Information Review* (31:5).
- Ba, S. 2001. "Establishing online trust through a community responsibility system," *Decision Support Systems* (31:3), pp 323-336.
- Ba, S., and Johansson, W. 2008. "An exploratory study of the impact of e-service process on online customer satisfaction,," *Production and Operations Management*. (17:1), pp 107-119.
- Ba, S., and Pavlou, P. 2002. "Evidence of the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior,," *MIS Quarterly* (26:3), pp 243-268.
- Ba, S., Whinston, A. B., and Zhang, H. 2003. "Building trust in online auction markets through an economic incentive mechanism," *Decision Support Systems* (35:3), pp 273-286.
- Bateson, J. E. G., and Hui, M. K. 1992. "The Ecological Validity of Photographic Slides and Videotapes in Simulating the Service Setting," *Journal of Consumer Research* (19:2), pp 271-281.
- Bolton, G. E., Katok, E., and Ockenfels, A. 2004. "How effective are electronic reputation mechanisms? an experimental investigation,," *Management Science* (50:11), pp 1587-1602.

- Burrows, G. R., Drummond, D. L., and Martinsons, M. G. 2005. "Knowledge management in China," *Communications of the ACM* (48:4), pp 73-76.
- Casimir, G., Waldman, D., Bartram, T., and Young, S. 2006. "Trust and the relationship between leadership and follower performance: opening the black box in Australia and China.," *Journal of Leadership & Organizational Studies* (12:3), pp 68-84.
- Cazal, D. 1994. "Ethics and global competitiveness: Confucianism in Korean companies.," in *The Global Competitiveness of the Asian Firm*, H. Schutte (ed.), St. Martin's Press: New York.
- Chen, C. C., Chen, Y. R., and Xin, K. 2004. "Guanxi practices and trust in management: A procedural justice perspective," *Organization Science* (15:2), pp 200-209.
- Child, J. 1998. "Trust and International Strategic Alliances: the Case of Sino-foreign joint ventures," in *Trust within and Between Organizations.*, C. Lane and R. Bachmann (ed.), Oxford University Press: Oxford, U.K, pp. 241-272.
- Choi, S.-Y., Stahl, D. O., and Whinston, A. B. 1997. *The Economics of Electronic Commerce*, Macmillan Technical Publishing.
- Chou, M. C., Chua, G. A., and Teo., C. P. 2010. "On range and response: Dimensions of process flexibility," *European Journal of Operational Research* (20:1), pp 711–724.
- Chua, R., Morris, W., and Ingram, P. 2009. "Guanxi vs networking: Distinctive configurations of affect- and cognition-based trust in the networks of Chinese vs American managers," *Journal of International Business Studies* (40:3), pp 490-508.
- CNNIC 2007. "Statistical survey report on the Internet development in China.."
- Coleman, R. 1990. *Foundations of Social Theory*, Belknap Press: Cambridge, MA.

- Dasgupta, P. 1998. "Trust as a commodity," in *Trust: Making and Breaking Cooperative Relations*, D. Gambetta (ed.), Basil Blackwell, Inc.: New York.
- Dellarocas, C. 2003. "The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms," *Management Science* (49:10), pp 1407-1424.
- Doney, P. M., Cannon, J. P., and Mullen., M. R. 1998. "Understanding the influence of national culture on the development of trust," *Academy of Management Review* (23:3), pp 601-620.
- Earley, C., and Ang., S. 2003. *Cultural Intelligence: Individual Interactions Across Cultures.*, Stanford Business Books: Stanford, CA. .
- Eckel, C., and Wilson, R. K. 2006. "Internet cautions: Experimental games with internet partners.," *Experimental Economics* (9:1).
- Farh, J. L., Tsui, A. S., Xin, K., and Cheng, B. S. 1998. "The influence of relationship demography and Guanxi: the Chinese case.," *Organization Science* (9:4), pp 471-488.
- Garbarino, E., and Lee, O. F. 2003. "Dynamic pricing in Internet retail: Effects on consumer trust,," *Psychology & Marketing* (20:6), pp 495-513.
- Gefen, D. 2000. "It is Not Enough to Be Responsive: The Role of Cooperative Intentions in MRP II Adoption," *The DATA BASE for Advances in Information Systems* (31:2), pp 65-79.
- Gefen, D. 2002. "Nurturing Clients' Trust to Encourage Engagement Success During the Customization of ERP Systems,," *The International Journal of Management Science Omega* (30:4), pp 287-299.
- Gefen, D., Karahanna, E., and Straub, D. 2003. "Trust and TAM in Online Shopping: An Integrated Model," *MIS Quarterly* (27:1), pp 51-90

- Gerwin, D. 1987. "An agenda for research on the flexibility of manufacturing processes," *International Journal of Operations & Production Management* (7:1), pp 38-49.
- Gupta, Y., and Gupta, M. 1991. "Flexibility and availability of flexible manufacturing systems: an information theory approach," *Computers in Industry* (17), pp 391-406.
- Hair, J., Anderson, R., and Tatham, R. 1998. *Multivariate analysis*, Prentice Hall International: Englewood.
- Hart, P., and Saunders, C. 1998. "Emerging electronic partnerships: antecedents and dimensions of EDI use from supplier's perspective," *Journal of Management Information Systems* (14:4), pp 87-111.
- Hofstede, G. 1980. *Culture's Consequences*, Sage: Beverly Hills CA.
- Huff, L., and Kelley, L. 2003. "Levels of Organizational Trust in Individualist Versus Collectivist Societies: A Seven-Nation Study," *Organization Science* (14:1), pp 81-90.
- Hui, M. K., and Bateson, J. E. G. 1991. "Perceived Control and the Effects of Crowding and Consumer Choice on the Service Experience," *Journal of Consumer Research* (18:2), pp 174-184.
- Jarvenppa, S., and Tractinsky, N. 1999. "Consumer trust in an Internet store: a cross-cultural validation," *Journal of Computer Mediated Communication* (5:2).
- Jenco, L. K. 2010. "'Rule by Man' and 'Rule by Law' in Early Republican China: Contributions to a Theoretical Debate," *The Journal of Asian Studies* (69:1), pp 181-203.
- Kahle, D. 2008. "Designing Open Educational Technology," in *Opening up education: The collective advancement of education through open technology, open content, and open knowledge*, T. Iiyoshi and M. S. V. Kumar (eds.), MIT Press: Cambridge, MA, pp. 27-45.

- Kim, M., and Ahn, J. 2006. "Comparison of trust sources and an online market-maker in the e-marketplace: buyer's and seller's perspectives.," *The Journal of Computer Information Systems* (47:1), pp 84-94.
- Kim, Y., Kim, D., and Hwang, Y. 2009. "Exploring Online Transaction Self-Efficacy in Trust Building in B2C E-Commerce," *Journal of Organizational and End User Computing* (21:1), pp 37-59.
- Kocaballi, B., Gemeinboeck, P., Saunders, R., and Dong, A. 2011. "Towards a relational approach to design process," in *45th Annual Conference of the Architectural Science Association: The University of Sydney*.
- Koufaris, M., and Hampton-Sosa, W. 2004. "The development of initial trust in an online company by new customers," *Information and Management* (41:3), pp 377 – 397.
- Levitt, T. 1976. "The industrialization of service," *Harvard Business Review*:9), pp 63-74.
- MacKinnon, D. P., Warsi, G., and Dwyer, J. H. 1995. "A simulation study of mediated effect measures," *Multivariate Behavioral Research*:30), pp 41-62.
- Mahmood, M. A., Bagchi, K., and Ford, T. C. 2004. "Online Shopping Behavior: Cross-Country Empirical Research," *International Journal of Electronic Commerce* (9:1), pp 9-30.
- Martinsons, M. G. 2008. "Relationship-based e-commerce: theory and evidence from China," *Information Systems Journal* (18:4), pp 331-356.
- Martinsons, M. G., and Hempel, P. S. 1998. "Chinese Business Process Re-engineering," *International Journal of Information Management* (18:6), pp 393-407.
- Martinsons, M. G., and Westwood, R. I. 1997. "Management information systems in the Chinese business culture: An explanatory theory," *Information & Management* (32:5), pp 215-228.

- McKenzie, H. 2007. "Foreign internet players battle mainland challenges.," January 12.
- McKnight, D. H., Choudhury, V., and Kacmar, C. 2002. "Developing and Validating Trust Measures for e-Commerce: An Integrative Typology," *Information Systems Research* (13:3), pp 334–359.
- Merrilees, B., and Fry, M.-L. 2003. "E-trust: the influence of perceived interactivity on e-retailing users," *Marketing Intelligence & Planning* (21:2), pp 123 - 128.
- Meuter, M. L., Ostrom, A. L., Roundtree, R. I., and Bitner, M. J. 2000. "Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters," *Journal of Marketing* (64:3), pp 50-64.
- Milne, G. R., and Boza, M. E. 1999. "Trust and concern in consumers' perceptions of marketing information management practices," *Journal of Interactive Marketing* (13:1), pp 5-24.
- Morsbach, H. 1972. "Aspects of non-verbal communication in Japan.," in *Readings in cross-cultural psychology*, J. L. Dawson and W. I. Lonner (eds.), Hong Kong University Press: Hong Kong, pp. 117-135.
- Neumann, P. 1997. "Identity-related misuse," *Communications of ACM* (40:7).
- Nidumolu, S. R., and Knotts, G. W. 1998. "The Effects of Customizability and Reusability on Perceived Process and Competitive Performance of Software Firms," *MIS Quarterly* (22:2), pp 105-137.
- Ou, C. X. J., Davison, R. M., Pavlou, P. A., and Li, M. Y. Year. "Leveraging Rich Communication Tools: Evidence of Online Trust and Guanxi in China," ICIS 2008 Proceedings 2008.

- Palanisamy, R. 2003. "Achieving Organizational Flexibility and Competitive Advantage through Information Systems Flexibility: a Path Analytic Study," *Journal of Information & Knowledge Management* (2:3), pp 261-277.
- Pavlou, P. 2003. "Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model,," *International Journal of Electronic Commerce* (7:3), pp 101-134.
- Pavlou, P., and Gefen, D. 2004. "Building effective online marketplaces with institution-based trust,," *Information Systems Research* (15:1), pp 37-59.
- Pavlou, P. A., and Dimoka, A. 2006. "The Nature and Role of Feedback Text Comments in Online Marketplaces: Implications for Trust Building, Price Premiums, and Seller Differentiation," *Information Systems Research* (17:4), pp 392-414.
- Peerenboom, R. 2002. "Social networks, rule of law and economic growth in China: The elusive pursuit of the right combination of private and public ordering," *Global Economic Review: Perspectives on East Asian Economies and Industries* (31:2).
- Pennington, R., Wilcox, H. D., and Grover, V. 2003. "The role of system trust in business-to-consumer transactions," *Journal of Management Information Systems* (20:3), pp 197-226.
- Podsakoff, P. M., MacKenzie, S. B., Podsakoff, N. P., and Lee, J. Y. 2003. "The mismeasure of management and its implications for leadership research," *The Leadership Quarterly* (14:6), pp 615–656.
- Redding, G. 1995. "Overseas Chinese networks: Understanding the enigma," *Long Range Planning* (28:1), pp 61-69.

- Roth, A. V., and Jackson, W. E. 1995. "Strategic Determinants of Service Quality and Performance: Evidence from the Banking Industry," *Management Science* (41:11), pp 1720-1733.
- Seligman, S. 1999. *Chinese Business Etiquette – A Guide to Protocol, Manners, and Culture in the People's Republic of China*, Warner Books, Inc: New York, NY.
- Sethi, A. K., and Sethi, S. P. 1990. "Flexibility in manufacturing: A survey," *International Journal of Flexible Manufacturing Systems* (2:4), pp 289-328.
- Sha, W. 2009. "Types of structural assurance and their relationships with trusting intentions in business-to-consumer e-commerce," *Electronic Markets* (19:1), p 43.
- Shapiro, S. P. 1987. "The Social Control of Impersonal Trust," *American Journal of Sociology* (93:3), pp 623-658.
- SinoCast. 2007. "eBay to rejoin Chinese online auction market," June 26.
- Stewart, K. 2003. "Trust transfer on the world wide web.," *Organization Science* (14:1), pp 5-17.
- Tan, H., and Chee, D. 2005. "Understanding interpersonal trust in a Confucian-influenced society.," *International Journal of Cross Cultural Management* (5:2), pp 197-212.
- Thirumalaia, S., and Sinha, K. K. 2011. "Customization of the online purchase process in electronic retailing and customer satisfaction: An online field study," *Journal of Operations Management* (29), pp 477–487.
- Whitener, E. M., Brodt, S. E., Korsgaard, M. A., and Werner, J. M. 1998. "Managers as Initiators of Trust: An Exchange Relationship Framework for Understanding Managerial Trustworthy Behavior," *The Academy of Management Review* (23:3), pp 513-530.
- Williamson, O. E. 1993. "Calculativeness, Trust, and Economic Organization," *Journal of Law and Economics* (36:1), pp 453-486.

- Wingreen, S. C., and Baglione., S. L. 2005. "Untangling the Antecedents and Covariates of E-Commerce Trust: Institutional Trust vs. Knowledge-Based Trust," *Electronic Markets* (15:3), pp 246-260.
- Wu, G. 2006. "Conceptualising and Measuring the Perceived Interactivity of Websites," *Journal of Current Issues and Research in Advertising* (28:1), pp 87-104.
- Xin, K. R., and Pearce, J. L. 1996. "Guanxi: Connections as Substitutes for Formal Institutional Support," *The Academy of Management Journal* (39:6), pp 1641-1658.
- Yamagishi, M., and Yamagishi., T. 1994. "Trust and commitment in the United States and Japan," *Motivation and Emotion* (18:1), pp 29-66.
- Zucker, L. G. 1986. "Production of trust: Institutional sources of economic structure, 1840–1920," *Research in Organizational Behavior* (8), pp 53-111.