

# Factors Affecting Consumers' Trust Building in B-to-C e-Commerce Market of China: An Empirical Study

Chuan Pang<sup>1</sup> Zhongmin Chen<sup>2</sup> Chi Tin Hon<sup>3</sup>

<sup>1</sup>Assistant Professor, Faculty of Management and Administration, Macao University of Science and Technology, Macao, P. R. China

<sup>2</sup>Ph.D. Candidate, School of Management, Fudan University, Shanghai, P. R. China

<sup>3</sup>Ph.D. Candidate, School of Business, South China University of Technology, Guangzhou, P. R. China

## Abstract

B-to-C e-Commerce in China is not as prosperous as people wish. Lacking of consumers' trust is proved one of the major reasons. According to a survey-based study, we find that four major factors, which are technology, business, environment and personal cares and experience, can significantly affect consumers' trust building through eight paths. We also find that in B-to-C market of China, some kinds of consumers have a higher level of trust than the others. Based on these findings, we suggest some actions the enterprises and the government could take to improve the consumers' e-trust.

**Keywords:** e-trust, B-to-C, e-Commerce, China

## 1. Introduction

Since its appearance from the end of the 20th Century, B-to-C e-Commerce has made a great progress in China. But it's not as prosperous as people wish. According to "Chinese E-Commerce Yearbook (2000)", the total trade volume of E-Commerce in Year 2000 is 77.16 billion RMB (about 9.33 billion USD), in which B-to-C e-Commerce trade volume is only 0.5%, 0.39 billion RMB (about 47 million USD). Lots of researches have revealed that lacking consumers' trust is one of the major handicaps for the further progress of B-to-C E-Commerce (Ba 2001, Ba et al. 2002a, 2002b, Cheskin et al. 1999, Gefen 2000, Hoffman et al. 1999, Khare & Rifkin 1998, Ratnasingham 1999, Tan & Thoen 2002, Urban et al. 2001)

E-Trust is considered as one of the most important prerequisites for e-Commerce success (Hoffman & Novak 1999, Torkzadh & Dhillon 2002). When a customer decides to trust an online store, he or she may then takes an action to provide personal

information, buy the product, and use the service offered by the vendor. We can hardly imagine the consumers will do like that without their basic trust on the vendors. Because of its importance to e-Commerce success, it is worthwhile to find out how consumers' e-trust building can be affected.

Sociologists, economists, psychologists have found that a lot of factors can affect a person's trust building, such as capability, institution, familiarity, culture, third-party, information, etc (Coleman 1990, Dasgupta 1988, Deustch 1973, Kreps 1990, Johnson-George & Swap 1982). As to e-trust, some researches have revealed that security, privacy protection, technology, fulfillment, and other factors can affect consumers' e-trust building (Cheskin et al. 1999, Hoffman et al. 1999, Khare & Rifkin 1998, Klang M. 2001). According to these research findings, we build a path model and try to find out which factors can significantly affect consumers' e-trust building.

## 2. Research Model

We summarize all the factors affecting consumers' e-trust building into four major factors, which are technology (including system stability, download speed, webpage design, and security), business (including brand, product types, quality, price, product introduction and appraisalment, navigation, payment, logistics, after service, and virtual community), environment (including moral level of the society, enterprise credit rating system, and e-commerce related law), and personal cares and experience (including privacy protection, recommendation from friends or third-party, experience).

What we intend to do is to find out what factors can affect consumers' e-trust significantly.

We also want to test the following hypotheses:

H1: Those who have purchased online have a higher e-trust level than those who have not;

H2: Those who have more experience in online purchasing have a higher e-trust level than those who have less experience in online purchasing;

H3: Those who have a high salary (>3000RMB/month) have a higher e-trust level than those who have a low salary (<2000RMB/month);

H4: Those who have a higher e-trust level will pay more (buy more products or buy more expensive goods) in online purchasing.

### 3. Questionnaire Survey

In order to find out the significant paths, we designed a questionnaire survey. Because the Internet users spread so widely in China, we used a quota sampling method instead of random sampling, according to a survey result by CNNIC (China Network Information Center) published on July 1st,

2002 (<http://www.cnnic.org>). We handed out 400 questionnaires and 224 valid questionnaires were sent back.

### 4. Path Analysis and Discussion

We did three times multi-regression, respectively let 'e-trust' be independent variable, 'tech', 'busi', 'envi' and 'pers' be dependent variables; 'pers' be independent variable, 'tech', 'busi' and 'envi' be dependant variables; 'busi' be independent variable, 'busi' and 'envi' be dependent variables. The result is shown as Figure 1 (\* means significant path coefficient). We can see that 'Technology' can't affect consumers' e-trust directly, but it can significantly affect e-trust through 'Business'. This tells us that Chinese consumers don't care much about the technology issues. It doesn't mean the websites may pay no attention to the technology applied. The websites can improve business performance with aid of proper technology to improve the consumers' e-trust.

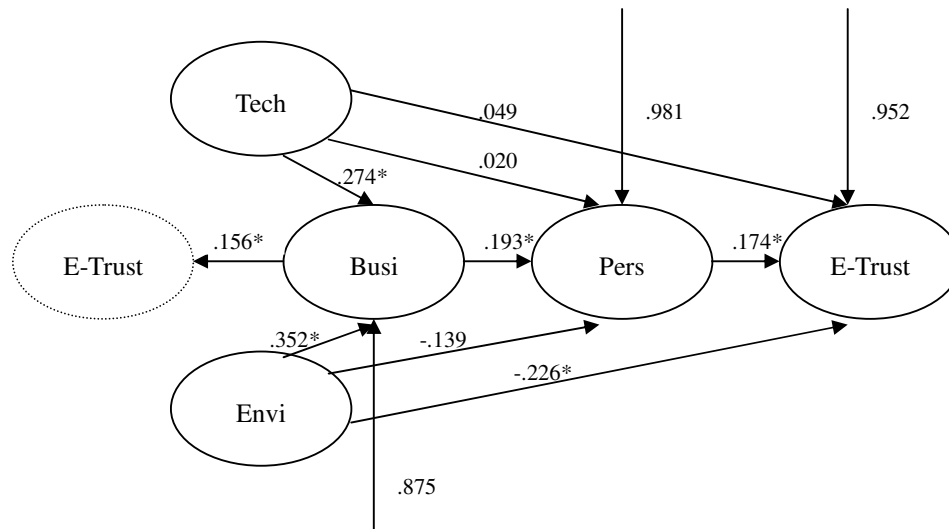


Figure 1 Path Coefficients

The two factors 'Business' and 'Personal cares & experience' have significant effects on consumers' e-trust. 'Business' factor reflects the capability to meet the consumers' demands, and 'Personal cares & experience' factor contains privacy concern, recommendation and experience. It's easy for us to understand why these two factors can significantly affect consumers' e-trust building. What we should point out is they are the important media for 'Technology' and 'Environment' affecting consumers' e-trust. So the enterprises should pay

more attention to 'Business' and 'Personal cares & experience'.

We find an interesting phenomenon in this study: the 'Environment' factor has a significant negative effect on consumers' e-trust (the coefficient is  $-0.226$ ). This may be a phenomenon of 'Chinese Character'. In China, consumers always take an attitude as 'let it be' when are cheated in a transaction. There are several reasons: not having established a complete e-commerce related law system; too high cost of engaging in a lawsuit; not having a trustworthy enterprise credit rating system, etc.

Anyway, this phenomenon tells us an important path to improve consumers' e-trust. Once the reasons caused this phenomenon are thoroughly changed, we can expect the factor 'Environment' having a significant positive effect on consumers' e-trust building.

## **5. Hypotheses Test and Discussion**

### **5.1 Hypothesis 1**

We divide the 224 participants into two groups: having no online purchasing experience and having online purchasing experience. Use variable 'trust' to represent their e-trust level (trust=1 means the lowest e-trust level, and trust=4 means the highest e-trust level). Do Independent-Samples T Test, and the result show that those who have purchased online have a significantly higher e-trust level than those who have not (sig. 0.05), which means Hypothesis 1 can't be rejected.

### **5.2 Hypothesis 2**

We divide all the 224 participants into 5 groups according to their online purchase times: times=1 (never purchased online), times=2 (average less than once per two months), times=3 (average less than once per month), times=4 (average less than twice per month), times=5 (average more than twice per month). Use variable 'trust' to represent their e-trust level (trust=1 means the lowest e-trust level, and trust=4 means the highest e-trust level). The data analysis result shows that the e-trust levels of group 2, 3, 4, 5 are significantly different from that of group 1, but between groups 2, 3, 4, 5, there are no significant differences (sig. 0.05). This means we can't accept H2. There are two possible explains: there are significant differences between group 2, 3, 4 and 5, but the sample size is not big enough to find out the differences; there is a trust threshold between those who have online purchasing experience and those who have no, and after the e-trust level is higher than the threshold, there will be no significant difference. We will do further study on this.

### **5.3 Hypothesis 3**

Put the participants who have a salary less than 2000RMB/month in group 1, and put the participants who have a salary more than 3000RMB/month in group 2. Use variable 'trust'

to represent their e-trust level (trust=1 means the lowest e-trust level, and trust=4 means the highest e-trust level). Do Independent-Samples T Test, and the result shows that those who have a high salary (>3000RMB/month) have a higher e-trust level than those who have a low salary (<2000RMB/month) (sig. 0.05), which means Hypothesis 3 can't be rejected.

### **5.4 Hypothesis 4**

Divide all the 224 participants into two groups according to their e-trust level: lower trust level group (trust\_1=0) and higher trust level group (trust\_1). Use variable 'pay' to represent their pay level (pay=1 means they are willing to pay less than 100 RMB in one online purchase, pay=2 means they are willing to pay 101 to 200 RMB in one online purchase, pay=3 means they are willing to pay 201 to 300 RMB in one online purchase, pay=4 means they are willing to pay 301 to 400 RMB in one online purchase, pay=5 means they are willing to pay more than 400 RMB in one online purchase). Do Independent-Samples T Test, and the result shows that those who have a higher e-trust level will pay more (buy more products or buy more expensive goods) in online purchasing (sig. 0.05), which means Hypothesis 4 can't be rejected.

## **6. Conclusion**

According to the results we have now, we may give some suggestions to Chinese enterprises and government to improve consumers' e-trust:

What enterprises can do:

Try to attract those who have no online purchasing experience step into e-commerce;

Aim at more profitable consumers (old customers, customers with higher salary);

Pay more attention to consumers' privacy protection;

Use proper technology to improve the capability to meet the consumers' demands;

Build a transparent information platform for the consumers.

What the government can do:

Establish a complete e-commerce related law system;

Establish an authoritative and trustworthy enterprise credit rating system.

## 7. Suggestions for Further Research

Because of the culture difference and the other differences, the consumers' e-trust of different countries will be affected by different factors and to different extents. If there are sufficient data, a cross-country study on the factors affecting consumers' e-trust can be very meaningful. And it will also be very helpful if an experiment can be done in an e-commerce enterprise to test whether there will be a significant difference between the consumers' e-trust level before and after making some efforts according to this study.

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