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# What Makes Consumers Trust B2C?

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## Abstract

*The problem of trust came with the development of B2C E-Business and has become a bottleneck. This paper studied crucial influential factors for E-trust on B2C E-Business through a survey and analyzed the difference between E-trust influential factors for different levels of consumers in China. The result and conclusion are expected to provide suggestions to B2C websites, to help improve consumers' trust and to drive the development of B2C E-Business.*

## Key words

E-Business, B2C, E-trust

## 1 Introduction

Internet is changing our life. Whether Internet-based E-Business is challenging or supporting traditional business, it will become one of the dominant business forms in the coming future because of its inherent high efficiency in information transmission and processing and its wide coverage on both time and space. However, E-Business exacerbated information asymmetry between sellers and buyers and hence undermined transaction's substantial foundation, trust. Faced with so many virtual Internet shops and so much commodity information rather than real products, how can consumers be convinced that such a deal will bring them benefits? Among a large number of E-shops, which one is worth trusting? All these concerns have inhibited the further development of E-Business. Experts have been engaged in a lot of related research on what factors are most influential on E-trust, i.e. consumers' trust on websites. But is there any difference between the influential factors for different levels of consumers?

A survey was conducted to study the crucial influential factors on E-trust and the difference between E-trust influential factors for different consumer levels, in the manner of E-shopping. The result and conclusion are expected to provide suggestions to B2C websites in market competition and business strategy design, to help improve consumers' trust on B2C websites

and finally to drive the development of B2C E-Business. The second part of this paper will introduce current research situation and theoretical achievements; in the third part, a framework of E-trust influential factors will be put forward based on the existent related research; in the fourth part, the adopted research method will be described in details; discussion on the crucial influential factors on E-trust and analysis on the difference between E-trust influential factors for different levels of consumers, will be made in the fifth part; the conclusion and the research prospect will be given in the last part.

## 2 Review

There are a number of definitions for trust. In the *American Heritage Dictionary of the English Language* (4<sup>th</sup> Edition, 2000), trust is defined as firm reliance on the integrity, ability, or character of a person or thing. According to *Encyclopedia Britannica*, in Anglo-American law, trust is a relationship between persons in which one has the power to manage property and the other has the privilege of receiving the benefits from that property. The moral philosopher Annette Baier offered a useful starting point that one leaves others an opportunity to harm one when one trusts, and also shows one's confidence that they will not take it (Batya Friedman, Peter H Kahn Jr and Daniel C Howe, 2000). Trust in the context of E-business is called E-trust. On the base of the former research, E-trust is defined in this paper as people's reliance on E-Business model and corresponding transaction party and their expectation of the benefits coming with the reliance.

Trust is by no means a new problem. It was regarded as the foundation of successful business relationship long ago. In the age of pre-Internet, business parties built their trust through face-to-face communication so as to realize long-term and profitable cooperation (David Sklar, 2001). The number of Internet users has been increasing according to the Moore's Law. But only a little part of them has been involved in E-Business. People are not willing to do shopping on the Internet or to provide their private information in the transaction, because they don't trust those business websites (Donna L Hoffman, Thomas P Novak and Marcos Peralta, 1999).

Several scholars and experts have done a lot of research on E-trust influential factors. And the research has shown that consumers wish to purchase the right product on the Internet without accounts and password of their credit card divulged and their personal information abused (Patrick D Lynch, Robert J Kent and Srini S Srinivasan, 2001). This reflects the current three types of research on E-trust factors: business risk, technology risk and privacy risk (Figure 1).

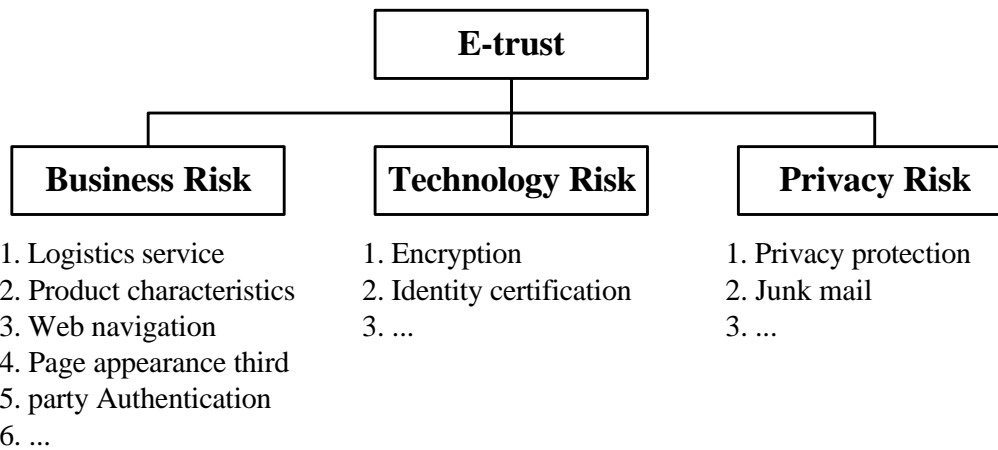


Figure 1. Types of E-trust research

In the field of technology risk research, encryption and identity certification are most discussed (Michele Pepe, 2000). In the field of privacy risk research, problems are studied from the aspect of management (Donna L Hoffman et al., 1999), regulation (Deb Goldstein, 1999) and ethnics, mainly including privacy protection, junk mail and so on. However, business risk is the focus of E-trust research. Related studies were concentrating on logistics service (Pang Chuan et al., 2001), product characteristics (Patrick D Lynch et al., 2001), web navigation, page appearance (Ted Kemp, 2000), third party authentication (Ben Shneiderma, 2000) and so on. Patrick D Lynch et al. (2001) based their research on 12 countries and found out that E-trust influential factors are different for different regions and different products.

Setting out from the reality of Chinese E-Business and focusing on the business risk, this paper is to study the crucial E-trust influential factors as well as the factor difference between different consumer segments.

### 3 Theoretical Framework

Existing research shows that the E-trust influential factors can be found almost all over the place. E-business has changed transaction mode between buyers and sellers. Consumers should pay for online orders electronically but could not receive corresponding products immediately. They could only perceive the products by online information and were probably concerned about how to deal with unsatisfactory products. Ted Kemp (2000) suggested that E-retailers who would like to improve consumers' trust spend more time on efficient navigation tools and order fulfilling system. Ben Shneiderma (2000) summed up the E-trust principles and considered 3<sup>rd</sup> party's participation as a measure to make consumers trust. The gap of technology risk brings job opportunities for CPA, who might supervise operation of E-Business websites and provide independent authentication (Judith S Olson and Gary M Olson, 2000). A framework of E-trust influential factors can be established based on the combination of the former research efforts. (Table 1)

<b>Website Characteristics</b>	<b>Service Content</b>	<b>Third Party</b>
1. System stability 2. Webpage layout 3. Navigation convenience	1. Logistics efficiency 2. Payment security 3. Commodity variety 4. Commodity returning mechanism 5. Information richness	1. 3rd Party Authentication 2. Consumer Appraisal 3. Friends' recommendation

*Table 1. Framework of E-trust influential factors*

This factor framework intends to describe the problems that influence E-trust in three aspects: Website Characteristic, Service Content and 3rd Party, each composed of 3 to 5 factors. System stability, Webpage layout and Navigation convenience are all website characteristics which compose the basic environment for E-shopping. A website lacking for a comfortable environment, like a department store in a shabby building, can neither attract consumers nor improve their trust. Logistics efficiency, Commodity returning mechanism, Payment security, Commodity variety and Information richness all belong to the aspect of Service Content. These factors are equal to such software in traditional commerce as service personnel and business administration, etc. They can represent the merchant's image in consumers' mind and to some degree indicate the credibility of the website. Besides the two interactive parties in transaction, a third party can also have an impact on consumers' trust. Entities such as special organizations, past consumers, friends can provide almost neutral information to consumers as reference in their decision process. The eleven factors, as the basis of our research, influence the trust of consumers during E-shopping to different degrees. Currently, problems related to some of those factors must constitute the bottleneck of the development of B2C E-Business, especially in China.

A joint research report on E-trust done by Cheskin Research and Studio Archetype/Sapient in USA (1999) pointed out that E-consumers have very low degree of trust on on-line transactions at the very beginning, but with their experience in E-shopping accumulated little by little, their degree of trust will also increase continuously. It may be further supposed that with both the accumulation of experience and deepening of knowledge in B2C E-Business, consumers' trust will be influenced by different factors to different degrees in different stages. Potential consumers may be affected by remarks of others (3rd party), while mature consumers will pay more attention to the efficiency and value of E-shopping.

This research is focused on screening out relatively important ones from the 11 factors listed above and comparing the differences between factors influencing potential (or fresh) consumers' trust and those influencing mature consumers' trust on B2C E-Business.

## **4 Research Method**

A survey was completed in this research. Questionnaires were distributed and collected by E-mail. Besides the respondents' personal information and past experience in E-shopping, the

questionnaires also contained questions about to what degree the 11 key factors influence the respondents' trust on B2C E-Business. According to the degree of each factor's influence on E-trust, respondents were asked to rate the factors. Rates ranged from 1 to 5, standing for the weakest to the strongest influence. Respondents were chosen from various companies in Shanghai in that those people who can easily accept new things and can afford moderate consumptions constitute a good sample of current and potential E-consumers. A total of 307 questionnaires were handed out with 172 of them returned. 38 of the returned questionnaires were invalid with incomplete answers and the remaining 134 were regarded as valid ones. Personal information of the 134 respondents is listed in the following tables.

	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>Number</b>	76	58	134
<b>Percentage</b>	56.7%	43.3%	100%

*Table 2. Gender Proportion of Respondents*

<b>(Years Old)</b>	<b>18—22</b>	<b>23—25</b>	<b>26—30</b>	<b>&gt;30</b>	<b>Total</b>
<b>Number</b>	10	53	34	37	134
<b>Percentage</b>	7.46%	39.55%	25.37%	27.61%	100%

*Table 3. Age Proportion of Respondents*

	<b>IT</b>	<b>Commerce</b>	<b>Manufacturing</b>	<b>Consulting Service</b>	<b>Others</b>	<b>Total</b>
<b>Number</b>	26	17	18	37	36	134
<b>Percentage</b>	19.40%	12.69%	13.43%	27.61%	26.87%	100%

*Table 4. Industry Proportion of Respondents*

<b>(1000 RMB)</b>	<b>1—2</b>	<b>2—3</b>	<b>3—5</b>	<b>5—8</b>	<b>&gt;8</b>	<b>Total</b>
<b>Number</b>	14	13	67	30	10	134
<b>Percentage</b>	10.45%	9.70%	50.00%	22.39%	7.46%	100%

*Table 5. Income Proportion of Respondents*

## 5 Analysis and Discussion

Firstly, the means of the numerical influential degree of each factor across 103 valid questionnaires were calculated out and used to indicate the relative influential degree of each factor. Table 6 lists the 11 outcomes, which are sorted in descending order.

No.	Factor	Average Influential Degree (Full Score:5)
1	Logistics efficiency	4.5448
2	Payment security	4.5373
3	Commodity returning mechanism	4.1194
4	System stability	4.1119
5	Navigation convenience	3.9925
6	Commodity variety	3.8284
7	Information richness	3.7910
8	Consumer Appraisal	3.5821
9	3 Party Authentication	3.3358
10	Webpage layout	3.1194
11	Friends' recommendation	2.9403

*Table 6. Influential degree of each factor on E-trust*

Indicated by the above table, 5 of the 11 factors have got an average influential degree over 4. They are: Logistics efficiency, Payment security, System stability, Commodity returning mechanism and Navigation convenience. These factors are explained in more details as the following:

1. Logistics efficiency: Since consumers can't "touch" the commodities they order on line, they can only know about the commodities' features from the texts, photographs and other media forms provided by websites. No matter how vivid these media forms are, consumers will still feel uncertain about the transactions. These uncertainties will inevitably impose pressure on the consumers. The less efficient the logistics system is, the longer the lead time of distribution will be, which means that consumers will have to endure pressure for a longer period. In addition, more unexpected accidents will occur during longer period of distribution time. Hence, afraid of taking on more risks, consumers will have lower degree of trust on the websites with lower logistics efficiency.
2. Payment security: Payment by credit card (or debtor card) now covers an increasing percentage of all online payment. Information about personal credit card may be burgled and embezzled when transferred via Internet. Though encryption technology has been developed to an advanced stage, not every B2C website is expert in this field. Once

mistakes occur during encrypting and decrypting process, the potential danger will be great to consumers. Hence, if consumers sense the existence of such kind of danger, their trust in E-shopping will decrease.

3. Commodity returning mechanism: It is also related to the nature of incomplete information of E-shopping. If consumers can return the unsatisfactory commodities to E-merchants through certain channels and withdraw payment to minimize their losses, they would undergo less risk. Otherwise, if consumers consider that they have to take on great risks, they will be hesitant on E-shopping.

4. System stability: E-shopping involves the application of many network technologies, but most of the consumers, both current and potential, do not understand those sophisticated technologies. Consumers would feel puzzled and frightened when they encounter troubles during the surfing process due to the instability of website system. Caring whether their personal interests will be endangered or not, consumers will withdraw their trust towards instable websites.

5. Navigation convenience: One of the greatest differences between traditional shopping environment and E-Business environment lies in that E-Business consumers order commodities by self-service. So B2C websites should provide convenient information browsing and searching mechanism which enables consumers to locate the commodity and related information they need. Websites with less effective browsing and searching mechanism will not only lose business opportunities but also frustrate consumers who are lost in the mass of information.

Through the above analysis, we found out the five main factors that influence E-trust in today's B2C E-Business environment. A website with low logistics efficiency, insecure payment system, poor mechanism of commodity returning, instable website function and disordered organization of information will usually indicate its poor back-end operation. Consumers will consider this kind of E-merchants untrustworthy to deal with.

Second stage of analysis compared the differences of influential factors for different levels of consumers. All of the 134 respondents were divided into three levels: amateur, professional and expert consumers according to their past E-shopping experience and frequencies (Table 7).

Consumers with more than a year of E-shopping experience and monthly frequency are categorized as expert consumers; both consumers with more than two years of experience but low frequency and consumers with shorter period of experience but higher frequencies in E-shopping are also categorized as expert consumers; consumers with no experience in E-shopping or with half a year of but only once or twice experience are categorized as amateur consumers; the rest are all categorized as professional consumers. According to this criterion, there are 51 amateur consumers, 29 professional consumers, 54 expert consumers among the 134 respondents. A variance analysis was conducted between the amateur consumers and expert consumers to verify our hypothesis that different factors influence different levels of consumers' trust on E-shopping.



		History of E-shopping			
		Never	Half A Year	One Year	Two Years
Average Frequency of E-shopping	Never	Amateur Consumer	----	----	----
	Once/Twice Per Year	----	Amateur Consumer	Professional Consumer	Expert Consumer
	Monthly	----	Professional Consumer	Expert Consumer	Expert Consumer
	Weekly	----	Expert Consumer	Expert Consumer	Expert Consumer

Annotation: Horizontal lines in the table stand for impossible combinations of the two dimensions.

Table 7. Classification of E-Business Consumers

The statistical result indicates (Table 8) that more than half of the 11 factors (6 of them) are almost of the same influential degree to amateur consumers and expert ones. Expert consumers attach more importance to "Navigation convenience" and "Information richness", while amateur consumers think more of the "System stability", "Consumer appraisal" and "Friends' recommendation".

No	Influential Factors on E-trust	Amateur		Expert		T-value
		Mean	Variance	Mean	Variance	
1	Logistics efficiency	4.4314	1.0102	4.5741	0.5510	0.8307
2	Payment security	4.5490	0.9725	4.5370	0.7439	0.0664
3	Commodity returning mechanism	4.0784	1.1937	4.1667	1.0849	0.4236
4	System stability	4.2745	0.9231	4.0370	0.7911	1.3151*
5	Navigation convenience	3.8431	0.8549	4.1111	0.5157	1.6637*
6	Commodity variety	3.8039	1.5208	3.8889	1.1195	0.3796
7	Information richness	3.6275	0.9984	4.0185	0.8110	2.1088**
8	Consumer Appraisal	3.7451	1.0337	3.4259	0.4755	1.8917**
9	3 Party Authentication	3.4118	1.8471	3.4074	1.2271	0.0181
10	Web page layout	3.1373	0.8008	3.1852	1.0217	0.2567
11	Friends' recommendation	3.1765	1.5082	2.7593	1.5825	1.7182*

Annotation: \* indicates significant difference at the level of significance of  $\alpha=0.1$

\*\* indicates significant difference at the level of significance of  $\alpha=0.05$

Table 8. Variance Analysis between the Amateur Consumers and Expert Consumers on Influential Factors on E-trust

Expert consumers know well about E-shopping in both its advantages and disadvantages. They are also quite aware that it is difficult to directly evaluate the value of commodities they order on the Internet and that they can only receive the commodities some time after their orders are placed. They will pay more attention to the navigation convenience and quantity of information provided, for these two factors will have direct impact on the effectiveness and efficiency of E-shopping. In addition, these two factors also reflect the background operation performance of E-Business websites. Obviously, the focus of attention shown by expert consumers to E-shopping is almost like that shown to traditional transaction.

Amateur consumers have less knowledge and experience of E-shopping than expert consumers do. They have just fulfilled online transactions for at most once or twice. Compared with traditional shopping, E-shopping is a much different and strange matter to amateur consumers. The shopping mode of choosing favorite commodities by mouse-click and waiting for the commodities to be delivered in a few working days is beyond amateur consumers' psychological comfort zone. Any unexpected accident, such as webpage display error, unsatisfactory commodity and delayed delivery, can drive the amateur consumers to give up E-shopping. This level of consumers is in need of suggestions in E-shopping experience from their relatives and friends to expand their own psychological comfort zone and finally accept E-shopping. They also care more for website system stability because they are not familiar with E-Business and unable to estimate the probability of danger.

Since E-trust influential factors for Expert Consumers are different from those for Amateur Consumers, B2C websites could adopt appropriate marketing strategy and related promotion tactics after identifying the characteristics of those consumers in their target market segments. Take a B2C website as an example, which is focusing on the market segment of young people who are faddier than others. Usually consumers of this type have more experience in E-Shopping thus they are more concerned about navigation convenience and information richness. Therefore the website should be dedicated to the improvement of web navigation so that consumers could locate products they want and place an order with minimum clicks. In addition, several media, such as text, picture, wave and animation, could be chose and combined to present products in order to transfer to consumers as rich information as possible and make them able to identify products easily.

As for some other B2C websites whose target consumers are amateur ones lacking for E-Shopping experiences, we suggest that they conduct social programs of simulative E-Shopping, providing consumers with opportunity to try E-Shopping and get familiar with the overall process. Those websites should also collect information about shopping experience and tips as well as some advice from existing consumers and push it to potential consumers. Because the recommendation from friends is more effective on amateur consumers than on expert ones, those websites are also suggested to pay more attention to promotion by consumers themselves. Consumers should be encouraged to invite their relatives and friends to do shopping on the website and prized if they successfully do so. All of the measures above will help relax potential consumers' fear to E-Shopping, enlarge their psychological comfort zone and finally cultivate harmonious and trustworthy E-Shopping environment.

## 6 Conclusion

In this paper, it has been demonstrated that E-trust influential factors lie in many aspects and are of different important degrees. In B2C E-business environment, especially in Chinese B2C E-business, high logistics efficiency, robust payment security, effective commodity returning mechanism, stable website system and convenient information browsing & searching are powerful measures for websites to improve consumers' trust. Different levels of B2C E-business consumers are influenced by these factors to different degrees: Amateur consumers are inclined to obtain experience from a 3rd party and care much for the technical aspects of websites; expert consumers attach great importance to those factors related to operation performance of websites because they care how to compensate for the limitations of E-shopping. B2C websites could adopt appropriate marketing strategy and related promotion tactics after identifying the characteristics of those consumers in their target market segments.

This research is based on E-Business in China and the conclusion could not go beyond the bounds of Chinese economy and culture. Similar research could be conducted in other countries/regions where B2C E-business has been developed to different stages. Research focus could also transfer from factor screening and variance analysis to wider scopes, such as exploring for the source of distrust and for systematic methodology to improve E-trust.

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