

The Effect of Different Types of Building Trust in E-commerce of IT-based Products

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Abstract

E-commerce is the trading or facilitation of trading in products or services using computer networks, such as the Internet. Basically, principle of business must be carried on tactfully in order to reach the desired goals. If tact is accompanied by honesty, honesty will also accompany credit. Therefore, three principles must be observed in business: tact, honesty, and earning credit. In this research, the effect of trust factors (Technique, Rules, Transportation, Payment) on e-commerce of IT products was analyzed and using hypotheses and data analysis, it turned out that these factors do have an influence on e-commerce of IT products. Finally, it became clear that the second factor, i.e. dispositional trust, has the greatest influence on e-commerce of IT products.

Keywords

E-commerce, IT Products, Trust, Technique, Rules, Transportation, Payment

I. Introduction

E-commerce is the act of trading through computer-based communication networks especially the Internet. E-commerce is a kind of paperless trade. The exchange of buying and selling information and the information necessary for transporting goods will be done using less effort and bank transactions will be done more rapidly. Companies will not face the current limitations for communicating with each other and they will be able to communicate easily. Also, the connection between sellers and customers can be one-on-one connection with each customer. In other words, E-commerce is a general name for a vast variety of software and systems [1].

The aim of using e-commerce is to offer a new method for practicing business. Through this method, traders can offer their products and services to customers all the time regardless of geographical boundaries [4].

The business conventions of every country are unique. Basically, principle of business must be carried on tactfully in order to reach the desired goals. If tact is accompanied by honesty, honesty will also accompany credit. Therefore, three principles must be observed in business: tact, honesty, and earning credit. It does not matter if your business is traditional, market, or electronic; what matter is that you want to be a businessperson [5]. E-commerce is so pleasant to e-merchants that they even put their cellphone number on their company's sign to service their customers 24/7. As technology develops and people's awareness of them grows, they choose easier ways for business. It could even be said that half of non-traditional (non-electronic) jobs are introduced to e-commerce. Nowadays, they are trying to trade over the Internet, buy foreign products and sell them to foreigners, produce in their country and export to other countries. Right now, non-electronics are advertising on the Internet. But how much will be the trust in this type of commerce and what will be the effect of trust? This is the question we are going to answer in this research about IT products.

II. Previous work

The concepts of trust, risk, privacy, and security are widely used in various fields [5]. In some fields these concepts are misunderstood and regarded as the same. However, many studies have been done about these concepts and relationships between them especially in e-commerce. One of the studies has divided trust into three parts: interpersonal, dispositional, and institutional. Fig. 1 demonstrates the relations between them [6].

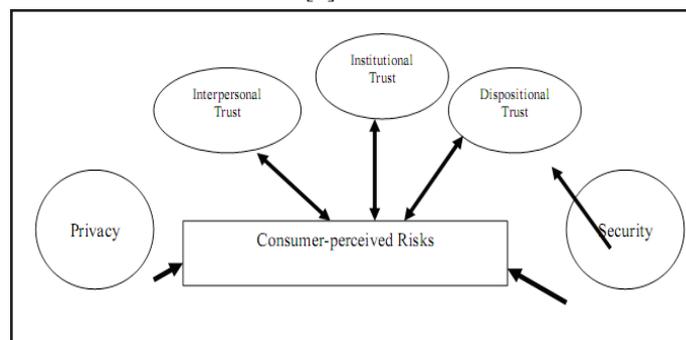


Fig. 1: Relationships Between Trust, Risk, Privacy, and Security [6]

In another model, a different categorization has been proposed based on factors which influence risk and trust in B2C business. These trust building factors have been divided into four parts [2]:

- Technique
- Rules
- Transportation
- Payment

The major reasons why e-commerce is inactive is that CA project (digital certificate) is not completed, e-commerce is not provided by all the banks, powerful companies to deliver goods are small in number, and also paper receipts have not replace electronic receipts yet. However, in addition to the factors mentioned above, there is another factor involved in e-commerce which is building trust. The simplest issue here is how the customer contacts the seller which plays an important factor in sales.

What is obvious is that sources of risks have attracted the attention of researchers and many categorizations have been proposed about these risks – technical and non-technical, systematic and non-systematic, financial, confidential, payment, transportation, dishonesty in communication, etc. to name a few [4]. In this paper it has been attempted to analyze the effects of different types of trust in e-commerce of IT-based products.

III. Trust

Trust is a very complicated social and psychological phenomenon and lack of trust is recognized as one of the important reasons for not purchasing goods from online markets. In fact, trust is an important factor in economic and social development [2].

The emergence of trust is dependent on two important factors; the first one is risk and the second one is control. If there is no risk

involved in business exchanges and customer relations, we can say that when people do something, the outcome of which they are certain about, there is also no need for trust to exist. Therefore, risk is prior to, and the basis of, trust. In addition, effective control can improve people's trust.

In fact, instead of devising a trust mechanism in B2C e-commerce in order to reduce risk, we must find the sources of risk. Research on B2C e-commerce trust can be divided into two aspects: some researchers specifically emphasize the trust technology such as website performance, security of certificates, and confidentiality of personal data. On the other hand, some researchers analyze trust from a non-technological point of view and believe that customers' trust in online markets is influenced by multiple factors such as ethics, reputation of financial institution, approach, environmental policies, etc. [1]

Many experts believe that trust is one of the important factors needed to create successful, profitable, and effective e-commerce. Organizations in which there is trust between customers are successful, otherwise they often fail. So, most of the time managers ask themselves: How can trust be established and how can distrust be avoided? Building trust always starts from top levels. Honesty and trust are not established inside an organization unless top executives serve as models for other workers and implement their goals by providing standards. There are five ways of building trust in e-commerce and groups:

A. Establish and Maintain Honesty

Honesty is the cornerstone of organizational trust. Honesty must start from the top levels of organization and continue into lower levels. In other words, among other things, you must always tell the truth and keep your promise. It doesn't matter how hard it is. If workers are honest, then trust will be established

B. Exchange Ideas and Values

Communication is important because it is the artery of gaining information and accessing facts. Exchanging organizational views can enables managers to tell workers where to go and by relating to facts, helps them establish this.

C. Treat Customers Fairly

This is done by contacting and meeting customers. After that, management must have an awareness of customers' views (and appreciate them).

D. The focus must be on shared goals rather than individual ones

When customers feel that they can agree on the same opinion through group work and cooperation rather than focusing on a number of individual goals, trust is established. This is a requirement for group work. A group can continue working only when the members trust one another.

E. If something is right do it and ignore individual risks

We all know, through some sixth sense, what is the right thing to do in every situation. If we follow this sense and ignore individual consequences whatsoever, we will always be respected by our customers. And what follows respect is trust.

As mentioned above, a risky and uncertain environment is a prerequisite for trust. In e-commerce, which is not a physical environment, people are faced with risk. Therefore, when shopping

online, they have to trust the system and take risks. The less the risk, the more the trust people have in a specific business. Researchers are trying to identify risk environments and increase online sales by resolving them.

IV. Evaluating the effect of trust in e-commerce of IT Products

This research has tried to study the effect of three types of trust (interpersonal, dispositional, and institutional) in e-commerce of IT products. This classification is based on the hypotheses of the previous works [6].

First in order to specify analysis method, three important factors of this research, i.e. three types of building trust, have been taken into consideration as factors influencing e-commerce of IT projects. Then, a thorough analysis has been introduced to choose the most influential one of these factors. So, our three hypotheses are as follows:

First hypothesis: The first type of trust, i.e. interpersonal (X1), influences e-commerce of IT products.

Second hypothesis: The second type of trust, i.e. dispositional (X2), influences e-commerce of IT products.

Third hypothesis: The third type of trust, i.e. institutional (X3), influences e-commerce of IT products.

Goal: If these factors do have an influence, which one has the most influence?

This research is a posteriori and tries to answer the question above. This research, by collecting information, first evaluates the effect of three types of trust, i.e. interpersonal, dispositional, and institutional, in e-commerce of IT products and then compares their effects with one another.

To answer these questions, 220 customers were chosen using Morgan table from among the statistical society of electronic customers of IT projects. Next, in order to enhance the authenticity of research, 250 customers were chosen using random sampling.

In order to enhance the validity of research, 30 people who were not among the statistical society were chosen and given the questionnaire. After collecting the questionnaires, data were typed into SPSS software and validity was calculated using Cronbach's alpha method. Since alpha exponent was more than %60, no question was eliminated. Tables 1 and 2 show the validity of questionnaire.

Table 1: Case Processing Summary

		N	%
Cases	Valid	25	96.2
	Excluded ^a	1	3.8
	Total	26	100.0

a. Listwise deletion based on all variables in the procedure (for evaluating the validity of questionnaire)

Table 2: Mean results of the test T

	N	Mean	Std. Deviation	Std. Error Mean
x1	220	3.35	.880	.059

The questionnaire was sent to customers via email and after receiving and analyzing them, 220 questionnaires were acceptable. The questions were coded and typed into SPSS19. The data normality test using Kolmogorov–Smirnov test in order to choose appropriate testing statistics for confirming or rejecting hypotheses about the impact of trust on e-commerce of IT projects had a positive result. Therefore, descriptive statistics was used to test the hypotheses. The final SPSS output for the first factor is illustrated in fig. 2.

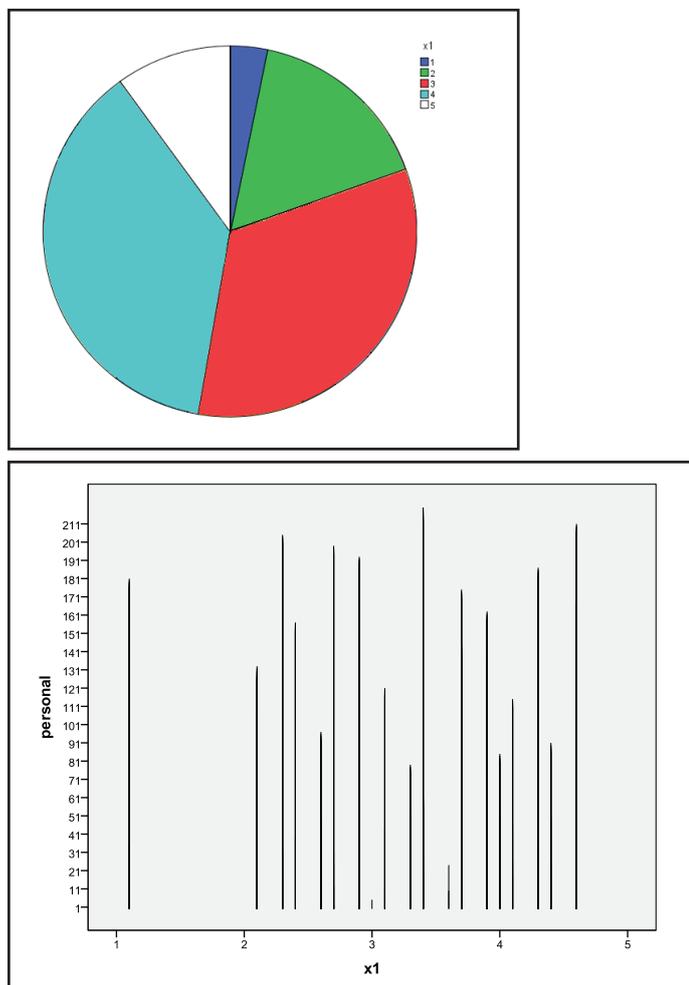


Fig. 2: Data Distribution Graph for first hypothesis based on Lickert spectrum (a. bar graph for distribution; b. round graph for distribution)

In this figure, data distribution graph is illustrated for questions which were devised on Lickert spectrum. Also in tables 3 and 4, which are the results of the test T, mean is 0.35 and says that first type of building trust does have an influence on e-commerce of IT products.

Table 3: Detailed Results of the test T

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
x1	5.890	219	.000	.350	.23	.47

According to the test T, first hypothesis which is the effect of interpersonal trust in e-commerce of IT products is approved.

The final SPSS results for the second factor have also been analyzed and shown in Table 2.

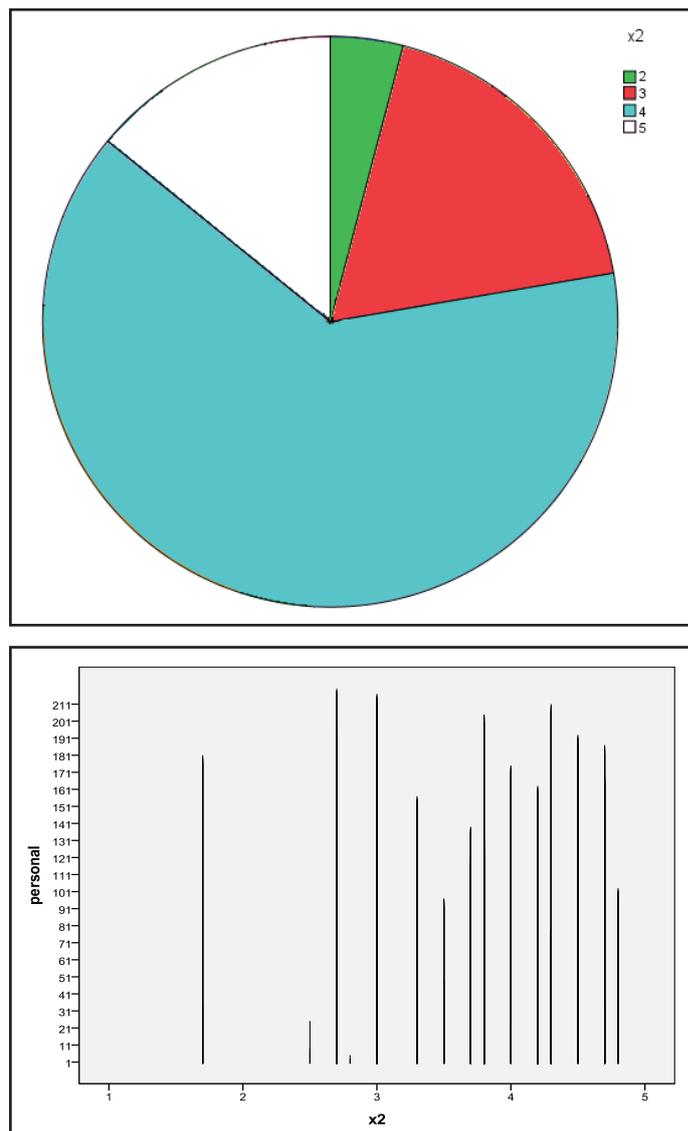


Fig. 3: Data Distribution Graph for the Second Type of Trust Based on Lickert Spectrum

Also in tables 5 and 6, which show the results for the test T, mean is 0.818 and says that the second type of trust, too, does have an effect on e-commerce of IT products. So, the second hypothesis, i.e. the impact of dispositional trust on e-commerce of IT products is also approved according to the test T.

Table 5: Detailed results of the test T for the second hypothesis

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
x2	17.852	219	.000	.818	.73	.91

Table 6: General results of the test T for the second hypothesis

	N	Mean	Std. Deviation	Std. Error Mean
x2	220	3.82	.680	.046

Table 7: Detailed results of the test T for third hypothesis

x3	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
x3	10.067	219	.000	.677	.54	.81

Table 8. General results of the test T for third hypothesis

	N	Mean	Std. Deviation	Std. Error Mean
x3	220	3.68	.998	.067

The same steps were followed for the third hypothesis and the results are shown in fig. 4 and Tables 7 and 8.

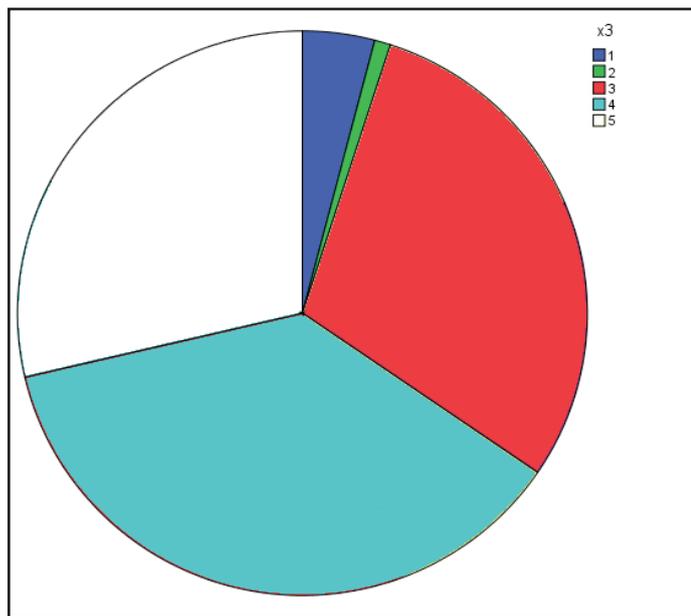
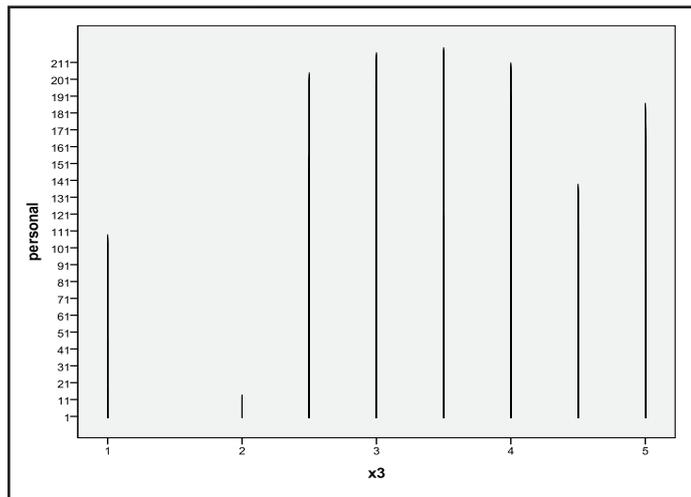


Fig. 4: Data Distribution Graphs for Third Hypothesis Based on Likert Spectrum

As we can see, third type of trust, i.e. institutional, does have an effect on e-commerce of IT products. Therefore, the third hypothesis is verified as well.

Now, based on the results for the three hypotheses and figure 5, we can see the effect of each one of factors. Obviously, the second factor has the greatest impact with a mean value of 3.82.

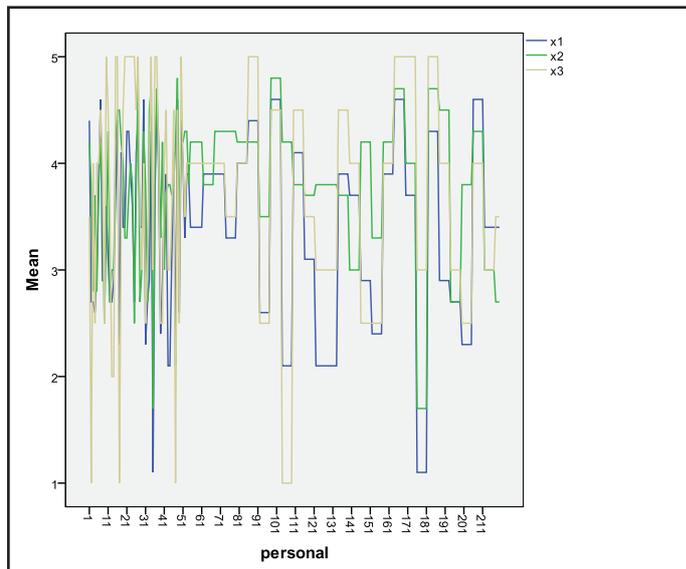


Fig. 5: Analysis of Effects of Factors in e-commerce of IT Products

V. Conclusion

The aim of using e-commerce is to introduce an innovative way of trading. Through e-commerce, traders can offer their products and services to customers all the time regardless of geographical boundaries. The only remaining problem is how to build trust in e-commerce projects. There are different classifications for building trust and one of them divides trust into three types of dispositional, interpersonal, and institutional. In this research, the effect of these factors on e-commerce of IT products was analyzed and using hypotheses and data analysis, it turned out that these factors do have an influence on e-commerce of IT products. Finally, it became clear that the second factor, i.e. dispositional trust, has the greatest influence on e-commerce of IT products.

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