

The Effect of User Perception and Interaction to Interpersonal Trust and its Impact to Selling-Purchasing Intention in C2C e-Commerce Sites

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Abstract: Lack of trust has been repeatedly identified as a major barrier to the adoption of online shopping. However, there has been little investigation of the establishment of interpersonal trust from seller's and buyer's perspective and how interpersonal trust affects sellers-buyer's transaction intention. This research aims to determine the impact of perception and interaction in establishing interpersonal trust from seller's and buyer's perspective. Furthermore, this research investigates the effect of interpersonal trust on selling and purchasing intention in C2C e-Commerce sites. A quantitative approach are employed by utilizing Partial Least Square (PLS). A total of 776 responds from buyers and 106 responds from sellers are collected. The results of this study indicate that trust in sellers is influenced by seller's expertise and opportunism while trust in buyers is influenced by buyer's opportunism and buyer-seller interactions. Additionally our findings imply that trust in sellers influence buyer's purchasing intention while trust in buyers influence seller's selling intention.

Key words: Interpersonal trust, user perception, user intention, PLS, e-Commerce

INTRODUCTION

Now a days, the number of internet users that participate in online transaction keeps increasing due to its benefit: conducting transaction with no time and geographical boundaries. However, in C2C e-Commerce transaction both buyers and sellers are vulnerable to uncertainty and risks, considering that both parties' decisions could be based on incorrect or incomplete information (Kim *et al.*, 2008). Thus people that aware with this risk, sometimes hesitate to do online transactions. A key issue in this problem is building trust between stakeholders. Trust is important in both offline and online transactions (Gustavsson and Johansson, 2006) and is the defining factor in e-Commerce success (Lu *et al.*, 2010). Trust can be defined as a psychological state in which someone accept to be vulnerable based by positive expectations of the other person's intentions or behavior (Rousseau *et al.*, 1998). Trust that is formed between users in C2C e-Commerce or interpersonal trust, represents people's perception that other parties are willing to be vulnerable in their interaction (Chen *et al.*, 2009). In this context, interpersonal trust is formed within sellers and buyers. Trust that is formed in seller and buyer are different in nature because of seller's trust and buyer's trust is based by different features and aspects of C2C e-Commerce site, changes of policy by intermediary could triggers different outcomes from both parties and sellers and buyers are tied to different

institutional mechanism (Sun, 2010). Numerous researches were previously conducted as part of the effort to understand the determinants of interpersonal trust in online transactions. However, the difference perspective of buyers and sellers has been neglected in prior studies. Different role of users in e-Commerce may have different views of online trust (Shankar *et al.*, 2002). Moreover, due to its different nature, the establishment of trust may have different cause for both of parties (Sun, 2010).

Researchers has studied the impact of trust in C2C e-Commerce sites (Jones and Leonard, 2008; Li *et al.*, 2010). However, most of researches did not identify the type of trust that affect user's participation. In C2C e-Commerce, trust could be formed between users (buyers and sellers) or between users and intermediaries. Most researches investigated from buyer's perspective. There are few researches that include seller's perspectives on their study. Thus in this study we aim to determine how trust, specifically interpersonal trust is formed in C2C e-Commerce both from seller's and buyer's perspective. This study focus on investigating perception as the highest influence on interpersonal trust (Walczuch and Lundgren, 2004). Therefore, this study aims to investigate the influence of perception in interpersonal trust in C2C e-Commerce sites from both buyer's and seller's perspective. Furthermore, this study aims to investigate how interpersonal trust affect user's purchasing and buying intention.

Literature review

Literature study and hypotheses development: A model is constructed in order to test hypotheses, based on combining past research models. According to Armstrong and Yee, people's perception of others could be divided into four variables which are expertise, opportunism, likability and listening (Armstrong and Yee, 2001). However, as both parties interact through the internet, direct meeting are less likely to happen which makes it hard for people to determine whether the other party are willing to listen to them (Meents and Verhagen, 2008). Therefore, listening is not relevant in the online transaction context. Expertise is defined as condition where someone has higher knowledge about certain things compared to others where knowledge is not only based on facts and rules but also based on experiences (Dreyfus and Dreyfus, 1986). Moorman, Deshpande and Zaltman highlight that expertise is the foundation of trust (Moorman *et al.*, 1992). There are also studies that prove that there is a positive relation between expertise and trust in seller (Crosby *et al.*, 1990; Doney and Cannon, 1997).

On the other hand, expertise also influences trust in buyer (Armstrong and Yee, 2001). For example for a seller, buyer who shows competences in their previous transactions wouldn't fail on sending payment on time, therefore trust in buyer is built. According to previous statements, the following hypotheses are proposed:

- H₁: expertise has positive influence on trust in seller
- H₂: expertise has positive influence on trust in buyer

Opportunism is defined as seeking personal gain through cunning and deception (Williamson, 1975). Opportunism is also defined as unexpected action which caused negative impact on other parties related (Koojaroenpaisan, 1996). Opportunism is more likely to occurred through internet, including C2C e-Commerce sites (Meents and Verhagen, 2008). However, people who can be trusted shouldn't have opportunistic behavior (Guenzi and Georges, 2010). When buyers think that sellers are taking advantages from them, trust in seller couldn't be formed (Andaleeb and Anwar, 1996). On the other hand when sellers think that buyers show opportunistic behavior, it becomes harder to trust the buyers (Armstrong and Yee, 2001). According to these statements, the following hypotheses are proposed:

- H₃: opportunism has negative influence on trust in seller
- H₄: opportunism has negative influence on trust in buyer

Doney and Cannon defined seller's likability as buyer's perception that seller is friendly, kind and delightful (Doney and Cannon, 1997). Likability is also seen as an affective closeness that between buyer and seller where emotional bond are formed between the 2 parties (Nicholson *et al.*, 2001). A study found that likability is the main factor of trust in sellers (Nicholson *et al.*, 2001). Other research also found that seller has to be likable in order to get buyer's trust (Swan *et al.*, 1985). On the other hand, likability also could affect trust in buyer. According to these statements, the following hypotheses are proposed:

- H₅: likability has positive influence on trust in seller
- H₆: likability has positive influence on trust in buyer

As buyers and sellers only meet virtually through the internet, it becomes harder for perception to be formed. In online world, perception is based by the interaction that both parties have therefore interaction should also be considered as the determinant of interpersonal trust. Interaction is defined as actions in which parties involved try to influence and calculate subjective experiences of other parties (Chen *et al.*, 2009). Frequent interactions could increase the amount of information exchange and built trust in parties involved (Doney and Cannon, 1997). Interpersonal trust could increase as people exchange ideas and emotions through interactions (Jones and George, 1998). According to these statements, the following hypotheses are proposed:

- H₇: interaction has positive influence on trust in seller
- H₈: interaction has positive influence on trust in buyer

Buyers are vulnerable to risks and uncertainty when shopping online and in these situations trust becomes the solution of the problems that arise because of these uncertainty (Li *et al.*, 2010). Buyers have tendencies to purchase items from seller that they trust. Buyers are willing to spend more money as long as they buy from trusted sellers (Strader and Ramaswami, 2002). Trust in seller influence buyer's decision to buy items and denote as the main factor that drives buyer's purchasing intention. There is significant connection between trust in seller and buyer's purchasing intention (Kim and Park, 2013). According to these statements the following hypotheses are proposed.

H₉ (trust in sellers has positive influence on buyer's purchasing intention): Transaction between seller and buyer is not only determined by buyer's intention to

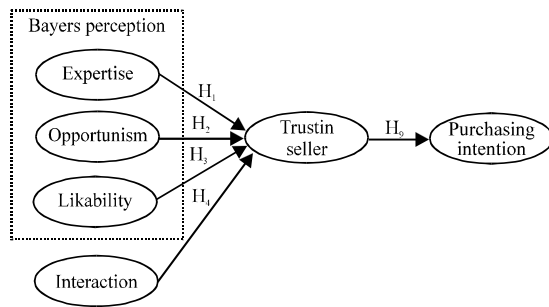


Fig. 1: Research model: buyer's perception

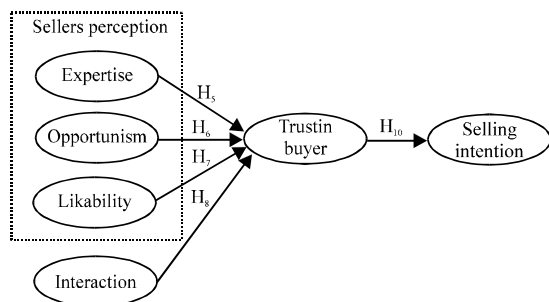


Fig. 2: Research model: seller's perception

purchase products but also by sellers who provides the opportunity to shop online (Schoder and Haenlein, 2004). Similar to buyers, sellers are also vulnerable of frauds in online world (Sun, 2010). When sellers encounter problems due to the uncertainty and vulnerability that they experience, trust becomes the solution for these problems (Li *et al.*, 2010). Thus, trust in buyers drives sellers to sell their products. Trust in buyers has positive influence on seller's selling intention (Armstrong and Yee, 2001). According to these statements, the following hypotheses are proposed.

H₁₀ (trust in buyers has positive influence on seller's selling intention): To summarize, the developed constructs from buyer's perception be seen in Fig. 1 whilst constrcut from seller's perception can be seen in Fig. 2.

MATERIALS AND METHODS

A quantitative study was conducted to measure the relationships between variables identified in the prior section. Questionnaires were distributed among buyers and sellers at various e-Commere site as a method for data collection. The majority of respondents are students, representing the dominant internet user in Indonesia that

is between the ages of 18-25 (27). This study use Partial Least Squares (PLS) as a method for analyzing research model. Validity and reliability were tested for the constructs used in the research models. In validity test, the value of item loading and Average Variance Extracted (AVE) per constructs are examined in which value of item loading is at least 0.7 while value of AVE is at least 0.5. Furthermore, discriminant validity is also tested by examining value of cross loading and comparison of square root of AVE and correlation of latent variables. Additionally, reliability is tested by examining the value of composite reliability in which composite reliability is at least 0.7 (Hair *et al.*, 2011). The developed construct comply with rules defined above. Thus, this research found all variables to be reliable and the developed constructs are valid.

RESULTS AND DISCUSSION

Partial Least Squares (PLS) Graph version 3.00 was employed to evaluate the hypotheses of the 2 developed construct. Hypotheses are tested by examining value of t-statistics from research model. t-value should be >1.96 for 95% significance level (Hair and Ringle, 2011). t-value is examined by using bootstrap in Smart PLS. Table 1 shows summary of significance testing for research model both from buyer's and seller's perspective. As seen in Table 1, H₁ posed that expertise would have positive influence on trust in seller whilst H₂ posed that expertise would have positive influence on trust in buyer. While H₁ was found to be significant, H₂ was rejected. Meanwhile, H₃ posed that opportunism would have negative influence on trust in seller whilst H₄ posed that opportunism would have negative influence on trust in seller

As seen in Table 1, H₁ posed that expertise would have positive influence on trust in seller. Meanwhile, H₂ posed that opportunism would have negative influence on trust in seller when H₃ posed that likability would have positive influence on trust in seller. H₄ posed that interaction would have positive influence on trust in seller. Both of H₁ and H₂ were found to be significant while both of H₃ and H₄ were not supported by the result. In research model with seller's perspective (Fig. 2) H₅ posed that expertise would have positive influence on trust in buyer. H₆ posed that opportunism would have negative influence on trust in buyer whilst H₇ posed that likability would have positive influence on trust in buyer. H₈ posed that interaction would have positive influence on trust in buyer. Both of H₅ and H₇ were not supported by the result while both of H₆ and H₈ were found to be significant.

Table 1: Hypotheses testing result

Hypotheses	Path	Path coefficient	t-statistics	Conclusion
H ₁	EXB->TIS	0.32982	3.359704	Accept
H ₂	OPS->TIS	0.18453	2.437896	Accept
H ₃	LIB->TIS	0.16203	1.576099	Reject
H ₄	INB->TIS	0.16273	1.389241	Reject
H ₅	EXB->TIB	0.09418	0.854060	Reject
H ₆	OPS->TIB	0.30503	3.281350	Accept
H ₇	LIB->TIB	0.07317	0.689250	Reject
H ₈	INS->TIB	0.38456	3.175140	Accept
H ₉	TIS->PUR	0.32541	3.443784	Accept
H ₁₀	TIB->SEL	0.31906	4.046790	Accept

When analyzing the impact of trust on buying or selling intention, H₉ posed that trust in seller would influence buyer's purchasing intention while H₁₀ posed that trust in buyers would influence seller's selling intention. Both of H₉ and H₁₀ were found to be significant.

CONCLUSION

This study sought to examine influence of user's perception and interactions to interpersonal trust and impact of interpersonal trust to user's purchasing-selling intention. Interpersonal trust is divided into trust in sellers and trust in buyers due to differences in the roles and characteristics that each party has. Results indicate that trust in sellers is influenced by seller's experiences and opportunism while trust in buyers is influenced by buyer's opportunism and interactions between both parties. This result also indicate that trust in buyers influences seller's selling intention and trust in sellers influences buyer's purchasing intention. Expertise is said to have positive influence on trust in sellers because by showing expertise in interactions, seller could convince buyers that he/she could be trusted. As mentioned before, buyers experiences vulnerability and risks in online transactions due to the uncertainty of seller's identity or product quality (Ba and Pavlou, 2002). When sellers show that they are competent and knowledgeable, buyers could be convinced that seller wouldn't frame them and would perform accordingly in their transactions therefore trust could be formed.

Seller's opportunism also influence trust in sellers. Trust in seller couldn't be formed if buyers doubt that seller would perform accordingly in their transactions. If buyers thought that sellers are not sincere and honest, trust in seller would be damaged due to buyer's belief that seller would cause them detriment. Therefore, it is evident that opportunism could bring negative impact to trust in sellers. On the other hand, results indicated that likability and interaction didn't influence trust in sellers. Context of likability is relatively close to cultural value and norms that one's possess therefore likability could be interpreted differently by people from different demographic

(Armstrong and Yee, 2001). Traits that used to describe likability in other studies might be irrelevant by respondents in this study therefore different results could be obtained from both studies. Interaction also didn't influence trust in sellers. Due to the features that is provided by intermediaries in C2C e-Commerce sites such as feedback or review features, buyers doesn't have to interact with sellers to build a perception about them. Buyers could determine whether he/she will trust sellers from the opinions of others that already interacted with the sellers. Therefore, interaction isn't necessary to build trust in sellers.

Trust in buyers is determined by buyer's opportunism and interaction between both parties. Similar to trust in seller, trust in buyer couldn't be formed when sellers believe that buyers would cause them detriment or frame them. If sellers think that buyer only taking advantages of them seller wouldn't want to sell products to said buyers therefore it is evident that buyer's opportunism determines trust in buyers. Interaction between two parties also determines trust in buyers. Unlike buyers, sellers didn't get to know each buyers that they see and focused on a community of buyers (Sun, 2010) therefore it's hard for seller to determine whether to trust each buyers that they're interacting with. Seller also not equipped with the same features that buyers have such as rating or review features in C2C e-Commerce sites therefore selling products online is still risky for them. By interacting with buyers, sellers could gather information that would help them decide whether buyer could be trusted or not therefore interaction is needed to form trust in buyers.

On the other hand, expertise doesn't determine trust in buyers. Majority of products sold in C2C e-Commerce sites in Indonesia doesn't require expertise from both parties to be sold and only requires buyer's preferences therefore expertise doesn't affect seller's trust in buyer. Similar to trust in sellers, trust in buyer also isn't determined by likability. Traits that used to describe likability in other studies might be irrelevant by respondents in this study therefore different results could be obtained from both studies. It is evident that trust in sellers and trust in buyers could be determined by different factors due to differences that sellers and buyers have such as roles, features in sites, etc. Trust in sellers is determined by buyer's perception on sellers while on the other hand trust in sellers is not always determined by seller's perception on buyers but also by their interactions. These findings could be useful for all parties involved in C2C e-Commerce transactions, especially intermediaries. Sellers and buyers could try to act accordingly to obtain other parties' trust while

intermediaries could adjust service they provided with these findings. For example, intermediaries could provide features chatting or discussion to enhance interactions between sellers and buyers or provide regulations for all parties to act accordingly. Lastly this study found that trust in sellers determines buyer's purchasing intention and trust in buyers determines seller's selling intention. This study confirms that interpersonal trust influence user's purchasing-selling intention. When faced with uncertainty in online transactions, trust encourages users to take the leap of faith albeit of risks that they face (Komiak and Benbasat, 2004). Therefore, it is important for intermediaries to provide services that could build trust, especially interpersonal trust in C2C e-Commerce sites.

LIMITATIONS

Limitation of this study lies in the sample being biased to one domain of demography. For future researches, more diverse sample should be examined for more representative conclusion. This research also only considers user's perception and interactions as the determinant of interpersonal trust therefore for future researches, other additional factors could be proposed as influences on interpersonal trust in C2C e-Commerce such as security and appearance of ecommerce site. Finally, this research also only discuss about user's purchasing-selling intention as the outcome of interpersonal trust. Future research could discuss about other possible outcomes such as loyalty or anticipation for future research.

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REFERENCES

- Andaleeb, S.S. and S.F. Anwar, 1996. Factors influencing customer trust in salespersons in a developing country. *J. Int. Marketing*, 4: 35-52.
- Armstrong, R.W. and S.M. Yee, 2001. Do chinese trust chinese? A study of chinese buyers and sellers in Malaysia. *J. Int. Marketing*, 9: 63-86.
- Ba, S. and P.A. Pavlou, 2002. Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behavior. *MIS Q.*, 26: 243-268.
- Chen, J., C. Zhang and Y. Xu, 2009. The role of mutual trust in building members loyalty to a C2C platform provider. *Int. J. Electron. Commerce*, 14: 147-171.
- Crosby, L.A., K.R. Evans and D. Cowles, 1990. Relationship quality in services selling: An interpersonal influence perspective. *J. Market.*, 54: 68-81.
- Doney, P.M. and J.P. Cannon, 1997. An examination of the nature of trust in buyer-seller relationships. *J. Market.*, 61: 35-51.
- Dreyfus, H.L. and S.E. Dreyfus, 1986. From Socrates to Expert Systems: The Limits of Calculative Rationality. In: *Philosophy and Technology II*, Mitcham, C. and A. Huning (Eds.). Springer, Berlin, Germany, ISBN:978-94-010-8510-6, pp: 111-130.
- Guenzi, P. and L. Georges, 2010. Interpersonal trust in commercial relationships: Antecedents and consequences of customer trust in the salesperson. *Eur. J. Marketing*, 44: 114-138.
- Gustavsson, M. and A.M. Johansson, 2006. Consumer Trust in E-Commerce. Kristianstad University, Kristianstad, Sweden, Pages: 80.
- Hair, J.F., C.M. Ringle and M. Sarstedt, 2011. PLS-SEM: Indeed a silver bullet. *J. Market. Theory Pract.*, 19: 139-152.
- Jones, G.R. and J.M. George, 1998. The experience and evolution of trust: Implications for cooperation and teamwork. *Acad. Manage. Rev.*, 23: 531-546.
- Jones, K. and L.N. Leonard, 2008. Trust in consumer-to-consumer electronic commerce. *Inf. Manage.*, 45: 88-95.
- Kim, D.J., D.L. Ferrin and H.R. Rao, 2008. A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk and their antecedents. *Decis. Support Syst.*, 44: 544-564.
- Kim, S. and H. Park, 2013. Effects of various characteristics of social commerce (s-commerce) on consumers trust and trust performance. *Int. J. Inf. Manage.*, 33: 318-332.
- Komiak, S.X. and I. Benbasat, 2004. Understanding customer trust in agent-mediated electronic commerce, web-mediated electronic commerce and traditional commerce. *Inf. Technol. Manage.*, 5: 181-207.
- Koojaroenpaisan, P., 1996. Evaluation of trust in the selection of international wholesalers: The case of ethnic Chinese suppliers in Thailand. Ph.D Thesis, State University, New Mexico.
- Li, H., Q. Ye, R. Law and Z. Wang, 2010. A purchasing-intention model in C2C e-commerce of China: The role of perceived risk, trust, perceived benefit and their antecedents. *Proceedings of the 12th International Conference on Electronic Commerce: Roadmap for the Future of Electronic Business*, August 02-04, 2010, ACM, New York, USA., ISBN:978-1-4503-1427-5, pp: 101-109.

- Lu, Y., L. Zhao and B. Wang, 2010. From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers purchase intention. *Electron. Commerce Res. Appl.*, 9: 346-360.
- Meents, S. and T. Verhagen, 2008. Investigating the impact of C2C electronic marketplace quality on trust. *Res. Memorandum*, Vol. 8,
- Moorman, C., G. Zaltman and R. Deshpande, 1992. Relationships between providers and users of market research: The dynamics of trust within and between organizations. *J. Market. Res.*, 29: 314-328.
- Nicholson, C.Y., L.D. Compeau and R. Sethi, 2001. The role of interpersonal liking in building trust in long-term channel relationships. *J. Acad. Market. Sci.*, 29: 3-15.
- Rousseau, D.M., S.B. Sitkin, R.S. Burt and C. Camerer, 1998. Not so different after all: A cross-discipline view of trust. *Acad. Manage. Rev.*, 23: 393-404.
- Schoder, D. and M. Haenlein, 2004. The relative importance of different trust constructs for sellers in the online world. *Electron. Markets*, 14: 48-57.
- Shankar, V., G.L. Urban and F. Sultan, 2002. Online trust: A stakeholder perspective, concepts, implications and future directions. *J. Strategic Inf. Syst.*, 11: 325-344.
- Strader, T.J. and S.N. Ramaswami, 2002. The value of seller trustworthiness in C2C online markets. *Commun. ACM.*, 45: 45-49.
- Sun, H., 2010. Sellers trust and continued use of online marketplaces. *J. Assoc. Inf. Syst.*, 11: 182-211.
- Swan, J.E., I.F. Trawick and D.W. Silva, 1985. How industrial salespeople gain customer trust. *Ind. Mark Manage.*, 14: 203-211.
- Walczuch, R. and H. Lundgren, 2004. Psychological antecedents of institution-based consumer trust in e-retailing. *Inform. Manage.*, 42: 159-177.
- Williamson, O.E., 1975. *Markets and Hierarchies*. In: *Strategy: Critical Perspectives on Business and Management*, Faulkner, D. (Ed.). Taylor & Francis, Oxford, New York, pp: 26-30.