Online trust building through third party trust transfer and third party protection

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Abstract. The primary objective of this research is to develop an online trust building mechanism for SME (Small Medium Enterprise). Trust is very important in e-commerce. The nature of online shopping has a greater uncertainty than offline shopping. Seeing as there is an uncertainty that can produce risks, a prospective buyer’s trust is needed. A lot of people’s unwillingness to shop online is caused by their lack of trust toward e-commerce. E-commerce is said to be one of the ways for SME to compete with bigger companies. However, building trust requires immense time and cost. SME with limited resources may experience difficulties in building trust just with their own resources. Based on literature research that needs to be validated in next research, we found that trust can be built through trust transfer from the reputable and well-known trust-mark issuer, and third party protection such as escrow account service and credit card issuer.

Keywords—Trust, Risk, Trust-mark, Third party protection, e-commerce

1. Introduction

Indonesia is a big country, 3rd largest in population and 16th largest GDP in the world, with GDP 888.838 million USD on 2014. With Internet penetration reaching about 71.2 million people in 2013 and expected to reach 100 million people on 2016. According to Google survey, 1 in 2 Indonesian people who have internet access has an intention to shop online within 12 months[1]. The potential market of Indonesian e-commerce is 8 billion USD in 2013 and expected to be 25 billion USD in 2016[1]. Several multinational companies have already put their feet in Indonesia. The growth of e-commerce in Indonesia does not only attract multinational enterprises, but also unethical ones. This calls for a more serious attention in e-commerce users’ protection[2]. Indonesia e-commerce market still has a lot of space to improve. The percentage of Indonesian online shopper compare to Indonesia people who have access to the internet is only 27% in 2014[3], while the world already reaches 38% in 2011 and expected to be 45% in 2015. The nature of the online transaction, where there is no physical contact and there is a temporal and spatial separation between the vendor and the consumer, creates more uncertainty[4][5]. In the e-commerce environment, the transaction is done without physical contact, thus buyers are forced to place their trust based on the information that are displayed on the website [6]. It makes buyers insecure; this condition makes buyers’ uncertainties bigger than when purchasing in traditional commerce environment [7][8]. These uncertainties may lead to risk, and most people are risk-averse[9]. Several empiric researches show that a lot of consumer refrain from online shopping because of the risk it exposes [10][3]. Trust helps a consumer to reduce their perception of risk [11][12]. Several surveys show that trust is the biggest factor for e-commerce buyers to make a transaction. The absence of trust may stunt the growth of e-commerce [13][2]. This is consistent with TNS’s survey result, which says that 40% of people who don’t shop online do so because of their distrust [1]. SME in Indonesia has an important role by having more than 50% share in PDB. E-commerce is also considered as a substantial opportunity for SME to compete with enterprise because of wider
market reach, more efficient market, and cheaper transaction cost [14][15][16]. However, there is an important issue in e-commerce, which is consumer’s trust[8]. Building trust is a job that needs a big effort in term of resources and money, for a long period [17]. This might not be easy for SME. Other than doing it by their own resources, trust can also be built by collaborating with the third party through certification or endorsement.

2. LITERATURE REVIEW

2.1. E-commerce
E-commerce is a business transaction that transfers the ownership of the good or services through an electronic medium such as internet, telephone, television, or fax. There are stages in e-commerce transaction: 1) The Order Placement, 2) The Payment and the 3) delivery of the good or services. A transaction can be defined as e-commerce transaction if the transaction does at least the first phase through electronic medium. There are several types of e-commerce that involving consumer as a buyer as follow: 1) B2C (Business to Consumer) and 2) C2C (Consumer to Consumer). E-commerce also can be categories by the market or the place of transaction, like: Online Marketplace, Classified Ads, Daily Deals, Online Retail and social media such as Instagram and Facebook[18].

2.2. Online Trust
Trust has been studied by multi-discipline for years, but until now there is no single scientific definition that generally accepted[19][8]. One of the trust definition that is widely accepted: Trust is a psychological condition where one party is willing to be vulnerable based on a positive expectation of the intention of the other party[19]. In the e-commerce context, trust or online trust can be defined as the willingness of the consumer to depend on the vendor. The willingness is based on the perception that the vendor will fulfill or deliver the commitment[20]. In e-commerce, trust plays more significant role compared to brick and mortar shop or to traditional market which has a face to face relationship because there is no physical contact in e-commerce, either with the vendor, goods or money. The consumer and the vendor can be separated by a few km to thousands km, it causes the consumer to have no possibility to use social cues to assess the vendor[21][22]. According to Mayer and McKnight, trust is a very important role to make a consumer be willing to take a risk where there are uncertainty, interdependence, and fear of opportunism[12]. Trust involves a calculation process to calculate the gain and the loss for when the trusted party delivers the commitment or otherwise[23]. To build the trust, the buyer needs analytical skill to predict the behavior of the other party. There are several mechanisms in building online trust, which are: Institution-based, Knowledge-based mechanism dan Transfer [11][24].

2.3. Institution-based Trust
Institution-based trust is the perception or beliefs that a structural condition exists to mitigate the risk and increase the possibility for the transaction to succeed[25][21][26]. In the e-commerce environment where the uncertainty is bigger compared to face to face, trust is fundamental in building and retaining inter-organizational relationship [7]. Even though institution-based trust is an important factor to drive purchase intention in an online environment, the trust itself is not enough to make a consumer do an online purchase[12]. These vendor-specific mechanisms are useful in building trust and eliminating risks inherent with transaction related to specific vendor[26]. Institution-based trust is built by 1) Structure Assurance and 2) Situational Normality [27][25][20]. Structure assurance can be defined as a belief that a protection mechanism from the institution is in place to ensure the condition are conducive for a transaction to succeed, such as warranty, contract, rule, process, procedure and system [25][11]. Trust that is earned through structure assurance is usually obtained by: 1) Transferences, 2) Guarantees, 3) Signaling [12]. Structure Assurance sources can be : Trust Mark (Dependent Vendor), Escrow Account (Independent Vendor), bank as credit card issuer (Independent vendor) [12][25]. Situational Normality can be defined as a belief based on general belief that the e-commerce environment and the vendor are normal, favorable and appropriate to gain success[11][28].

2.4. Perceived Risk
People tend to give a bigger value to something that is already certain compared to something that is not certain yet[29]. Most people are risk-averse, they will choose a less gain but with 100% probability, compared to bigger gain but with uncertainty[12][29]. For example, people will choose to gain 3,000 but sure, compared to having a probability of 80% to gain 4,000[29]. Risk-averse people will reject the opportunity to get 200 or lose 100 with the equal probability [30]. Risk can be defined as a situation where the result of a decision involves uncertainty. This happens because of the decision maker’s incapability to determine end result that depends on the upcoming situation. A decision with countable probability is still considered as a risk because the result is still
trust toward the online store is increased, this process called trust transferred [43]. Kaye (2004) and Liu (2004), a traditional vendor who has a physical store can be perceived as more credible object of trust or parties that will be trusted [41]. Some examples of the trust transfer: According to Johnson and an object that has association with the object of trust, rather than to gain it based on direct experience with the other objects that are not too famous or have a little experience [23][27][40]. Trust can be transferred from Trust Transfer is a process in which an object that has been proven to be reliable gives the effect of trust on the other objects.

2.4.2. Trust Transfer

Trust Transfer is a process in which an object that has been proven to be reliable gives the effect of trust on the other objects. The purpose is to show the visitor of the website that the institution in which the website belongs to is eligible to conduct trade transaction through electronic, having followed and passed a series of assessment and audit from authorized organization. With the label, mark, or logo of trust mark embedded on the institution website, it means that the institution has proved that they have a certain standard. For example, can be one of them or a combination of them, but not limited to: computer security, data security, the business model, financial stability, after sales support [2][36]. There are different names for the similar concept of trust mark. For example, Web Assurance Seals, Third-Party Seal. One of trust mark goal is to ensure e-commerce customer is protected by e-commerce institution, through securing the website in processing the transaction, guarding personal and financial information from a hacker, virus, and other means of electronic data exchange [2][37]. Trust mark can increase the trust, especially on the small medium enterprise where their brands are not well known [2]. Displaying the trust mark is one of the ways to increase consumer's trust in doing online transaction. If an institution is displaying the e-commerce trust mark on their website, we can expect that the institution has the integrity to respect the law, good business behavior, and other standards [2][25][38]. Every trust mark issuer represents their own standard. There are several categories in trust mark: a) Transaction Security assurance (e.g., VeriSign), b) consumer privacy assurance (e.g., TRUSTe), and c) transaction integrity assurance (e.g., BBBOnlineReliability) [39]. The several reasons consumer look for the trust mark when shopping online [2]:

- Give the consumer confidence in shopping with the vendor
- The vendor complies with the consumer legislation
- The vendor has secure payment methods
- The trust mark may provide help when a problem occurs.

2.4.1. Trust Mark

Trust Mark is an integrity certification logo that is displayed on the website. The purpose is to show the visitor of the website that the institution in which the website belongs to is eligible to conduct trade transaction through electronic, having followed and passed a series of assessment and audit from authorized organization. With the label, mark, or logo of trust mark embedded on the institution website, it means that the institution has proved that they have a certain standard. For example, can be one of them or a combination of them, but not limited to: computer security, data security, the business model, financial stability, after sales support [2][36]. There are different names for the similar concept of trust mark. For example, Web Assurance Seals, Third-Party Seal. One of trust mark goal is to ensure e-commerce customer is protected by e-commerce institution, through securing the website in processing the transaction, guarding personal and financial information from a hacker, virus, and other means of electronic data exchange [2][37]. Trust mark can increase the trust, especially on the small medium enterprise where their brands are not well known [2]. Displaying the trust mark is one of the ways to increase consumer's trust in doing online transaction. If an institution is displaying the e-commerce trust mark on their website, we can expect that the institution has the integrity to respect the law, good business behavior, and other standards [2][25][38]. Every trust mark issuer represents their own standard. There are several categories in trust mark: a) Transaction Security assurance (e.g., VeriSign), b) consumer privacy assurance (e.g., TRUSTe), and c) transaction integrity assurance (e.g., BBBOnlineReliability) [39]. The several reasons consumer look for the trust mark when shopping online [2]:

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- The trust mark may provide help when a problem occurs.
2.5. Online Payment Provider Protection (OPPP).
There are several online payment providers which give the extra protection in the online shopping environment such as:

2.5.1. Escrow Service
Escrow service is one of dispute avoidance system, that prevent the seller to get the money before buyer confirmation on good receiving and prevent the buyer don’t pay when the seller sent the good because the seller only sent the good after he/she has a notification from the escrow service provider (or the escrow) that the buyer already deposits the money into escrow account. Escrow service cause extra cost for the fee \[44\]. In addition, the consumer has several options to use other payment services to make online purchases which have a similar degree of protection such as Paypal. Paypal extends the protection more than the common escrow services. That usually ended when the buyer already confirm that the good already received with the condition as agreed. Paypal extends the protection period until 180 days after the purchase\[45\][44]. Some escrow service providers have an ADR (Additional Dispute Resolution) to help its customer. The escrow is not only helped its customer by facilitates communications between the buyer and seller. But if the negotiation between the seller and the buyer can not produce an agreed solution, the escrow will make a decision as online arbitrator. The ADR provided by Paypal able to decrease 50% complain to the seller, and reduce 20% chargeback (retracts the money from the seller account and transfers back to the buyer account) to the seller\[44\].

2.5.2. Credit card protection
3D Secure already implemented by several credit card companies like Visa (Verified by Visa), Master Card (MasterCard SecureCode), JCB International (J/Secure) etc., to give another layer of protection on online payment using a credit card. We can see their logo on the online shop that working with them. 3D Secure has OTP (one-time password) and ‘Phrase’ to authentic the seller and the buyer. With OTP, the consumer needs to key in the OTP that sent from the credit card company to their phone cell. And the consumer also will be able to verify whether the online shop is the real one by the phrase that shown on the online shop. The phrase that displayed in the online shop should be the same with the one that the consumer registered on the credit card issuer, usually bank. Several numbers weakness of 3D secure:

- 3D Secure are only give the protection on the online shop that working with them, while the consumer needs the protection on all online shop.
- There is no law to enforce online shop to use 3D Secure in only shop payment using a credit card.

In Indonesia, there is no law that particularly to protect credit cardholder from the fraudulent transaction. But some credit card issuer already have a policy regarding this issue, for example Visa has a policy called Zero Liability, that guarantee the credit card holder won’t be held any responsibility for transactions that not authorized by her/him \[46\].

2.6. Purchase Intention
Purchase mostly preceded by purchase intention. Even though not all purchase intention will be converted to real purchase\[47\]. Purchase intention is not perfect to portray the real purchase because it can be changed by the time. But the purchase intention variable still reliable to represent the real purchase, and still use by researcher widely \[48\]. Without real purchase, both the seller and the consumer can’t get the full benefit of e-commerce and the technology behind them. The consumer can’t get the benefit that been offered by e-commerce such as a lower price and the convenient\[22\]. And the seller can’t have the more efficient market, and cheaper transaction cost\[14\].

3. Model and Hypotheses Development
Trust in general is built slowly, and requires a big amount of resources and time\[17]\[49\]. One of the methods that relatively fast to build trust is trust transfer method, which recently received great attention\[41\]. Trust transfer can be done by using the trust-mark from the well-known trust-mark issuer. Trust-mark that more widely used, will be more effective\[50\]. There are several studies that show the trust-mark able to increase the online trust, especially for small or not very famous online retailer\[50]\[51\]. And also able to reduce online risks\[50]\[52]\[53\]. Hence, we hypothesized:

H1. Trust-mark is positively related to online trust.
H2. Trust-mark is negatively related to perceive risk.
Risk in a simple way can be formulated into the consequences or potential loss multiply by the occurrence probability[54]. So to reduce the risk, we can reduce one of the two components, in this case is the potential loss. In the online retail environment, there are some institutions that are independent of online retailer that helps protect consumers from potential losses caused by the online transaction, for example credit card issuer and escrow service[12]. With the protection, the online risk can be expected to be lower. This protection also able to increase the online trust[12][55]. Hence, we hypothesized:

H3. Online payment provider protection is positively related to online trust.
H4. Online payment provider protection is negatively related to perceive risk.

Shopping online has a greater risk compared to traditional shopping. Because of the risk, trust is necessary to make a customer want to shop online [21][12]. Trust and risk perception is an important psychological factor in influencing consumer shopping behavior in shopping online [56]. To participate in online shopping requires complex calculations relating to the behavior of sellers and internet security, trust can reduce complexity and reduce the threat of a possible seller of doing things that are beyond his expectations[32][57]. Trust in online shopping site has an important role in online shopping, because it is likely customers will not shop if the customer does not trust the online shopping site[32][58]. Trust is a strong indication of the intention to buy [57]. It is supported by several empirical studies that show trust has a positive influence on buying intention[58][59]. Hence, we hypothesized:

H5. online trust is positively related to purchase intention.
H6. Risk is negatively related to Purchase Intention.

There are several studies with different results according to the trust mark, some of them show the positive relation between trust mark and the trust, on the other hand, the trust mark does not have any significant impact on trust or on purchase intention[39][50][60]. The negative result might lead by the consumer didn’t know what the trust-mark is. For example, the survey conduct by The European Consumer Centre’s Network in 19 European countries[2] shows only 37% consumers look for a trust mark when they are shopping, but it maybe because only 49% percentage of people know what a trust mark is, and only 34% know of any trust mark. Other research shows that trust-mark with high-dissemination are more effective[50]. Same result on escrow services, the main cause of escrow services is not used is the lack of awareness (70%)[26]. And according to trust transfer theory, trust is transferred from a more trusted and known institution to less known institution[23][27]. Hence, we hypothesized:

H7. Institution familiarity is moderates relationship between trust-mark and online trust
H8. Institution familiarity is moderates relationship between trust-mark and perceived risk
H9. Institution familiarity is moderates relationship between OPPP and online trust
H10. Institution familiarity is moderates relationship between OPPP and perceived risk

Based on literature review and hypotheses above, we propose the model:

Fig. 1. The Proposed Model

4. CONCLUSION AND FUTURE WORK
Trust is an important key in e-commerce, including in Indonesian market. Some Indonesian people didn’t want to do online shopping, mostly because there are risks that inherent in online shopping. But building trust is cost time and money, while SME has more limited resources and time. Choosing the third party is not an easy job, most of the third parties that already have a reputation usually demanding better condition and more money for the fee compare to the less known third party. But regarding trust theory and several researches, more reputable and well-known institution will give better impact in trust transfer.
This research proposed online trust building based on structure assurance, which is a third party institution that consists of trust-mark and online payment services protection, that already in the market and ready to use. Those source of trust needs relative small initial investment and relative faster, more effective on a small company that not really famous. The proposed model will be tested empirically in Indonesia market. There are a few open research related to this study such as: e-commerce risk ramification to differentiate the source of risk, other trust building that suitable for different market, e-commerce risk reduction to increase the purchase intention.

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