Conceptual Model of Relationship between Trust, Perceived Risk, Price Dispersion, E-WOM, Perceived Value, and Online Transaction Intention

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Abstract

Indonesia has always been a lucrative market for e-marketplace and classified ads development as the country has both a large population of youth and stronger economic growth. However, e-marketplace and classified ads are still highly associated with fraudulent acts. According to the POLRI report from January to July 2019, there were 1,243 cases of fraudulent activities and this condition worsened the trust in using e-marketplace and classified ads. This condition also makes the perceived risk and negative review in using e-marketplace and classified ads to increase. The decrease in confidence also has an impact on price dispersion increasing perceived risk and ultimately makes the perceived value by the community to change. So, based on this phenomenon, this study aims to formulate the conceptual model of the relationship between initial trust, perceived risk, price dispersion, perceived value and e-WOM toward the intensity of transaction. This study uses several models from previous authors as a reference to build a conceptual model. Thus, this study proposes a new conceptual model consisting of eight variables for e-marketplaces and classified ads. The findings of this study are to build a conceptual model to determine the relationship between variables for further research.

Keywords

1. Introduction

The advent of internet technology has made the development of C2C (consumer to consumer) e-commerce grow very rapidly throughout the world (Dan 2014). The growing development of e-commerce business also has an impact on the increasing number of online fraud cases that occur every year starting from 1993 (Renjith 2018). Indonesia is one of the countries experiencing e-commerce developments, both e-marketplaces, and classified ads.

E-marketplaces are defined as internet-based business facilities for buying and selling on a website, where there are third parties whose job is to direct and be neutral (Janita and Javier 2013). The surveys to 2,026 Indonesian consumers which is conducted by Dailysocial.id (2019) collaborate with JakPat indicated that Shopee is the most preferred e-marketplace service at 34%. Then Tokopedia 28%, Bukalapak 17.5%, Lazada 14%, Blibli 2.15%, and the rest are other e-marketplaces totalling 4.31%. Besides e-marketplaces, selling on stalls or social media providers is also very popular in Indonesia. Selling at stalls and social media providers in the field of e-commerce are called classified ads. Although both are selling in online stores, in classified ads, the stall providers do not interfere in the transaction process (Eko 2013). The data indicated that, in Indonesia, the most preferred classified ads are OLX, mamikos, rumah123, mitula, and others (Similarweb 2020). The survey conducted by APJII mentioned that Facebook (50.7%) is the most visited social media respondents. It is followed by Instagram (17.8%), YouTube (15.1%), Twitter (1.7%) and LinkedIn (0.4%) (Dailysocial.id 2019).

The many e-commerce sites that have arisen in Indonesia has increased fraud cases. Countries in Asia are reported as the countries with the highest fraud rates, especially Indonesia and China, which reached 22% in 2008 by Rofiq and Joseph (2010). Based on Kaspersky Lab and B2B International's research results, 26% of consumers in Indonesia become victims of online fraud and the study calls Indonesia as the country with the most victims in the world.
Then, the magnitude of online fraud in Indonesia is also evidenced by the report of the Indonesian National Police (POLRI) where there are 1,243 cases and this is the most cases obtained from January 2019-July 2019 (katadata.co.id 2020). The Indonesian Financial Services Authority also noted that there were 19,000 complaints that they had already paid but the goods ordered did not arrive (katadata.co.id 2020).

The many online fraud cases that occur in Indonesia has resulted in people's perceptions about risk and trust being important. Trust and risk are important issues in e-commerce because of the many cases of online fraud that occur (merdeka.com 2020). This is evidenced from research conducted by Puspitasari et al. (2018) if a person's buying intention is influenced by the level of trust in the seller. In previous studies that have been done, the transaction risk is a concern of the buyer because they do not know what risks will occur when making online transactions (merdeka.com 2020). In the study conducted by Puspitasari et al. (2018), it is also known that the increased risk has an impact on price dispersion. Where people see that the lower the price is below the normal price, the risk will be also higher. Other research has found that perceived risk is an important factor that shapes attitudes and behaviors of trust in society (Wu et al. 2015). Then in influencing purchase intentions, it is known that risk, trust, and the price will indirectly be facilitated or mediated by perceived value (Chang and Wu 2012; Chang and Tseng 2013). Based on the results of other studies conducted by Wang (2010), e-WOM (Word of Mouth) has the same influence as the trust and risk of the intention to transact online. According to Sheikh et al. (2019), 83% of online customers are eager to share purchase reviews with others, and when shopping, 67% of customers consider buying a product recommended by a community. Hajli in Sheikh et al. (2019) said that when there is trust in e-commerce platforms, both e-marketplace and classified ads, there will be impact that can be positive or negative on content that has been created by users/consumers before.

After knowing the problems commonly faced in online transactions, this study aims to describe the relationship of trust, risk, price, value and e-WOM on the intensity of online transactions conducted on e-marketplaces and classified ads.

2. Literature Review

2.1. E-Commerce

E-Commerce (Electronic Commerce) is a process of buying and selling or exchanging a product, service, and information with an internet network intermediary on a computer or smartphone (Siregar 2010). In addition to internet networks, technologies such as databases, e-mail, payment systems and shipping of goods are also needed in e-commerce businesses (Siregar 2010). E-commerce is divided into several categories, such as Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C), Business to Employee (B2E), Government to Government (G2G), Government to Employee (G2E), Government to Business (G2B), Business to Government (B2G), Government to Citizen (G2C), dan Citizen to Government (C2G) (Ravi 2017). This study will focus on e-commerce types of C2C. Consumer to Consumer is defined as e-commerce wherein the business sellers and buyers can interact directly until reaching an agreement related to goods or services (Ravi 2017). According to Ngo (2016), it is estimated that the C2C market will experience an increase in the future due to cost-effectiveness and a growing of product variants. C2C is divided into 2 types namely e-marketplace and classified ads (Ngo 2016).

According to Turban et al. (2012), e-marketplace is an online market (internet-based) that brings together sellers and buyers in conducting various types of transactions both goods and services aimed at making money. Janita et al. 2013 define the e-marketplace as a place to conduct transactions of buying and selling goods or services between Internet-based buyers and sellers where buyers can search for products according to what they want, other than that third party e-marketplaces or platform providers are responsible as intermediaries in the occurrence of transactions. Examples of e-marketplaces in Indonesia are Tokopedia, Bukalapak, Lazada, Shopee, and others (Ngo 2016). Then, as for classified ads, it is an effective strategy for sellers in promoting goods or services. Classified ads are also defined as e-commerce where the stall provider or platform is not involved in buying and selling transactions (Turban 2012). Alade (2018) argues that classified ads are a medium that is used by someone to provide information that contains things to promote. This type of C2C is generally low cost because it only displays classified ads on a website or social media that can be accessed from a smartphone or computer (Alade 2018). Examples of classified ads in Indonesia are OLX, Kaskus, Carmudi, Rumah123, Facebook, Instagram, etc. (Ngo 2016).
2.2. The Previous research
The previous research related with the subject of this study can be seen in Table 1.

<table>
<thead>
<tr>
<th>Author</th>
<th>Sample</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Empirical Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Wu et al. 2015)</td>
<td>Taobao Customers (N=261)</td>
<td>Purchase Intention, Perceived Value</td>
<td>Initial Trust, Perceived Risk, Price Dispersion</td>
<td>SEM-PLS</td>
<td>Types of products moderating the consequences of price dispersion. The negative impact of price dispersion on perceived value and the positive impact of price dispersion on perceived risk becomes stronger on high-touch products.</td>
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<td>(Hajli 2019)</td>
<td>Social Commerce website in Iran (N=512)</td>
<td>Purchase Intention, Social Media Communication</td>
<td>Instituted Based Trust</td>
<td>SEM-PLS</td>
<td>Trust in web sites and social interactions influence purchase intentions</td>
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<td>(Wei et al. 2019)</td>
<td>Taobao(N=158 from buyers, N=162 from sellers)</td>
<td>Transaction Intention</td>
<td>Trust in Intermediary, Institution based Trust, Propensity to Trust, Perceived Risk, Prior Positive Experience, Perceived Ease of Use, Perceived Usefulness</td>
<td>SEM-PLS and Post-Hoc</td>
<td>The impact of perceived risk on sellers and buyers is same, Trust also affects transaction intentions but for sellers it is stronger in intermediaries while buyers is stronger in institutions</td>
</tr>
<tr>
<td>(Sheikh et al. 2019)</td>
<td>Social Commerce website in Pakistan (N=343)</td>
<td>Relationship quality (Commitment, Satisfaction, Trust), Social commerce intentions, Use behaviour</td>
<td>Social commerce constructs (Ratings and reviews, Recommendation and referrals, Social support (Informational support, Emotional Support)</td>
<td>SEM-PLS</td>
<td>SCC or E-WOM, Relationship Quality, and Social Support have a significant influence on social commerce intentions</td>
</tr>
<tr>
<td>(Yang et al. 2016)</td>
<td>Student in mid-western university in the USA (N= 137), Amazon Mechanical Turk (N=165)</td>
<td>Perceived risk, Subjective norm, Attitude toward purchasing, Intention to purchase,</td>
<td>Review volume, Review valence</td>
<td>SEM-PLS and MANOVA</td>
<td>Reviews Valence have an impact on consumer perception, especially negative reviews that have a significant impact on risk</td>
</tr>
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<td>(Sfenrianto et al. 2018)</td>
<td>Buyers in Jakarta (N=547)</td>
<td>Trust, Satisfaction</td>
<td>Perceived Risk, Perceived Usefulness, Perceived Ease of Use, E-marketplace Reputation, Sellers Reputation, Sellers Expertise, Convenience</td>
<td>SEM</td>
<td>Risk, value, reputation, and convenience have a significant impact on consumer confidence so that buyers are able to overcome the threats that may occur during online transactions</td>
</tr>
<tr>
<td>(Walsh et al. 2018)</td>
<td>Online and offline retailer in Germany (N= 207 online, N= 794 offline)</td>
<td>Consumers new product, Perceived value, Perceived risk</td>
<td>CBR (price appropriateness, social and environmental responsibility, product and service quality,</td>
<td>SEM-PLS</td>
<td>CBR significantly influences perceived value and perceived risk. The strength of these influences is</td>
</tr>
</tbody>
</table>
reliable and financially strong company, good employer, customer orientation),
different between offline and online

| (Shareef et al. 2019) | 296 students in university of Bangladesh | Purchase intention, Perceived price value, Perceived trust, Operational performance | Perceived privacy, Perceived anxiety, Perceived security, Perceived time value, Perceived effort value, SEM | Trust and Operational Performance have a significant impact on transaction intentions |

The previous research related with the subject of this study can be seen in Table 1. Based on the previous study, it is known that risk, trust, e-WOM are the most widely used in research related to the level of purchase intention. Therefore, the researcher decides to use these variables in this study. Other than that, researchers will also add two other variables which are price and word of mouth. Both of these variables were chosen because there is still a few studies that use them. So, it was decided that this study uses five dimensions that affect transaction intentions, which are risk, trust, WOM, value, and price. The following is an explanation of these variables.

1. Perceived Risk
Schiffman and Kanuk (2010) define risk as uncertainty or uncertainty in self consumers when they cannot predict the outcome of a purchase decision. The same thing was also explained by Suresh and Shashikala (2011) who stated that the risk is the uncertainty of the consequences consumers will receive in their purchasing decisions. Risk is divided into several variables and one of them is perceived risk. Perceived Risk is defined as a complex construct depending on someone's perspective view such as the source of risk, the types of damage that can be experienced as well as events that can bring harm to consumers when transacting online (Glover and Benbasat 2010). Perceived Risk has several categories described by See-To and Ho (2016), such as performance risk, financial risk, psychological risk, product risk, social risk, and time risk. In a study conducted by Antoniou and Batten (2011), they added one more category to Perceived Risk, which is the privacy risk associated with the buyer identity security issue.

2. Initial Trust
Park et al. (2012) define trust as an ambiguous feeling of indecision for someone of the actions of others. According to Hansen and Mowen (2011) trust is all knowledge possessed by consumers in concluding the attributes, objects, and benefits. Trust itself is divided into several variables and one of them is initial trust. Initial Trust is defined as the trust of a company in accepting a technology. Meanwhile for interaction with other variables, such as perceived value, there is no comprehensive research conducted yet (Kim 2012). Previous studies examining the relationship between initial trust and perceived risk in the context of C2C e-commerce have not received more attention. In literature, initial trust has 2 types of relationships namely, "perceived risk and initial trust are reused as independent variables" by Verhagen et al. (2006) and "the relationship between perceived risk and trust is reciprocal" by Chang and Chen (2008).

3. Price Dispersion
According to Kotler and Armstrong (2012), there is two definitions regarding price. First, if the price is narrowly defined on the amount of money spent on a product or service. Second, if the price is broadly defined as the amount of value exchanged by consumers to own and use a product or service that allows a reasonable profit. The basis of marketing tools is the price, and the price value of a product or service can be measured in terms of payment (Rajput et al. 2012). One variable in the price dimension is the price dispersion. Price dispersion is defined as variations or differences in prices on products that have the same characteristics (Rajput et al. 2012). At present, the price dispersion context is divided into 4 types namely price comparison in offline and online, price differences online, sources that cause price differences, and the impact of price differences (Puspitasari 2018). In e-commerce today, information about price differences from one store to another can be known more easily and quickly because it can be accessed online without having to go to the physical store directly (Petrescu 2011). In the field of marketing, price dispersion is influenced by several factors such as reviews, recommendations, and store reputation (Rajput et al. 2012). In addition to these three factors, online fraud can also make price distribution abnormal (Biswas and Burman 2009).
4. E-WOM

Electronic word of mouth (WOM) is an important tool in the field of trade, and this facility is very influential for business if it is located in a community (Zhang et al. 2013). Today's internet or web technology has greatly influenced social perception because consumers can easily share their experiences, knowledge, and information. Then, consumers can also participate in a forum and community and are allowed to leave their recommendations or suggestions regarding a product or service in a note intended for other customers (Kozinets et al. 2010). Many studies suggest that online communication or E-WOM has an important role in the formation of consumer attitudes (Hajii 2013). In this case, the content of E-WOM is textual and visual information provided by customers through social media. Positive valence information is defined as a declaration that is positively motivated in the interests of consumer purchase intentions and negative valence consists of negative declarations (Yang et al. 2019). E-WOM about products or services can be positive or negative as consumers can describe the experiences, they got (Hajii 2019). There is a fact that negative information about a product's failure is more important than positive information about positive experiences felt by consumers (Kim and Peterson 2017). Other than that, in a study it was said that consumers tend to write positive reviews because they are more general and polite (Liu and Kang 2017).

5. Customer Value

Schiffman and Kanuk (2004) define customer value as a comparison of the benefits obtained by consumers (economic, functional, psychological) against the sources used to obtain it (money, time, energy) and psychological in obtaining its benefits (reliability, durability, performance and resale value). In addition, customer value can also be defined as the relationship between self-concept of consumers and product users compared psychologically (Susanty et al. 2018) There are several variables in customer value, one of which is perceived value. Koupa et al. (2015) defines this variable as a person's perception in providing an assessment of the function or usefulness of the product based on the benefits and advantages obtained from the sacrifice made in obtaining the goods or services. Yang & Petterson (2004) argues that the perceived value is the comparison between the benefits obtained by consumers from the use of products with the benefits obtained by producers from the production process of products. Another opinion states that perceived value is a gap between consumer evaluations of all expected benefits, all costs incurred and alternatives that are considered (Yang and Petterson 2004).

3. Research Hypothesis

The hypothesis of this study can be seen as the following explanation.

1. Perceived Risk to Initial Trust, Perceived Value, and Purchase Intention

Perceived Risk is the possibility of a consumer experiencing subjective losses when he wants to get the achieved results (Kotler and Keller 2016). A study found that perceived risk influences the attitudes and behavior of consumer trust in general (Wu et al. 2015). Then in a study conducted by Malaquias and Hwang (2016), it got results that perceived risk has a negative impact on trust. This can be strengthened by the many previous studies that support the negative influence of perceived risk on trust (Puspitasari et al. 2018; Walsh et al 2018). Therefore, this study proposes the following hypothesis.

\[ H1a: \text{Perceived risk has a significant negative influence on initial trust.} \]

In general, perceived risk has an influence on consumer attitudes and behavior when making transactions (Wu et al. 2015). Offer given by the seller to consumers related to something high risk is not necessarily able to convince consumers that they will get the utility and benefits in accordance as expected (Malaquias and Hwang 2016). The customer itself is more concerned about the risks obtained rather than the benefits to be gained (Hunt et al. 2013). Then according to the results of Wu et al. (2015) it is known that consumers are more concerned with the financial risks that will be experienced rather than the benefits that will be obtained later. Thus, it can be concluded that the risk has a negative impact on the perceived value/benefit and this has been supported in previous studies (Puspitasari et al. 2018; Sfenrianto et al. 2018; Keh and Pang 2019; Zhang et al. 2017). Therefore, this study proposes the following hypothesis.

\[ H1b: \text{Perceived risk has a significant negative influence on perceived value.} \]

There is a statement that the perceived risk is higher in monetary transactions through a platform through online shopping (Keh et al. 2019). Perceived risk in an online transaction has been studied in various studies, especially in the field of e-commerce (Farivar et al. 2017; Khare et al. 2012). Online transactions face more possibilities for high risk compared to offline transactions because consumers often worry about privacy information or account hacking (Nepomuceno et al. 2014). Concerns about privacy risks are also discussed by Dillahunty and Malone.
4. Price Dispersion to Perceived Risk and Perceived Value

Price dispersion or price distribution also reduces the level of transactions (Puspitasari et al. 2018). Buyers feel suspicious of products sold that have prices far below normal. For some products, prices that are lower than normal are considered as characteristics of fraud, low quality, poor warranty, and so on (Petrescu 2011). The low quality of the product also causes some risks such as not functioning and this is included in the category of performance risk, our connections may blame us for their useless purchase (social risk), the length of time to replace damaged products with new products (time risk), and lastly if there is electricity leakage, especially for electronic goods (physical risk) (Puspitasari et al. 2018). Cases of transaction risk when buying products at high or low prices have been reported in many studies (Puspitasari 2018; Biswas and Burman 2009). Biswas and Burman (2009) said that buyers will spend more time in searching for goods when there is a high price dispersion. This is done by buyers to find products that match their expectations (Wang and Herrando 2019). Then in the previous study it was known that the influence of price dispersion with perceived value has a positive relationship (Wang and Herrando 2019). Previous studies have found a positive impact of price dispersion on search intentions (Petrescu 2011). However, the relationship has an impact on the amount of time spent during the transaction process, increasing transaction costs and decreasing the value of a product (Wang and Herrando 2019). Then in a study conducted by Wu et al. (2015) and Walsh et al. (2018), he argues that price dispersion must have a negative influence on perceived value. Therefore, this study proposes the following hypothesis.

\[ H4a: \text{Price dispersion has a significant positive influence on perceived risk.} \]
\[ H4b: \text{Price dispersion has a significant negative influence on perceived value.} \]

3. Price Dispersion to Perceived Risk and Perceived Value

Trust in online trading sites is an important construction of this research model. There is a fact, where a store's ranking, discussion forums, and suggestions on where to buy and sell online and social media affect consumers' trust in the online store (Curtis et al. 2011). Consumers assume that the source of information is the most important thing in forming trust (Guo et al. 2011). Qasim and Abu-Shanab (2015) argue that advice from a community forum is important for consumers who lack experience in online transactions because it can build trust. Hajli (2019) said that when there is trust in e-commerce platforms, both e-marketplaces, and classified ads, there will be impact that can be positive or negative on content that has been created by users/consumers before. In a study conducted by Wang and Herrando (2019) the results show that trust in e-commerce platforms (e-marketplace and classified ads) will encourage consumers to interact positively with fellow discussion forum members and subsequently will have a positive influence on positive valence and will have a negative influence on negative valence. Therefore, this study proposes the following hypothesis.

\[ H3a: \text{Initial trust has a significant positive influence on content.} \]
\[ H3b: \text{Initial trust has a significant positive influence on positive valence.} \]
\[ H3c: \text{Initial trust has a significant negative influence on negative valence.} \]

2. Initial Trust to Perceived Value, E-WOM variables, and Purchase Intention

Trust is described as the desire of one party to be vulnerable to the actions of another party (See-To and Ho 2016). Trust is a significant predictor of behavioural intentions (Dillahunt and Malone 2015). After the initial trust is built, buyers tend to spend less effort to make transactions with sellers (Pipitwanichakarn and Wongtada 2019). Kim and Peterson (2017) states that trust has a positive relationship with perceived value. This positive relationship has been supported in various studies (Kim et al. 2012; Kim and Peterson 2017). Then, trust is also an important construct in purchase intention (Chen and Chang 2012). Because without the trust of buyers and sellers, online transactions cannot be started (Anderson and Agarwal 2010). Curtis et al. (2011) also stated that trust positively influences transaction intentions. Therefore, this study proposes the following hypothesis.

\[ H2a: \text{Initial trust has a significant positive influence on perceived value.} \]
\[ H2b: \text{Initial trust has a significant positive influence on purchase intention.} \]

Electronic word of mouth (E-WOM) in online communities is another important tool of commerce, and it can be significant for businesses (Zhang et al. 2013). The decision-making process carried out by e-commerce consumers both on the e-marketplace platform or social commerce always involves social interaction between individuals.
(Cheung et al. 2014). This is confirmed by the statement of Hajli et al. (2019) that the interaction will produce an important content for users when doing through buying and selling online. Content that influences purchase intentions also varies from product reviews, store ratings, suggestions from previous users, and others (Amblee and Bui 2011). A content that is formed can be negative or positive valence (Yang et al. 2016). A high percentage on positive valence can trigger consumers to increase purchase intentions, and decrease consumers' buying intentions if the percentage of negative valence is high (Sfenrianto et al. 2018). Therefore, this study proposes the following hypothesis.

\[ H5a: \text{Content has a significant positive influence on purchase intention.} \]
\[ H5b: \text{Positive valence has a significant positive influence on purchase intention.} \]
\[ H5c: \text{Negative valence has a significant negative influence on purchase intention.} \]

5. Perceived Value to Purchase Intention

Fang et al. (2016) assume that perceived value is an important aspect that drives someone in online transaction behaviour. Perceived value stems from consumer satisfaction with experience in online transactions (Sullivan and Kim 2018). Perceived value is described as the benefits a person gets from their online transaction processes such as product usability and satisfaction as well as the losses he receives such as financial losses, price ambiguity, searching for difficult items and so on in online transactions (Kim et al. 2017). The amount of profit that will be obtained by the buyer will further strengthen the intention to transact online (Wu et al. 2015). The relationship between perceived value and Purchase Intension has been confirmed in previous studies (Kim et al. 2011; Chai et al. 2015). Therefore, this study proposes the following hypothesis:

\[ H6: \text{Perceived value has a significant positive influence on purchase intention.} \]

Based on those hypotheses, the conceptual model can be seen in the Figure 1. This model can also be seen as the combination of two previous models, namely Wu et al. (2015) and Hajli (2018).

![Figure 1. The conceptual model.](image-url)

4. Conclusion

After reviewing some literature related to transaction intentions, it can be concluded that risk factors, trust, and word of mouth are the most impacting factors on consumers' buying intentions. As studies that examine factors such as
price and perceived value are still few, this study will therefore further investigate about these two factors. This research has determined several hypotheses that will be tested later. Of all these hypotheses, the most researched relationship in previous studies is risk and trust to purchase intention. The hypothesis testing will be carried out using the Structural Equation Modelling (SEM) method which is processed using AMOS software. AMOS was chosen because there were enough respondents to retrieve, i.e. more than 200 data. Respondents from this study consisted of two groups, e-marketplace, and classified ads users. For respondents, there will be no restrictions on what type of platform they use. This was done so that this research obtained heterogeneous data. The results of the data processing will be analysed to find out the different impact of each variable on e-marketplace and classified ads. The analysis aims to illustrate whether the intention to buy consumers in both C2C e-commerce is based on the same factors or not.

References


