

The Roles of Electronic Word of Mouth and Information Searching in the Promotion of a New E-Commerce Strategy: A Case of Online Group Buying in Indonesia

Achmad Nizar Hidayanto¹, Mutia Ovirza², Pinkie Anggia³, Nur Fitriah Ayuning Budi⁴, and Kongkiti Phusavat⁵

¹ Universitas Indonesia, Faculty of Computer Science, Depok, Indonesia, nizar@cs.ui.ac.id

² Universitas Indonesia, Faculty of Computer Science, Depok, Indonesia, mutia.ovirza@ui.ac.id

³ Universitas Indonesia, Faculty of Computer Science, Depok, Indonesia, pinkie.anggia@ui.ac.id

⁴ Universitas Indonesia, Faculty of Computer Science, Depok, Indonesia, nurfitriah@cs.ui.ac.id

⁵ Kasetsart University, Center for Advanced Studies in Industrial Technology, Bangkok, Thailand, fengkkp@ku.ac.th

Received 31 January 2016; received in revised form 1 April 2017; accepted 27 May 2017

Abstract

The purpose of this study is to examine the determinants of customers' intention to engage in online group buying, which involves electronic word of mouth, information searching, trust in the vendor, trust in the product, monetary value, hedonic value, and utilitarian value. The research model was analyzed using partial least squares of 196 respondents who had previously completed an online group buying transaction. The data were processed using SmartPLS 2.0 M3 software. The study found that electronic word of mouth significantly influenced information searching and trust (in both the vendor and the product). Further, information searching only significantly influenced trust in the product, although it had a strong correlation with all the types of perceived value (monetary value, hedonic value, and utilitarian value). In conclusion, we believe that trust in the vendor, monetary value, and hedonic value have a significant impact on customers' intention to engage in online group buying in Indonesia.

Keywords: Electronic word of mouth, Information searching, Trust, Perceived value, Online group buying, Indonesia, E-commerce, Consumer behavior

1 Introduction

The Internet represents an information technology development that has had a significant impact on both society and various aspects of contemporary human life, including communication, business, entertainment, and social activities [1]. In addition to serving as a source of information, the Internet has become a popular channel for conducting commercial business. In relation to this commercial opportunity, Indonesia is one of many developed countries to feel the impact of, and benefit from, the rapid development of the Internet.

The significant opportunity presented by Internet technology has driven the emergence of e-commerce sites, which deal in products such as fashion, music, food, electronics, and travel. The increasing number of e-commerce sites has led to fierce competition among e-commerce businesses as they try to attract new customers. Accordingly, such businesses should implement innovations and strategies that make them appear different to their competitors in order to gain new customers and retain existing customers. One of the most common strategies in this regard is to provide discounts on certain products or offer an appealing promotion.

Online group buying is a type of e-tailing or business to business (B2C) e-commerce [2] that is typically believed by customers to offer low prices for products or services. As it also provides information about daily changes in the prices of various goods and services, online group buying has attracted both practitioners' and academics' attention due to representing a new marketing strategy [3]. According to Shiau and Luo [1], the concept of online group buying is applied when people purchase a product or service collectively so as to secure a cheaper price when the number of transactions or buyers has reached a given target. In other words, the transaction will only be processed if the number of buyers (or transactions) reaches a predetermined minimum number. This strategy allows sellers to lower their prices to attract customers, as well as allowing customers to purchase the desired goods at a cheaper price [4]. There are two types of online group buying, namely fixed-duration group buying and fixed-price group buying [4]. Fixed-duration group buying refers to when the participants must complete the auction within a fixed period of time, while fixed-price group buying occurs if the number of buyers who participate in the group buying process meets the predetermined target [4]. The popularity of online group buying is increasing and it has become a trend among communities in Europe, America, and Asia, including Indonesia. Some examples of the online group buying sites available in Indonesia are Groupon.co.id, LivingSocial.co.id, eVoucher.co.id, and OgahRugi.com [5].

It is common for customers to have many considerations in mind when they wish to buy a particular product. Similarly, in online group buying schemes, customers must take into account various considerations when deciding whether to engage in online group buying or not, for instance, determining which site is the best, determining what products to buy, price-related considerations, and the persuasiveness of discounts. Several previous studies have found that both the price and product characteristics are important factors that affect customers' decisions regarding whether to purchase collectively, [4], [6], [10]. A study by Shiau and Luo [1] found that trust is the main factor that affects customers' buying intention and their satisfaction when engaging in online group buying. Furthermore, Shiau and Yeh [11] conducted a case study on the use of Groupon in Taiwan and they found that the richness of information and the ease of navigation also affect the perceived value and customers' habits when shopping online. Nonetheless, the factors that influence customers to participate in online group buying have evolved into a wide range of dimensions concerning the development of communication networks and the online environment [1]. Ultimately, trends and the particular characteristics of the community in each country will vary and influence customers' buying behavior.

In previous studies, trust was considered to be an important factor that drives customers' intention to purchase and remain loyal to a company [12]. Other studies have shown that trust, recommendations, and information searching are all seen as important determinants of customers' buying behavior, especially for new business models, [7], [13]. Information searching allows customers to increase their knowledge regarding new products or innovations [13], which might serve to alter their attitudes. Examining the impact of electronic word of mouth (eWOM) on information searching is important, since potential customers might not be aware of the credibility of the eWOM's sender [14]. Thus, adopting a different approach to previous studies, this study incorporates eWOM, information searching, trust, and perceived value to investigate the antecedents of customers' intention to engage in online group buying in Indonesia. Further, this study seeks to explain the roles of eWOM and information searching in driving the success of online group buying as a new e-commerce strategy in Indonesia.

2 Theoretical Foundation

By participating in online group buying, customers can gain at least two benefits, namely the offer of a cheaper product price and information about the quality of both the product and vendor, prior to completing the transaction. The information regarding the quality of the product and vendor can be acquired by customers because the Internet facilitates electronic word of mouth and information searching. Most people will engage in information searching in relation to particular eWOM, since there is a lot of anonymous information available on the Internet and it is not always clear which information can be trusted. This activity is therefore vital for customers because the information they obtain will form the basis of their intention to continuously purchase certain products [14]. In addition, performing

information searching and accessing eWOM are likely to increase customers' perceived value in relation to online group buying activities. Accordingly, in this section, we elaborate the variables that influence customers' intention to participate in online group buying, including electronic word of mouth, information searching, trust, and perceived value.

2.1 Electronic Word of Mouth

According to previous studies, the concept of word of mouth (WOM) can be explained in several ways, although they all indicate it to represent a form of communication. Wien and Olsen [15] define WOM as *a general consumer tendency to produce product- and brand-related communication that can be observed across categories and contexts*. Similarly, Harrison-Walker [16] explains traditional WOM to be *informal, person-to-person communication between a perceived noncommercial communicator and a receiver regarding a brand, a product, an organization, or a service*. Further, Wang and Yu [17] suggest that *WOM information is an indispensable experienced source created by individuals or marketers, and is then diffused by consumers or marketers to other consumers*. In this context, information provided via WOM will help customers to evaluate a service or a product prior to its consumption, and it will also shape expectations of that service or product [17].

The rise of Internet technology has allowed WOM theory to evolve from the concept of physical or face-to-face communication into electronic word of mouth that is enabled by the Internet [18]. Many studies refer to Hennig-Thurau et al. [19] when defining eWOM as any positive or negative statement made by potential, actual, or former customers about a product or a company via the Internet. By means of eWOM, customers share their opinions and knowledge regarding items or services they have purchased on platforms such as social media, blogs, online forums, online reviews, and chat sites [18]. In the context of e-commerce, eWOM can produce WOM information with the features of recommendations and referrals, ratings and reviews, and forums and communities [20].

The study by Cheung and Thadani [14] suggests that eWOM differs from WOM in several characteristics. First, eWOM has unprecedented scalability and speed of diffusion [14]. In this way, eWOM communications involve multi-directional exchanges of information in an asynchronous mode, and anyone who can use the Internet can generate and utilize eWOM. Second, and different to traditional WOM, eWOM communications are more persistent and accessible [14]. Most of the text-based information presented on the Internet is archived and is thus available for an indefinite period of time. Third, eWOM communications are more measurable than traditional WOM [14]. The presentation format, quantity, and persistence of eWOM render such communications more observable. Lastly, if traditional WOM enables us to discover the quality and credibility of the information sender, then, on the contrary, the electronic nature of eWOM in most applications eliminates the receiver's ability to judge the credibility of the sender and his or her message [14].

2.2 Information Searching

Information searching or information retrieval is the process by which a person seeks information about a particular problem, situation, or artifact based on his/her own initiative [13]. Through their inquiries, customers can feel closer to technological innovations and they can gain important knowledge related to those innovations [13]. The purpose behind conducting information searching is different for each individual, for example, people might seek to collect information related to the product they want to buy, or they might just look around without having any particular intention in mind [21]. Currently, almost all customers look for information via the Internet before deciding to engage in a transaction. This activity might include searching for further information provided by the vendor or owner of an e-commerce business, as well as looking for reviews or recommendations written by other customers [22]. For example, potential customers might validate whether an online store really exists (i.e., ensure it is not a fake online store), as well as checking whether the online group buying (OGB) vendor offers the cheapest price by comparing it to other e-commerce or OGB sites. Further, customers might also read reviews by previous customers to make sure there are no defects in the product or service they wish to purchase. Finally, after they have made all this extra effort, customers can assess the quality of the eWOM they have received and judge the credibility of the sender and his or her message. This explains clearly why eWOM is different to traditional WOM. However, the development of the Internet has facilitated the way people perform information searching activities. Thanks to Google, they can search for information not only on a particular e-commerce website, but also anywhere else, whether it be online forums, social media, news sites, and so on.

2.3 Trust

Lu, Zeng, & Fan [23] suggest that when people want to participate in e-commerce activities, they have to anticipate a high degree of risk and uncertainty related to the opportunistic behavior of the other parties, which in this context refers to e-commerce providers. These negative perceptions may cause potential customers to hesitate to engage in online transactions [23]. In order to anticipate this, trust appears to be an effective social mechanism believed to reduce any complexity and vulnerability that potential customers feel in relation to e-commerce [24], [26]. Indeed, trust is known to be a prerequisite of social behavior, especially with regard to important decision-making processes [27]. It is also an important predictor of risk-taking within a relationship, which in the context of online shopping means taking the risk of buying from an online store [22]. Eventually, trust can increase an individual's willingness to

be vulnerable to the risk of opportunistic behavior on the part of another, reduce expectations of opportunistic behavior, and more generally, reduce risk perceptions [23].

In the context of e-commerce, trust can be applied to both the vendor and the product. Vendor trust (i.e., trust in the vendor) refers to customers' trust in the e-commerce service provider [28]. In the context of this study, the service providers are those service providers responsible for online group buying. In business-to-consumer e-commerce, trust in the vendor plays an important role in customers' decisions to complete a transaction [29]. To build customers' trust, vendors must be able to show ability, integrity, predictability, security, and privacy assurances in relation to the customer service they provide. In addition, reputation and the vendor's brand are also considered to be determinants of customer trust [29]. Customers will try to seek information related to the reputation of an online vendor, while the information they receive will affect their assessment of trust and their perceptions of risk. Thus, it will influence their intention to engage in transactions with the vendor [7]. Further, the notion of product trust refers to customers' trust in the products offered. In this research study, the product trust directly refers to trust in the merchants who offer products on the online group buying platform.

2.4 Perceived Value

Zeithaml [30] explains that perceived value is an overall assessment of the usefulness of a product or service based on the customer's perception of what is accepted (i.e., gain or benefit received) and what is given (i.e., effort or sacrifices). According to this definition, the perceived value is shaped by two main factors, namely the benefits received and the sacrifice made by a customer [31]. The sacrifices made in this context can be financial or other things, such as time, energy, or effort [30], while the potential benefits received include enjoyment, satisfaction, happiness, and financial gain. Undeniably, the perceived value plays an important role in predicting consumers' preferences and willingness to conduct a transaction in the future [30].

The perceived value discussed in this research study includes hedonic value, monetary value, and utilitarian value. Hedonic value refers to a pleasant shopping experience as perceived by the customer [32]. Further, hedonic value can explain customers' behavior when seeking happiness, fantasy, resurrection, and enjoyment [21]. Hedonic customers love to shop because they enjoy the shopping process itself, not because it can serve to achieve a goal or complete a mission [21]. Conversely, the characteristics of utilitarian value are applied for customers who are critical, rational, effective, efficient, and result-oriented [32]. A customer with a focus on utilitarian value starts from a mission or task perspective, and the benefits received will depend on whether the mission is completed or not, or whether the mission is completed efficiently through the particular process [21]. A previous study suggested that utilitarian customers will be more motivated to shop online when the website they visit is informative, convenient, and efficient [32]. Another concept of value that is relevant in this study is monetary value. Monetary value is a form of perceived value that can be measured by means of the financial benefits and costs incurred in the transaction or through the use of goods and services [33]. In other words, customers will be more encouraged to complete a purchase transaction if it can save them money due to involving discounts or rebates.

3 Hypotheses Development

The model proposed in this research examining the relationship among the eWOM, information searching, trust, perceived value, and intention to perform online group buying. First, we will posit our hypothesis regarding the relationship between e-WOM and information searching. Second, we will discuss the relationship between eWOM and trust. Next, we will provide our justification in regards the relationship between information searching and trust. Fourth, we will provide the justification of the relationship between information searching and perceived value. In the last two sub-sections, we will discuss the impact of trust and information searching on group buying intention, respectively.

3.1 Influence of eWOM on Information Searching

The Internet allows everyone to share their experiences of product purchasing, including product information, product quality, the services of the vendor, and so on. However, the nature of eWOM has eliminated the receiver's ability to judge the credibility of the sender and his or her message [14]. Potential customers will likely not know the person who provides the eWOM on the Internet, especially on e-commerce websites. In this situation, the receiver of the eWOM will usually evaluate the eWOM according to attributes such as quality, authenticity, authority, and attractiveness before accepting it [34]. In this way, eWOM will influence information searching in order to validate the communication received.

The potential customer could receive positive or negative eWOM. Positive eWOM will portray the good aspects of customers' experiences, while negative eWOM related the bad things that customers' experience. In the context of negative eWOM, the eWOM recipient will first evaluate it by considering whether the communication will enhance his/her self-worth, avoid risk, or produce negativity bias before accepting the eWOM [35]. In such an uncertain situation, when someone sees a review of a product and feels interested and also curious about it, then they will likely seek more information about it. This is supported by the study of Gupta and Harris [36], who found that eWOM

has an influence on people's motivation to perform information searching. Information searching can be conducted to reinforce and prove the truth of eWOM and the associated recommendations, as well as serving as a point of further consideration for customers when they are deciding whether or not to complete transactions. Thus, we propose the following hypothesis:

H1: eWOM about group buying significantly influences information searching.

3.2 Influence of eWOM on Trust

According to Ku [7], eWOM is known as a powerful communication media and tool for helping with marketing activities and collecting information about customers and their purchasing experience. Through eWOM, the customer can describe all the positive or negative experiences related to a product or service. Based on this experience, the customer will then provide a recommendation to other customers. The better the recommendations given, the higher the trust generated in an e-commerce business [22]. The context of relevance to this study is e-commerce with online group buying strategies. According to the theory of Utz, Kerkhof, and van den Bos [22], if a customer receives a recommendation about people's experiences during e-commerce transactions, it will affect that customer's level of trust in the site or the seller. This happens because people tend to believe recommendations offered by those with more experience. The recommendation previously mentioned is a type of positive recommendation. Hence, it is necessary to discover whether received eWOM has a significant effect on trust in relation to online group buying. We determine trust using two definitions, namely vendor trust (i.e., level of customers' trust in the online group buying provider) and product trust (i.e., level of customers' trust in the products offered). These definitions are based on the understanding that online group buying business is not only composed of the service provider, but also the products sold by different merchants. Thus, we propose the following hypotheses:

H2a: eWOM significantly influences vendor trust.

H2b: eWOM significantly influences product trust.

3.3 Influence of Information Searching on Trust

Information searching allows customers to become more familiar with the terms they are looking for. In this context, the more product-related information they obtain, the more understanding they will have [13]. According to Martin and Lueg [37], by achieving this understanding, customers will be capable of evaluating and forming opinions and beliefs regarding such information. Therefore, we would like to investigate whether information searching has a significant influence on customers' trust in online group buying businesses. Similar to the previous explanation, we determine trust using two definitions, namely vendor trust (i.e., level of customers' trust in the online group buying provider) and product trust (i.e., level of customers' trust in the products offered). Finally, we propose the following hypotheses:

H3a: Information searching significantly influences vendor trust.

H3b: Information searching significantly influences product trust.

3.4 Influence of Information Searching on Perceived Value

Information searching enriches and clarifies all ambiguous information. By means of acquiring adequate and complete information, a clear description of a product can be obtained [11], so that customers can experience and feel the product-related value. For a customer, comparing information about a product is necessary before making the decision to complete a transaction [11]. Almost all customers are willing to engage in a transaction when they realize the value they will gain, or when the benefit they expect to receive exceeds the cost/sacrifices they expect to make. In the context of this study, customers' perceived value includes hedonic value, monetary value, and utilitarian value. A previous study found that the quality and quantity of good information can influence the perceived usefulness of online sites, as well as helping consumers to make the decision to conduct transactions efficiently [11]. Utilitarian value belongs to notion of perceived usefulness [11]. Chen and Tan [38] found that the wealth of information has a positive influence on the perceived usefulness of a store. Similarly, Shiau and Yeh [11] proved the wealth of information to be positively influential on the perceived utilitarian value.

As described previously, monetary value is associated with cost savings. However, according to To, Liao, and Lin [21], cost saving also falls within utilitarian value because it has a positive relationship with utilitarian customers' motivation. Further, Chandon, Wansink, and Laurent [39] also suggested that monetary savings contribute to utilitarian value. By engaging in information searching in relation to a particular product, utilitarian customers can take advantage of the cheaper price offered by an online group buying business. Thus, it can be assumed that all the information regarding a product on an online group buying site could influence customers' utilitarian value, as well as affecting their monetary value.

The convenience of Internet browsing has led to easy access to information anywhere and at any time, which has served to facilitate information searching. In addition, the information available on the online site itself that provides complete and clear product information, for example, text and images, will increase consumers' enjoyment and reduce the uncertainty they feel during the searching process [11]. Therefore, consumers become more interested and enjoy their shopping experience more [11]. Wang, Zhao, and Li [40] conclude that hedonic value focuses on emotional responses, including pleasure and enjoyment, while research by Oh et al. [41] found that abundant information has a positive effect on perceived playfulness. In this case, hedonic value belongs to the notion of perceived playfulness. Shiau and Yeh [11] also found that a wealth of information will affect the hedonic value. Thus, we propose the following hypotheses:

H4a: Information searching significantly influences monetary value.

H4b: Information searching significantly influences hedonic value.

H4c: Information searching significantly influences utilitarian value.

3.5 Influence on Trust on Intention to Engage in Online Group Buying

When engaging in online shopping, customers face certain risks related to uncertainty, piracy, fraud, and so on. Trust has been suggested as a potential means of compensating for this problem. By relying on trust, people act on their belief in the characteristics of others [42]. According to Mayer, Davis, and Schoorman [42], there are three characteristics that affect people's trust in other things, namely ability, wisdom, and integrity. In other words, if a website has proven ability, wisdom, and integrity, then the trust level of visitors regarding that website will increase. In the context of e-commerce, with an increasing level of trust, customers tend to be less afraid of the risks that might arise, which strengthens customers' intention to complete the transactions [43].

In an online environment, customers experience high uncertainty, limited information, and limited cognitive resources when examining the products offered directly. In response to this situation, Luhmann [44] concludes that trust is an effective factor for reducing the uncertainty and complexity of online transactions, as well as creating a positive intention for customers to complete the transactions. Similarly, Shiau and Chau [45] found that trust has a positive effect on customers' intention to make an online transaction. Several studies have shown a direct relationship between trust and customers' intention to complete online transactions, [25], [43], [46] Shiau and Luo [1] also found that customers' satisfaction and trust are the strongest factors affecting their intention to engage in online group buying. With reference to the previous studies that have highlighted how trust affects customers' intention to complete online transactions, we would like to analyze the determinants of trust that influenced customers' decision to conduct online transactions, particularly online group buying, as well as determine what kind of trust would have a greater influence. In this study, we examined two trust factors, namely trust in the vendor and trust in the product. Thus, we propose the following hypotheses:

H5a: Vendor trust significantly influences the intention to engage in online group buying.

H5b: Product trust significantly influences the intention to engage in online group buying.

3.6 Influence of Perceived Value on Intention to Engage in Online Group Buying

When the perceived value is defined as the customers' overall evaluation of the relative value of a particular product as compared to the alternative products available, it reflects the net profit obtained by the customers as a result of their consumption behavior, which will be used as an indicator of their desire to conduct a transaction [47]. The perceived value becomes crucial for online shopping activity because it motivates customers to visit an e-commerce site and it affects their intention to continuously make transactions [32]. Customers' perceptions as reflected in the perceived utilitarian and hedonic value are the main component of customers' satisfaction and loyalty, with a satisfied customer being more likely make a transaction [32].

Several previous studies have proved the positive effect of perceived value on customers' intention to complete a transaction. Chen and Dubinsky [47] found that perceived value has a significant positive correlation with the desire to conduct e-commerce transactions, while Shiau and Yeh [11] found that perceived value and perceived hedonic value positively influence the desire to participate in online group buying.

In this study, we classify the types of perceived value as monetary value, utilitarian value, and hedonic value. By using these classifications, we investigate the effect of each type of perceived value on customers' intention to engage in online group buying. This study aims to reveal which perceived value has the most influence on customers' intention to complete a transaction in an online group buying scheme (i.e., the value of pleasure, needs, or an affordable price). Hence, we propose the following hypotheses:

H6a: Monetary value significantly influences the intention to engage in online group buying.

H6b: Hedonic value significantly influences the intention to engage in online group buying.

H6c: Utilitarian value significantly influences the intention to engage in online group buying.

The proposed research model is presented in Figure 1.

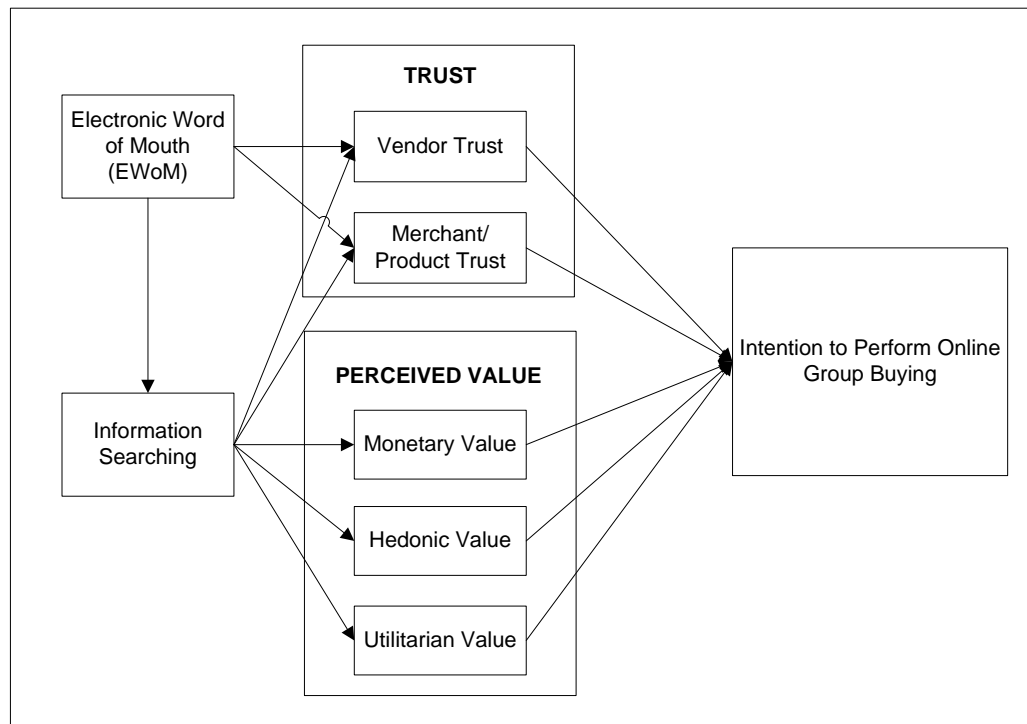


Figure 1: Research model and hypotheses

4 Methodology

This research used a quantitative approach that relies on the numerical data. After we collected the data using an online questionnaire, we processed these data using the structural equation modeling method with the help of SmartPLS 2.0 M3 software. This section will explain the data collection procedure, as well as the instrument used in this research.

4.1 Data Collection Procedure

Data were collected by distributing questionnaires to people who had previously completed a transaction on an online group buying site. The questionnaires were distributed online by disseminating links through social networking sites such as Facebook and Twitter, as well as large Indonesian online shopping sites such as Kaskus and FemaleDaily. They were also distributed via mailing lists and chat messenger. The link directly connected the respondents on a Google Docs form that contained several questions. The answers given by the respondents were automatically saved on the drivers provided by Google Docs. However, redundant data might be obtained when collecting data through Google Docs. Therefore, we carefully reviewed the collected data throughout the process. The questionnaires were distributed in less than two months (April to May 2015), with 196 respondents ultimately being reached. This number of respondents satisfied the minimum sample size that must be achieved. This target was set according to the rules of structural equation modeling (SEM) as between 100 and 150 samples [48]. Additionally, Wijanto [49] states that the ideal sample size is five times higher than the number of indicators. The number of indicators in the study questionnaire was 34, so the ideal sample size was 170 or more. Hence, a sample size of 196 respondents was sufficient to continue on to the data processing stage.

4.2 Research Instrument

The instrument used in this study consists of two parts. The first part contains the respondents' demographics, including their age, gender, education, and the habits of internet users and online group buyers. The second part contains statements derived from the variables that make up the research model, including electronic word of mouth, information searching, vendor trust, merchant or product trust, hedonic value, monetary value, utilitarian value, and intention to perform online group buying. The respondents were asked to state their level of agreement with the

available statements by using a Likert scale ranging from 1 to 5, where 1 indicates strongly disagree and 5 indicates strongly agree. Table 1 presents the instrument used in this study.

Table 1: Research instrument

Code	Indicator	References
1. Electronic word of mouth		[50]
EW1	Recommendations regarding online group buying are useful to me.	
EW2	Recommendations regarding online group buying influence my choice when I am performing online shopping.	
EW3	Recommendations regarding online group buying would increase my interest in finding out more.	
EW4	I will make a decision to make a purchase based on a recommendation I received.	
2. Information searching		[13], [51]
IS1	I use the Internet to seek out a variety of topics that match my interest.	
IS2	I took the initiative to conduct a search for information with the aim of increasing my knowledge of online group buying.	
IS3	I took the initiative to conduct a search for information with the aim of improving my ability to make a purchase using online group buying.	
IS4	I took the initiative in seeking out the various sources of information related to online group buying.	
3. Vendor trust		[52]
VT1	Online group buying service providers can be trusted.	
VT2	Online group buying service providers attempt to fulfill their promises and commitment to customers.	
VT3	I trust the service providers of online group buying because they make me interested in making the transactions.	
VT4	I do not need to worry about the online service providers of group buying.	
VT5	The attitudes and habits of online group buying service providers meet my expectations.	
4. Merchant or product trust		[7]
PT1	I feel that the products offered in online group buying fulfill their functions.	
PT2	I feel that the products offered have a positive meaning.	
PT3	In general, I think the products offered are good.	
5. Monetary value		[53], [54]
MV1	I am happy to know that I would save money because of the price of online group buying.	
MV2	In my opinion, price is the most important factor when making transactions via online group buying.	
MV3	I participated in online group buying because the price is affordable.	
MV4	I could save money by buying from online group buying websites.	
MV5	I think the price of products on online group buying websites is affordable for buyers, so completing a purchase via online group buying is the right choice.	
6. Hedonic value		[32], [53], [55], [56]
HV1	The benefits I get from online group buying give me pleasure.	
HV2	I feel excited when choosing the goods offered on online group buying websites.	
HV3	When I am in a bad mood, online group buying improves my mood.	
HV4	When doing online group buying, I feel a sensation of happiness when searching for products.	
HV5	In my opinion, online group buying is a pleasant way to spend leisure time.	
7. Utilitarian value		[32]
UV1	I tend to only visit the online group buying websites when there is something I want to buy.	
UV2	When performing online group buying, I tend to only look at the products I want and need.	
UV3	Online group buying makes the buying process quicker.	
UV4	Online group buying makes the buying process easier.	
8. Intention to engage in online group buying		[1]
IO1	I intend to do online group buying.	
IO2	My intention to do online group buying is very high.	
IO3	I have an intention and desire to do online group buying in the future.	
IO4	I intend to choose an online group buying site as a channel for making purchases in the future.	

5 Results and Discussion

This section will elaborate the results of our study with regard to the factors that influence customers to engage in online group buying.

5.1 Respondent Demographics

The demographic data concerning the respondents in this study include their age, sex, education, region of origin, duration of internet usage per day, frequency of performing online group buying per year, and sources of information regarding online group buying. According to Table 2, the customers of online group buying websites are mostly females aged between 19 and 22 years. Further, almost half of respondents purchase a product from an online group buying website less than twice in a year. The respondents make use of social media to obtain information related to the products sold and promotions offered on online group buying sites.

Table 2: Respondent demographics

Age		Group buying frequency/year	
<19	2%	<3 times	45%
19-22	65%	4-6 times	37%
23-30	32%	7-9 times	10%
>30	1%	>10 times	8%
Sex		Information source	
Male	34%	Online forum	22%
Female	66%	Social media	60%
Site		Chat messenger	5%
Groupon	57%	Group buying website	49%
LivingSocial	19%	Email	1%
e-Voucher	5%	Friends	10%
Valadoo	2%	Others	2%
Others	17%		

5.2 Measurement Model Test

SmartPLS 2.0 M3 software was used to analyze our data. We followed a two-stage process by first assessing the measurement model and then the structural model according to the approach of Hair et al. [48]. The measurement model test was used to evaluate the reliability and validity of our research instrument, while the structural model test examines the research hypotheses and model fitness [57].

5.2.1 Evaluation of Convergent Validity

The evaluation of convergent validity relates to the principle that the indicators of a variable should have high correlation [57]. The convergent validity of a test can be examined by looking at the loading factor, which must be higher than 0.7, and the value of the average variance extracted (AVE), which must be higher than 0.5 [57]. Based on our first examination of the loading factor values, there are four indicators that have a value less than 0.7, namely EW4 (0.561325), VT5 (0.683036), UV1 (0.283679), and UV2 (0.256981). Chin [58] found that in the early stages of measurement, a loading factor value between 0.5 and 0.6 could be considered feasible [57]. Therefore, we do not exclude the indicators EW4 and VT5, since they can be considered sufficient to satisfy the validity test. However, UV1 and UV2 do not satisfy the validity test because they do not achieve the minimum cut-off value, which is higher than 0.5. Therefore, we eliminated UV1 and UV2 from our proposed research model. The final result of our convergent validity test is presented in Table 3. Based on the value of the loading factor and the AVE, it can be said that our instrument satisfies the convergent validity test.

5.2.2 Evaluation of Reliability

We performed the reliability test by examining the value of Cronbach's alpha, which must be higher than 0.7 or higher than the composite reliability value of 0.7 [57]. The list of Cronbach's alpha and composite reliability values can be seen in Table 3. From the table, it can be inferred that the entire value of the Cronbach's alpha latent variables is higher than 0.7, with a range from 0.771810 to 0.877938. Similarly, the entire value of the composite reliability latent variables is higher than 0.7, with a range from 0.854376 to 0.911435. Hence, it can be concluded that all the variables are reliable.

Table 3: Loading factor, AVE, communality, cronbach's alpha, and composite reliability values

Variable name	Indicator name	Loading factor value	AVE	Communality	CA	CR
EW	EW1	0.791675	0.60069	0.60069	0.77181	0.854376
	EW2	0.885149				
	EW3	0.823065				
	EW4	0.561325				
IS	IS1	0.740683	0.614286	0.614286	0.791718	0.864157
	IS2	0.786943				
	IS3	0.823352				
	IS4	0.781852				
VT	VT1	0.832058	0.608401	0.608401	0.837973	0.885143
	VT2	0.802668				
	VT3	0.859361				
	VT4	0.707367				
	VT5	0.683036				
UV	UV3	0.914808	0.831712	0.831712	0.797687	0.908125
	UV4	0.907861				
PT	PT1	0.844073	0.689568	0.689568	0.775381	0.86944
	PT2	0.847072				
	PT3	0.799197				
HV	HV1	0.749853	0.634722	0.634722	0.858361	0.896643
	HV2	0.823965				
	HV3	0.808418				
	HV4	0.828052				
	HV5	0.770194				
MV	MV1	0.815377	0.673657	0.673657	0.877938	0.911435
	MV2	0.742704				
	MV3	0.873015				
	MV4	0.851690				
	MV5	0.815050				
IO	IO1	0.817057	0.641558	0.641558	0.813165	0.87693
	IO2	0.704637				
	IO3	0.838951				
	IO4	0.835633				

5.2.3 Evaluation of Discriminant Validity

The discriminant validity relates to the principle that the indicators of a construct should have the highest correlation when compared to the other constructs [57]. Discriminant validity can be tested by comparing the square root of the AVE for each latent variable with the value of the correlation between the latent variables in the model [57]. The results of our calculation of the square root of the AVE and the correlation between the latent variables and the other variables can be seen in Table 4. The values in Table 4 show that each latent variable has the highest correlation with the latent variable itself. Additionally, the discriminant validity can also be tested by looking at the cross loading value, where an indicator is valid if it has the highest loading factor to the intended loading factor construct when compared to the other constructs [57]. The cross loading comparison results should indicate that each indicator has the highest loading factor value only at its intended constructs.

Table 4: Correlation between the variables

	EW	HV	IO	IS	MV	PT	UV	VT
EW	0.775041							
HV	0.398304	0.796694						
IO	0.449864	0.583614	0.800973					
IS	0.627705	0.468677	0.477188	0.78376				
MV	0.604434	0.468098	0.509735	0.46083	0.82077			
PT	0.420638	0.218501	0.390901	0.37867	0.49827	0.830402		
UV	0.312509	0.208209	0.339997	0.3819	0.32466	0.330151	0.911982	
VT	0.493276	0.298545	0.505364	0.40846	0.47291	0.486271	0.532219	0.780001

Numbers in bold (diagonal component) represent the value of the square root of the AVE.

Thus, it can be concluded that all the indicators in each of the latent variables are valid and exhibit no high correlation with the other latent variables.

5.3 Structural Model Test

After the evaluation of the measurement models had been completed, we performed an evaluation of the structural models. A structural model evaluation is performed by looking at the determination coefficient, path coefficient, and significance value (t-statistics). The determination coefficient is determined by looking at the R-squared value, which can be used to explain the influence of certain exogenous latent variables on the endogenous latent variables. According to Chin [58], the R-squared values of 0.67, 0.33, and 0.19 show a strong, moderate, and weak model, respectively. The R-squared results of each variable can be seen in Table 5. From the table, it can be inferred that the online group buying intention has a highest R-squared value at 0.48. This shows that a 48% variance in the online group buying intention is enough to have been moderately affected by the vendor trust, product trust, hedonic value, utilitarian value, and monetary value. Similarly, information searching had an R-squared value of 0.39, which reflects how a 39% variance in information searching is moderately influenced by eWOM. However, some of the endogenous variables showed a weak relationship with their exogenous variables, with values between 0.15 and 0.26.

Table 5: R-squared values

	R-squared
IS	0.39
VT	0.26
PT	0.20
MV	0.21
UV	0.15
HV	0.22
IO	0.48

A significance relationship assessment between the variables can be seen in the results of the path coefficient calculations using the bootstrapping algorithm, where the value of the t-statistics of each relationship between the variables must be greater than 1.96 [57]. If the t-statistics value is greater than 1.96, then the relationship between the variables is significant. From the results of the path coefficient evaluation presented in Table 6, it can be inferred that there are three insignificant relationships, whereas ten other relationships among the variables proved significant. The final model used in this study is presented in Figure 2.

Table 6: Hypothesis testing results

Hypothesis	Path	T-statistics (> 1.96)	Hypothesis is accepted/rejected?
H1	EW→IS	11.041832	Accepted
H2a	EW→VT	4.782996	Accepted
H2b	EW→PT	3.336021	Accepted
H3a	IS→VT	1.916939	Rejected
H3b	IS→PT	2.095137	Accepted
H4a	IS→MV	5.810883	Accepted
H4b	IS→HV	8.718686	Accepted
H4c	IS→UV	6.200292	Accepted
H5a	VT→IO	3.238700	Accepted
H5b	PT→IO	1.263637	Rejected
H6a	MV→IO	2.676101	Accepted
H6b	HV→IO	6.595831	Accepted
H6c	UV→IO	0.521587	Rejected

Table 6 shows that the EW (electronic word of mouth) and IS (information searching) variables have a more significant relationship than the other variables. There are three relationship variables that are not significant, namely the relationship between the IS (information searching) and VT (vendor trust) variables, the relationship between the PT (product trust) and IO (intention to engage in online group buying) variables, and the relationship between the UV (utilitarian value) and IO (intention to engage in online group buying) variables, since they have t-statistic values less than 1.96, that is, 1.916939, 0.521587, and 1.263637, respectively.

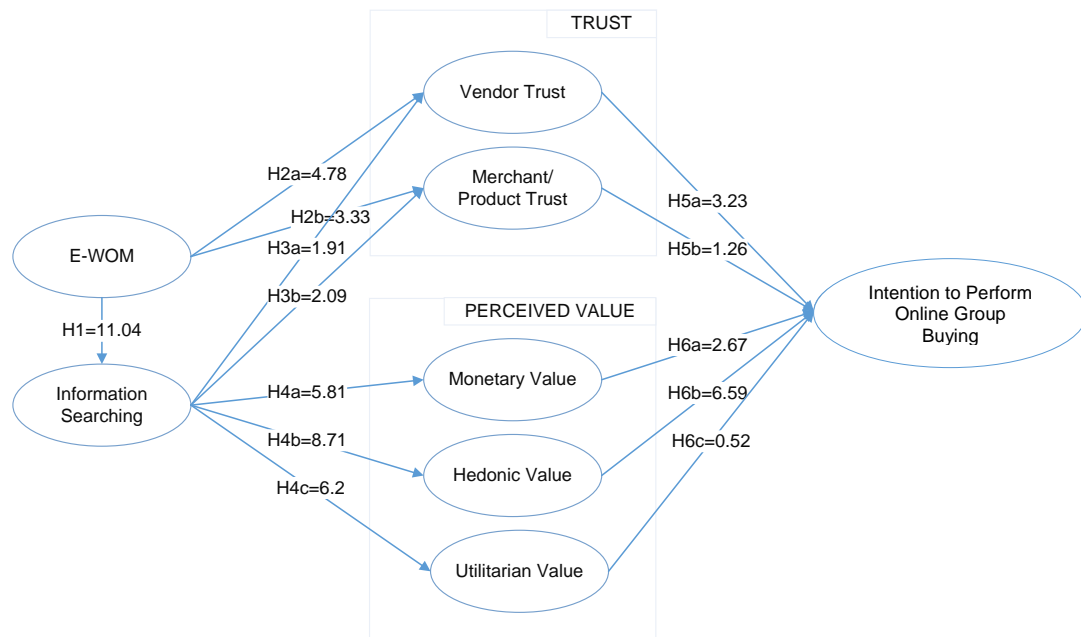


Figure 2: Research model with relevant T values

5.4 Discussion

This study aims to examine the influence of eWOM and information searching on the perceived value and trust that affect customers' intention to perform online group buying. The research model has been evaluated by examining the measurement model and then the structural model. We calculated the R-squared values to determine the robustness of our proposed research model. The results of our evaluation are presented in Table 5, which shows that the model is at a moderate level for the information searching (IS) and intention to engage in online group buying (IO) variables, while the model is weak in terms of representing the of vendor trust (VT), product trust (PT), monetary value (MV), hedonic value (HV), and utilitarian value (UV) variables.

5.4.1 The Impact of eWOM on Information Searching

The results of our study indicate that eWOM has a significant impact on information searching. In other words, when someone receives recommendations from others regarding online group buying, whether it be through social media, online forums, chat, or other media, they do not immediately take action in relation to the recommendation they received. In fact, they will first evaluate and try to learn more about the recommendation by conducting information searching in order to obtain further information before they decide to follow the recommendation. They will evaluate the eWOM according to attributes such as quality, authenticity, authority, and attractiveness before accepting it [34]. This result is in line with the findings of Jia and Hall [13], who suggested that word of mouth will stimulate individual consumers' learning. In addition, according to Gupta and Harris [36], eWOM has a positive influence on people's motivation to conduct information searching. They explained that e-WOM is likely to result in more time being spent considering the recommended product by performing information searching activities. We can conclude that customers will always want to look for more detail and further information related to any kind of recommendation (eWOM) for online group buying.

5.4.2 The Impact of eWOM on Trust

In this study, eWOM also had a significant effect on trust. Two types of trust were examined, namely vendor trust (i.e., trust in the service provider) and product trust (i.e., trust in the products offered on the online group buying website). According to the results of our study, eWOM significantly influences customers' trust in both the vendor and the product offered. The results also indicate that eWOM serves as a tool for customer to evaluate the quality of the vendor and product on online group buying sites [7]. This result is aligned with the findings of the study by Utz, Kerkhof, and van den Bos [22], who suggested that the better the recommendations given, the higher the trust generated in the e-commerce site.

5.4.3 The Impact of Information Searching on Trust

Our findings confirm that information searching only has a significant impact on product trust. In many cases, customers want to look for and utilize any other experience and gain a feel for the product they want to purchase. This desire underlies their behavior with regard to information searching. Finally, all the information they obtain provides an indication of the potential quality and trustworthiness of the products offered. This result is supported by the study of Filieri, Alguezaui, & McLeay [59], who examined the five factors that influence trust in consumer-

generated media. The five factors are source credibility, information quality, website quality, customer satisfaction, and user experience with consumer-generated media. However, the results show that there is no correlation between information searching and vendor trust. This result implies that complete and detailed product information is important for customers' evaluations, although it is not as important as detail information on the vendor. It can be assumed that customers mostly rely on the recommendations (eWOM) that have been accepted before, so they no longer need to evaluate and search further to determine the quality of the vendor.

5.4.4 The Impact of Information Searching on Perceived Value

Further analysis showed that information searching also has a significant influence on customers' perceived value. It significantly influences all types of perceived value, including monetary value, utilitarian value, and hedonic value. When customers perform information searching, it means they want to mitigate and minimize any risks before completing the transaction, which should increase the value they might perceive later. For them, comparing information about a product is necessary before making a decision about carrying out the transaction [11]. Therefore, the quality of the information can influence the perceived usefulness of online group buying sites, as well as helping consumers to make the decision to conduct transactions efficiently [11]. This result is consistent with the results of previous research conducted by Chen and Tan [38] and Shiau and Yeh [11], who identified the positive effect of the information richness on customers' utilitarian value. In addition, another study by Shiau and Yeh [11] found correlation between the information quality and customers' hedonic value.

5.4.5 The Impact of Trust on Customers' Intention to Perform Online Group Buying

According to our analysis, the two types of trust studied (trust in the vendor and trust in the product) have different levels of significance with regard to the intention to engage in online group buying. Vendor trust has a significant influence on customers' intention to perform online group buying. Meanwhile, product trust does not have a significant effect on customers' intention to perform online group buying. This result is slightly different to the findings of studies by Shiau and Chau [45] and Shiau and Luo [1], who found that trust has a positive influence on customers' willingness to perform online group buying. However, different to our study, those two previous studies examined the aspects of trust as a single construct. The results of this study provide new insight into the fact that not all types of trust affect customers' intention to participate in an online group buying scheme. Therefore, we assume that the result found in this study is not comparable with the findings of the two previous studies because of differences in the research objectives and contexts. However, we can conclude that once customers receive a recommendation for a reliable and reputable vendor of online group buying, they do not need detailed and complete information about the product(s) offered by that vendor. As the customers trust the vendor, they also trust the product. This also means that eWOM concerning vendor evaluations will determine the customers' intention to perform online group buying.

5.4.6 The Impact of Perceived Value on Customers' Intention to Perform Online Group Buying

In this study, we finally found that not all types of perceived value will influence customers' intention to perform online group buying. We found hedonic value and monetary value to have a significant effect on the intention to perform online group buying, while utilitarian value does not have a significant effect. The results indicate that when customers enjoy the shopping process and have a pleasant shopping experience, they will tend to be interested in making transactions on online group buying websites. The shopping process in this context also refers to their experience of information searching in order to find eWOM from other previous buyers. By performing information searching, customers also obtain a financial benefit because they receive valuable information that encourages them to complete the transaction. In contrast, customers who engage in online group buying are not heavily influenced by the fact they want to buy a particular product, in addition to the quick and easy transaction process. Further, we can infer that in the context of online group buying, the external factor (represented by eWOM and enforced by information searching) could become the most significant reason why customers make impulse purchases from online group buying sites. This result is different from the result of a study by Chen and Dubinsky [47], who found that all types of perceived value had a positive and significant correlation with customers' intention to perform online group buying. A study by Shiau and Yeh [11] also found that only utilitarian value and hedonic value have a positive impact on customers' intention to engage in online group buying. Both previous studies found that hedonic and utilitarian value have a positive impact on customers' intention to make complete online group buying transactions.

5.5 Research Implications

This section discusses the implications of this study, both to the online group buyer providers in Indonesia and to the theoretical advancement in relation to the online group buying.

5.5.1 Implications for Online Group Buying Providers in Indonesia

This study provides an overview of the trends, characteristics, and customer perceptions involved in conducting online group buying in Indonesia. Through the variables that build the research model, we can understand several factors that influence the customers' intention to engage in online group buying. These variables should be considered by service providers in Indonesia when they are preparing innovative and appropriate marketing

strategies for customers. In addition, they can provide insight into what should be done by the service providers in order to attract the attention of customers who want to participate in online group buying.

Information searching was also shown to have a significant effect on the perceived value of vendor trust. Following up on this result, providers of online group buying in Indonesia should promote and update the information related to the products they offer online, so that customers can obtain complete information about the available products. To optimize the results of information searching activities, the online group buying providers should utilize tools such as search engine optimization (SEO) in order to obtain high rankings on search engines [60]. Thus, when searching for information on the Internet, consumers will obtain official information before they see information available on social media. Additionally, it would be useful if the online group buying providers could equip their sites with communication features, for example, forums, chat, and social media, in order to provide a place for customers to interact with other customers. These kinds of features will also help the online group buying providers to oversee customers' interactions, which should help them to anticipate and prevent negative word of mouth that could jeopardize their reputation and eventually decrease customers' intention to purchase their products. Further, these features could be an effective source of information for two-way communication, as well as helping the providers to resolve customers' complaints effectively and efficiently.

Through this study, we can observe that the main reason why Indonesian people perform online group buying is the cheaper price offered by online group buying when compare to other common e-commerce schemes. Additionally, many people complete an online group buying transaction because of the discount given or because their shopping experience provides them with enjoyment or pleasure. Further, the discounts offered by online group buying websites in Indonesia can reach 75% of the normal price, while the products or services offered on the online group buying websites in Indonesia includes things such as recreational vehicles, food, and holiday packages, which are extremely popular with customers. In fact, we know that customers mostly look for fun rather than focusing on satisfying their needs when they make a transaction on an online group buying site. Accordingly, the marketing strategy that should be applied by the online group buying providers is to increase these monetary and hedonic values, which has been proven to increase customers' intention to purchase a product from online group buying scheme. The monetary value could be enhanced by periodically applying several promotional strategies such as rebates/discounts, coupons, sampling, displays, and premiums. Another interesting finding is that Indonesian people tend to be impulsive when purchasing a product so long as they have a great experience using online group buying sites. This explains the hedonic value that customers seek. In this context, customers often overlook and disregard their particular need for a product or service when they enjoy the process of surfing the online group buying websites and, moreover, if they could obtain a cheaper price than usual. For this reason, it is not sufficient that providers sell goods and services that are fun and attractive without being supported by interesting promotional strategies and advertisements. Additionally, to support the hedonic value craved by customers, online group buying providers should consider customers' experience when using their sites, for example, by applying usability design principles. Indeed, many studies have shown the importance of usability in driving customers' enjoyment and satisfaction when using e-commerce sites [61]-[67].

5.5.2 Implications for Theory

This study confirms the theory and previous research related to online group buying. Our results highlight the important role of eWOM and information searching in the success of online group buying strategies in Indonesia. These results indicate that electronic word of mouth significantly affects information searching and trust (both in the vendor and in the products offered). Further, information searching significantly affects the perceived value (monetary value, utilitarian value, and hedonic value) and trust in the products offered, but not trust in the vendor. The results of this study also showed that trust in the vendor behind online group buying, monetary value, and hedonic value significantly influence customers' intention to perform online group buying, especially in Indonesia. This research can therefore enrich the theory of online group buying and strengthen existing theories. Moreover, this research can also be used as a reference for academics, researchers, and others wishing to carry out further research on online group buying or related matters.

6 Conclusion

In this study, we conducted an analysis to determine the influence of electronic word of mouth and information searching on customers' perceived value and trust in relation to their intention to engage in online group buying. Based on the structural equation modeling analysis, it can be concluded that eWOM has a significant effect on customers' information searching behavior and their trust (both trust in the vendor and trust in the product). However, customers' information searching activity does not have a significant impact on their trust in a vendor or service provider of online group buying, since it only influence their trust in the products offered. Information searching was also proven to have an impact on building customers' perceived value, including monetary value, hedonic value, and utilitarian value. In conclusion, the results of this study imply that customers' intention to purchase from online group buying sites is only affected by customers' trust in the vendor, monetary value, and hedonic value. Meanwhile, customers' trust in the product and customers' utilitarian value have no significant impact on their willingness to conduct online group buying. This study successfully explores the links between eWOM, information searching, trust, customers' perceived value, and the intention to perform transactions on online group buying sites. Thus, the online group buying providers can formulate the best and most effective strategy for increasing customer participation and

transactions. Despite the success of our study, some limitations must be considered. Although the minimum sample size has been achieved for the model evaluation, it is expected that future research will examine larger numbers of respondents in order to achieve better results. This study also only focused on the peculiarities of one specific country (Indonesia), so that future studies could extend the scope of this study by considering the situation in other countries. In the future, including more indicators that might influence online group buying would be beneficial for exploring the factors from a different perspective.

Acknowledgments

We gratefully thank Universitas Indonesia for providing financial support for this study through *Publikasi Internasional Terindeks Untuk Tugas Akhir Mahasiswa (PITTA)* grant No. 394/UN2.R3.1/HKP.05.00/2017. We also wish to thank the Faculty of Computer Science, Universitas Indonesia, for their continuous support and the provision of a comfortable lab in which we could write this paper.

References

- [1] S. Abdallah and B. Jaleel, Website appeal: Development of an assessment tool and evaluation framework of e-marketing, *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 10, no. 3, pp. 45-62, 2015.
- [2] I. Alfina, J. Ero, A. N. Hidayanto, and M. R. Shihab, The impact of cognitive trust and e-wom on purchase intention in C2C e-commerce site, *Journal of Computer Science*, vol. 10, no. 12, pp. 2518-2524, 2014.
- [3] T. Al-Maghrabi and C. Dennis, The driving factors of continuance online shopping: Gender differences in behaviour among students-the case of Saudi Arabia, *International Journal of Business Information Systems*, vol. 9, no. 4, pp. 360-384, 2012.
- [4] S. Ba, J. Stallaert and Z. Zhang, Price competition in e-tailing under service and recognition differentiation, *Electronic Commerce Research and Applications*, vol. 6, no. 3, pp. 322-31, 2007.
- [5] H. Baek, S. Oh, H. Yang, and J. Ahn, Electronic word-of-mouth, box office revenue and social media, *Electronic Commerce Research and Applications*, vol. 22, pp. 13-23, 2017.
- [6] P. Chandon, B. Wansink and G. Laurent, A benefit congruency framework of sales promotion effectiveness, *Journal of Marketing*, vol. 64, no. 4, pp. 65-81, 2000.
- [7] J. Chaparro-Peláez, A. Hernández-García and A. Urueña-López, The role of emotions and trust in service recovery in business-to-consumer electronic commerce, *Journal of Theoretical and Applied Electronic Commerce Research*, vol. 10, no. 2, pp. 77-90, 2015.
- [8] P. Y. K. Chau, P. J-H. Hu, B. L. P. Lee, and A. K. K, Examining customers' trust in online vendors and their dropout decisions: An empirical study, *Electronic Commerce Research and Applications*, vol. 6, no. 2, pp. 171-182, 2007.
- [9] K. Chen, A study of the relationship between UK consumers' purchase intention and store brand food products - Take Nottingham city consumers for example, Master Dissertation, The University of Nottingham, England, 2008.
- [10] Z. Chen and A. J. Dubinsky, A conceptual model of perceived customer value in e-commerce: A preliminary investigation, *Psychology and Marketing*, vol. 20, no. 4, pp. 323-347, 2003.
- [11] L.-D Chen and J. Tan, Technology adaptation in e-commerce, *European Management Journal*, vol. 22, no. 1, pp. 74-86, 2004.
- [12] C.M.K. Cheung and D.R. Thadani. (2010) The effectiveness of electronic word-of-mouth communication: A literature analysis, *BLD Proceedings. AISel*. [Online]. Available: <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1023&context=bled2010>
- [13] W. W. Chin, The partial least squares approach to structural equation modeling, *Modern Methods for Business Research*, vol. 295, no. 2, pp. 295-336, 1998.
- [14] H. W. Chuah, M. Marimuthu and T. Ramayah, The effect of perceived value on the loyalty of generation Y mobile internet subscribers: A proposed conceptual framework, *Procedia - Social and Behavioral Sciences*, vol. 130, pp. 532-541, 2014.
- [15] A. de Angeli, A. Sutclie and J. Hartmann, Interaction, usability and aesthetics: What influences users' preferences?. in *Proceedings of the 6th ACM conference on Designing Interactive Systems*, New York, pp. 271-280, 2006.
- [16] Dskon. (2014, April). Website Group Buying 2011. Dskon. [Online]. Available: <http://www.dskon.com/website-group-buying/>
- [17] B. Edelman, Adverse selection in online trust certifications and search results. *Electronic Commerce Research and Applications*, vol. 10, no. 1, pp. 17-25, 2011.
- [18] I. E. Erdoğan and M. Çiçek, Online Group Buying: What Is There For The Consumers? *Procedia - Social and Behavioral Sciences*, vol. 24, pp. 308-316, 2011.
- [19] R. Filieri, S. Alguezau, F. McLeay, Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word-of-mouth. *Tourism Management*, vol. 51, pp. 174-185, 2015.
- [20] D. Gefen, E. Karahanna, and D. W. Straub, Trust and TAM in online shopping: an integrated model. *MIS Quart*, vol. 27, no. 1, pp. 51-90, 2003.

- [21] P. Gupta and J. Harris, How e-WOM recommendations influence product consideration and quality of choice: A motivation to process information perspective. *Journal of Business Research*, vol. 63, no. 9-10, pp. 1041-1049, 2010.
- [22] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis: A Global Perspective*. NJ: Pearson Prentice Hall, 2010.
- [23] N. Hajli, X. Lin, M. Featherman, and Y. Wang, Social word of mouth: how trust develops in the market. *International Journal of Market Research*, vol. 56, no. 5, pp. 673-689, 2014.
- [24] L. J. Harrison-Walker, The Measurement of Word-of-Mouth Communication and an Investigation of Service Quality and Customer Commitment as Potential Antecedents, *Journal of Service Research*, vol. 4, no. 1, pp. 60-75, 2001.
- [25] T. Hennig-Thurau, K. P. Gwinner, G. Walsh, and D. D. Gremler, Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? *Journal of interactive marketing*, vol. 18, no. 1, pp. 38-52, 2004.
- [26] A. N. Hidayanto, M. S. Adha, M. A. Jiwanggi, and T. Melia, A study of impact of search engine optimisation to internet marketing strategy. *International Journal of Services, Economics and Management*, vol. 4, no. 4, pp. 298-316, 2012.
- [27] A. N. Hidayanto, A. Herbowo, N.F.A. Budi, and Y.G. Sucahyo, Determinant of customer trust on E-commerce and its impact to purchase and word of mouth intention: A case of Indonesia. *Journal of Computer Science*, vol. 10, no. 12, pp. 2395-2407, 2014
- [28] A. N. Hidayanto, H. Saifulhaq, and P. W. Handayani, Do consumers really care on risks in online shopping? An analysis from Indonesian online consumers. In the *Proceedings of IEEE International Conference on Management of Innovation and Technology (ICMIT)*, pp. 331-336, 2012.
- [29] M. Huang, F. Cai, A. S. Tsang, and N. Zhou, Making your online voice loud: the critical role of WOM information. *European Journal of Marketing*, vol. 45, no. 7/8, pp. 1277-1297, 2011.
- [30] L. Jia and D. Hall, Consumer Learning to Promote Behavioral Intention Towards IT Innovation: Is Word-of-mouth Needed? *Proceedings of the Nineteenth Americas Conference on Information Systems*, Chicago, Illinois, pp. 1-9, 2013.
- [31] R. J. Kauffman and B. Wang, Bid together, buy together: On the efficacy of group-buying business models in Internet-based selling. *The e-business handbook*, pp. 99-137, 2002.
- [32] D. J. Kim, D. L. Ferrin, and H. R. Rao, A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, vol. 44, no. 2, pp. 544-564, 2008.
- [33] C. Kim, R. D. Galliers, N. Shin, J. H. Ryoo, and J. Kim, Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, vol. 11, no. 4, pp. 374-387, 2012.
- [34] E. C. Ku, Beyond price: how does trust encourage online group's buying intention? *Internet Research*, vol. 22, no. 5, pp. 569-590, 2012.
- [35] H. Latan and I. Ghozali, *Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Program SMART PLS 2.0 M3*. Semarang: Badan Penerbit UNDIP, 2012.
- [36] C. Li, K. Sycara, and A. Scheller-Wolf, Combinatorial coalition formation for multi-item group-buying with heterogeneous customers. *Decision Support Systems*, vol. 49, no. 1, pp. 1-13, 2010.
- [37] P. Lin, C. Chen, and M. Song, Price dispersion of online air tickets for short distance international routes. *The Service Industries Journal*, vol. 29, no. 11, pp. 1597-613, 2009.
- [38] C.-H. Lin, P. J. Sher, and H.-Y. Shih, Past progress and future directions in conceptualizing customer perceived value. *International Journal of Service Industry Management*, vol. 16, no. 4, pp. 318-336, 2005
- [39] G. Lindgaard, C. Dudek, D. Sen, L. Sumegi, and P. Noonan, An exploration of relations between visual appeal, trustworthiness and perceived usability of homepages, *ACM Transactions on Computer-Human Interaction*, vol. 18, no. 1, pp. 1-30, 2011.
- [40] B. Lu, Q. Zeng, and Q. Fan, Examining macro-sources of institution-based trust in social commerce marketplaces: An empirical study. *Electronic Commerce Research and Applications* vol. 20, pp. 116-131, 2016.
- [41] N. Luhmann, *Trust and Power*. John Wiley & Sons, Chichester, England, 1979.
- [42] W. C. Martin and J. E. Lueg, Modeling word-of-mouth usage. *Journal of Business Research*, vol. 66, no. 7, pp. 801-808, 2013.
- [43] R.C. Mayer, J.H. Davis, and F. D. Schoorman, An Intergrative Model of Organizational Trust. *Academy of Management Review*, vol. 20, no. 3, pp. 709-734, 1995.
- [44] P. McCole, E. Ramsey, and J. Williams, Trust considerations on attitudes towards online purchasing: The moderating effect of privacy and security concerns. *Journal of Business Research*, vol. 63(9-10), pp. 1018-1024, 2010.
- [45] D. H. McKnight, V. Choudhury, and C. Kacmar, The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *The Journal of Strategic Information Systems*, vol. 11, no. 3, pp. 297-323, 2002.
- [46] L.A. Mills, G. Knezek, and F. Khaddage, Information Seeking, Information Sharing, and going mobile: Three bridges to informal learning. *Computers in Human Behavior*, vol. 32, pp. 324-34, 2014.
- [47] J. Nolle, and M. Beaulieu, Should an organisation join a purchasing group? *Supply Chain Management*, vol. 10, no. 1, pp. 11-7, 2005.

- [48] S. H. Oh, Y. M. Kim, C. W. Lee, G. Y. Shim, M. S. Park, and H. S. Jung, Consumer adoption of virtual stores in Korea: Focusing on the role of trust and playfulness. *Psychology and Marketing*, vol. 26, no. 7, pp. 652-668, 2009.
- [49] K. O'Reilly and S. Marx, How young, technical consumers assess online WOM credibility. *Qualitative Market Research: An International Journal*, vol. 14, no. 4, pp. 330-359, 2011.
- [50] D.V. Parboteeah, J. S. Valacich, and J. D. Wells, The influence of website characteristics on a consumer's urge to buy impulsively. *Information Systems Research*, vol. 20, no. 1, pp. 60-78, 2009.
- [51] T. Rintamäki, A. Kanto, H. Kuusela, and M. T. Spence, Decomposing the value of department store shopping into utilitarian, hedonic and social dimensions: Evidence from Finland. *International Journal of Retail & Distribution Management*, vol. 34, no. 1, pp. 6-24, 2006.
- [52] C. M. Sabiote, D. M. Frías, and J. A. Castañeda, The moderating effect of culture on overall perceived value in the online purchasing process. *Service Business*, vol. 7, no. 1, pp. 83-102, 2012.
- [53] W-L. Shiau and P.Y.K. Chau, Does altruism matter on online group buying? Perspectives from egotistic and altruistic motivation. *Information Technology & People*, vol. 28, no. 3, pp. 677-698, 2015.
- [54] W.-L. Shiau and M. M. Luo, Factors affecting online group buying intention and satisfaction: A social exchange theory perspective. *Computers in Human Behavior*, vol. 28, no. 6, pp. 2431-2444, 2012
- [55] W-L., Shiau and K.-H. Yeh, The Effects Of Information Richness And Navigation On Value And Behavior Intentions: The Case Of Groupon Taiwan. In *PACIS*, pp. 130, 2012.
- [56] P. Shukla, The influence of value perceptions on luxury purchase intentions in developed and emerging markets. *International Marketing Review*, vol. 29, no. 6, pp. 574-596, 2012.
- [57] P.-L. To, C. Liao, and T.-H. Lin, Shopping motivations on Internet: A study based on utilitarian and hedonic-value. *Technovation*, vol. 27, no. 12, pp. 774-787, 2007.
- [58] E. Turban, D. King, and J. Lang, *Introduction to E-commerce*. (U.S. Hall, Ed.) (3rd ed., pp. 52-53). U.S: Pearson Education, 2011.
- [59] S. Utz, P. Kerkhof, and J. van den Bos, Consumers rule: How consumer reviews influence perceived trustworthiness of online stores. *Electronic Commerce Research and Applications*, vol. 11, no. 1, pp. 49-58, 2012.
- [60] T. Verhagen, and W. van Dolen, The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information Management*, vol. 48, no. 8, pp. 320-327, 2011.
- [61] Y. Wang and C. Yu, Social interaction-based consumer decision-making model in social commerce: The role of word of mouth and observational learning. *International Journal of Information Management*, vol. 37, pp. 179-189, 2017
- [62] J. J. Wang, X. Zhao, and J. J. Li, Group Buying: A Strategic Form of Consumer Collective. *Journal of Retailing*, vol. 89, no. 3, pp. 338-351, 2013
- [63] J. D. Wells, V. Parboteeah, and J. S. Valacich, Online impulse buying: Understanding the interplay between consumer impulsiveness and website quality. *Journal of the Association for Information Systems*, vol. 12, no. 1, pp. 32-56, 2011.
- [64] A. H. Wien and S. O. Olsen, Producing word of mouth - a matter of self-confidence? Investigating a dual effect of consumer self-confidence on WOM. *Australasian Marketing Journal*, In press, 2017.
- [65] S. H. Wijanto, *Structural Equation Modeling dengan LISREL, 8: Konsep dan Tutorial*. Yogyakarta: Graha Ilmu, 2008
- [66] V. A. Zeithaml, Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, vol. 52, pp. 2-22, 1988.
- [67] W. Zhuang, K. J. Cumiskey, Q. Xiao, and B. L. Alford, The impact of perceived value on behavior intention: an empirical study. *Journal of Global Business Management*, vol. 6, no. 2, pp. 1-7, 2010.