Why customers buy an online product? The effects of advertising attractiveness, influencer marketing and online customer reviews

Mohammad Arief
Department of Management, Universitas Trunojoyo Madura, Bangkalan, Indonesia

Rita Indah Mustikowati
Department of Management, Universitas PGRI Kanjuruhan Malang, Malang, Indonesia,

Yustina Chrismardani
Department of Management, Universitas Trunojoyo Madura, Bangkalan, Indonesia

Abstract
Purpose – Digitalization in marketing activities has made it easier for people to make purchase decision. This platform encourages every firm to optimize digitalization as part of its marketing strategy. Optimization of attractive digital marketing involves advertising attractiveness, influencer marketing and online customer reviews. This study aims to investigate advertising attractiveness, influencer marketing and online customer reviews on purchase decision.

Design/methodology/approach – The study was conducted with a quantitative approach. A total of 120 respondents were involved in this study by using convenience sampling techniques in data collection. Multiple linear regression was used to analyze the data.

Findings – The results of the study show that influencer marketing and online customer reviews have an impact on online purchase decision. Meanwhile, advertising attractiveness does not show any influence on purchase decision.

Practical implications – Despite the start-ups have modified the website by increasing the content to make it more informative, it seems that customers are not interested in making a purchase. Therefore, notwithstanding the role of website attractiveness, the use of physical attractiveness is still considered an effective way to encourage customers to make purchasing decisions. In this way, a firm needs to make adjustments between the customers’ personality, lifestyle and attitudes and endorsers.

Originality/value – This study developed previous empirical studies which a positive relationship between advertising attractiveness, influencer marketing, online customer reviews and purchase decision. The development of the model was carried out by elaborating variable indicators. In addition, the source of increasing credibility was not based on physical attractiveness, but rather emphasizes the website quality.

Keywords Advertising attractiveness, Influencer marketing, Online customer reviews, Purchase decision

Paper type Research paper

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1. Introduction

The advances of internet technology have driven changes in people's lifestyles. In the past, the majority of people used conventional approaches in making purchases. At present, internet technology has brought people's interest in online shopping. There is a rationalization of the shift in people's behavior in shopping. Studies conducted by Chang, Chih, Liou, and Yang (2016), Moreno, Calderón, and Moreno (2016) reveal that internet technology has reshaped how people live, improving well-being through product offerings and choices, providing efficiency in lower price offerings, providing unlimited information and expanding distribution channels. Other studies have also shown that the use of technology in shopping can be done without having to meet face-to-face between sellers and buyers (Arief, 2021; Dahnil, Marzuki, Langgat, & Fabeil, 2014; Ha, Bae, & Son, 2015), so that it will reduce obstacles in carrying out the transaction process (Öztamur & Karakadılar, 2014).

However, customers probably face an uncertainty when make online transactions. For example, customers may be concerned that the virtual disclosure of personal information will be misused by others (Bhat, Prasad, Sinha, Sagorkar, & Fernandes, 2018; Zhong, 2019) as well as products not meeting expectations (Chang et al., 2016; Cronin & Morris, 1989). The uncertainty in online transactions has the potential to pose risks for customers. To overcome this, a firm must take a preventive action by building trust (Dai, Forsythe, & Kwon, 2013; Lim, Osman, Salahuddin, Romle, & Abdullah, 2016). Through these efforts, we believe that it is not easy for a firm to virtually build trust with customers. Before a purchase decision is made, customers may assess the extent of ad appeal (Kergoat, Meyer, & Merot, 2017; Munnukka, Uusitalo, & Toivonen, 2016), who are the influencers used in marketing (Asan, 2022; Audrezet, de Kerviler, & Guidry Moulard, 2020) and they may conduct a review of existing catalogs (Ha et al., 2015; Lee & Shin, 2014; Senecal & Nantel, 2004). From these considerations, customers will be assessing the integrity of an online firm (Mukherjee & Nath, 2007). Thus it can be seen that in conditions of uncertainty and risk, the integrity of an online firm is very important in helping customers to gain trust in online activities.

Previous studies have shown the relationship between advertising attractiveness (Furaji, Łatuszyńska, Wawrzyniak, & Wąsikowska, 2013; Khuong, 2015; Triyono, Ginting, Karina, & Sembiring, 2019), influencer marketing (Guptaa, 2021; Kavaliauskienė & Margis, 2017; Lou & Yuan, 2019; Nagori, 2020) and online customer reviews (Constantinides & Holleschovsky, 2016; Thomas, Wirtz, & Weyerer, 2019; Zhang, Zheng, & Wang, 2020) on purchase decision. In general, the results of the study showed that there was a positive relationship in each observed variable. But from other searches, it has resulted in some conclusions as follows. First, there are still very few studies of advertising attractiveness in relation to purchase decision. Even if there is, some researchers use effectiveness parameters in measuring advertising attractiveness (Baker & Churchill, 1977; Caballero, Lumpkin, & Madden, 1989; Jantzon & Basil, 2018; Phau & Lum, 2000). For example, Jantzon and Basil (2018) explained that advertising attractiveness has decreased the intensity of product purchases. This can happen when companies use endorsers to increase advertising attractiveness, advertising effectiveness will decrease for people with similar genders.

Second, most research on the topic of advertising attractiveness is focused on physical attractiveness resources (Li, 2015; Sompel & Vermeir, 2016). When some researchers use sources to explain advertising attractiveness, they place more emphasis on persuasive ability to communicate (DeShields, Kara, & Kaynak, 1996; Phau & Lum, 2000), a person's behavior (Sompel & Vermeir, 2016), culture (Liu & Brock, 2011) and body shapes that can change stereotypes (Bower, 2001). Overall, several approaches are used in advertising attractiveness to increase credibility (Kim & Na, 2007; Munnukka et al., 2016).
Third, there is a consensus that influencers in marketing activities will have a positive impact on purchase decision, cannot always occur. Functionally, influencers tend to use their expertise at a certain market share (Hudders & Lou, 2022). This is done to distinguish the products that will be recommended to the intended market. Consequently, the use of influencers in marketing has the potential to have a negative impact, especially on behavioral (Ho-dac, Carson, & Moore, 2013; Leban, Thomsen, Wallpach, & Voyer, 2020) and the credibility and reputation of influencers (Ryu & Han, 2021). Finally, to avoid bias in purchase decision, customers will review the products offered (Lackermair, Kailer, & Kanmaz, 2013). When a customer conducts an online review, it will involve at least two components, namely, personality and knowledge (Cheung, Lee, & Rabjohn, 2008; Senecal & Nantel, 2004). Based on these two components, the results of online customer reviews will result in a decision whether to buy or not. Customers will make a purchase if they can capture the information submitted, and vice versa (Lee & Shin, 2014).

Considering some of these reviews, this research contributes to increasing the credibility of online firm to build customer trust. To the best our knowledge, the majority of studies addressing the topic of increasing the credibility of online companies still focus on the physical attractiveness of the endorser. This is understandable, because customers tend to demonstrate positive behavior from physically attractive endorsers (Kahle & Homer, 1985; Snyder & Rothbart, 1971). Specifically, we offer an alternative by highlighting the website quality dimension to increase credibility. When an online platform can increase credibility, it will encourage customer attitudes and behavior to make purchasing decisions. Empirically, a focus switching from endorser attractiveness to website quality might have an impact on the findings. This shows an interesting gap to explore. To fill the gap of the relationship between advertising attractiveness, influencer marketing and online customer reviews and purchasing decisions, we focus our studies on start-up businesses. The reason is that start-ups are considered as organizations entering the market with new business models (Kusumaningtyas et al., 2021) and require more specific knowledge (Guerrero & Urbano, 2014). This assumption arises because the main strength of start-up businesses is the ability to innovate and use technology (Potjanajaruwit & Girdwichai, 2019; Sabeena & Ayyapparajan, 2020).

Thus this study aims to analyze issues related to the relationship between advertising attractiveness, influencer marketing and online customer reviews on purchase decision. To achieve the desired goal, the study is structured as follows. We begin by linking theories about the observed variables, both from literature and empirical approach. Furthermore, theoretical frameworks and hypotheses are proposed to predict the findings of the proposed problems (see Figure 1). To empirically test the model, we compiled a methodological design. At the end, the research model will be tested using multiple regression analysis. The results of statistical calculations will be discussed and concluded.

![Diagram](https://via.placeholder.com/150)

**Figure 1.** The research model
2. Literature review and hypothesis development

2.1 Advertising attractiveness

Preliminary studies have shown that advertising attractiveness is related to the ability to communicate (DeShields et al., 1996; Phau & Lum, 2000), behavior (Sompel & Vermeir, 2016) and body shape (Bower, 2001). This underlies the focus of the study, where the use of endorsements has been linked to measuring advertising attractiveness. Although in the literature, the focus of the explanation of advertising attractiveness is more directed at physical attractiveness, the use of endorsements is only part of the concept measurement. Referring to the study conducted by Caballero et al. (1989), when the phenomenon of physical attraction is widely discussed by researchers, there is a substance in the formulation. The findings explained that the formulation of physical attractiveness includes (1) the extent to which respondents’ responses to physical attractiveness can be conditioned over time and (2) the extent to which physical attractiveness may give rise to various positive attributions from respondents. Caballero et al. (1989) indicated that prototype of advertising attractiveness is not only focused on endorsers. But more than that, advertising attractiveness can be designed with more informative content and types (Haj Eid, Nusairat, Alkailani, & Al-Ghadeer, 2020; Lutfie & Marcelino, 2020) as well as attractive design (Soberman & Xiang, 2022; Xin Teo, Leng, & Phua, 2019). To adopt the content design, Amandeep, Varshney, and Aulia (2017) explained the operationalization of advertising attractiveness, including uniqueness, informative, use, features, character, and clarity. Some of the operationalization of advertising attractiveness can be considered as a stimulus factor for respondents. The point is that advertising attractiveness emphasizes more on the efforts of a firm to provide stimulus to respondents so that they can encourage attitudes and cognitive in making purchase decision (Cvirka, Rudiné, & Morkunis, 2022; Kergoat et al., 2017).

The positive relationship between advertising attractiveness and purchase decision has been agreed upon by several researchers. In their study, Furaji et al. (2013) analyzed consumer behavior with a survey approach. A total of 174 respondents were involved in the study, with the category of men and women in Basra City, Iraq. Each respondent were given five questions about the purchase preferences of household appliances. Ultimately, the question relates to advertising attractiveness that encourages them to make a purchase decision as well as what attributes are decisive. The findings are in line with a study conducted by Amandeep et al. (2017). Using 100 customers who bought consumer products in Oman, it was found that advertising attractiveness can influence customers in making decisions.

Based on these explanations, the hypothesis in this study can be proposed as follows:

\[ H1. \] Advertising attractiveness has a positive effect on purchase decision.

2.2 Influencer marketing

Influencer marketing can be interpreted as a communication process that involves individuals in the form of exploration, identification and support for products or services. An influencer will develop and send an advertising message with the aim to influencing someone’s opinion so that brand awareness will be formed and will ultimately drive purchase decision (Guptaa, 2021; Lou & Yuan, 2019). To form customer opinions, an influencer can provide a strong, convincing and real message (Tien, Amaya Rivas, & Liao, 2019). Technically, the formation of customer opinions can be done using endorsements (Ahmadi & Ieamsom, 2022; Martensen, Brockenhuus-schack, Zahid, Martensen, & Brockenhuus-schack, 2018) as well as experiences from others (Chetioui, Benlafqih, & Lebdaoui, 2020; Sudha & Sheena, 2017).

Casaló, Flavián, and Ibáñez-Sánchez (2020) explained that there are two mainstreams in the concept of influencers, namely, (1) identifying the characteristics and motivations of influencers. For this category, it is more focused on the role of personal traits, and (2) parsing the influence of influencers in several areas, such as decision making. Furthermore, it is
explained that the two main streams can drive the number of followers on the products or services offered. An influencer will reveal his personality through various daily activities, skills he/she has and give recommendations for products that have been consumed based on experience (Chetioui et al., 2020). However, a large number of followers do not guarantee a purchase decision. Several studies have shown that the positive impact of influencers, both those who use endorsements and experiences, on purchasing behavior will be determined by knowledge and expertise (Tien et al., 2019), product engagement (Bakker, 2018; Zhu, Tan, Zhu, & Tan, 2007), emotional power (Kowalczyk & Pounders, 2016; Ladhari, Massa, & Skandrani, 2020) and credibility and trust (Chetioui et al., 2020; Lou & Yuan, 2019).

Empirically, preliminary studies have shown that there is a positive relationship between influencer marketing and purchase decision (Guptaa, 2021; Kavalaiskiene & Margis, 2017; Lou & Yuan, 2019; Nagori, 2020). Using 330 respondents who made purchase decision on Coca Cola products, Kavalaiskiene and Margis (2017) found that the most influential social media in driving the decision was Instagram, followed by Facebook and YouTube. The study also explained that account ownership of some social media can have a significant influence on purchase behavior. Fondevila-Gascón, Polo-López, Rom-Rodríguez and Mir-Bernal (2020) reinforced the findings by explaining the factor of the account ownership on social media. In his explanation, account ownership can be used to control the brand and increase reputation by creating partnerships with several influencers. A follow-up study was conducted by Lou and Yuan (2019) with its main focus on the informative value of influencers, trust, attractiveness as well as similarity of influencers. The results show that the overall focus of the study can increase the trustworthiness of followers toward the product brand and that they will subsequently make a purchase decision. Logically, the trustworthiness of followers will encourage emotional bonds with influencers (Nafees, Cook, Nikolov, & Stoddard, 2021), and will further shape brand awareness (Guptaa, 2021; Lou & Yuan, 2019). When followers realize the existence of the brand, they will make purchase decision.

Based on this explanation, the hypothesis in this study can be proposed as follows:

\( H_2 \). Influencer marketing has a positive effect on purchase decision.

### 2.3 Online customer reviews

Online customer review is part of the concept of electronic word of mouth (E-WOM) (Cheung et al., 2008; Ho-dac et al., 2013; Melián-González, Bulchand-Gidumal, & González López-Valcárcel, 2013). In the perspective of the literature on the impact of E-WOM, it is explained that the higher the quality of reviews made by customers, the more interest in making purchases (Lee & Shin, 2014). A purchase decision can be made if several review criteria can be met. The study conducted by Cheung and Thadani (2012) explained that reviews are considered quality if they meet several indicators, such as the content of the information, accuracy format and timeliness. Some of the indicators above will lead customers to evaluate by looking at the rating on the product or seller. When customers trust the results of the rating review, then expectations will be exceeded (Chen & Law, 2016; Meijerink & Schoenmakers, 2020; Melián-González et al., 2013), so the purchase decision will be made.

Empirically, some researchers have conducted investigations on the relationship between online customer reviews on purchase decision. Using data by 110 participants studying at Chinese universities, Guo, Wang, and Wu (2020) showed that a pleasant online customer review would increase the likelihood of a high purchase. The argument is, when customers think the results of the review are not pleasant, they have low motivation toward the product or store. If that happens, then the assessment process carried out will be based on heuristic information (p. 9), that is, an assessment based on the experience that the customer has with the product or store.
Another study conducted by Thomas et al. (2019) yielded similar findings. Involving 282 users who had conducted an online review on the Yelp website, it was found that customers’ purchase decision were influenced by two factors, namely, the quality of arguments and peripheral cues. In this study, both factors were used to measure online reviews. Included in the measurement of the quality of arguments are accuracy, completeness and quality of online reviews. The measurement of the quality of arguments is in line with the concept described by Cheung et al. (2008), Senecal and Nantel (2004) that the quality of the argument will be determined from two components, namely, personality and customer knowledge. More specific, the measure of the quality of the argument also reinforces the explanation from Cheung and Thadani (2012) that a review is considered quality if it meets several indicators, such as the content of the information, accuracy, format and timeliness.

Moreover, peripheral cues are measured by the expertise of the reviewer, the quality of the argument and the reputation of the website. The measurements on this variable are slightly different from some other studies. For example, Teng and Khong (2015) used peripheral cues indicators such as the attractiveness of sources, endorsements, sources of expertise, reputation, sources of credibility, quantity of arguments, intention, price and so on. The differences are considered as a development form of the online review concept.

Based on these explanations, the hypothesis in this study can be proposed as follows:

\[ H3. \] Online customer reviews has a positive effect on purchase decision.

3. Research methodology

3.1 Overview of study

To test the relationship between advertising attractiveness, influencer marketing and online customer reviews on purchase decision, we focus on business start-up in Indonesia. Currently, the e-commerce business in Indonesia is dominated by five startups, namely Tokopedia, Shopee, Bukalapak, Lazada and Blibli (Hartanto, Stephanie, & Alamsyah, 2021). From the five business startups, Shopee has a higher popularity among Indonesian consumers because of its attractive offers (Negara & Soesilowati, 2021). Therefore, this study will investigate users of Shopee, an e-commerce platform in Indonesia.

However, with the number of Shopee users were 90.7 million (Ernestivita, 2020), which is quite difficult to reach. The possibility of bias is very large, so the sample is not able to represent the actual number of Shopee users. To anticipate this, we used the recommendations of Thomas et al. (2019) by developing a survey that is in accordance with the methodological approach and taking action on every existing condition. First, we assumed that e-commerce users on one particular platform have the same characteristics. Logically, individuals who use this platform will try to find personality compatibility with the product brand (Ahmadi & Ieamsom, 2022). Second, we defined users of e-commerce platforms based on individuals who like or follow Facebook and Instagram accounts. The consideration was when the community does that, the process of interaction will occur. In addition, it can be concluded that the interaction process will describe credibility and trust in the product offered or store, and ultimately potentially in the making of purchase decision (Casaló et al., 2020; Martensen et al., 2018). Third, to minimize the occurrence of bias, we provided questionnaires to users via the internet.

3.2 Sample and data collection procedure

Our data consisted of Shopee’s users. Data collection was carried out by convenience sampling method. To support the generalization, we carry out data collection in the following stages. First, we made observations on Shopee users in the time period of January 2022. Observations were made on Shopee users who followed Facebook and Instagram accounts. We determined Shopee users from individuals who are members of both applications as a sample because
they are actual fans and have experience in this area. As a result, in that period as many as 34,158,348 individuals had liked or followed both Shopee accounts. Second, based on some of the methodological considerations above, we sent messages to 300 Shopee users, each of whom consisted of 150 men and women. Messaging was done through the features in the application. From the total number of confirmed Shopee users, as many as 158 individuals have responded and are willing to be involved in this study. At the next stage, we conducted a preliminary confirmation of the respondent’s knowledge relating to the focus of the study. For initial confirmation, we asked questions about “have you ever given an online review of Shopee”, “do you have an account on the Shopee website”. In the end, respondents were given a question about “have you ever made a purchase transaction on Shopee”. From 158 respondents who had been given the initial question, 120 respondents, consisting of 52 men and 68 women, had confirmed. At the last stage, we sent questionnaires to the selected sample by e-mail. An overview of respondents’ profiles is presented in Table 1.

3.3 Questionnaire
After the respondents are determined, a set of questionnaires was submitted for the data collection process. The structure of the questionnaire consisted of two parts, namely, general questions and questions related to the topic of study. For general questions, more emphasis is placed on exploring respondents’ characteristics, including gender, age and employment status (see, Table 1). For questions related to the topic of study, 18 questions have been asked. Each question submitted was used to test the observed variables effect on purchase decision. The advertising attractiveness variable consisted of six questions, influencer marketing consisted of three questions and online customer reviews consisted of four questions. Furthermore, as many as five questions were asked for the purchase decision variable. Each of the questions asked were measured on a Likert scale, ranging from 1 indicating “agree” to 5 which means “strongly disagree”. Every response given by the respondents were tested statistically.

3.4 Variable measurement
The main models of this study include advertising attractiveness, influencer marketing, online customer reviews (independent variables) and purchase decision (dependent variables). To determine the observed variables, we adopted previous studies with some modifications. Modifications are needed to adapt to the characteristics of the object. In this study, advertising attractiveness was explained as the ability of advertising to attract the customer attention. To measure advertising attractiveness variables based on content (Caballero et al., 1989; Soberman & Xiang, 2022), uniqueness, informative, accurate, product

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>43.3</td>
</tr>
<tr>
<td>Women</td>
<td>56.7</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>17–25</td>
<td>77.5</td>
</tr>
<tr>
<td>26–35</td>
<td>17.5</td>
</tr>
<tr>
<td>36–45</td>
<td>3.3</td>
</tr>
<tr>
<td>More than 46</td>
<td>1.7</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>15.8</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>8.4</td>
</tr>
<tr>
<td>Professional</td>
<td>69.1</td>
</tr>
<tr>
<td>Staff Officer</td>
<td>2.4</td>
</tr>
<tr>
<td>Housewife</td>
<td>3.4</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Table 1. An overview of respondents
Furthermore, influencer marketing is described as a communication process that involves individuals in the form of exploration, identification and support for products or services. Based on this explanation, influencer marketing variables are measured by trustworthiness, reputation and credibility (Chetioui et al., 2020; Lou & Yuan, 2019; Nafees et al., 2021; Zak & Hasprova, 2020).

Online customer review is described as a medium used by customer in providing an assessment of purchase decision that has been made. Thomas et al. (2019) explained that online customer review can be determined from peripheral cues. Several follow-up studies revealed that peripheral cues include review expertise, product ranking, quality of arguments and website reputation (Cheung, Sia, & Kuan, 2012; Luo, Luo, Xu, Warkentin, & Sia, 2015).

The ultimate goal of this study is to test the relationship between advertising attractiveness, influencer marketing, online customer reviews and purchase decision. Purchase decision is a process by which individual make transaction on all aspects of life by integrating personalities. DeShields et al. (1996) explained that the inegration of an individual’s personality in purchase decision will involve emotional, cognitive, behavioral, competence and environmental factors.

### 3.5 Data analysis procedures

In data analysis processes, there were several stages that were carried out (see Table 2). First, we tested the consistency of the questionnaire. For these purposes, validity and reliability tests were carried out. The validity test relates to the ability of a construct to measure the validity of an instrument (Malhotra, 1996). Pearson product moment correlation is used to determine how valid the research instrument is. To test the validity, it will be compared between the $r$ value (correlated item total correlations) and the $r$ table. If $r$ counts $>$ $r$ table, then it is declared valid. The results of the validity test are presented in Table 3.

Testing the consistency of the instrument was carried out by conducting reliability tests. Referencing the opinion of Malhotra (1996), reliability used to find out whether a measurement can be replicated. A measuring instrument is said to be reliable if the respondent’s answer to the statement is consistent or stable over time. To test reliability, we used the recommendation from Nunnally (1978) that the instrument is said to be reliable if the value of Cronbach’s alpha coefficient $>$ 0.7. The results of reliability test are presented in Table 4.

In the second stage, we conducted tests of normality, multicollinearity and heteroscedasticity (see Table 5). To check the extent to which the data is normally distributed, it was determined from the value of Kolmogorov–Smirnov. Meanwhile, to find out the extent of the correlation that occurs between free variables, a multicollinearity test was carried out. To find out that the amount of VIF value will be determined. Based on the recommendations of Hair et al. (2019), if the VIF value $>$ 10 or if the tolerance value $<$ 0.1 then

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising attractiveness</td>
<td>Content, uniqueness, informative, accurate, product display and interactivity</td>
<td>Amandeep et al. (2017), Caballero et al. (1989), Cvirka et al. (2022), Phau and Lum (2000), Soberman and Xiang (2022)</td>
</tr>
<tr>
<td>Influencer marketing</td>
<td>Trustworthiness, reputation and credibility</td>
<td>Chetioui et al. (2020), Lou and Yuan (2019), Nafees et al. (2021), Zak and Hasprova (2020)</td>
</tr>
<tr>
<td>Online customer reviews</td>
<td>Review expertise, product rating, quality of arguments and website reputation</td>
<td>Cheung et al. (2012), Luo et al. (2015), Thomas et al. (2019)</td>
</tr>
<tr>
<td>Purchase decision</td>
<td>Emotional, cognitive, behavioral, competence and environment</td>
<td>DeShields et al. (1996)</td>
</tr>
</tbody>
</table>

**Table 2.** Variable measurement
multiplicollinearity occurs, and vice versa. At the last stage, when all the requirements for the use of multiple linear regression analysis have been met, a test will be carried out against the proposed hypothesis.

4. Result and finding
4.1 Validity and reliability of measures
The first step in analyzing the data was to test the instrument and its consistency. Validity and reliability tests were used to check both items. A total of 120 respondents with a significance level of 0.005 and the degree of freedom value was known to be 0.1779. Based on

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
<th>Reliability parameter</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising Attractiveness (X1)</td>
<td>0.729</td>
<td>&gt;0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Influencer Marketing (X2)</td>
<td>0.827</td>
<td>&gt;0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Online Customer Reviews (X3)</td>
<td>0.830</td>
<td>&gt;0.7</td>
<td>Reliable</td>
</tr>
<tr>
<td>Purchase Decision (Y)</td>
<td>0.788</td>
<td>&gt;0.7</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

| Table 3. Validity test |

One-sample Kolmogorov–Smirnov test

<table>
<thead>
<tr>
<th>Construct/Items</th>
<th>Pearson correlation</th>
<th>Degree of freedom</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising attractiveness (AA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AA 1</td>
<td>0.545</td>
<td>0.1779</td>
<td>Valid</td>
</tr>
<tr>
<td>AA 2</td>
<td>0.521</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>AA 3</td>
<td>0.562</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>AA 4</td>
<td>0.664</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>AA 5</td>
<td>0.589</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>AA 6</td>
<td>0.612</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Influencer marketing (IM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM 1</td>
<td>0.821</td>
<td>0.1779</td>
<td>Valid</td>
</tr>
<tr>
<td>IM 2</td>
<td>0.773</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>IM 3</td>
<td>0.809</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Online customer reviews (OCR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCR 1</td>
<td>0.781</td>
<td>0.1779</td>
<td>Valid</td>
</tr>
<tr>
<td>OCR 2</td>
<td>0.935</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>OCR 3</td>
<td>0.822</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>OCR 4</td>
<td>0.889</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Purchase decision (PD)</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>0.1779</td>
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<tr>
<td>PD 2</td>
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<td>PD 4</td>
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<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Y1.5</td>
<td>0.649</td>
<td></td>
<td>Valid</td>
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</tbody>
</table>

| Table 4. Scale reliability results |

Customer buy an online product
this parameter, each item of advertising attractiveness, influencer marketing, online customer review and purchase decision is above the degree of freedom value (as presented in Table 3). It indicated that the questionnaire instrument was declared valid.

Meanwhile, the reliability test used to measure the instrument’s consistency showed good results. This can be known from the value of Cronbach’s alpha on each observed variable. As presented in Table 4, the Cronbach’s alpha value is in the range of 0.729–0.830, with the lowest value lying in the advertising attractiveness variable (0.729). Overall, the value is above 0.7 so it is in accordance to the recommendations of Nunnally (1978). Thus, it can be concluded that the measuring instruments used, have consistency and can be used for replication.

4.2 Normality, multicollinearity and heteroscedasticity
When the questionnaire instrument and the consistency of the measuring instrument have met the requirements, the data analysis was continued in the second stage. At this stage, tests of normality, multicollinearity and heteroscedasticity were carried out. Based on the results of the Kolmogorov–Smirnov test, it was known that the significance value of each variable shows a value greater than 0.05. For statistical tests, the advertising attractiveness variable had a value of 0.104, the influencer marketing variable had a value of 0.230 and the online customer reviews had a value of 0.210. Meanwhile, the purchase decision variable had a value of 0.169. Therefore, it can be concluded that all variables studied have met the normal distribution of data.

To find out the extent of the correlation that occurs between free variables, we conducted a multicollinearity test and determined the amount of VIF value. From the results of statistical tests, it showed that the VIF value of each variable studied is still smaller than 10 and the tolerance value is higher than 0.1. This indicated that there is no sufficiently strong correlation between the fellow variables studied (Statistical testing results are presented in Table 6). Thus it can be concluded that no multicollinearity occurs.

Finally, to test whether in the regression model there was an inequality of variants from the residual of one observation to another, we conducted a heteroscedasticity test. This test was done by looking at the scatterplot chart. From the graph presented in Figure 2, it can be seen that the points spread randomly, without a clear pattern, and are spread above or below the number 0 on the Y axis. This means that there is no heteroscedasticity problem in the regression model, so the regression model is worth using.

4.3 Hypothesis test
From the test results of normality, multicollinearity and heteroscedasticity that have been described earlier, it showed that there is no problem. Thus it can be concluded that the results have been qualified for use in testing the proposed hypothesis. In this study, there were three main hypotheses proposed and all tests were carried out with a significance level of 5%. To test the hypothesis, we used multiple linear regression analysis. Table 7 shows the results of multiple regression analysis.

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td></td>
</tr>
<tr>
<td>AA</td>
<td>0.529</td>
</tr>
<tr>
<td>IM</td>
<td>0.515</td>
</tr>
<tr>
<td>OCR</td>
<td>0.615</td>
</tr>
</tbody>
</table>

**Table 6. Result of multicollinearity test**

To test the first hypothesis, “advertising attractiveness has a positive effect on purchase decision”, the statistical t-value on the advertising attractiveness variable showed insignificant
results ($t = 1.540, \beta = 0.075, p > 0.05$). This indicated that advertising attractiveness has no effect on purchase decision. Thus, the first hypothesis on this study was rejected. While the second hypothesis stated that “influencer marketing has a positive effect on purchase decision”, based on Table 7, the statistical $t$-value in the influencer marketing variable indicates that there is significance ($t = 13.725, \beta = 0.680, p < 0.05$). These results suggest that the hypothesis was accepted. The implication is that the higher the use of influencers in marketing activities, the more it will encourage customer to make purchase decision.

The third hypothesis states that “online customer reviews has a positive effect on purchase decision”. With the statistical $t$-value in the influencer marketing variable as presented in the table above ($t = 6.177, \beta = 0.280, p < 0.05$), it can be concluded that there is significance to the study results. This suggests that the third hypothesis in this study is accepted. Furthermore, this explains that the higher reviews given by customers who have consumed Shopee products, the more purchase decisions made by other customers.

5. Discussions
The main purpose of this study is to test the relationship between advertising attractiveness, influencer marketing and online customer reviews on purchase decision. To achieve that, we conducted a search of previous studies. For example, several preliminary studies have shown that there is a positive relationship between advertising attractiveness (Amandeep et al., 2017; Furaji et al., 2013), influencer marketing (Kavaliauskiené & Margis, 2017; Lou & Yuan, 2019)
and online customer review (Guo et al., 2020; Thomas et al., 2019) toward purchase decision. Further tracing was carried out to substantiate the proposed hypotheses as well as determine the measurements of variables. We also found that with the same terms, some researchers have used different measurements. At this point, we conclude that the variable measurement used not only differs from a large group, but also lies in the smallest unit. For example, studies conducted by DeShields et al. (1996), Phau and Lum (2000) uses the ability to communicate to measure advertising attractiveness. For the same variable, this measurement is different from the study conducted by Bower (2001), where researchers used the body shape for measurement. In groups, both measurements focus more on the use of endorsers. Based on its characteristics, an endorser is required to have good communication skills and have a suitable body shape with the advertised product. However, Caballero et al. (1989) argued that advertising attractiveness is not only focused on endorsers. There are several other large groups that can be used to measure the extent to which an ad’s attractiveness can influence purchase decision. In this study, we took that portion by emphasizing the website quality. The same position is used by influencer marketing and online customer reviews. The point is that there are gaps that can be explored further and will develop the advertising theory.

Empirically, the study found that the three hypotheses proposed did not entirely support the theory. From three hypotheses, the relationship between advertising attractiveness does not show a significant influence on purchase decision. In this study, we used variable indicators including content, uniqueness, informative, accuracy, product display and interactivity. Soberman and Xiang (2022) argued that when the heterogeneity of competing products is very strong, then advertising should be directed at symmetrical content. This means that there is a balance between the content of the message and the needs of the customer. A balance approach to ad content may have an impact on the lack of customer appeal. In addition, uninformative advertising is also a problem. As a result, customers may not be interested in making a purchase decision. Meanwhile, the ads content is supposed to show all the products information. The more content, the more it can indicate that the ads are rich in information. Furthermore, as one of the attraction resources, customers may respond to the products offered, but they never give an evaluation of the website content (Teng & Khong, 2015). Psychological factors, such as cognitive, attitude and affective (Munnukka et al., 2016) and the level of customer engagement (Xin Teo et al., 2019) are determinants of customers’ content review.

 Zhong (2019) explained that high interactivity should result in a major change in the way customers make purchases. But at the same time, high interactivity will result in consequences by leaving some privacy vulnerabilities for customers. In general, this issue is not only catastrophic; it only occurs in individuals, but it also has affected the development of the e-commerce industry as a whole. Factually, customer privacy protection on internet technology is still not able to be done, so customer privacy leaks still often occur on e-commerce platforms (Negara & Soesilowati, 2021). In addition, the interactivity that we describe as the ability of the system to communicate with individuals is still not optimal. E-commerce platforms including Shopee, use independent sites to communicate with customers. The web will advise customers to visit some official sites affiliated with the business platform, such as Facebook, Instagram, Twitter and so on. Communication using independent sites is considered to be less influential in purchase decision making (Chen, Teng, Yu, & Yu, 2016).

The study also found that influencer marketing and online customer reviews influence purchase decision. Empirically, these findings are in line with predictions as well as consistent with previous studies. In his study, Chetioui et al. (2020), Nafees et al. (2021) pointed out that the credibility of influencers is the factor that makes the strongest contribution to purchase decision. In line with these findings, Martensen et al. (2018) argued that trustworthiness is the dominant factor in influencing people's perceptions and subsequently they are interested in becoming followers. It can be said that a follower will try to equate his characteristics with influencers, including behavior. The implication is that
they are willing to make sacrifices to gain economic and social rewards. This is done to provide an affirmation that there are differences in their characteristics with other groups of people.

Meanwhile, several indicators of online customer reviews, including review expertise, product rating, quality of argument and website reputation are able to influence customer purchase decision. These findings reinforce the results of previous studies, such as Constantinides and Holleschovsky (2016), Thomas et al. (2019) and Zhang et al. (2020) that there is a positive relationship between online customer reviews and purchase decision. Overall, all indicators used to conduct reviews will reduce the falsehoods of the products offered so as to increase customer trust. However, purchase decision can occur when the review results are able to show several things, such as the number of reviewers, the results of the review, the characteristics of the review format and so on. When the number of reviewers is large, but the results of the reviews show negative comments, then customers are not interested in making a purchase and vice versa. However, at this time, it is still not being studied yet, about the number of recommended reviewers so that the purchase decision can be made by the customer. In simple terms, this will refer to the number of followers owned by the e-commerce business.

6. Conclusion
6.1 Theoretical and managerial implications
This study’s result has interesting implications for researchers and managers. Apart from many previous studies that examine the relationship between advertising attractiveness (Furaji et al., 2013; Khuong, 2015; Triyono et al., 2019), influencer marketing (Gupta, 2021; Kavalaiuskienė & Margis, 2017; Lou & Yuan, 2019; Nagori, 2020) and online customer reviews (Constantinides & Holleschovsky, 2016; Thomas et al., 2019; Zhang et al., 2020) with purchase decisions, the use of website quality can enrich the construct dimensions. Mostly, previous studies have shown that the relationship focuses on physical attractiveness (Li, 2015; Sompel & Vermeir, 2016), and especially the uses of endorsers. The uses physical attractiveness and website quality will be promote the development of firm credibility – and at the end will be triggering a purchase decision. Therefore, we develop a hypothesis by emphasizing website quality to assess the relationship between constructs.

From the statistical testing, it shows that the hypothesis stated “advertising attractiveness has a positive effect on purchase decision”, does not show support for a theoretical perspective. Meanwhile, the other two hypotheses, influencer marketing and online customer reviews, show positive effects on purchase decision. These findings contributed to the literature development on the use of social media as a way to increase purchase decision. The literature development of the study lies in several sections. First, we tried to modify the variable indicators and then empirically tested the conceptual model of the relationship between advertising attractiveness, influencer marketing and online customer reviews with purchase decision. Second, to validate the model, we used the website quality as source credibility.

6.2 Practical implication
In practical terms, these findings provide recommendations for practitioners who take on the e-commerce business, especially for start-ups. First, the absence of a relationship between advertising attractiveness and purchase decisions confirms that consumer perceptions in purchase decision are influenced by other factors, especially physical attractiveness. Despite the start-ups have modified the website by increasing the content to make it more informative, it seems that customers are not interested in making a purchase. Therefore, notwithstanding the role of website attractiveness, the use of physical attractiveness is still considered an effective way to encourage customers to make purchasing decisions. In this
way, a firm needs to make adjustments between the customers’ personality, lifestyle and attitudes and endorsers. Based on the recommendations (Friedman, Termini, & Washington, 1976), the effectiveness of endorsers will be achieved when they meet the following criteria: are popular, have knowledge, are professional and have a leadership spirit.

Second, increased credibility and trustworthiness can be used as capital to change people’s perceptions. With changing perceptions, people are willing to incur additional costs to adapt influencers’ behavior. Third, the greater the number of positive reviews, the more it will encourage customers to make a purchase. However, it is necessary to anticipate related to the issue of fake online reviews or hoaxes. This issue is very vulnerable to occur in businesses that use online media. Online review issues can be adding or subtracting information that is not suitable with the specific purpose. This can have an impact on credibility and trustworthiness, so it will reduce customer interest in making purchases.

6.3 Limitations and future research recommendation
In this study, there are several limitations that can be recommended for researchers to continue. First, the study only involved dependent and independent variables. The issue of customer involvement in accessing information that has an impact on purchasing decisions is complex (Huang & Lin, 2022). Therefore, the use of one variable category in causality relationship causes the findings to be too simplistic. Secondly, we were only focused on one e-commerce platform, which is Shopee which is one of the start-ups in Indonesia. The uniqueness in innovation and use of technology from each start-up to improve purchasing decisions may vary (Potjanajaruwit & Girdwichai, 2019). However, we anticipated by putting this study as a basic prototype through indicators modification. Therefore, researchers can develop this prototype by expanding the scope, either by adding mediation or moderation variables. The use of mediation or moderation variables can serve to close the gap amid the complexity of the e-commerce business.

As a previous explained, the creation of credibility has become an important factor in driving purchase decisions (Kim & Na, 2007; Munnukka et al., 2016). Therefore, future researchers can use credibility as a mediator between this constructs. In the case of moderating variables, future research can also use interaction effects (Amos, Holmes, & Strutton, 2008), past experience (Singh & Banerjee, 2021) as well as cognitive (Kergoat et al., 2017), which inherent in endorsers. Finally, the expansion of the object by adding other e-commerce platforms is also recommended for subsequent studies.

References


**Corresponding author**

Mohammad Arief can be contacted at: arief@trunojoyo.ac.id

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