



# How Online Behavioral Advertising Affects Purchase Intention with Consumer Trust as Mediating Variable

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**Abstract.** Introduction/Main Objectives: This study investigates the role of consumer trust as mediating in the relationship between informativeness, credibility, and entertainment on purchase intention. This study will also look at the effect of consumer trust as a mediator on E-commerce in Indonesia. Background Problems: The rapid development of e-commerce has increased since changing consumer demand and increasing sales efficiency. Online e-commerce is a market formed by digital technology that facilitates trade in goods and services through e-commerce. Prior research came up with complex theoretical frameworks that explain antecedents of OBA focusing only on ethical issues in marketing, on the effectiveness of a single OBA campaign, or on how to create a successful advertising campaign. However, no study focuses on the intended or actual behavior of shoppers. Novelty: This study examines online behavioral advertising can affect purchase intention by using consumer trust as mediating variable and using SEM as technique analyse data that comprised both the reliability test and structural equation modeling. Research Methods: 234 responses were analysed using Structural equation modeling (SEM) - AMOS to test this study's hypotheses. Finding/Results: The results prove that statistically online behavioral advertising has a significant positive effect on purchase intention. The study's findings indicate that informativeness, credibility and entertainment have a direct influence on purchase intention, as well as a direct effect on consumer trust. In addition, the research showed the mediation influence of consumer trust between informativeness, credibility, entertainment, and purchase intention among Indonesian consumers.

**Keywords:** online behavioral advertising · consumer trust · informativeness · credibility · entertainment · purchase intention · e-commerce

## 1 Introduction

In this growing digital age, as a result, the importance of online marketing has increased significantly over the past few years, as evidenced by the revenue generated by various marketing channels. Online Behavioral advertising is now the primary tool for online

advertising, generating personalized advertisements based on the client's past online behavior. Advertisers have seized the opportunity to personalize and target advertisements using online consumer data. This information can include websites visited, articles read, and videos viewed, as well as all search engine queries.

According to eMarketer, in 2021, digital advertising spending in the world will increase by 2.4% compared to 2020, reaching an amount of 332.84 billion dollars, representing 36.11 billion dollars less spending than pre-pandemic forecast. Recent developments in online tracking and profiling technologies have changed the way of communicating with people, especially to customers, allowing the targeting and personalization process in real-time while a user browses the Internet [1, 2]. Therefore in context, technology enables businesses to target consumers based on their general interests by analyzing the editorial content of the web page on which the advertisement will appear [3].

This new era thus introduces a new marketing concept that encourages the use of social media, also known as social media marketing. One of the social media that can be used for selling products is Instagram. Instagram has become a first-rate application dealing with posting pictures and short video that can be shared to other social media.

Nowadays, one of the most popular social media is Instagram. Instagram is a social network that businesses widely use to launch, promote, and inform their products [4]. Many people use Instagram as a medium to buy or sell various types of goods. Over time, many Instagram users use Instagram to share photos and use it as a medium for buying and selling transactions. Social media, which is currently an idol for every community, is not only used to communicate and access information but can also be a means for placing advertisements and conducting promotions.

In the current era of globalization, many information and communication technology innovations can help companies advertise or promote their products, one of which is social media. [5] stated that promotion in placing advertisements on social media is believed to be more effective because it does not require a lot of costs, time, and effort for the company. It is easier for consumers to find out information about the desired product or service wherever and whenever they are.

This phenomenon provides opportunities for startup companies or business owners to expand their advertising activities, particularly on Instagram. However, creating advertisements on social media to successfully attract consumers and motivate consumers to make purchases and consumer confidence to buy products indirectly seeing the goods is always a challenge. As a result, the purpose of this study is to identify and test the main factors associated with social media advertising to determine how much they can influence consumer purchasing interest.

When customers use the internet, they often form attitudes that influence their propensity to make online purchases. Therefore, internet usage and feelings about online buying are strong indicators of whether or not you intend to do so. Purchase intention refers to people's expected or planned future behavior, as well as the likelihood that their views and attitudes will be influenced to act. As the outcome, the relationship between online behavioral advertising and trust affects purchase intention on e-commerce platform is investigated in this study.

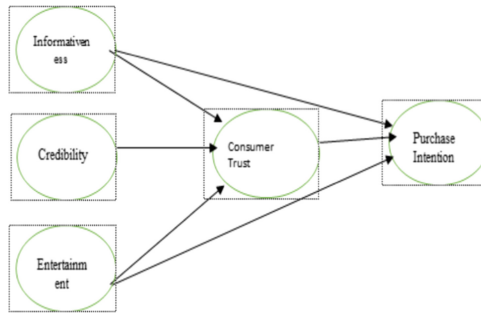
Advertisers are starting to see OBA as one of the most important ways to reach the people they want to reach. Advertisers are increasingly monitoring people's online behavior and using the resulting data to display individually targeted advertisements. The concept for this phenomenon is online behavioral advertising (OBA). Online behavioral targeting or online behavioral advertising is conceptualized as the use of past online behavior or identified through click data that consumers have made to tailor ads for each consumer [3]. In addition, the OBA is theoretically aimed to provide users with more relevant advertisements. However, the collection of information and its use are frequently concealed, creating ethical issues because consumers are unaware of the OBA's underlying mechanisms [6].

The theoretical background of OBA research is highly fragmented. Many studies focus on the effects of the OBA and how to measure acceptance and resistance to the OBA [6, 11–13]. Credibility is essential in the success of personalized ads, and consists in seeing the ads as reliable and capable of having a significant role in guiding the purchases. Literature states that OBA is more effective than non-targeted advertising, but its effects depend both on consumer-controlled factors and on advertiser-controlled factors. The latter mainly refer to the information used to customize the advertiser's ad and transparency, namely, to the credibility of the ad [6].

Therefore, it becomes crucial to understand how and in which measure consumers value both the benefits of the OBA and its costs in order to accept or avoid it. Consequently, the acceptance or the avoidance of the OBA will affect consumer's actual purchase intention.

There are six contributions made by this research. As a starting point, it will serve as a guide for marketers and advertisers to comprehend how online behavior relates to Instagram advertising. Second, it offers valuable insights into how Instagram advertisements influence consumer purchase intent. Thirdly, we investigate the factors that influence the most effective Instagram advertising strategies for brands. Therefore, this research has six objectives: (1) examining the relationship between Informativeness on Consumer Trust Through Instagram advertising (2) examining the relationship between Informativeness on Purchase Intention Through Instagram advertising (3) examining the relationship between Credibility on Consumer Trust Through Instagram advertising (4) examining the relationship between Credibility on Purchase Intention Through Instagram advertising. (5) examining the relationship between Entertainment on Consumer Trust Through Instagram advertising. (6) examining the relationship between Entertainment on Purchase Intention Through Instagram advertising as shown in Fig. 1 research model.

The research aims to investigate how online behavioral advertising can affect purchase intention through Instagram. Specifically, the work attempts to come out with a structural equation model, which can help researchers and practitioners to better understand online behavioral advertising on Instagram.



**Fig. 1.** Research Model

## 2 Methodology

### 2.1 Population and Sample

Respondents were selected using a non-probability known as purposive sampling. Respondents were permitted to complete the questionnaire and were acquainted with Ali Express. From May to June of 2022, it will take eight weeks to collect the data. This is a quantitative survey-based study with closed-ended questions. For this study, the Google online form collected 234 responses.

### 2.2 Data Collection Techniques

To obtain data, data was collected using a questionnaire. The questionnaire method is a series or list of questions that are systematically arranged, then sent to be filled out by respondents. After filling out the questionnaire, it was sent back. The questionnaire used is an optional type to make it easier for respondents to provide answers because alternative answers have been provided and only require a shorter time to answer. The questionnaire contains questions related to research variables.

### 2.3 Data Analysis

Using Structural Equation Modelling (SEM)-AMOS to collect and analyse data for hypothesis testing. Based on measurement theory, the Structural Equation Modelling (SEM) method is effective for assessing data such as survey measurements. Because SEM is advantageous for confirmatory research, it may be employed to establish the relationship in this study. Therefore, SEM may be used to evaluate the path coefficient in this study [7].

In this study, the two-step approach recommended by [8] was implemented. First, the reliability and validity of the measurement model for the first- and second-order models were evaluated, followed by the evaluation of the structural model for the proposed hypothesis.

In order to conduct a second-order CFA, the reliability and validity of first-order latent variables must be established. The subsequent section describes the concept's dependability and validity.

### 3 Results and Discussions

#### 3.1 First-Order Measurement Model

Using factor analysis and confirmatory factor analysis, the measurement model was examined (CFA). Both assessments are meant to evaluate the validity and reliability of items. All items in this study have a loading score more than 0.60 and are loaded in specific variables; thus, they are legitimate [9]. CFA uses the average variance extracted (AVE) score to evaluate convergence validity. Due to the fact that the AVE score exceeds 0.50, there are no issues with the convergence validity of any of the questions in this research [10].

Following [9], this study executed a reflective measurement model (algorithm) and a structural model using SEM-AMOS. As a higher-order variable, attitude is estimated using a two-step procedure. First, the validity and dependability of the measurement model are examined to ensure that the measurement quality standards are satisfied. In terms of internal consistency, both Cronbach's alpha and composite reliability of each construct was more than 0.70, indicating that the constructs'; internal reliability is consistent. In addition, the extracted average variance (AVE) is more than 0.50, indicating that the convergent validity meets the threshold value.

As demonstrated in Table 3, the square roots of the AVE values are greater than the correlation of constructs in terms of discriminant validity. Goodness of fit test allows researcher to determine whether the sample follows a normal distribution. Using three to four fit models is sufficient to show that this research model is acceptable, at least each of the absolute fit, incremental fit, and parsimonious fit are fulfilled [9]. In addition, the model Goodness of Fit is evaluated by certain indicators as mentioned in Table 1.

This model's CMIN/DF score is 1.910 (5.00), which is good; its RMSEA score is 0.051 (0.08), which is also good; and its CFI and TLI scores are 0.956 and 0.943 (>0.95), suggesting an excellent GOF. Overall, the ratings indicate that the Goodness of Fit model is satisfactory [9].

According to Table 2, each indication of the research variable has a loading factor value greater than 0.5. Based on how the loading factors turn out, it may be possible to say that the construct has good convergent validity. All of the factor loading values for each statement item exceed the standard, so none of the statement items are taken out of the model. As a result, the measurement model can be tested further. Table 2 shows that

**Table 1.** Goodness of Fit

Criteria	Threshold	Result	Rule of thumb
Chi-square	Small	227,294	Good
RMSEA	<0.08	0,051	Good
CFI	>0.95	0,956	Good
TLI	>0.95	0,943	Good
CMIN/ df	<5.00	1,910	Good

the AVE value for all constructs is more than 0.5. The AVE value shows the convergent validity value. Its aim is to determine the variance of a construct component based on the indications. The AVE value should be more than 0.5. As a result, the convergent validity measurement model used in this study is likely to be accurate. Table 2 indicates that a Cronbach's Alpha value greater than 0.6 indicates a very dependable Cronbach's Alpha value. Cronbach's alpha values between 0.70 and 0.90 are usually interpreted as meaning that the study is very satisfactory [9]. Also, the total value of reliability is greater than 0.6. Because of these results, each study variable meets the assessment requirements, which means that the whole variable is considered reliable as Table 2.

Consumer trust is shown to be favorably influenced by informativeness ( $b = 0.269$ ,  $p 0.01$ ). As a result, H1, which proposes a favorable effect of informativeness on consumer trust, is confirmed right. The credibility is shown to be significant and positively connected with consumer attitudes ( $b = 0.215$ ,  $p 0.01$ ). As a result, H2 is supported. H3 investigates the relationship between entertainment and consumer trust. The regression results corroborate this hypothesis, with the coefficient of entertainment being positively and substantially linked with the dependent variable of consumer trust ( $b = 0.538$ ,  $p 0.01$ ). As predicted, the component of informativeness has a positive influence on the dependent variable of purchase intention ( $b = 0.210$ ,  $p 0.01$ ). Thus, H4 is proven. Credibility and purchasing intention had a comparable positive significant correlation ( $b = 0.205$ ,  $p 0.01$ ). As a result, H5 is supported. Entertainment is substantial and positively connected with purchasing intention ( $b = 0.474$ ,  $p 0.01$ ). As a result, H6 is supported.

**Table 2.** Measurement model indicators (n = 243)

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
IM	IM1	0,783	0,872	0.836	0.530
	IM2	0,819			
	IM3	0,721			
	IM4	0,531			
CR	CR1	0,481	0.914	0.829	0.470
	CR2	0,727			
	CR3	0,739			
	CR4	0,725			
ET	ET1	0,711	0.917	0.808	0.517
	ET2	0,540			
	ET3	0,608			
	ET4	0,719			
PI	PI1	0,484	0.885	0.835	0.641
	PI2	0,858			
	PI3	0,796			
CT	CT1	0,740	0.909	0.652	0.403
	CT2	0,432			
	CT3	0.410			

Notes: IM = Informativeness, CR = Credibility, ET = Entertainment, PI = Purchase Intention, CT = Consumer Trust

Because all theories have been confirmed and supported. All of the findings are detailed in Table 2. The results can be seen in Fig. 2.

Based on comparisons of output outcomes, almost every index has improved after adjustment. IM, CR, EN, PI and CT findings are within the recommended range, hence it can be assumed that the overall model is valid.

In addition, hypothesis testing was carried out by looking at the critical ratio (CR) value, greater than 1.96 at a significant level of  $p < 0.05$  and 2.58 at a significant level of  $p < 0.01$ . It can be seen from Table 4 that the standardized regression weight of the informativeness on consumer trust is 0.269,  $p$ -value  $< 0.011$ . The value of credibility on consumer trust is 0.215,  $p$ -value  $< 0.01$ . The standardized regression weight of entertainment on consumer trust on is 0.538,  $p$ -value  $< 0.01$ , the value informativeness on purchase intention is 0.210,  $p$ -value  $< 0.01$ . The value of credibility on purchase intention is 0.205,  $p$ -value  $< 0.01$ , and the value of entertainment on purchase intention is 0.474,  $p$ -value  $< 0.01$ . The outcomes of direct and indirect effects are shown in Table 3.

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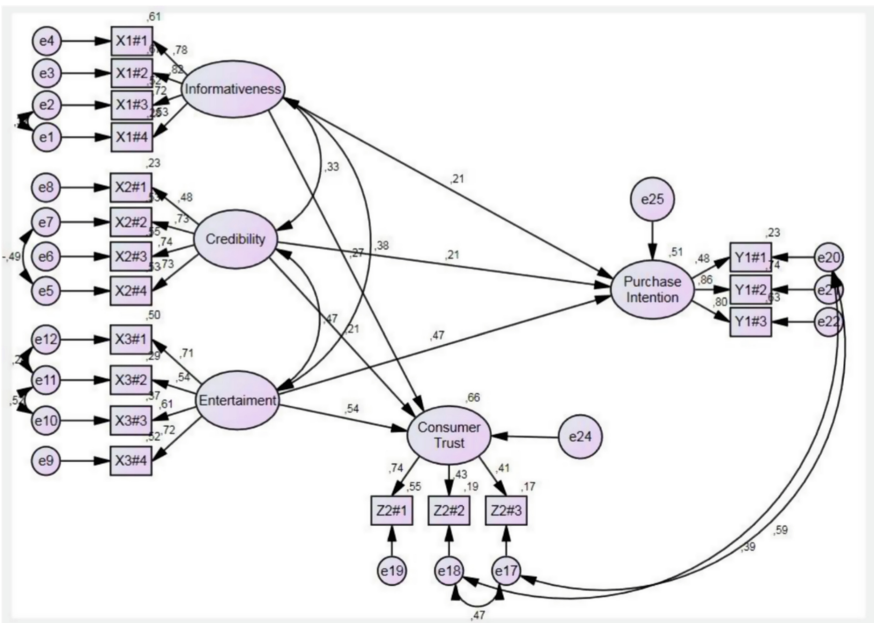


Fig. 2. Structural Model

**Table 3.** Structural Model Result

Hypotheses	Path effect	Critical ratio	Std. Regression Weight	P value	Decision
H1	Consumer Trust ← Informativeness	3,284	0,269	0,001	Supported
H2	Consumer Trust ← Credibility	2,655	0,215	0,008	Supported
H3	Consumer Trust ← Entertainment	4,754	0,538	0,000	Supported
H4	Purchase Intention ← Informativeness	3,159	0,210	0,002	Supported
H5	Purchase Intention ← Credibility	2,994	0,205	0,003	Supported
H6	Purchase Intention ← Entertainment	5,266	0,474	0,000	Supported

**Table 4.** Standardized Value, Direct, Indirect, dan Total Effect

	Direct effect	Indirect effect	Total Effect	Conclusion
Entertainment -> Purchase Intention -> Consumer Trust	0,300	0,000	0,300	Significant
Credibility -> Purchase Intention -> Consumer Trust	0,127	0,000	0,300	Significant
Informativeness -> Purchase Intention -> Consumer Trust	0,170	0,000	0,170	Significant

Table 4 of standardized direct effects and standardized indirect effects might be used to represent the indirect impacts if they were standardized. The findings presented a contrast between direct and indirect consequences. The direct effect of credibility on purchase intention mediated by consumer trust is higher than the direct effect of entertainment on purchase intention mediated by consumer trust. The direct result of entertainment on purchase intention mediated by consumer trust is 0.300, while the indirect effect of entertainment on purchase intention mediated by consumer trust is 0.000. The informativeness variable indirectly influences the purchase intention variable, and the 0.000 consumer variable mediates this effect. Furthermore, among consumers in Indonesia, informativeness, credibility, and entertainment have a significant effect on their purchase intention. People may engage in several informative activities, such as informativeness, credibility, and entertainment.



## 4 Conclusion

Based on the findings of the hypotheses above tests, the conclusions are as follows: informativeness, credibility and entertainment significantly influence consumer purchase intention. The higher informativeness, credibility, and entertainment will increase consumer purchase intention. Likewise, the results of the indirect effect of consumer trust between informativeness, credibility, and entertainment on consumer purchase intention. The mediation variables of consumer trust help consumers to make choices and understand how informativeness, credibility, and entertainment create consumer purchase intention.

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