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## **Privacy Concerns in Personalized Advertising Effectiveness on Social Media**

Lia Febria Lina<sup>1</sup>, Adhy Setiyanto<sup>2</sup>

<sup>1,2</sup>Universitas Teknokrat Indonesia

<sup>1</sup>liafebrialina@teknokrat.ac.id

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**Abstract:** Social media is considered to be one of the greatest environments in which users interact with each other. This is also used by marketers in promoting their products to target consumers it commonly called personalized advertising. Various studies related to personalized advertising have inconsistency result. This study aims to fill the gaps with examining personalized advertising on the perceived advertising value of consumers that affect purchase intention and examine the role of consumer privacy concerns as a moderating variable. This study uses a survey method on 131 respondents who are active users of Instagram in Indonesia. The findings show that the more advertisements are adjusted to the user's interests, purchase history, interests, the more advertisements provide a level of benefit that makes users have purchase intention. Furthermore, privacy concerns weaken effect personalized advertising and advertising value. Further research suggestions are also discussed in this study.

**Keywords:** *Personalized advertising, Advertising value, purchase intention*

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### **Introduction**

Social media is also known as a form of social networking, discussion forums, reviews, and blogs that have dominated the Internet today (Zhang & Mao, 2016). One of the popular social media in Indonesia is Instagram. It is supported by Indonesia's entry into the world's 4th rank by having a total of 63 million Instagram users in 2020 (Statista, 2020). This happens because Instagram always makes innovations that make it easy to use, both for users looking for entertain information, and for marketers who want to use Instagram as a media promotion. One of the innovations that Instagram has in making it easier for

marketers to promote products is the innovation of paid advertising. These paid advertising make the ads that appear on the user's Instagram page customize to personal information, consumer demographics, interest in certain accounts, and the user's current location. In various researches related to customize advertising, targeting, tailoring is referred to as personalized advertising (Boerman et al., 2017). According to Baek & Morimoto (2012), personalized advertising is a form of a promotional message sent to consumers through paid media, which is arranged based on personal information such as user names, purchase history, psychographic aspects, location, and user lifestyle. So, each user can receive different advertisements, because marketers compile advertisements and deliver advertisements that are very relevant to the current location and the environment around each consumer (Tong et al., 2020). Thus, personalized advertising has advantages when compared to advertisements in other media, such as being easily accessible to users. Even though it has various positive advantages, the effectiveness of personalized advertising in the context of social media has not provided sufficient evidence because it has not been widely studied (Shanahan et al., 2019).

There have been various past studies on personalized advertising with inconsistent results. Research of De Keyzer et al. (2015); Kim & Han (2014); Lee et al. (2017); Shanahan et al. (2019); Van Reijmersdal et al. (2017); Dehghani et al. (2016) provide positive results on perceptions and behaviour such as the more personalized advertising, it encourages positive responses like user purchase intentions, ad value, consumer involvement as well as on brand engagement and loyalty. The results are contradictory to research Kim & Han (2014) which stated that personalization does not have a positive effect on advertising value and has not provided an explanation regarding why advertising personalization does not have a significant effect on advertising value. This is influenced by various factors of individual factors such as personality or experience and also the context in which the research was conducted. Kim and Han (2014) also stated that personalization may cause privacy concern. Empirical research that pursues insights into the moderating effect of privacy concerns on the relationships between personalization and cognitive and affective factors is needed. According to Inews (2019) there are various Android applications that violate Google regarding the types of user activity that can be tracked and shared with data brokers to be used in various ways, one of which is targeted advertising or can be called as personalized advertising. The use of this data for some people is a violation of privacy. The level of privacy concerns can affect the evaluation of subjective norms, the higher the level of consumer privacy concerns has a negative moderating effect on repurchase intentions and consumers who have low privacy concerns can have positive moderating effect to repurchase intentions and have an effect on increasing consumer satisfaction (Liang & Shiau, 2018).

Boerman et al., (2017) conducted a literature review related to personalized advertising seen from various perspectives of consumers, marketers and also discussed the outcomes of advertising personalization such as consumer responses from various studies and different contexts. The results of this study state that consumer perceptions, knowledge, and responses to personalized advertising can change over time in accordance with development of technology. So, it is very necessary to do research related to personalized advertising with various research methods. Boerman et al. (2017) also stated that in the current big data era, research related to the use of data in this case is personalized advertising is very important for various parties such as marketers, consumers, researchers, and policies. However, research related to how consumers' perceptions of personalized advertising is still limited (Brinson et al., 2019). So, this study fills the gaps of previous studies that have inconsistent result and overcomes the limitations

of previous studies (Kim and Han, 2014) by examining privacy concern as a moderating variable in different contexts, in Indonesia with different respondents. So, this study also aims to examine how personalized advertising provides benefits to consumers that was measured using the advertising value variable on purchase intention on social media Instagram and examine privacy concern as moderating variable.

## **Literature Review**

### **Personalized Advertising, Advertising Value and Privacy Concern**

Social media is considered to be one of the greatest environments in which users interact with each other. This is also used by marketers in promoting their products to target consumers, and certainly this requires a large cost. One of the paid media in marketing products is using personalized advertising. There are various definitions of personalized and called different names but with the same definition, there are online behavioural/behavioural advertising, online behavioural/behavioural targeting, customized advertising, personalized/personalized, or online profiling (Boerman et al., 2017). Personalized advertising is defined as a form of a promotional message sent to consumers through paid media which is arranged based on personal information such as user names, purchase history on the internet, psychographic, location, and user lifestyle (Baek & Morimoto, 2012). There are still few studies that examined how advertising personalization is applied in the context of social media effectively. Research by Shanahan et al (2019) examine advertising personalization and was found to have a positive effect on brand attachment and brand engagement and Lee et al. (2017) found that personalized advertising also affects the value of advertising. Advertising value define as advertising is valuable, useful and important based on a subjective assessment (Ducoffe, 1996). However, advertising personalization also has negative effects, such as intrusive to consumers. This due to the use of customer data in adjusting advertisements (van Doorn & Hoekstra, 2013). The aspect of privacy in the online context cannot be separated, the more complete the information, the easier it is for companies to target. Privacy is also very attractive in various fields and is still a paradox because one side provides positive things such as convenience, but on the other side raises concerns regarding the misuse of this information. Privacy concern has several definition in different study. Morimoto & Macias (2009) defined consumer privacy concerns as intrusion upon their control of marketer interactions such as unsolicited commercial e-mail. Privacy concerns was defined as psychological state of anxiety stemming from negative consequences caused by privacy loss (Taylor et al. 2011 as cited by Youn & Shin, 2019). In Liang & Shiau (2018) study, privacy concern is consumer factor that reduce repurchase intention. If consumers have higher level of consumer privacy concerns, it will have a negative effect on repurchase intentions and consumers who have low privacy concerns can have high repurchase intentions and have an effect on increasing consumer satisfaction.

### **Hypothesis Development**

In the era of the Internet of things, today's consumers are increasingly selective when they want to buy a product. Consumers are always looking for information through various media before buying a product, from reviews in e-commerce, reading content and blogs or from influencers. Personalized advertising has more advantages compared to other advertising strategies, such as right delivery at the right time, messages that match interests

to previous consumer search history. Thus, advertising personalization creates benefits for both customers and marketers because it provides the right preferences according to consumer needs. De Keyzer et al. (2015); Kim & Han (2014); Lee et al. (2017); Van Reijmersdal et al. (2017); Shanahan et al. (2019); Dehghani et al. (2016) found that personalization has a positive relationship both on consumer attachment, the advertising value to customer loyalty. If consumers feel that the advertisement is in accordance with the interests of the consumer and search history, the consumer will find the advertisement useful. So that the hypothesis is formed:

**H1: Personalized advertising has a positive effect on the advertising value**

Feelings of liking or disliking an object can lead to consumer attitudes and behavior (Zhang & Mao, 2016). When consumers perceive personalized advertising as a beneficial advertisement, consumers can lead to positive attitudes and behaviors such as purchase intention for products displayed by marketers. Consumers with positive attitudes to advertising have shown positive responses such as purchase intention for brands in ad impressions (Lee et al., 2017). Consumers who consider advertisements useful then lead to positive behaviour such as purchase value and are also involved in the brands advertised by marketers (Shanahan et al., 2019). If consumers feel that advertisements are useful and make it easier for consumers to find products that are of interest, it will encourage to purchase intention. Finding in previous research stated that advertising value has a positive effect on purchase intention (Lee et al., 2017) and loyalty (Wu & Li, 2018). So, that the following hypothesis can be formed:

**H2: Advertising Value as a positive effect on purchase intention**

Personalized advertising impressions that match the current location, likes, interests, and consumer search history cannot be separated from the collection and use of information in its compilation. For some people, this can be considered a violation of privacy. When consumers who have privacy concerns see ad impressions, namely ad personalization, consumers can feel suspicious and worried. Liang & Shiao (2018) found that the higher the level of consumer privacy concerns has a negative moderating effect on repurchase intentions and consumers who have low privacy concerns can have positive moderating effect to repurchase intentions and have an effect on increasing consumer satisfaction. Van Doorn & Hoekstra (2013) also uses a moderating variable for privacy concerns, the results of his research stated that advertisements are considered less useful for users with high privacy concerns. Finding on Liang & Shiao (2018) research stated that if people very concerned about privacy they will have low repurchase intention, but those who care less about privacy have high purchase continuance intention. So, when someone has high privacy concerns, they will feel that the advertising is less useful even though the advertising is tailored to their personal preferences. So the following hypothesis is formed:

**H3: Privacy concerns moderated the negative effect on personalized advertising and advertising value**

## **Methods**

The quantitative approach is used in this study with primary data collected from the results of online questionnaires for active Instagram users with Google Form. The questionnaire contains statements related to advertising personalization variables was defined as advertising or promotional message sent to consumers through paid media which is arranged based on user names, purchase history, browsing history on the internet, psychographic, location, and user lifestyle in Social Media (4 statement items) from Xu et

al. (2008), Unal et al. (2011), advertising value is defined as advertising in social media is valuable, useful and important based on a subjective assessment (3 statements) modified from Ducoffe (1995), Liu et al. (2012), purchase Intention is defined as possibility of buying product or services when receive Advertising (3 statement items) modified from Hong & Cho (2011), Wu, Yeh & Hsiao (2011), and Privacy Concern is defined as Psychological state of anxiety came from negative consequences cause by privacy loss like use personal information, stored or used by other. (4 statements) modified from Culnan (1993).

The sampling technique in this study used a purposive sampling type non-probability sampling. To ensure that the respondent is a suitable respondent to fill out this questionnaire, screening questions are given such as "Have you ever received an advertisement marked as "sponsored"?, Are you actively using social media?, how long do you use social media in a day?. The sample used in this study was 131, before testing the hypothesis, the instruments used in this study were tested with validity and reliability tests. If the Average Variance Extracted (AVE) value > 0.5 (Hair et al., 2010) then the research instrument is said to be valid. A reliability test was also carried out by looking at Cronbach's alpha value, it can be said to be reliable if the alpha value is > 0.7. (Hair et al., 2010). After making sure the instrument is valid and reliable, hypothesis testing is carried out with Wrap PLS 6 analysis tool.

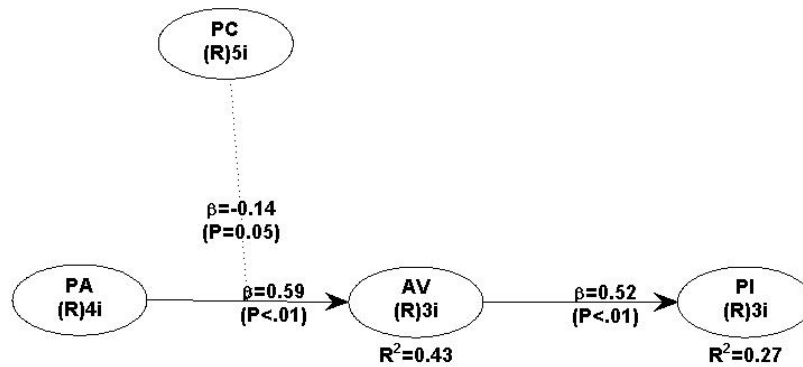
**Findings**

The questionnaire was distributed to 200 respondents and only 131 respondents met the criteria, namely active Instagram users, aged 17-25 and receiving advertisements marked with "sponsored" of various types such as culinary, fashion, entertainment, beauty and sports advertisements. This study was dominated by female respondents with a total of 91 respondents (69%) of the total respondents and total of male respondents are 40 (31%). Respondents were dominated from Sumatra and Java islands. Respondents have received sponsored advertisements of various types such as culinary, fashion, entertainment, beauty and sports advertisements. Before testing the hypothesis, this study measured model fit, reliability and validity. The measurement model fit demonstrated acceptable values, Tenenhaus GoF (GoF)=0.522, and Cronbach Alpha for each construct more than 0.7 and The AVE for each construct is greater than 0.5. This can be seen in Table 1 below:

**Table 1. Assessment of the measurement model**

	<b>PA</b>	<b>AV</b>	<b>PI</b>	<b>PC</b>
<b>Cronbach Alpha</b>	<b>0.826</b>	<b>0.820</b>	<b>0.847</b>	<b>0.910</b>
<b>AVE</b>	<b>0.662</b>	<b>0.735</b>	<b>0.766</b>	<b>0.737</b>

After ensuring that the measurement items are fit, valid and reliable, hypothesis testing is carried out, with the following results the hypotheses testing are illustrated in Figure 1:



\*PA: Personalized Advertising; AV: Advertising Value; PI: Purchase Intention; PC: Privacy Concern

Figure 1. Hypotesis Testing

Hypothesis 1 has p-value  $< 0,01$  with a value of  $\beta = 0.59$  it means that personalized advertising has a positive effect on the advertising value (H1 is supported). Instagram users have a belief that personalized advertising that is accurate and highly relevant to consumers makes it very easy for consumers to receive information related to the desired product and following their need so that it is considered to provide benefit. Therefore, the more advertisements are adjusted to the user's interests, purchase history, interests, and location, the more advertisements provide a level of benefit that makes users feel given the convenience of shopping. The results of this study contradict research (Kim & Han, 2014) and are in line with the research results of Dehghani et al., (2016) and Lee et al. (2017).

Hypothesis 2 has a significance value with p-value  $< 0,01$  and value of  $\beta = 0.52$  that means advertising value affects the purchase intention of personalized products (H2 is Supported). This means that users who feel that this personalization provides benefits can lead to positive attitudes and behaviors such as intending to buy the advertised product. The results of this study are supported by research conducted by Haghirian & Inoue (2007); Kim & Han (2014); Lee et al. (2017); Martins et al. (2019); and Dao et al. (2014).

Furthermore, the results of hypothesis 3, privacy concerns moderate the negative effect of personalization advertising on advertising value, which has a significant value of  $P = 0.05$  Value of  $\beta = -0.14$ , means that privacy concerns weaken the effect of personalized advertising on advertising value (H3 is supported). The findings of this study can explain that Instagram users that have high privacy concerns will reduce the usefulness of ad personalization. The results of this study supported by van Doorn & Hoekstra (2013) which showed that consumers who have high concerns can feel more disturbed and reduce their intention to buy advertised products even though the advertisements match their interests. Liang & Shiau (2018) found that privacy concerns have a significant negative moderating effect between customer satisfaction and purchase intention. So, respondent who are very concerned about privacy have low repurchase intention, but those who care less about privacy have high purchase continuance intention. The results of hypothesis testing in this study can be seen in Table 2

Table 2. Research Results

Hipotesis	Sig	Hypotesis Check
H1: PA -> AV	<0,01	<i>Supported</i>
H2: AV->PI	<0,01	<i>Supported</i>
H3: PA->PC->AV	0,05	<i>Supported</i>

Information: PA= Personalized Advertising, AV= Advertising Value, PI= Purchase Intention, PC=Privacy Concern

## Conclusion

The purpose of this study is to fill the gaps in previous research by examining how the effect of personalized advertising on the advertising value of and purchase intention is considered as a measurement of the effectiveness of personalization in Indonesian. In this research, personalized advertising has positive effect to advertising value and also positive effect to purchase intention. Privacy concern has weakened the effect on the relationship between personalized advertising and advertising value. It indicated that higher degrees of personalization, such as personal identification, searching history, transaction information can increase advertising value. The more accurate advertising, respondent feel the advertising is useful and made just for them self and affect positively to purchase intentions. But positive effect is weaker when the consumers have a high privacy concern. When someone has high privacy concerns, they will feel that the advertising is less useful even though the advertising is tailored to their personal preferences.

## Limitation and suggestion for future research

This research has several limitation, first the data were collected only from Instagram user and only obtained 131 respondents. Future research can replicating this study with more respondents. So, that they can be generalized. Second, this study only analyze and examine personalize advertising in social media Instagram. With the rapid development of personalized advertising in various media, both social media and e-commerce, research related to advertising personalization has not provided sufficient understanding. So, that research related to this field still needs to examine and analyze in a different context. Last, this research using quantitative method and cannot see how high and accurate the advertising personalized, so that further research can use experimental methods to get better results.

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