

Panggati, Ignatius Enda; Sasmoko; Simatupang, Boto; Abdinagoro, Sri Bramantoro

Article

Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Panggati, Ignatius Enda; Sasmoko; Simatupang, Boto; Abdinagoro, Sri Bramantoro (2023) : Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 10, Iss. 2, pp. 1-16, <https://doi.org/10.1080/23311975.2023.2220204>

This Version is available at:

<https://hdl.handle.net/10419/294488>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude

Ignatius Enda Panggati, Sasmoko, Boto Simatupang & Sri Bramantoro Abdinagoro

To cite this article: Ignatius Enda Panggati, Sasmoko, Boto Simatupang & Sri Bramantoro Abdinagoro (2023) Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude, Cogent Business & Management, 10:2, 2220204, DOI: [10.1080/23311975.2023.2220204](https://doi.org/10.1080/23311975.2023.2220204)

To link to this article: <https://doi.org/10.1080/23311975.2023.2220204>



© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 05 Jun 2023.



Submit your article to this journal [↗](#)



Article views: 1761



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)



Received: 18 November 2022
Accepted: 28 May 2023

*Corresponding author: Ignatius Enda Panggati, Management Department, BINUS Business School Doctoral of Research in Management, Bina Nusantara University, Jakarta, Indonesia
E-mail: ndoghy@gmail.com

Reviewing editor:
Hazem Rasheed, Department of Marketing and International Business, Arab Academy for Science Technology and Maritime Transport, Alexandria, Egypt

Additional information is available at the end of the article

MARKETING | RESEARCH ARTICLE

Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude

Ignatius Enda Panggati^{1*}, Sasmoko¹, Boto Simatupang¹ and Sri Bramantoro Abdinagoro¹

Abstract: The COVID-19 pandemic is changing consumer behaviour, where consumers are shifting their activities toward digital activities. One of the popular advertising media among digital natives during the COVID-19 pandemic is digital influencers. Brands and marketers should use digital advertising and digital influencer in their digital advertising strategy to adapt to consumer behaviour changes during the COVID-19 pandemic. This study fills the gap in the advertising literature by proposing trust in digital influencers as a predictor for consumers' attitudes toward digital advertising and evaluating brand attitude as mediating variable between consumers' attitudes toward digital advertising and purchase intention. The data was collected through an online survey, and there were 461 respondents in Indonesia. Smart Partial Least Square was used to analyze, test, and validate the collected data. The result showed that trust in digital influencers, entertainment, information, and personalization directly influence consumers' attitude toward digital advertising, and brand attitude has a positive and significant influence as a mediating variable between consumers' attitude toward digital advertising and purchase intention. This study also discusses theoretical and managerial implications on how brands, marketers, and agencies can effectively use digital advertising and influencers.

Subjects: Advertising; Consumer Behaviour; Internet / Digital Marketing / e-Marketing

Keywords: trust in digital influencer; digital influencer; entertainment; informative; personalization; digital advertising

1. Introduction

In early 2020, the world faced the COVID-19 pandemic (Uğur & Akbiyik, 2020). The COVID-19 pandemic shocked the world like no other, mainly due to the new strains of the virus, which are highly infectious, and the viruses mutate quickly (Lim, 2021). Many governments put emergency measures to control and maintain massive infection by requiring their people to maintain in their homes and restricting their activities outside to control the COVID-19 pandemic. Thus, the COVID-19 pandemic devastates the economy and businesses, besides the health systems. There are many businesses bankruptcy cases and unemployment cases due to the COVID-19 pandemic. The fear of contracting COVID-19 during the COVID-19 pandemic, government restrictions on social

mobility and irrational buying intention led consumers to swiftly adopt online shopping on a large scale (Birtus & Lăzăroiu, 2021; Rydell & Šuleř, 2021). In the midst of the COVID-19 pandemic, consumers are compelled to use the internet and information technology in their daily lives; consumers have shifted their shopping toward e-commerce, consumers have begun to remote work from home, and their preference in entertainment shifted from cinema to streaming online (Kohli et al., 2020). The change in consumers buying behaviour patterns are becoming an entangled part of their daily lives during the COVID-19 pandemic, and it will be unlikely that these buying behaviour habits will last and it will be unlikely to return to normal in the near future (Karamchandani et al., 2021). During the COVID-19 pandemic, the advertising budget of many brands has shrunk, while consumers' consumption of online media has increased by several folds. The change in consumers' purchase behaviour patterns online during the COVID-19 pandemic became a potential strategy for brands to use digital advertising during the COVID-19 pandemic (Falcão & Isaías, 2020). Therefore, it is crucial for brands and marketers to understand consumers' responses toward digital advertising and analyze factors that influence their attitudes toward it during the COVID-19 pandemic. This research explores the digital advertising capabilities that contribute to building consumer's positive attitudes toward digital advertising. A prior study by Lim et al. (2021) explains that the entertainment and personalization capability of digital advertising contributes to building positive attitude toward digital advertising of native digital generations. Previous empirical studies revealed that consumers responded positively to the entertainment, informativeness and personalization aspect of digital advertising (M. M. Tsang, S. C. Ho, et al., 2004; Xu, 2006; Y. C. Lee, 2018). This study proposes entertainment and informativeness as antecedents of consumer attitudes toward digital advertising.

Nowadays, consumers expect brands to interact with them, not just sell their products to them. Thus, the brand became actively pursue building relationships with its consumers through consumer engagement marketing (Lim & Rasul, 2022). Influencer marketing is one of the effective digital marketing approaches that enables brands to engage with their consumers in the digital and social media (Lim et al., 2022; Tafesse & Wood, 2021). In the last decade, influencer marketing has grown rapidly to become a popular trend among consumers and has been adopted by many advertisers and marketers in their marketing strategy (C. Childers & Boatwright, 2021). According to a report by Influencer Marketing Hub, the influencer marketing industry is growing to reach approximately \$16.4 billion in 2022, and the influencer marketing industry is still a growing and popular marketing media despite the impact of the COVID-19 pandemic upon the world (Geyser, 2022). The digital influencer has become a popular trend among consumers, especially among the generations that have grown up with the digital device and the internet, which are usually called digital natives generations (Smith, 2019). Advertisers and marketers occasionally use to endorse digital influencers to advertise their products or service in digital media and social media (Donthu et al., 2022). Prior studies on digital influencers usually address several relevant issues on digital influencers on consumers' behaviour as electronic word of mouth (Chetioui et al., 2020; Hsu et al., 2013; Jiménez-Castillo & Sánchez-Fernández, 2019), digital influencers as endorsement media (Belanche et al., 2020; S. Lee & Kim, 2020). Research on digital influencers is still in a nascent state; there are several issues that remain unexplored in the digital influencer field (Tafesse & Wood, 2021). Although digital influencer is a popular advertising medium for brands and advertisers, relatively few studies have sought to explore digital influencer as one of the digital advertising media that contribute to building consumers' positive attitude toward digital advertising. This study adapted the digital influencer into a trust in digital influencer based on a study by Hsu et al. (2013). This study fills the literature gap in advertising research by proposing trust in digital influencers as one of the predictors of consumers' attitudes toward digital advertising. This study aimed to investigate the influence of trust in digital influencers and digital advertising capabilities on consumers' attitudes toward digital advertising during the COVID-19 pandemic.

Consumers can purchase more when they already have a good brand attitude (Wardhani & Alif, 2019). The COVID-19 pandemic has brought changes in consumer behaviour towards online behaviour that will last in the long term, and digital advertising has become a strategic marketing medium for brands and marketers (Birtus & Lăzăroiu, 2021; Rydell & Šuleř, 2021). Branding and persuading

consumers are the main goals of advertising; it is important for brands to understand their consumer's attitudes toward brand during the COVID-19 pandemic (Alalwan, 2018; Karamchandani et al., 2021). Therefore, it is imperative to study the relationship between consumers' attitudes toward digital advertising—brand attitudes—purchase intention during the COVID-19 pandemic. However, there are still few empirical studies in advertising that explore the relationship of brand attitude as mediating variable between attitude toward digital advertising and purchase intention. This highlights the importance of examining brand attitude as a mediating variable of the relationship between attitude toward digital advertising and purchase intention.

Overall, the present study aims to examine the influence of trust in digital influencers and digital advertising capabilities (entertainment, personalization, informativeness) in building consumers' attitudes toward digital advertising and evaluate brand attitude as a mediating variable of the relationship between attitude toward digital advertising and purchase intention. To answer the main purpose, this study draws on several research questions.

RQ1 - Do consumers' attitudes toward digital advertising and brand attitude have an influence on purchase intention?

RQ2 - Do trust in digital influencer has a positive impact as an antecedent on consumers' attitudes toward digital advertising?

RQ3 - Do digital advertising capabilities (entertainment, informativeness, and personalization) have a positive influence in building consumers' attitudes toward digital advertising?

RQ4- Does brand attitude has a mediating impact on the relationship between consumers' attitude toward digital advertising and purchase intention?

This paper consists as follows, first, the introduction, and second, the theoretical background and hypothesis are developed. Thereafter, the research methodology used in this study, then data analysis and results. Finally, the discussion and conclusion.

2. Literature review

2.1. Theory of reasoned action

The theory of reasoned action (TRA) is a psychological theory that predicts consumers' individual behaviours. The theory of reasoned action is a popular theory that is used in many marketing and consumer behaviour research. TRA was used and adapted in many empirical studies in advertising (Fatima & Abbas, 2016; M. M. Tsang, S. C. Ho, et al., 2004; Wolin et al., 2002). TRA stated that consumers' attitude influences their behaviour through intention (Fishbein & Ajzen, 1975). Consumer attitude is an essential variable in advertising research. Fishbein and Ajzen defined attitude as a learned predisposition of a human being (Fishbein & Ajzen, 1975). Kotler defined attitude as a person's enduring favourable or unfavourable evaluations, emotional feelings, and action tendencies toward some object or idea (Kotler, 2022; Kotler & Armstrong, 2016). This study defined consumer attitude as consumers enduring favourable or not, positive or negative emotional feelings as evaluation toward their interaction with digital advertising.

Prior empirical studies in advertising found that consumers' attitude positively influences their intention (Ho Nguyen et al., 2022; Lim et al., 2021; Souiden et al., 2019). Thus, this study proposes that.

H1: Consumers' attitude toward digital advertising positively influences their purchase intention.

2.2. Entertainment

Consumer enjoyment from advertising plays an essential role in generating their attitude toward advertising (Saadeghvaziri et al., 2013). Digital advertising, with its creativity and multimedia capability, can be added value to the advertised brand (Wolin et al., 2002). Entertainment of digital advertising refers to consumers' feelings of enjoyment and delight, which are obtained from their interaction with digital advertising (Karamchandani et al., 2021). Entertaining digital advertising will lead consumers to have better purchase intention and be more loyal to the advertised brand (Gaber et al., 2019). This study defined entertainment as the level at which consumers perceive enjoyment and involvement during their interaction with digital advertising that will influence their positive affect and mood.

Enjoyable, interactive presentations of digital advertising influence consumer buying behaviour. A prior study stated that entertainment positively influences consumers' attitudes toward advertising (Gaber et al., 2019; Popovic, 2019; Souiden et al., 2019). Based on the finding from prior studies, this study proposes.

H2: Entertainment positively impacts consumers' attitudes toward digital advertising.

2.3. Informativeness

The main function of advertising is as media to provide information for consumers (Fennis & Stroebe, 2010; Wolin et al., 2002). The brand will generate awareness of its product among its customers and consumers through the role of advertising (Saadeghvaziri et al., 2013). One of the main reasons for consumers' positive response to advertising is the advertising's ability to deliver information to consumers (Karamchandani et al., 2021). The informativeness of digital advertising refers to the consumer's extent that consumers realize and feel that the information contained in digital advertising regarding products or services is being advertised (Ho Nguyen et al., 2022). The informativeness capability of digital advertising is one of the crucial factors in persuading consumers and a predictor for consumers to gain value from interacting with digital advertising (Shareef et al., 2019). Informativeness for digital advertising was then developed by Wolin et al. (2002).

Previous empirical studies in advertising proved that the informativeness of digital advertising is important in building consumers' attitudes toward advertising (Gaber et al., 2019; Ho Nguyen et al., 2022; Martins et al., 2019; Y. C. Lee, 2018). Based on the prior study's findings, thus this study proposes the following hypotheses.

H3: Informativeness has a positive impact on consumers' attitudes toward digital advertising.

2.4. Personalization

Consumer buying decisions are influenced by their characteristics and the marketing strategy (Xu et al., 2008). Information technology enables digital advertising to be delivered personalized based on the consumer's characteristics. Personalization refers to the ability of the business to understand and treat its customers as an individual through personal messaging (Le & Wang, 2021). The digital advertising content which personalized according to customer preference can help customers to decrease their cognitive load, saving their time and decrease their fatigue while making choices (Chandra et al., 2022). The future of digital advertising lies in personalized communication based on precise data on consumers (H. Lee & Cho, 2020). Several empirical studies proved that digital advertisement personalization leads to positive consumers attitudes toward digital advertisement (Fatima & Abbas, 2016; Gaber et al., 2019; Ho Nguyen et al., 2022; Le & Wang, 2021; Lim et al., 2021). Based on the prior findings, this study proposes the following hypotheses.

H4: Personalization of digital advertising leads to positive consumer attitudes toward digital advertising.

2.5. Trust in digital influencers

Influencer marketing is a digital marketing strategy that enables the brand to forge a deeper connection with its consumers in digital media (Tafesse & Wood, 2021). Influencers, through sharing their personal content with their followers create and leverage deeper bonds with them, which usually revolves around lifestyles, interests, and opinions (Ladhari et al., 2020). Influencer marketing forge and leverage trust and connection with their followers to expand their impact, reputation and reach of brands in social media (C. C. Childers et al., 2019). According to Hsu et al. (2013), the formation of consumer trust in digital influencers is classified as knowledge-based trust; where trust is formed through repeated interaction experiences between consumers as readers and viewers of digital influencers' content then trust is formed (Hsu et al., 2013). Based on prior research by Hsu et al. (2013), the definition of trust in digital influencers is the degree to which consumers as digital influencer readers believe in digital influencers and the information posted on the digital influencer can be trusted.

Trust is one of the predictors of purchase intention, and prior studies found that trust positively influences consumer attitudes (Balaji et al., 2019; Chawla & Joshi, 2019; Fan et al., 2018). Based on prior findings and arguments, this study suggests these hypotheses.

H5: Trust in digital influencer positively and significantly influence consumer attitude toward digital advertising.

2.6. Brand attitude

Brand attitude is defined as consumers' eagerness to interact repeatedly with a particular brand and show a positive or negative reaction to a particular brand (Salehzadeh & Pool, 2017). Consumers' attitudes toward a brand are created through their engagement and experience with that brand, which is resistance to change (Yim et al., 2014). Even though sales and branding are the goal of advertising, prior research on digital advertising has emphasized the influence of attitude toward digital advertising on purchase intention (Falcão & Isaías, 2020; Gaber et al., 2019). There is still little research on advertising that emphasizes the influence of brand attitude on purchase intention (E. B. Lee et al., 2017). Furthermore, this study proposes to evaluate the influence of brand attitude as mediating variable between consumers' attitudes toward digital advertising and purchase intention.

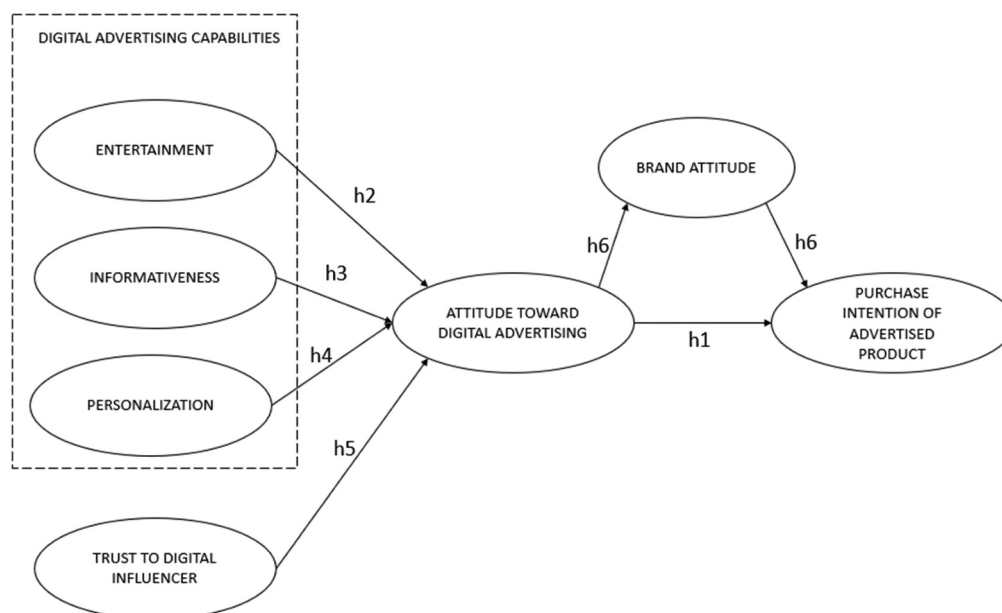
H6. Brand attitude has a positive and significant influence as mediating variable between customers attitude toward advertising and purchase intention. The research model of this study can be seen in Figure 1 above.

3. Research methodology

3.1. Data collection

This study is a cross-sectional study. The population from this research is Indonesian digital advertising consumers that already interact with digital advertising. The study collected the data through an online survey that was conducted using Google Forms to collect data. The snowball method is used in this study, which this method is considered relevant in studies such as electronic word of mouth and advertising research (Bakr et al., 2019; Falcão & Isaías, 2020; Kudeshia & Kumar, 2017). Four hundred and seventy responses from Indonesian consumers were received after removing the incomplete and missing data, leaving us with 461 respondents' data. The final sample consists of 53 per cent women and 37 per cent men, 63 per cent of 15–20 years of age, 19 per cent 21–26 years of age, 9 per cent 27–32 years of age, and 9 per cent 33–38 years of age.

Figure 1. Research model.



3.2. Measurements

All the construct items that were used in this research were adapted from prior empirical research literature and measured using a five-point Likert-type scale. The scale for entertainment and informativeness was adopted from Tsang et al. (2004) and Falcão & Isaías (2020). (Falcão & Isaías, 2020; M. M. Tsang, S. Ho, et al., 2004). The scale for personalization of digital advertising was obtained from prior research by Xu (2006) and Zhang et al. (2021) (Xu, 2006; Zhang et al., 2021). The scale for consumer's attitudes toward digital advertising and consumer purchase intention was adapted from Zhang et al. (2021) and Tsang et al. (2004) (M. M. Tsang, S. Ho, et al., 2004; Zhang et al., 2021). The items that were used to measure trust in digital influencer was adapted from Hsu et al (Hsu et al., 2013). The scale used to measure brand attitude was adopted from Spears et al. and Chin et al (Chin et al., 2020; Spears & Singh, 2004).

3.3. Data analysis

This study uses Structural Equation Modelling—Partial Least Square (SEM-PLS) to evaluate and test the research model and data. SEM-PLs were deemed suitable because the data used are not normally distributed, and the nature of this research is exploratory research (Hair et al., 2017).

4. Results

4.1. Measurement model

The measurement model of PLS-SEM is based on the latent variables' reliability, convergent validity, discriminant validity, and the validity of each item (35). Items on each latent variable in Table 1 have loading factors above 0.700, suggesting that each of the latent variables or constructs in the research model has a good validity. The result in Table 1 also showed that items in each of the latent variables have VIF or variance inflation factors below 3.3 which indicate that the model can be considered free from common method bias (Kock, 2015). The result (Table 1) shows that the composite reliability or CR value from each latent variable was higher than 0.7 thresholds, suggesting that all the latent variables have good reliability. The evaluation of convergent validity measurement was assessed using average variance extracted or AVE from each latent variable. The calculation shows AVE values for each latent variable (Table 1) were greater than 0.5 thresholds, suggesting that all the latent variables have good convergent validity (Hair et al., 2019).

Table 1. Measurement model result

Latent variables	Items	Loading factor	CR	AVE	VIF
ATTITUDE TOWARD DIGITAL ADVERTISING	atdid_1	0.796	0.896	0.684	1,750
	atdid_2	0.762			
	atdid_3	0.862			
	atdid_4	0.881			
ENTERTAINMENT	ent_1	0.774	0.887	0.663	1,757
	ent_2	0.878			
	ent_3	0.785			
	ent_4	0.815			
INFORMATIVENESS	inf_1	0.841	0.903	0.699	1,917
	inf_2	0.790			
	inf_3	0.856			
	inf_4	0.855			
PURCHASE INTENTION OF ADVERTISED PRODUCT	pi_1	0.860	0.926	0.757	2,297
	pi_2	0.864			
	pi_3	0.863			
	pi_4	0.893			
PERSONALIZATION	psn_1	0.861	0.934	0.780	2,442
	psn_2	0.880			
	psn_3	0.898			
	psn_4	0.893			

(Continued)

Table 1. (Continued)

Latent variables	Items	Loading factor	CR	AVE	VIF
TRUST IN DIGITAL INFLUENCER	trdi_1	0.835	0.904	0.702	2,116
	trdi_2	0.874			
	trdi_3	0.872			
	trdi_4	0.766			
BRAND ATTITUDE	atdbr_1	0.829	0.929	0.765	1,772
	atdbr_2	0.902			
	atdbr_3	0.884			
	atdbr_4	0.881			

Notes: AVE: average variance extracted, CR: Composite reliability, VIF: variance inflation factor, Atdid: Consumers attitude toward digital advertising, Ent: Entertainment, Inf: Informativeness, Pi: Purchase intention, Psn: Personalization, Trudi: Trust in digital influencer, Atdbr: Brand attitude

Table 2. Discriminant validity result

	Atdid	Atdbr	Ent	Inf	Psn	Pi	Trdi
Atdid	0.827						
Atdbr	0.576	0.875					
Ent	0.719	0.527	0.814				
Inf	0.662	0.511	0.729	0.836			
Psn	0.598	0.615	0.604	0.690	0.883		
Pi	0.693	0.761	0.600	0.638	0.701	0.870	
Trdi	0.461	0.506	0.412	0.447	0.542	0.535	0.838

Notes: Atdid: Consumers attitude toward digital advertising, Ent: Entertainment, Inf: Informativeness, Pi: Purchase intention, Psn: Personalization, Trdi: Trust in digital influencer, Atdbr: Brand attitude

The next phase is to evaluate the discriminant validity. The square root of the AVE values from each latent variable should be greater than its correlation with another latent variable to have good discriminant validity.

The calculation result of discriminant validity is presented in Table 2. The result in Table 2 revealed that the correlation score among latent variables has the highest score than the correlation with another latent variable, which implies that each of the latent variables is empirically different from the others.

4.2. Structural model

After the measurement model, the next step is the structural model assessment. The structural model is assessed by estimating the path coefficient and the coefficient of determination. The coefficient of determination of R^2 estimates the change of items in the dependent variables that can be explained by the independent variables (Hair et al., 2019). The result of R^2 is shown in Table 3. The coefficient of determination of consumers' attitude toward digital ads is 0.584, which means about 58.4% of the variation in the consumer's attitude toward digital ads can be accounted for by the trust in a digital influencers, entertainment, informativeness and personalization. The result also showed that the coefficient of determination of purchase intention is 0.676, which implies that 67.6% of the variation in the purchase intention can be accounted by brand attitude and consumers attitude toward digital ads.

Bootstrapping techniques with 5,000 resamples were used to test the path coefficient from each hypothesis in this research. The result (Table 4) shows that consumers' attitude toward digital advertising positively influences purchase intention, which supports H1. The result in Table 4 also found that entertainment, information, trust in digital influencers, and personalization have a positive and significant impact on building positive attitudes toward digital advertising, providing support for H2, H3, H4, and H5. The result also revealed that consumers' attitude toward digital advertising has a positive impact on brand attitude; furthermore, brand attitude has a positive influence on purchase intention.

The mediating effect evaluation was tested using bootstrapping with 5,000 resamples, and the result is in Table 5.

Table 3. Coefficient of the determination result

Variables	R^2
ATTITUDE TOWARD DIGITAL ADVERTISING	0.584
BRAND ATTITUDE	0.332
PURCHASE INTENTION OF ADVERTISED PRODUCT	0.676

Table 4. Structural measurement model result					
	Relationship	beta	t-statistic	p-value	Notes
H1	ATTITUDE TOWARD DIGITAL ADVERTISING → PURCHASE INTENTION OF ADVERTISED PRODUCT	0.382	10.920	0.000	accepted
H2	ENTERTAINMENT → ATTITUDE TOWARD DIGITAL ADVERTISING	0.456	8.876	0.000	accepted
H3	INFORMATIVE → ATTITUDE TOWARD DIGITAL ADVERTISING	0.187	3.217	0.001	accepted
H4	PERSONALIZATION → ATTITUDE TOWARD DIGITAL ADVERTISING	0.129	2.524	0.012	accepted
H5	TRUST IN DIGITAL INFLUENCER → ATTITUDE TOWARD DIGITAL ADVERTISING	0.120	3.083	0.002	accepted
H6	ATTITUDE TOWARD DIGITAL ADVERTISING → BRAND ATTITUDE	0.576	18.013	0.000	accepted
H6	BRAND ATTITUDE → PURCHASE INTENTION OF ADVERTISED PRODUCT	0.541	15.188	0.000	accepted

Table 5. Mediating effect model result

Relationship	t-statistic	p-value	Notes
Total Effect			
ATTITUDE TOWARD DIGITAL ADVERTISING → PURCHASE INTENTION OF ADVERTISED PRODUCT	26.260	0.000	Accepted
Direct Effect			
ATTITUDE TOWARD DIGITAL ADVERTISING → PURCHASE INTENTION OF ADVERTISED PRODUCT	10.920	0.000	Accepted
Specific Indirect Effect			
ATTITUDE TOWARD DIGITAL ADVERTISING → PURCHASE INTENTION OF ADVERTISED PRODUCT	12.837	0.000	Accepted

The results in Table 5 show the significant result from the indirect effect of brand attitude on attitude toward digital advertising and purchase intention. Table 5 also shows the positive and significant results from the total effect and direct effect between consumer's attitudes toward digital advertising and purchase intention. Due to the result of direct effect, total effect, and indirect effect being significant, we can conclude that brand attitude partially mediates the relationship between consumers' attitudes toward digital advertising and purchase intention.

5. Discussion

The COVID-19 pandemic has had an impact on changing consumer behaviour. Quarantine and lockdowns carried out by the government have made consumers switch to online activities in their daily activities. Increased online activity during the COVID-19 pandemic is an opportunity for the digital advertising industry to develop. This research found that the positive attitude of consumers towards digital advertising had a significant effect on their purchase intention during the COVID-19 pandemic. This result is in line with prior study (Herrando & Martín De Hoyos, 2022; Ho Nguyen et al., 2022; Le & Wang, 2021). These findings confirm that digital advertising is an effective promotional medium during the COVID-19 pandemic. This research was also conducted to understand what digital advertising factors can deliver a positive attitude from consumers towards digital advertising during the COVID-19 pandemic. The result showed that the entertainment, informativeness and personalization capabilities of digital advertising have a positive impact on consumers attitude toward digital advertising during the COVID-19 pandemic. The results of this study are in accordance with the results of previous studies from Martins et al. (2019), Souiden et al. (2019), and Aramendia-Muneta and Olarte-Pascual (2019), which in conclusion state that entertainment and informativeness are factors that have a significant impact in shaping consumer attitudes towards digital advertising. However, this previous research was conducted before the COVID-19 pandemic, while this research was conducted during the COVID-19 pandemic. In addition, the results of this study also show that consumers are happy when they feel entertained and get up-to-date information when interacting with digital advertisements during the COVID-19 pandemic. Brand managers, marketers and advertising agencies should use various multimedia features of digital advertising that differentiate them from other media advertisements effectively to be able to attract consumer interest during the COVID-19 pandemic, such as using animation, quality videos, and interesting storylines. The results of this study also allude that consumers are using digital advertising as a medium of information during the COVID-19 pandemic. Brand managers and marketers should use digital advertising to communicate about offers, promotions, product launches and all the latest information about their brands through digital advertising

during the COVID-19 pandemic. The results of this study also show personalization as one of the influential factors in shaping consumer attitudes towards digital advertising. These results are in accordance with previous studies which prove the importance of the influence of personalization in shaping consumer attitudes towards digital advertising (Falcão & Isaías, 2020; Gaber et al., 2019; Jingjun Xu, 2006). Then, this research revealed that consumers like digital advertising content that is relevant to their preferences when they interact with digital advertisements during the COVID-19 pandemic. Marketers and brand managers must consider using personalization technology, such as programmatic advertising, to place their digital advertisements so that they are liked by consumers during the COVID-19 pandemic. Brand managers and marketers must also use digital platforms with good personalization technology when they want to place digital advertisements, such as social media platforms.

This study also aimed to fill the gap in the digital advertising literature by investigating the effect of trust in digital influencers in developing consumers' positive attitudes toward digital advertising during the COVID-19 pandemic. The results of this study show that consumer trust in digital influencers contributes significantly to shaping positive consumer attitudes towards digital advertising. This result is consistent with several prior studies which examine the influence of digital influencers on consumers attitudes (De Veirman et al., 2017; Hsu et al., 2013; Singh & Banerjee, 2018). It is just that previous research did not examine the influence of digital influencers on consumer attitudes in the context of digital advertising. At the same time, this study provides empirical evidence regarding the significant influence of trust in digital influencers on consumer attitudes towards digital advertising. The results of this hypothesis test can be caused because the population of this study is mostly a population that grew up in the internet era and is included in the digital native's category, where digital influencers are popular and have become a trend among digital natives. Digital native consumer's during the COVID-19 pandemic believed in the truth and were open to digital influencer content so that when the digital influencer created content about a brand or product, it was easier for consumers to like digital advertisements for that product or brand. This shows the important role of digital influencers in digital advertising during the COVID-19 pandemic; thus, brand managers, marketers and advertising agencies need to use digital influencers in their digital advertising campaign strategy during the COVID-19 pandemic to reach their consumers, especially digital natives consumers. Brand managers, marketers and advertising agencies, when endorsing digital influencers, need to pay attention to how their content is, how engaged their followers are with their content, and whether the information from their content can be trusted and relied upon by their followers so that the results are more effective.

Another objective of this research is to analyze the effect of brand attitude as a mediating variable between consumer attitudes towards digital advertising and purchase intentions. This study found that brand attitude partially mediates the relationship between consumer attitudes towards digital advertising and purchase intentions. These results revealed that when consumers like a digital advertisement during the COVID-19 pandemic, it will increase their purchase intention for the product or brand in the digital advertisement, and also affect their positive attitude towards the brand in the digital advertisement, where their positive attitude towards the brand also contributes to building their purchase intention for the product or brand in the digital advertisement. So, it is important for brand managers, marketers and advertising agencies to design digital advertisements that can be well received by consumers because, apart from increasing their purchase intention, it also has an impact on their positive response to the brand.

6. Conclusions

6.1. Theoretical contributions

This study makes several theoretical contributions to the current digital advertising literature. First, this study advances digital advertising literature, especially in consumers attitude toward digital advertising. In the body of knowledge of advertising literature, consumers attitude toward digital advertising is one of the nine leading advertising topics in the advertising journals between 2000 and 2020 (Donthu et al., 2022). This study advances digital advertising literature by investigating

the role of trust in digital influencers as one of the predictors of positive consumer attitudes toward digital advertising during the COVID-19 pandemic. Most of the prior studies in digital advertising have investigated various antecedents, such as entertainment, informativeness, credibility, personalization, and motivation. However, little attention has been put on the role of trust in digital influencers as antecedents of consumers' attitudes toward digital advertising during the COVID-19 pandemic. This study is one of the study that attempts to empirically investigate and prove that trust in digital influencer positively influence consumers' attitude toward digital advertising. Second, this study also fills the gap in the digital advertising literature by evaluating the role of brand attitude as mediating variable in the formation of consumers' attitudes digital advertising-purchase intention relationship. There are several studies that examine the relationship between consumers' attitude toward advertising and their attitude toward brand; however, there are still few that explain brand attitude as mediating variable between attitude toward advertising and purchase intention. This study is one of the few that analyzed and empirically prove that brand attitude act as mediating variable between consumers' attitude toward digital advertising and purchase intention.

6.2. Managerial implications

The findings in our study have managerial implications, especially for the brand, marketer, and digital advertising agencies. One of the purposes of digital advertising is to build consumers' purchase intention. Marketers and digital advertising agencies should know the importance of consumers' attitudes toward digital advertising influence on purchase intention. They also realize that it is a challenging task to build positive consumer responses to digital advertising. Through this study, digital advertising agencies, marketers, and brand owners can understand and build an excellent digital advertising strategy which will gain positive consumer responses t during the COVID-19 pandemic. The result showed that entertainment has the highest significance in building a positive response toward digital advertising, among other variables, during the COVID-19 pandemic. Brands, marketers, and agencies should focus on the entertainment aspect of digital advertising to enhance consumers' attitudes toward digital advertising by creating entertaining, fun, and enjoyable digital advertising. The result also reveals that trust in digital influencers positively influences consumers' attitudes toward digital advertising during the COVID-19 pandemic. This finding suggests that brands, marketers, and agencies should use digital influencer endorsement and digital advertising in their digital marketing campaigns. Brands and marketers should carefully select digital influencers to endorse; they should choose digital influencers that are trustworthy and have good credibility.

6.3. Limitations and future research

This study comes with several limitations. First, this research was conducted in a single country (Indonesia). Further research could apply the research model and findings to other countries and settings. Second, this study considers four antecedents of consumers' attitudes toward digital advertising. Future studies should investigate the influence of other antecedents on consumers' attitudes toward digital advertising. Third, this study investigated the research model in the COVID-19 pandemic setting. Future research could test the model in the post-COVID-19 pandemic setting.

Author details

Ignatius Enda Panggati¹
E-mail: ndoghy@gmail.com
Sasmoko¹

Boto Simatupang¹
Sri Bramantoro Abdinagoro¹

¹ Management Department, BINUS Business School
Doctoral of Research in Management, Bina Nusantara
University, Jakarta, Indonesia.

Disclosure statement

No potential conflict of interest was reported by the authors.

Citation information

Cite this article as: Does digital influencer endorsement contribute to building consumers' attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude, Ignatius Enda Panggati, Sasmoko, Boto Simatupang & Sri Bramantoro Abdinagoro, *Cogent Business & Management* (2023), 10: 2220204.

References

Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information*

- Management*, 42(June), 65–77. <https://doi.org/10.1016/j.ijinfomgt.2018.06.001>
- Aramendia-Muneta, M. E., & Olarte-Pascual, C. (2019). Consumer attitudes towards mobile advertising: An updated vision. *International Journal of Internet Marketing and Advertising*, 13(3), 235–252. <https://doi.org/10.1504/IJIMA.2019.102564>
- Bakr, Y., Tolba, A., & Meshreki, H. (2019). Drivers of SMS advertising acceptance: A mixed-methods approach. *Journal of Research in Interactive Marketing*, 13(1), 96–118. <https://doi.org/10.1108/JRIM-02-2018-0033>
- Balaji, M. S., Jiang, Y., & Jha, S. (2019). Green hotel adoption: A personal choice or social pressure? *International Journal of Contemporary Hospitality Management*, 31(8), 3287–3305. <https://doi.org/10.1108/IJCHM-09-2018-0742>
- Belanche, D., Flavián, M., & Ibáñez-Sánchez, S. (2020). Followers' reactions to influencers' Instagram posts. *Spanish Journal of Marketing - ESIC*, 24(1), 37–54. <https://doi.org/10.1108/SJME-11-2019-0100>
- Birtus, M., & Lăzăroiu, G. (2021). The Neurobehavioral Economics of the COVID-19 Pandemic: Consumer cognition, perception, sentiment, choice, and decision-making. *Analysis and Metaphysics*, 20, 89–101. <https://www.ceeol.com/search/article-detail?id=1008999>
- Chandra, S., Verma, S., Lim, W. M., Kumar, S., & Donthu, N. (2022). Personalization in personalized marketing: Trends and ways forward. *Psychology & Marketing*, 39(8), 1529–1562. <https://doi.org/10.1002/mar.21670>
- Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – an empirical study. *International Journal of Bank Marketing*, 37(7), 1590–1618. <https://doi.org/10.1108/IJBM-09-2018-0256>
- Chetioui, Y., Benlafqih, H., & Lebdaoui, H. (2020). How fashion influencers contribute to consumers' purchase intention. *Journal of Fashion Marketing and Management: An International Journal*, 24(3), 361–380. <https://doi.org/10.1108/JFMM-08-2019-0157>
- Childers, C., & Boatwright, B. (2021). Do Digital Natives Recognize Digital Influence? Generational differences and understanding of social media influencers. *Journal of Current Issues & Research in Advertising*, 42(4), 425–442. <https://doi.org/10.1080/10641734.2020.1830893>
- Childers, C. C., Lemon, L. L., & Hoy, M. G. (2019). #sponsored #Ad: Agency Perspective on Influencer Marketing Campaigns. *Journal of Current Issues & Research in Advertising*, 40(3), 258–274. <https://doi.org/10.1080/10641734.2018.1521113>
- Chin, P. N., Isa, S. M., & Alodin, Y. (2020). The impact of endorser and brand credibility on consumers' purchase intention: The mediating effect of attitude towards brand and brand credibility. *Journal of Marketing Communications*, 26(8), 896–912. <https://doi.org/10.1080/13527266.2019.1604561>
- De Veirman, M., Cauberghe, V., & Hudders, L. (2017). Marketing through Instagram influencers: The impact of number of followers and product divergence on brand attitude. *International Journal of Advertising*, 36(5), 798–828. <https://doi.org/10.1080/02650487.2017.1348035>
- Donthu, N., Lim, W. M., Kumar, S., & Pattnaik, D. (2022). The journal of advertising's production and dissemination of advertising knowledge: A 50th anniversary commemorative review. *Journal of Advertising*, 51(2), 153–187. <https://doi.org/10.1080/00913367.2021.2006100>
- Falcão, J., & Isaías, P. (2020). Perceptions and attitude toward advertising on social networks and search engines: A comparative analysis. *Journal of Internet Commerce*, 19(4), 404–436. <https://doi.org/10.1080/15332861.2020.18116325>
- Fan, J., Shao, M., Li, Y., & Huang, X. (2018). Understanding users' attitude toward mobile payment use: A comparative study between China and the USA. *Industrial Management & Data Systems*, 118(3), 524–540. <https://doi.org/10.1108/IMDS-06-2017-0268>
- Fatima, T., & Abbas, T. (2016). Impact of advertising beliefs and personalization on attitude towards advertising; mediating role of advertising value. *International Journal of Business Management and Commerce*, 1(2), 10–19.
- Fennis, B. M., & Stroebe, W. (2010). *The Psychology of Advertising* (1st. ed., Psychology Press. <https://doi.org/10.4324/9780203853238>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. ARRB Group Limited.
- Gaber, H. R., Wright, L. T., & Kooli, K. (2019). Consumer attitudes towards Instagram advertisements in Egypt: The role of the perceived advertising value and personalization. *Cogent Business & Management*, 6(1). <https://doi.org/10.1080/23311975.2019.1618431>
- Geyser, W. (2022). *The state of Influencer marketing 2020: benchmark report*. Influencer marketing hub. <https://influencermarketinghub.com/influencer-marketing-benchmark-report-2020/>
- Hair, J. F., Jr., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107. <https://doi.org/10.1504/IJMDA.2017.087624>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Herrando, C., & Martín De Hoyos, M. J. (2022). Influencer endorsement posts and their effects on advertising attitudes and purchase intentions. *International Journal of Consumer Studies*, January(6), 2288–2299. <https://doi.org/10.1111/ijcs.12785>
- Ho Nguyen, H., Nguyen-Viet, B., Hoang Nguyen, Y. T., & Hoang Le, T. (2022). Understanding online purchase intention: The mediating role of attitude towards advertising. *Cogent Business & Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2095950>
- Hsu, C. L., Lin, J. C. C., & Chiang, H. S. (2013). The effects of blogger recommendations on customers' online shopping intentions. *Internet Research*, 23(1), 69–88. <https://doi.org/10.1108/10662241311295782>
- Jiménez-Castillo, D., & Sánchez-Fernández, R. (2019). The role of digital influencers in brand recommendation: Examining their impact on engagement, expected value and purchase intention. *International Journal of Information Management*, 49(February), 366–376. <https://doi.org/10.1016/j.ijinfomgt.2019.07.009>
- Jingjun Xu, D. (2006). The influence of personalization in affecting consumer attitudes toward mobile advertising in China. *Journal of Computer Information Systems*, 47(2), 9–19
- Karamchandani, S., Karani, A., & Jayswal, M. (2021). Linkages between advertising value perception, context awareness value, brand attitude and purchase intention of hygiene products during COVID-19: A two wave study. *Vision: The Journal of Business Perspective*, 097226292110439. <https://doi.org/10.1177/09722629211043954>
- Kock, N. (2015). Common Method Bias in PLS-SEM. *International Journal of E-Collaboration*, 11(4), 1–10. <https://doi.org/10.4018/ijec.2015100101>

- Kohli, S., Timelin, B., Fabius, V., & Veranen, S. M. (2020). *How COVID-19 is Changing consumer Behavior-Now and Forever*. Available online. McKinsey & Company. <https://www.mckinsey.com.br/~media/mckinsey/industries/retail/our%20insights/how%20covid%2019%20is%20changing%20consumer%20behavior%20now%20and%20forever/how-covid-19-is-changing-consumer-behavior-now-and-forever.pdf>
- Kotler, P., & Armstrong, G. (2016). *Principles of Marketing* (16. ed). Harambee University.
- Kotler, P., Keller, K. L., & Chernev, A. (2022). *Marketing Management* (16 ed). Pearson Education Limited.
- Kudeshia, C., & Kumar, A. (2017). Social eWOM: Does it affect the brand attitude and purchase intention of management research review article information: January. *Management Research Review*, 40(3), 310–330. <https://doi.org/10.1108/MRR-07-2015-0161>
- Ladhari, R., Massa, E., & Skandrani, H. (2020, December). YouTube vloggers' popularity and influence: The roles of homophily, emotional attachment, and expertise. *Journal of Retailing & Consumer Services*, 54(2019), 102027. <https://doi.org/10.1016/j.jretconser.2019.102027>
- Lee, Y. C. (2018). Comparing factors affecting attitudes toward LBA and SoLoMo advertising. *Information Systems & E-Business Management*, 16(2), 357–381. <https://doi.org/10.1007/s10257-017-0364-9>
- Lee, H., & Cho, C. H. (2020). Digital advertising: Present and future prospects. *International Journal of Advertising*, 39(3), 332–341. <https://doi.org/10.1080/02650487.2019.1642015>
- Lee, S., & Kim, E. (2020). Influencer marketing on Instagram: How sponsorship disclosure, influencer credibility, and brand credibility impact the effectiveness of Instagram promotional post. *Journal of Global Fashion Marketing*, 11(3), 232–249. <https://doi.org/10.1080/20932685.2020.1752766>
- Lee, E. B., Lee, S. G., & Yang, C. G. (2017). The influences of advertisement attitude and brand attitude on purchase intention of smartphone advertising. *Industrial Management & Data Systems*, 117(6), 1011–1036. <https://doi.org/10.1108/IMDS-06-2016-0229>
- Le, C. X., & Wang, H. (2021). Integrative perceived values influencing consumers' attitude and behavioural responses toward mobile location-based advertising: An empirical study in Vietnam. *Asia Pacific Journal of Marketing & Logistics*, 33(1), 275–295. <https://doi.org/10.1108/APJML-08-2019-0475>
- Lim, W. M. (2021). History, lessons, and ways forward from the COVID-19 pandemic. *International Journal of Quality and Innovation*, 5(2), 101–108. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3918803
- Lim, W. M., Gupta, S., Aggarwal, A., Paul, J., & Sadhna, P. (2021). How do digital natives perceive and react to online advertising? Implications for SMEs. *Journal of Strategic Marketing*, 1–35. <https://doi.org/10.1080/0965254X.2021.1941204>
- Lim, W. M., & Rasul, T. (2022). Customer engagement and social media: Revisiting the past to inform the future. *Journal of Business Research*, 148, 325–342. <https://doi.org/10.1016/j.jbusres.2022.04.068>
- Lim, W. M., Rasul, T., Kumar, S., & Ala, M. (2022). Past, present, and future of customer engagement. *Journal of Business Research*, 140, 439–458. <https://doi.org/10.1016/j.jbusres.2021.11.014>
- Martins, J., Costa, C., Oliveira, T., Gonçalves, R., & Branco, F. (2019). How smartphone advertising influences consumers' purchase intention. *Journal of Business Research*, 94(August 2017), 378–387. <https://doi.org/10.1016/j.jbusres.2017.12.047>
- Popovic, S. (2019). Beliefs about the influence on attitudes of Turkish university students toward advertising through sport. *Sport Mont*, 17(2), 9–15. <https://doi.org/10.26773/smj.190602>
- Rydel, L., & Šuleř, P. (2021). Underlying values that motivate behavioral intentions and purchase decisions: Lessons from the COVID-19 Pandemic. *Analysis and Metaphysics*, 20, 116–129. <https://www.cceol.com/search/article-detail?id=1009001>
- Saadeghvaziri, F., Dehdashti, Z., & Reza Kheyrikhah Askarabad, M. (2013). Web advertising. *Journal of Economic and Administrative Sciences*, 29(2), 99–112. <https://doi.org/10.1108/JEAS-09-2013-0029>
- Salehzadeh, R., & Pool, J. K. (2017). Brand attitude and perceived value and purchase intention toward global luxury brands. *Journal of International Consumer Marketing*, 29(2), 74–82. <https://doi.org/10.1080/08961530.2016.1236311>
- Shareef, M. A., Mukerji, B., Dwivedi, Y. K., Rana, N. P., & Islam, R. (2019). Social media marketing: Comparative effect of advertisement sources. *Journal of Retailing & Consumer Services*, 46(September 2017), 58–69. <https://doi.org/10.1016/j.jretconser.2017.11.001>
- Singh, R. P., & Banerjee, N. (2018). Exploring the influence of celebrity credibility on brand attitude, advertisement attitude and purchase intention. *Global Business Review*, 19(6), 1622–1639. <https://doi.org/10.1177/0972150918794974>
- Smith, K. T. (2019). Mobile advertising to Digital Natives: Preferences on content, style, personalization, and functionality. *Journal of Strategic Marketing*, 27(1), 67–80. <https://doi.org/10.1080/0965254X.2017.1384043>
- Souiden, N., Chaouali, W., & Baccouche, M. (2019, November). Consumers' attitude and adoption of location-based coupons: The case of the retail fast food sector. *Journal of Retailing & Consumer Services*, 47(2018), 116–132. <https://doi.org/10.1016/j.jretconser.2018.11.009>
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising*, 26(2), 53–66. <https://doi.org/10.1080/10641734.2004.10505164>
- Tafesse, W., & Wood, B. P. (2021). Followers' engagement with Instagram influencers: The role of influencers' content and engagement strategy. *Journal of Retailing & Consumer Services*, 58(March 2020), 102303. <https://doi.org/10.1016/j.jretconser.2020.102303>
- Tsang, M. M., Ho, S., & Liang, T. (2004). Consumer Attitudes Toward Mobile Advertising: An Empirical Study. *International Journal of Electronic Commerce*, 8(3), 65–78. <https://doi.org/10.1080/10864415.2004.101044301>
- Uğur, N. G., & Akbiyik, A. (2020). Impacts of COVID-19 on global tourism industry: A cross-regional comparison. *Tourism Management Perspectives*, 36(April), 100744. <https://doi.org/10.1016/j.tmp.2020.100744>
- Wardhani, P. K., & Alif, M. G. (2019). *The Effect of Advertising Exposure on Attitude Toward the Advertising and the Brand and Purchase Intention in Instagram*. Prentice Hall. <https://doi.org/10.2991/aprsh-18.2019.24>
- Wolin, L. D., Korgaonkar, P., & Lund, D. (2002). Beliefs, attitudes and behaviour towards Web advertising. *International Journal of Advertising*, 21(1), 87–113. <https://doi.org/10.1080/02650487.2002.11104918>
- Xu, D. J. (2006). The Influence of Personalization in Affecting Consumer Attitudes Toward Mobile Advertising in China. *Journal of Computer Information Systems*, 47(2), 9–19
- Xu, D. J., Liao, S. S., & Li, Q. (2008). Combining empirical experimentation and modelling techniques: A design

- research approach for personalized mobile advertising applications. *Decision Support Systems*, 44(3), 710–724.
<https://doi.org/10.1016/j.dss.2007.10.002>
- Yim, M. Y.-C., Sauer, P. L., Williams, J., Lee, S.-J., & Macrury, L. (2014). Drivers of attitudes toward luxury brands: A cross-national investigation into the roles of interpersonal influence and brand consciousness. *International Marketing Review*, 31(4), 363–389.
<https://doi.org/10.1108/IMR-04-2011-0121>
- Zhang, S., Wakefield, R., Huang, J., & Li, X. (2021). Exploring determinants of consumers' attitudes toward real-time bidding (RTB) advertising. *Information Technology & People*, 34(2), 496–525.
<https://doi.org/10.1108/ITP-09-2019-0480>