

EXPLORING FACTORS INFLUENCING CONSUMER PURCHASE INTENTION FROM SOCIAL MEDIA ADVERTISEMENTS: AN EXPLORATORY FACTOR ANALYSIS APPROACH

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Keyword

Social media advertising, Customer purchase intention, Engagement drivers, Celebrity influence, Emotive impulse, Innovative persuasion

Abstract

Over the past few years, the use of social media advertising by businesses has experienced significant growth, offering unprecedented opportunities for effective marketing and reaching target audiences. Despite this growth, Codykit's social media advertising efforts for their product, Codyplay, in the Indonesian children's book industry have not achieved the desired sales conversion rate and have resulted in a high customer acquisition cost (CAC). Therefore, this research aims to investigate the different elements of social media advertising that has the ability to drive customer purchase intention. The goal is to enhance the online sales traffic of Codyplay and improve the overall effectiveness of social media advertising efforts for Codykit. The research involved conducting a survey and utilizing exploratory factor analysis method to reduce the number of variables, detect the structure of the relationship between variables, and classify them into a new group of variables consisting the specific characteristics that significantly influence how people perceive social media advertisements. The survey respondents are Codykit's target market, specifically mothers with children aged 4-7 years old residing in Jabodetabek, Bandung, and East Java, who had previously made online purchases of children's goods. The findings indicate that engagement drivers, celebrity influence, emotive impulse, and innovative persuasion all have an impact on how social media advertising is evaluated. By placing sufficient emphasis on these specific traits, it would be possible to develop effective social media marketing strategies and increase consumer buying intent.

INTRODUCTION

In recent years, the utilization of social media advertising by businesses has witnessed remarkable growth, presenting unprecedented opportunities for effective marketing and reaching target audiences. The number of social media users has demonstrated a consistent upward trajectory, as evidenced by the findings of DataReportal (2022), wherein the global social media user base experienced a notable increase from 3.8 billion to 3.96 billion during the period between April and July 2020. According to Statista (2023), the click-through rate (CTR) for social media advertising experienced a modest year-over-year increase of 0.1%. This suggests a gradual improvement in the effectiveness of social media ads in generating user engagement and click-throughs. Additionally, research conducted by GlobalWebIndex (2018) reveals that a significant proportion of internet users, accounting for 54%, utilize social media platforms for product research. Furthermore, Biteable (2021) found that a substantial 64% of users make purchase

decisions after watching videos on social media. These findings emphasize the critical role of social media platforms in influencing consumer behavior and driving purchase intent.

Codyplay is a coding-based activity book series designed for children aged 4-7, aiming to teach them the fundamentals of computational thinking. It is a sub-brand product of Codykit, contributing to the Indonesian children's book industry. Despite running successful Instagram advertisements for Codyplay, the majority of purchases (97.73%) are not placed by social media but through personal selling channels and other non-social media platforms. This results in a higher online customer acquisition cost (CAC) than the customer lifetime value (CLTV) for Codyplay. To address this issue, the research seeks to identify the most influential elements of social media advertising that can encourage customers to buy children's books. The findings will help Codykit develop marketing strategies through social media advertisements to increase online sales traffic for Codyplay.

METHOD

To determine the factor structure, an exploratory factor analysis was performed after developing a questionnaire based on a comprehensive review of existing research. The survey was administered to mothers with children aged 4-7 years old residing in Jabodetabek, Bandung, and East Java, who had previously made online purchases of children's goods, who constituted the target market of Codykit. Exploratory factor analysis was conducted using JASP to identify the underlying constructs.

3.1. Questionnaire design

The questionnaire was developed based on extensive literature review to incorporate various factors influencing perception of social media advertising. The questionnaire consisted of two sections. The first section captured basic demographic information of the respondents, such as age, education, gender, etc. The second section included questions related to factors such as informativeness, personalization, entertainment, credibility, timeframe, emotional appeal, ad clicking, and more. The structured questionnaire utilized a 5-point Likert scale, where 1 represented strong disagreement, 2 indicated disagreement, 3 represented neutrality, 4 indicated agreement, and 5 represented strong agreement (Samuels, 2015).

3.2. Sampling

A total of 205 responses were obtained for this study, utilizing Google Forms to distribute the questionnaire among approximately 500 Indonesian mothers. The survey targeted mothers with children aged 4-7 years old living in Jabodetabek, Bandung, and East Java, who had previously made online purchases of children's goods. The respondents were divided into several groups of income based on Nielsen's classification of the Indonesian socioeconomic segments (Nielsen, 2010). Additionally, information regarding the average daily time spent on social media, the most used social media platforms, and the most used online channels to purchase children's goods by respondents was collected. The research utilized a non-probability convenience sampling method. The demographic composition consisted of 55.1% respondents from East Java, 29,3% living in Jabodetabek, and the rest 15.6% coming from Bandung. The distribution of respondents across different children age groups is detailed in Table 1.

Children's age	4 years old	21.5%
	5 years old	28.3%

	6 years old	23.9%
	7 years old	26.3%
Domicile	Jabodetabek	29.3%
	Bandung	15.6%
	East Java	55.1%
Education	High school	14.1%
	Bachelor's degree	59%
	Master's degree	21.5%
	Doctoral degree	5.4%
Monthly household expenditure	≤ Rp. 1.500.000	4.4%
	Rp. 1.500.001 - Rp. 2.000.000	13.2%
	Rp. 2.000.001 - Rp. 3.000.000	25.9%
	≥ Rp. 3.000.000	56.6%
Most used social media	Instagram	70.7%
	Facebook	17.1%
	Others	12.2%
Average daily time spent on social media	0-2 hours	21.5%
	3-5 hours	64.9%
	6 hours and above	13.7%
Most used online channel to purchase children's goods	Shopee	86.2%
	Tokopedia	6.9%
	Shop's official webstore	2.5%
	Others	4.4%

RESULTS

4.1. Validity and reliability test

According to DeVellis (2017), the most widely used methods to assess unidimensional reliability is Cronbach's alpha coefficient. Cronbach's alpha measures the extent to which items within a scale correlate with each other, indicating the scale's internal consistency. According to George and Mallery (2003), a Cronbach's alpha value of 0.70 or higher is often considered acceptable for research purposes. Tavakol and Dennick (2011) said item-test correlations are useful for identifying problematic items that may need to be revised or removed from the scale. A commonly suggested guideline is that item-test correlations should ideally be above 0.30 to ensure satisfactory reliability (DeVellis, 2017). Initially, all 42 measurement items underwent item-test correlation testing, revealing a range of 0.183 -

Frequentist Scale Reliability Statistics

Estimate	Cronbach's α
Point estimate	0.866
95% CI lower bound	0.838
95% CI upper bound	0.891

0.542, suggesting the presence of multiple unreliable items. Subsequently, 15 items with a correlation value below 0.3 were removed, resulting in a rising range of 0.369 - 0.524 for item-test correlation value. Initially, Cronbach's alpha value increased from 0.841 to 0.866 following the elimination of the 15 unreliable measurement items as depicted in Figure 1.

Figure 1. Reliability test result

4.2. Exploratory factor analysis

An Exploratory Factor Analysis using JASP was conducted to identify the specific factors that influence the perception of social media advertising. A total of 205 responses were analyzed. The adequacy and reliability of the sample were assessed using KMO and Bartlett's test. The study revealed a KMO value of 0.786, surpassing the acceptable threshold of 0.5, indicating an adequate and accepted sample size (Williams et al., 2010). The study also found a significant level of <0.001 , providing evidence to reject the null hypothesis as the correlation matrix was not an identity matrix. With a Cronbach's alpha value of 0.866, the chosen Likert scale of 5, comprising 27 items, demonstrated a high level of consistency among the sample size of 205. This alpha value exceeds the recommended threshold of 0.7, as per the Rule of Thumb (Gliem & Gliem, 2003; Hair et al., 2014).

4.2.1. Factor analysis

Factor analysis is a technique employed to extract a reduced number of factors from a larger set of interconnected quantitative variables. In essence, it serves as a means of transforming extensive datasets into more compact forms, hence its alternative term as a data reduction technique. Its primary purpose is to identify the factors influencing the variables and assess the potential relationships among them (Yong & Pearce, 2013).

4.2.2. Rotated component matrix

To reduce the number of factors with high loadings, rotation was performed. The principal component analysis method yielded various variables with variances above 0.5. This technique aims to extract maximum variance from the provided data, resulting in a reduction of variables into a smaller set of components (Yong & Pearce, 2013). Using the extraction method of principal component analysis with eigenvalues greater than 1 and the Varimax with Kaiser Normalization rotation method, the rotation converged in four iterations. Parallel analysis was conducted to validate the results. Out of the 27 variables considered, 22 items formed four factors. All factors exhibited loadings above 0.5, with no cross-loading and some having zero loadings. Each component was named based on the items it loaded. The identified factors are engagement drivers, celebrity influence, emotive impulse, and innovative persuasion (Appendix 1). They provide insights into various aspects of consumer responses to advertisements, including the role of entertainment, celebrity endorsement, emotional appeals, creativity, personalization, and social influence. They capture the key aspects that contribute to engaging and persuasive communication in advertisements, influence consumer attitudes and behaviors, highlight impulsive buying tendencies and emotional appeal, and emphasize the innovative and persuasive aspects of advertising.

4.3. Proposed conceptual framework

The factor analysis results served as the basis for developing a proposed conceptual model, depicted in Figure 2.

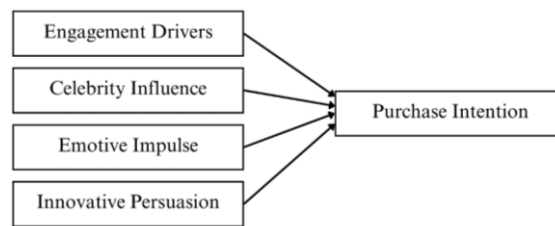


Figure 2. Proposed Conceptual Framework

The following are hypotheses that arise from the proposed framework :

H1: Engagement drivers have a significant impact on purchase intention.

H2: Celebrity influence has a significant impact on purchase intention.

H3: Emotive impulse have a significant impact on purchase intention.

H4: Innovative persuasion has a significant impact on purchase intention

DISCUSSION

Based on the exploratory factor analysis result (Appendix 1) it can be concluded that there are 4 main factors on the social media advertisement that has the ability to drive customer's purchase intention. The first factor is engagement drivers which consists of construct EN2, CD2, CR2, IN1, IN2, SI2, CD4, CV2, and EN1. This factor revolves around the influence of entertainment characteristics in advertisements on individuals' engagement and purchasing behavior. The variables within this factor suggest that elements like color, sounds, music, and graphics play a significant role in capturing attention and increasing engagement with ads. Additionally, adequate information and the inclusion of social cues, such as peer behaviors, can enhance the overall appeal and credibility of the ad. Individuals who are motivated by entertainment aspects and trust the platform where the ad is advertised are more likely to pay attention to the content and consider purchasing the advertised product or service.

The second factor is celebrity influence that formed by construct CE2, CE1, CE3, MA1, and MA2. This factor highlights the impact of celebrities in advertisements on individuals' attitudes and purchase intentions. The variables within this factor indicate that the pairing of a brand and a celebrity with similar attributes can have a positive effect on the individual's attitude towards the brand. The presence of a celebrity in an ad, as well as their endorsement, can create a greater degree of purchase intention and influence consumer behavior. Additionally, individuals who tend to make impulse purchases and are easily swayed by ads are more likely to be influenced by the inclusion of celebrities in advertisements.

The third factor is emotive impulse which consists of construct EA2, TF2, CR1, and EA1. This factor focuses on the role of emotional appeals in ads and the timing of brand posts on social media. The variables within this factor suggest that individuals tend to respond more positively to ads with strong emotional appeals compared to those that rely more on rational appeals. Creative ads that evoke emotions effectively generate interest in the featured products. Furthermore, individuals exhibit higher engagement with brand posts on weekdays compared to weekends. The timing of brand posts on social media platforms can impact individuals' level of engagement and their receptiveness to the message.

And the last factor is innovative persuasion that consists of construct PA1, CR3, PS1, SI1, and TF1. This factor emphasizes the importance of creativity, personalization, and social influence in advertisements. Individuals tend to find ads with original ideas more engaging, and they consider ads creative when they incorporate new technologies (e.g., Virtual Reality, Augmented Reality) to

communicate their message. Personalized content available on social media platforms helps individuals find products they need. Social influence also plays a role, as individuals are more likely to like an ad if a friend has already shown interest. Additionally, individuals engage more with brand posts during non-business hours (early morning and late night) compared to business hours.

CONCLUSION

This study conducted an exploratory factor analysis to uncover the underlying factors influencing consumer responses to advertisements. Four distinct factors were identified: engagement drivers, celebrity influence, emotive impulse, and innovative persuasion. These factors shed light on the significance of entertainment characteristics, celebrity endorsement, emotional appeals, creativity, personalization, and social influence in shaping consumer attitudes, engagement, and purchasing behavior. The findings highlight the importance of considering multiple factors when designing advertising campaigns. Marketers should focus on incorporating entertaining elements, leveraging celebrity endorsements strategically, utilizing emotional appeals effectively, and exploring creative and personalized approaches to engage their target audience. While this study has provided valuable insights into the factors influencing consumer responses to advertisements, further research is warranted to deepen our understanding in this area by doing confirmatory factor analysis to confirm these four factors influence towards customer's purchase intention.

APPENDIX

Appendix 1. Rotated component matrix result

Grouping	Construct	Code	Component			
			1	2	3	4
Engagement drivers	Entertainment characteristics of an ad (color, sounds, music or graphics) influences me to purchase the product/service being advertised	EN2	0.644			
	The corporate reputation of the advertiser affects my views of the credibility of information provided in the ad	CD2	0.583			
	I consider an ad creative if it stands out from its competitors	CR2	0.494			
	Adequate information regarding products/services in an ad often helps in my evaluation process of purchasing the product	IN1	0.468			
	I am motivated to look into the content of an ad only if it mentions the price of the product/service	IN2	0.430			
	Ads that include information about peer behaviors (i.e. as social cues like facial expression, body language, etc.) makes the ad more engaging to me	SI2	0.374			

	I am likely to pay more attention to the content in an ad if I trust the platform it is advertised in.	CD4	0.365			
	The number of followers of an advertiser is crucial in deciding my engagement with the ad	CV2	0.345			
	Entertainment characteristics of an advertisement (color, sounds, music or graphics) tend to increase my level of engagement with the ad	EN1	0.344			
Celebrity influence	The pairing of a brand and celebrity with similar attributes results in a positive effect on my attitude towards the brand	CE2		0.640		
	The presence of a celebrity in an ad has a positive effect on my attitude towards it	CE1		0.721		
	Ads delivered by a celebrity create a greater degree of purchase intention in me when compared to those without celebrities	CE3		0.616		
	I often end up buying things that I do not need due to ads	MA1		0.501		
	I tend to make impulse purchases due to ads	MA2		0.608		
Emotive impulse	I tend to like ads with strong emotional appeals more than rationally appealing ads	EA2			0.686	
	I have a higher level of engagement with brand posts made on weekdays when compared to weekends	TF2			0.575	
	Creative ads manage to create more interest in me about the featured products	CR1			0.435	
	An emotionally appealing ad more effectively persuades me when I have little motivation or little ability to cognitively process a message	EA1			0.408	
Innovative persuasion	I find ads with original ideas more engaging	PA1				0.623
	I consider an ad creative if it sees the implementation of new technologies (Example: Virtual Reality, Augmented	CR3				0.617

	Reality,etc.) in communicating its message				
	Personalized content of advertisement available on social media sites is often helpful in finding products I need	PS1			0.379
	I generally tend to like an ad if a friend has already shown interest towards it	SI1			0.330
	I generally engage with brand posts during non- business hours (early in the morning and late at night) than I do during business hours	TF1			0.318

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