Exploring the Impact of Social Influence on YouTube Advertising Perception and its Significance via Importance-Performance Map Analysis (IPMA)

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Abstract

This study aims to investigate 1) the role of social influence in shaping perceptions of YouTube advertising, and 2) the prioritization of factors contributing to positive advertising perceptions on YouTube through Importance-Performance Map Analysis (IPMA). Utilizing a structural equation model encompassing four key variables: advertisement value, duration, social influence, and advertising perception, the research conducted surveys among a sample of 400 predominantly female participants aged 18 to 24, selected through convenient sampling. Analysis was performed using GSCA Pro 1.1.8. Findings reveal that social influence emerges as a significant determinant of attitudes towards YouTube advertising, ranking second in impact ($\beta = .228$) following advertisement value ($\beta = .357$), while advertisement duration shows the least influence ($\beta = .170$). This study provides actionable insights for YouTube advertisers and content creators, guiding the creation of advertisements that foster positive attitudes towards advertising in the platform's audience.

1 Introduction

In 2022, the global internet user base increased by 192 million compared to the previous year, reaching a total of 4.95 billion users, constituting 62.5% of the world's population. In Thailand, there are approximately 54.5 million internet users, accounting for 77.8% of the total population. The top five most popular websites among Thai users are Google, YouTube, Facebook, Pantip, and Shopee (Napontun & Senachai, 2023). YouTube particularly stands out as a preferred platform for consuming various video content, with its primary revenue stemming from advertising expenditures. Advertising on YouTube significantly impacts brand perception and image (Febriyantoro, 2020; Meenaghan, 1995), making it a crucial marketing tool in the digital era. However, studies indicate a high ad-skipping rate on YouTube, reaching up to 73% (Dehghani & Tumer, 2015), reflecting predominantly negative attitudes towards YouTube advertising among viewers. Such negative attitudes often translate into adverse behavioral responses to advertisements (Zanot, 1984).

Moreover, past research has demonstrated that advertising attitudes significantly influence various other factors in numerous contexts. For instance, advertising attitudes influence brand attitudes (Lee et al., 2017), purchase intentions (Singh & Banerjee, 2018), and actual purchasing behavior (Teng et al., 2007). Additionally, studies conducted in Thailand have shown that attitudes towards YouTube advertising affect purchasing behavior (Chen & Panyaruang, 2021). Therefore, advertising attitudes serve as a critical determinant influencing various other factors. Negative advertising attitudes may lead to detrimental effects on consumer behavior, posing significant challenges for advertisers seeking to convey their intended messages effectively.

Previous studies on advertising attitudes have predominantly focused on factors such as ad value (Zha et al., 2015), with Trivedi (2017) expanding the scope by including ad duration as a relevant factor. Furthermore, H. C.-S. Lin et al. (2021) found that perceived interpersonal influence can mitigate negative reactions towards advertisements ($\beta = .280$), as it encourages viewers to willingly engage with advertisements, thereby reducing viewer annoyance. Researchers have thus recognized the importance of interpersonal influence in shaping advertising attitudes, as negative attitudes can lead to adverse behavioral responses (Yang et al., 2017). However, interpersonal influence has the potential to positively impact advertising attitudes, thereby mitigating negative reactions.

Given the existing gaps in the literature, further exploration is warranted to extend our understanding of the relationship between interpersonal influence and advertising attitudes on YouTube. Therefore, this study employs the Technology Acceptance Model (TAM) to investigate the influence of interpersonal influence on advertising attitudes, alongside factors traditionally examined in past research. Specifically, ad value is operationalized as perceived usefulness, while ad duration and interpersonal influence are considered external variables influencing advertising attitudes. This study aims to achieve two primary objectives: 1) to examine the impact of interpersonal influence on advertising attitudes on YouTube, and 2) to prioritize factors that contribute to positive

advertising attitudes on YouTube using Importance-Performance Map Analysis (IPMA). IPMA is considered a robust methodology that can assist in strategic decision-making and resource allocation (Henseler, 2020).

2   Literature Review

2.1   Technology Acceptance Model

The Technology Acceptance Model (TAM) by Davis (1989) has evolved from the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1977; Montano, Kasprzyk, et al., 2015) and the Theory of Planned Behavior (TPB) (Ajzen, 1991) to elucidate consumer decision-making processes regarding the adoption of new information system technologies. TAM posits two variables influencing attitudes towards usage: Perceived Usefulness and Perceived Ease of Use, which are influenced by external factors (Davis, 1989). Although initially designed to explain consumer behavior towards new information system technologies, TAM has been widely applied to study viewer behavior towards advertisements on social media platforms (Rauniar et al., 2014). This study focuses on exploring factors influencing attitudes, thus TAM serves as the foundational concept for research framework design.

2.2   Advertisement Value

Advertisement Value refers to the subjective evaluation by viewers and can serve as a metric for advertising effectiveness (Van-Tien Dao et al., 2014). Effectiveness is gauged by viewers assessing if advertisements align with their needs, such as informational or entertainment needs (Aitken et al., 2008). Additionally, Advertisement Value serves as a primary motivator for consumer acceptance or engagement with advertisements across various media, including traditional media (Calder et al., 2009) like television and digital media like the internet. Thus, Advertisement Value significantly influences attitudes towards advertisements, leading to the following hypothesis:

Hypothesis 1:
Advertisement Value positively influences attitudes towards advertisements.

2.3   Advertisement Duration

While attention spans have decreased over time, longer advertisements have shown to be more effective in various studies (Jeong et al., 2011; Wang et al., 2013). Longer advertisements afford viewers more time for information processing and engagement, leading to increased attitude formation towards advertisements (Wang et al., 2013). Recent research on YouTube advertisements supports this notion, indicating that longer video advertisements are more effective than shorter ones (Trivedi, 2017). Thus, advertisement duration influences attitudes towards advertisements, leading to the following hypothesis:

Hypothesis 2:
Advertisement duration positively influences attitudes towards advertisements.

2.4   Reciprocal Altruism in Advertisement

Reciprocal Altruism, first observed in animal behavior, entails individuals co-operating and reciprocating benefits in the future (Schumann et al., 2014). In human context, it involves individuals making small sacrifices for others with the expectation of future reciprocation (Guo et al., 2017). Extending this concept to YouTube advertising, viewers exhibiting Reciprocal Altruism willingly watch advertisements to support content creators, expecting future benefits. Hence, Reciprocal Altruism may positively influence consumer attitudes towards advertisements, leading to the following hypothesis:

Hypothesis 3:
Reciprocal Altruism positively influences attitudes towards advertisements.

2.5   Attitudes towards Advertisements

Consumer attitudes significantly impact future behavior and are representative of preferences towards advertisements (Muehling & McCann, 1993). Attitudes towards advertisements have become predominantly negative since the 1970s (Zanot, 1984), with significant implications for various advertisement factors such as credibility, perception, and viewer emotions (Tan & Chia, 2007). Therefore, attitudes towards advertisements play a pivotal role in shaping consumer responses, serving as a preliminary determinant of their receptivity towards advertisements (Muehling & McCann, 1993). Figure 1 exhibits the relationship among the constructs in the conceptual model.

3   Method

3.1   Population and Sample

The target population and sample group consist of individuals aged 18 and above with experience using the YouTube platform. Data collection employed a convenient sampling method through an electronic questionnaire distributed via Google Forms, disseminated across online social networks. Participants accessed the online questionnaire by scanning its QR code. The researcher followed the sample size determination method proposed by Hair et al. (2019), suggesting a sample size should range between 10-20 times the number of observable variables. With nine observable variables in this study, the sample size was determined to be between 90-180 individuals at minimum. However, the researcher opted for a sample size of 400 individuals, surpassing the established minimum requirement.
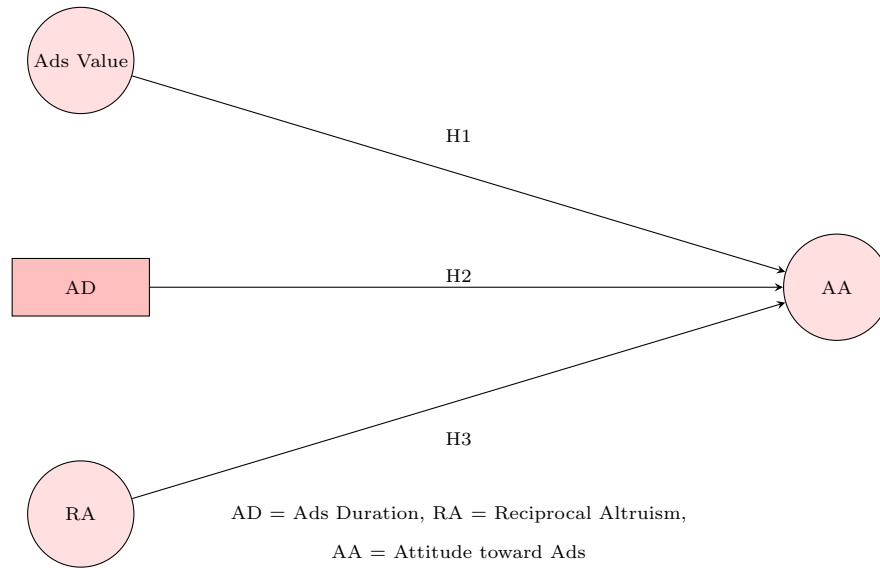
AD = Ads Duration, RA = Reciprocal Altruism,

AA = Attitude toward Ads

Figure 1: Conceptual framework

3.2   Survey Instruments

The questionnaire used in this study comprises two sections: demographic information and perceptions of YouTube advertisements. The demographic section consists of three questions, while the perception section contains nine questions, referencing eight previous research studies. Additionally, one question was custom-designed by the researcher, as displayed in Table 1. A 6-point rating scale was utilized for all variables, except for advertisement duration, which employed a 5-point rating scale. Furthermore, adjustments were made to the questionnaire items to enhance their contextual appropriateness for the study. Table 1 shows the details about the items used in this study.

3.3   Data Analysis

The researchers utilized the pre-existing statistical software GSCA Pro 1.1.8 developed by Hwang et al. (2021) for structural equation modeling analysis. They assessed construct validity, comprising convergent validity checked through factor loadings, which should exceed .70, average variance extracted (AVE) should be greater than .50, and Cronbach's alpha should exceed .60 (Hair et al., 2019). Discriminant validity was assessed using the Heterotrait-Monotrait Ratio of Correlations (HTMT), which should be less than .85 (Henseler et al., 2015; Roemer et al., 2021). Additionally, the researchers examined the appropriateness of the model structure using model fit indices, with a criterion of standardized root mean square residual (SRMR) less than .08 (Cho et al., 2020). Hypotheses were also tested using bootstrap method. Furthermore, the researchers con-

Construct	Items	References
Ads Value: AV		Firat (2019)
AV1	Do you think the overall presentation of skippable video ads on YouTube provides useful information?	
AV2	Do skippable video ads on YouTube benefit you?	
Ads Duration: AD		Napontun and Senachai (2023)
AD1	Are you willing to watch skippable video ads on YouTube that are [length] long?	
Reciprocal Altruism: RA		Napontun and Senachai (2023)
RA1	Do you feel good about supporting YouTubers by watching their videos on YouTube?	
RA2	Do you often take actions to support YouTubers (e.g., liking, subscribing, sharing, becoming a member, donating)?	
Attitude Towards Advertising : AA		Tsang et al. (2004)
AA1	Do you like the overall presentation of skippable video ads on YouTube?	
AA2	Do you agree with having skippable video ads appear before watching YouTube videos?	
AA3	Do you agree with having skippable video ads appear during YouTube video playback?	
AA4	Do you agree with having skippable video ads appear after watching YouTube videos?	

Table 1: Items used in the study and its references

ducted IPMA analysis in Excel based on statistical data obtained from GSCA Pro 1.1.8.

4   Result

4.1   Population Demographic Characteristics Analysis Results

The analysis of demographic data, as presented in Table 2, reveals that the majority of questionnaire respondents were female, accounting for 63.2%. Furthermore, 71.8% fell within the age range of 18-24 years, while 83.8% reported having attained a bachelor's degree or equivalent level of education. Table 2 reports the descriptive data of the study.

4.2   Analysis of Construct Validity

The analysis conducted using GSCA Pro (Hwang et al., 2021) revealed that the factor loadings for items ATA1 and ATA4 were below the recommended threshold of .7 (ATA1 = .615, ATA4 = .552), resulting in an Average Variance Extracted (AVE) for the ATA variables falling below the threshold of .5 (ATA = .425). Consequently, items ATA1 and ATA4 were removed. Following the removal of these items, the results, as shown in Table 3, indicated that the factor loadings ranged from .631 to .969. Although the factor loading for item AV2 was slightly below the .7 threshold, it was deemed acceptable. The AVE ranged from .513 to .648, while Cronbach's alpha ranged from .673 to .748.

	Characteristics	Number	Percentage	Average	Std Dev
Sex				1.70	5.26
	Male	134	33.5		
	Female	253	63.2		
	Others	13	3.3		
	Total	**400**	**100**		
Age				3.83	.626
	18-24	287	71.8		
	25-31	35	8.8		
	32-38	27	6.8		
	39-45	15	3.8		
	45+	36	9		
	Total	**400**	**100**		
Education				3.83	.626
	Below high school	2	.5		
	High school diploma or equivalent	29	7.2		
	Associate degree or equivalent	19	4.8		
	Bachelor's degree or equivalent	335	83.8		
	Above bachelor's degree	15	3.8		
	Total	**400**	**100**		

Table 2: Descriptive data

The Heterotrait-Monotrait Ratio of Correlations (HTMT) ranged from .206 to .469. Based on these findings, it can be concluded that the measurement model demonstrates adequate construct validity (Cho et al., 2020; Hair et al., 2019; Henseler et al., 2015; Rasmidatta, 2023; Satitsamitpong et al., 2024; Senachai et al., 2023, 2024).

4.3   Analysis of Structural Model and Hypothesis Testing Results

The analysis of the structural model's adequacy, as indicated by the model fit indices, revealed that the Standardized Root Mean Square Residual (SRMR) value was .036. Hence, it can be inferred that the model structure is appropriate (Cho et al., 2020). Regarding the hypothesis testing, depicted in Figure 2, the results did not reject any of the three hypotheses. Additionally, it was found that the advertising value ($\beta = .357$), advertisement duration ($\beta = .17$), and mutual benefit perceptions ($\beta = .228$) collectively accounted for 28.9% of the variance in attitudes towards advertising. These findings suggest that the proposed model adequately explains the relationships among the variables under investigation.

4.4   Analysis of Importance-Performance Map Analysis

Upon conducting the IPMA analysis, it was observed that the advertising value was categorized in Quadrant 1 (Performance = 56.333 and Importance = .357), indicating a high performance and high importance. Meanwhile, mutual benefit perceptions were situated in Quadrant 2 (Performance = 51.167 and Impor-

Constructs	Items	Average	Std Dev	AVE	Alpha	Loadings
AV				.668	.748	
	AV1	2.740	1.301			.969
	AV2	2.890	1.124			.631
	AD1	1.310	.744			1
RA				.512	.673	
	RA1	3.560	1.527			.718
	RA2	3.775	1.520			.713
AA				.516	.679	
	AA2	2.60	1.649			.716
	AA3	2.172	1.662			.721

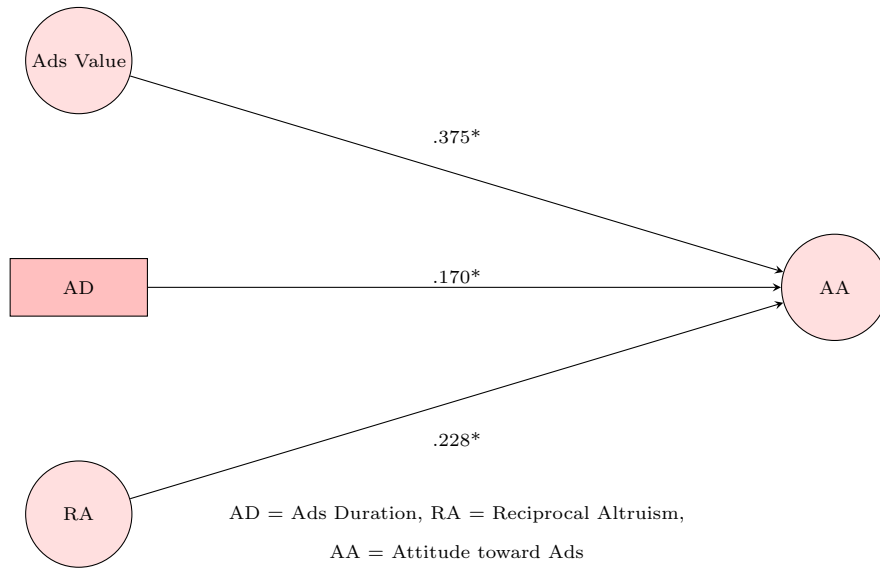Table 3: Results of the items analysis

Figure 2: Result of Structural Equation Modeling Analysis

tance = .228), suggesting relatively high performance but lower importance. Additionally, advertisement duration was placed in Quadrant 3 (Performance = 26.200 and Importance = .170), indicating lower performance and importance compared to the other variables.

These findings, depicted in Figure 3, provide insights into the relative importance and performance levels of the variables under examination, aiding in identifying areas for improvement and strategic prioritization.
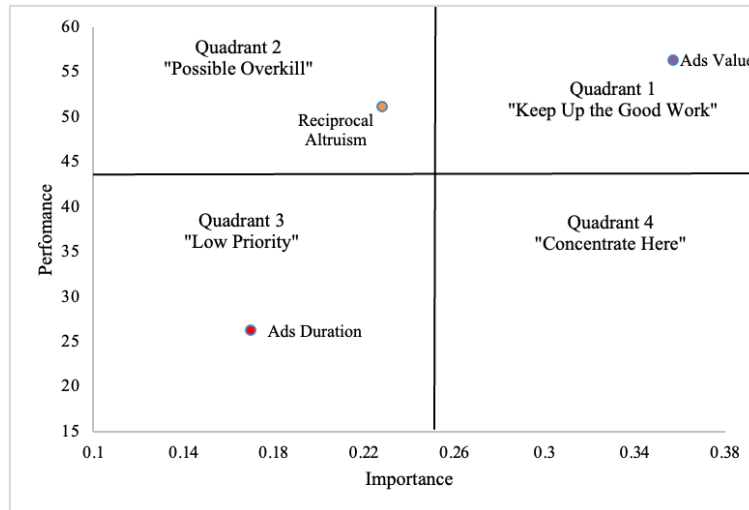

Figure 3: Results of IPMA

5   Discussion

The objectives of this study were twofold: 1) to examine the influence of mutual benefit perceptions on consumer attitudes towards advertising on YouTube, and 2) to determine the relative importance of factors that contribute to favorable attitudes towards YouTube advertising. The findings of this study reveal that mutual benefit perceptions significantly influence positive attitudes towards advertising on YouTube, ranking as the second most influential factor ($\beta = .228$). When viewers feel a connection with video producers (YouTubers), it fosters mutual benefit perceptions (Kim et al., 2016), consequently enhancing their attitudes towards advertising. This is because advertising on YouTube can generate increased revenue for video producers (YouTubers) (Chen & Panyaruang, 2021). Therefore, viewers perceive advertising on YouTube as beneficial when it appears in videos from producers with whom they feel a connection. Additionally, the IPMA analysis indicated that mutual benefit perceptions were situated in Quadrant 2, indicating high perceptions of mutual benefit with video producers (YouTubers). However, these perceptions alone were not significant drivers of favorable attitudes towards YouTube advertising.

In contrast, advertising value ($\beta = .357$) emerged as the most influential factor shaping attitudes towards advertising, in line with prior research by C. A. Lin and Kim (2016) and Zhao and Wang (2020). Furthermore, consistent with the Technology Acceptance Model (TAM) (Davis, 1989), which suggests that perceived usefulness positively influences attitudes, our study defines advertising value as the perceived usefulness variable. Advertising value serves as a crucial tool for viewers to evaluate the various benefits derived from advertising (Aitken et al., 2008), and our study underscores that the value perceived by viewers from advertising largely determines their attitudes towards it, alongside other factors.

Moreover, the IPMA analysis revealed that advertising value was categorized in Quadrant 1, indicating high perceived value and importance. This suggests that advertisers or content creators can effectively design advertising content that resonates with viewers and must maintain this effectiveness in the future. Given the pivotal role of advertising value in shaping favorable attitudes towards YouTube advertising, our study emphasizes its significance.

Furthermore, the analysis indicated that advertising duration significantly influences attitudes towards advertising ($\beta = .170$), consistent with the findings of Wang et al. (2013). Longer advertisement viewing times provide viewers with more information and time to evaluate the advertisements, resulting in more favorable attitudes compared to shorter advertisements. However, the IPMA analysis placed advertising duration in Quadrant 3, indicating that advertisers or content creators have not yet optimized advertising duration to suit consumers' preferences. Thus, advertising duration emerged as a less significant factor in shaping favorable attitudes towards advertising.

Overall, this study aligns with TAM and highlights the pivotal role of advertising value in influencing attitudes towards advertising on YouTube. Additionally, it underscores the need for advertisers or content creators to consider factors such as mutual benefit perceptions and advertising duration to enhance viewers' attitudes towards advertising on YouTube effectively.

6 Implications

6.1 Theoretical Contributions

Firstly, this study has expanded our understanding of attitude formation towards advertising by identifying new influential factors. Specifically, mutual benefit perceptions emerged as the second most influential factor, following advertising value, which researchers have traditionally utilized to predict attitudes towards advertising (Yang et al., 2017). Secondly, this study has extended the scope of the Technology Acceptance Model (TAM). While TAM has been previously employed to explain consumer behavior towards advertising on social media platforms (Kim et al., 2016; Zhao & Wang, 2020), no prior research has applied it within the context of YouTube advertising. By utilizing TAM to elucidate attitudes towards advertising on YouTube, this study demonstrates its applicability in explaining the findings. Thus, it contributes to the expan-

sion of TAM as a framework for understanding attitudes towards advertising on YouTube.

6.2   Managerial Implications

For advertisers on YouTube, this study underscores the importance of prioritizing the creation of advertising videos that hold value for viewers. Examples include producing entertaining, credible, and informative advertisements (Aitken et al., 2008), given that advertising value emerges as the most critical factor in shaping attitudes towards advertising. Furthermore, for video producers (YouTubers), fostering positive attitudes towards advertising among viewers may lead to longer viewing durations (Zanot, 1984), consequently increasing advertising revenue. Hence, video producers can cultivate viewer attachment by delivering mutual benefit perceptions, potentially elevating advertising revenue. Additionally, the study suggests that advertising videos should not be excessively brief, as longer durations allow viewers more time to process information and form favorable attitudes towards advertising.

7   Limitations and Future Research

A significant limitation of this study is the disproportionate representation of female participants aged between 18 and 24 years. This sampling bias may skew the data towards a specific demographic group, limiting the generalizability of the findings. Thus, future research should aim to collect data from a more diverse sample, ensuring equal representation across demographic variables such as gender and age. Furthermore, given the emergence of mutual benefit perceptions as a novel factor in predicting attitudes towards advertising, future studies should conduct in-depth investigations into the factors contributing to mutual benefit perceptions in the context of YouTube advertising. Understanding these factors can provide insights into enhancing attitudes towards advertising on YouTube.

8   Acknowledgement

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