

GENERATION Y: INFLUENCE OF ONLINE ADVERTISEMENT ON PURCHASE DECISION IN MALAYSIA

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Abstract

Purpose - This paper aimed to investigate the influence of online advertising on purchase decisions, focusing on four independent variables: credibility, informativeness, hedonic, and materialism. **Design/Methodology/Approach** - For data collection, online questionnaires were distributed to the targeted respondents of this research, which were Generation Y between the twenty-three to thirty-nine years old, and 570 sets of data were collected and analysed. Factor analysis, reliability test, descriptive analysis, and regression analysis were conducted using SPSS software, followed by Smart PLS software as confirmatory analysis. **Findings** - The analysis conducted through Smart-PLS. Cronbach's Alpha, Composite Reliability, and AVE value of the constructs were higher than the minimum acceptable level, higher than 0.7 for Cronbach's Alpha, higher than 0.7 for Composite Reliability, and higher than 0.5 for AVE. The findings showed that H1, H2, H3 were accepted since their t-values were greater than 1.96 and the p-values were lower than 0.05. However, H4 was rejected since the t-value was 0.409 and the p-value is 0.682. The result of bootstrapping analysis provided an R2 value of 0.371 indicating that this model explained 37.1% of the data variance. **Practical Implications** - The outcome of this research provided a reference to markets on how to improve the performance of their online advertisement by exploiting the independent variables investigated in this research. Since all independent variables were positively connected to purchase decisions, the advertisement should not prioritize materialism-related content in advertisement over the other variables unless necessary. **Originality/value**- This research study was conducted during the pandemic, which provides a unique setting to examine adjustability and learning.

Keywords: Online Advertisement, Purchase decision, Credibility, Informativeness, Hedonic, Materialism

1. Introduction

In the modern business world, advertising had become an essential tool for business survival, and now it existed in every media that enterprises have access to. Advertisement serves the purpose of notifying, convince, and prompt consumers about the product and services offered by the enterprise. It also plays an important part in executing and realizing the goal associated with different stages in the product life cycle (Qaswa & Danish, 2019). A business can compete by incorporating different elements in their advertisement, including product messages, design, personality, frequency, and many others to capture consumer's attention (Shaina, 2016; Madawa, Jana & Galia, 2014).

The global advertising market size is growing steadily for the past ten years, from USD 339 billion in 2010 to USD 563 billion in 2019, equivalent to an average of 4% growth annually (Guttmann, 2020). It is expected that the growth will continue in 2020, increasing by another

3.9% to achieve USD 615.4 billion in 2020 (Azanis, 2020). North America is the largest advertisement market, followed by the Asia Pacific is ranked second with a slight difference. Western Europe ranked third, with total advertising spending only half of North America (Guttman, 2020). A report in 2017 states that Samsung Electronics is the company with the most significant global advertising spending, which amounted to USD 11.2 billion annually, surpassing the earlier top performer, Procter & Gamble, ranked second with USD 10.5 billion advertising spending (Guttman, 2020). With L'Oreal, Unilever, and Nestle on the list, these five companies are the top 5 largest global advertisers (Guttman, 2020).

The growth of online advertisement is not relying on new market spending but also chips away at the budget distributed for other advertising media, especially television and print media (Trefis, 2015). In 2016, global expenditure on online advertising successfully overtook television advertising as the most significant advertising market thanks to the growth of mobile internet advertising, display internet advertising, and paid search internet advertising (Deborah, Emmanuelle, Megan & Matthew, 2020). Moreover, studies have predicted that the market size of digital advertisement will reach USD 356 billion in 2020, accounting for more than 50% of global advertisement overtake traditional advertising for the first time (Statista, 2020).

Even though Malaysia's advertising market has been growing steadily as well as the online advertisement market, but the growth of Malaysia advertising market is much slower compared to other Asia countries such as India, Pakistan, and Sri Lanka, recording at 2% growth annually compared to average growth of 7.4% in Asia- Pacific region (Balakrishnan, 2019). The possibility is that there are still many uncertainties in the advertising industry that hold back the efficiency of the advertisement displayed according to Balakrishnan (2019). One of the questions is how effective an online advertisement to communicate with consumers. In recent years, online advertising is gaining momentum in the Malaysian market, and the market size is expected to exceed traditional advertisement in the future. However, the current market share of online advertising in the Malaysia market is much smaller compared to the global market, with only 25% shares in Malaysia comparing to more than 50% in the global market, which can be due to the lack of understanding and attractiveness (Balakrishnan, 2019).

2. Literature Review

2.1. Purchase Decision

The purchase decision is closely related to consumer buying behaviour, which is defined as the collective result of the personal preferences, personality, goal, financial capability, and many other factors leading to a decision made by a consumer to buy certain good or service (Solomon, 2015). Hastuti, Rommy, and Nofal (2018) explain that buying decision is one of the steps in the buying decision process, in which the customer is directly or indirectly takes part in the transaction of buying the desire products or services. Anjana (2018) mentioned that purchase behaviour and the decision is a decision-making process or the characteristic of a consumer in buying and using products or services. Kanurk and Schiffman (2009) discussed the importance of purchase decision since it plays an essential role in maintaining the act's market development, characteristics, and routines.

Nikhashemi, Paim, Osman & Sidin (2013) showed that the factors affecting purchase decision is not limited to individuals such as family and friends only, but also affected by other internal and external variables such as state of mind, environment, and external information. Furaiji, Latuszynska, and Wawrzyniak (2012) researched the indirect and direct variables related to the consumer purchase decision, focusing on the connection between custom, traditions, community, individual, intellectual, and marketing mix factors with the consumer's purchase decision. Related research conducted by Oliver (2014) supports that internal elements such as personal background and intellectual and external elements, including cultural and social, are closely related to purchase decisions. Carlson and Paladino, et al. further elaborated the communal where it includes the family, interaction with people, character, and position, which develop the financial capability to buy and personal preference while making a purchase.

Research conducted by Russell, Solomon, and Previte (2012) suggested different perspectives about purchase decision-making by claiming that culture, subculture, and social class are the primary influencers of consumers' purchase decisions. The perspective was further elaborated that cultural factors will form the personal requirement of the product and service, including the acceptance level and emphasis on different features of their purchases. Kotler and Armstrong (2016) introduced a simplified chart summarizing and compiling the factors affecting consumer purchase decisions, including cultural, social, personal, and psychological factors.

Researches related to buying decision are widely available in Malaysia. Chahal and Kamil (2017) analysed the quality of food and services and atmosphere of the restaurants, where it was found that consumer's buying decision is positively related to both factors in the Klang Valley area. Basha, Mason, Shamsudin, Hussain & Salem (2017) conducted their study on purchase attitude towards organic food, and the variables were evaluated against purchase intention includes environmental, lifestyle, and product quality. Furthermore, research performed by Liew and Mohammad (2015) focuses on purchase intention towards online group purchases and it was found that price, word of mouth, trust, and usefulness are the significant factors influencing online group purchases in Malaysia. Song, Safari, and Mansori (2016) studied Malaysia's purchase behaviour and organic food to discuss similar variables such as quality, price service, and availability. Cham, Cheng & Lim (2017) conducted research on the factor influencing buying intention for clothing, focusing on brand image, quality, price consciousness, self-concept, and concluded that all 4 factors were strongly connected to buying intention.

2.1.1. Credibility

There are multiple papers published explaining the definition of credibility. Research conducted by Mishra and Mahalik (2017) investigated the impact of online advertising on consumers. He suggests that credibility is having the quality of being believable, convincing, and it is one of the factors contributing to the effectiveness of online advertising. Bell, Mieth, and Buchner (2020) offered a more detailed meaning of credibility in their work titled "Source memory for advertisements: The role of advertising message credibility" by suggesting that credibility was formed by two elements: competence and trustworthiness. Competence was

defined by the expertise, knowledge, and capability to make correct judgments, and trustworthiness was determined by the perceived self-interest of the source (Bell et al., 2020). Therefore, advertisement generally has low credibility because it was designed by advertisers with self-interest to guide consumers towards their clear aims (Bell et al., 2020). Pratiwi, Sarwoprasodjo, Soetarto, and Pandjaitan (2020) separated credibility into three categories; first, initial credibility decided by the social status or the position of the communicator; second, derived credibility is related to the intellectual abilities, competencies, and capability and third, terminal credibility is a mixture of both first credibility and derived credibility (Pratiwi, et. al., 2020).

There are several essential characteristics of credibility that are notable. **Firstly**, credibility comes from long-term consistency (Lehman, Sulkowski & Cap, 2019). Credibility cannot be built in a short period, and it requires the individual or performs and act following similar traits, personality, behaviour, and many others to build up their credibility (Lehman, et al., 2019).

A negative example will be Volkswagen involved in a scandal in 2015 that their vehicles are found emitting carbon dioxide more than the reported level, severely affecting their brand credibility, especially in European countries, and resulted in a continuous performance drop for several years (Hotten, 2015). **Secondly**, credibility was viewed as a compulsory moral or ethical element by the public. Credibility is needed everywhere when there is no means to know the truth about reality, and it is imperative when there are intermediaries with access to the truth. In a moral sense, credibility means whether a person is truth-telling or not, and when they do, their words and attitudes or actions will synchronize with their internal order of thoughts, making the communication more effective (Mazur & Duchlinski, 2020). **Lastly**, Credibility can be transferred or borrowed. For example, a less credible will be more attractive after inviting a celebrity or influencer to appear in the advertisement (Tabor, 2020). This is because the consumer watching the advertisement will detect the celebrity and influencer's traits, which affects their evaluation of the advertisement. Similarly, when writing a report, credibility can be increased by referencing published journals, books, or trusted websites as the source of information, which using the credibility of other work to build up the credibility of the new report.

2.1.2. Informativeness

Since there are many pieces of research available investigating the informativeness of online advertising, there are multiple definitions that provide understanding from different perspectives. Mishra and Mahalik (2017) have said in their studies that informative advertisements provide helpful, meaningful, or intensifying information that helps a consumer construct their understanding and familiarize with the offered products. However. Najib, Kasuma, and Bibi (2016) suggested that informativeness refers to the capability of advertising to communicate with consumers of product alternatives so that the consumer receives the most excellent satisfaction from their purchase or, in short, the amount of valuable and helpful information provided by the advertisement medium. Besides, online advertisement content is increasingly essential nowadays due to the tremendous increase in internet usage, and people are now treating the internet as a credible information source rather than a secondary

information source (Najib et al., 2016). Ariffin, Aun, and Salmzadeh (2018) provided a similar definition as above by saying that informativeness can be referred to as the informing role of advertisement about product and services, leading a consumer to make a better purchase decision. Brahim (2016) provided a different understanding of informativeness by saying that the informativeness of an online advertisement refers to the perceived value and the relevance of information within the online advertisement that appeals to the consumers. Lastly, Kowang, Jacob, Yew, Hee, Fei, and Long (2019) proposed that informativeness was regarded as advertisement's effectiveness in conveying the product's information to potential consumers to decide on buying the product with higher gratification.

Informativeness is extremely important for an online advertisement since the crucial role of online advertisement is to insert awareness of products and services into the thought process of consumers and make them understand the difference and uniqueness of the marketed product (Taghipoorreynh and Ernect, 2016). Besides, online advertisement was generally used to communicate new products and features and inform consumers about product changes, including prices (Taghipoorreynh and Ernect, 2016). Furthermore, informative advertisement was highly effective in building product awareness since consumers generally react very positively to an advertisement that provides relevant and clear information (Koshy & Manohar, 2019).

2.1.3. Hedonic

Kim, Jeon, and Lee (2020) in their work said that hedonic values refer to the purchasers' analysis and interpretation of assumed cognitive benefits and overall prices on the products and services such as adventure, social, gratification, idea, and role. Besides, the author suggested that hedonic elements in the advertising that derived the emotional attraction to consumers can influence trust and purchase decisions to certain extent. From another perspective, Brahim (2016) suggested that the entertainment or hedonic aspect of online advertising is the ability to entertain, which is closely related to the enhancement of advertising experience, and a positive correlation was detected between entertainment and advertising value. Koshksaray and Nabizadeh (2017) used the term pleasure or hedonic in their work "Internet Advertising Pleasure and Purchase Intention" and defined pleasure as the degree to which a person feels good, joyful, happy, or satisfied in a situation, which can be a result of certain stimulation such as activities or events. Besides, the author also claims that a positive emotion experienced from the advertisement, such as pleasure or hedonic, will positively evaluate the value perceived by the consumers. Linh (2017) suggested that hedonic products such as online advertisements are affect-oriented and characterized by the aesthetic, experiential and sensual pleasure stimulated by the interaction with the products, and consumers' perceived hedonic values drive its purchase under their hedonic motivations.

Many studies had highlighted the importance of the hedonic element in online advertisement. Sebastian and Pandowo (2016) stated that hedonic and pleasure was one of the advertisement experiences, allowing it to connect with consumers' emotions. Therefore, incorporating funny visuals and humorous creativity will lead to a favourable attitude towards online advertisement. Yaakop and Brown (2013) explained that hedonic/pleasure is a dimension that directs the

individual's perception about online advertising in terms of entertaining, amusing, and pleasurable, which will deepen the individual's memory towards the advertising and easier for recall. Ervin (2016) discovered an increasing number of entertainment-seeking consumers in the online environment, where they show greater gratification when interacting or consuming online advertisements with hedonic elements incorporated. Soebandhi, Kusuma, Subagyo, Sukoco, Hermanto, and Bon (2019) in their work titled "Utilitarian and Hedonic Motivations: Its Influences on Search and Purchase Intention on Instagram" suggested that hedonic motivation is a purchase motivation by the mean of pleasure, fantasy, and happiness experienced during information searching, which sometimes become consumer's priority instead of seeking for products that bring more physical benefits.

2.1.4. Materialism

Materialism is one of the topics discussed extensively by researchers from every field and therefore there are many versions of definition or understanding available online. Rashid and Malik (2019) stated that materialism can be defined as the importance one attaches to worldly possessions and it is a concept where materialistic acquisition provides happiness to individuals. Malgorzata (2019) offered a slightly different understanding by saying that materialism is related to psychology that wishes to get and own physical items. It can also be understood as the values that direct people's choices and behaviours in various situation and influence the way people structure their lives and relate to the external world. Kamal, Chu, and Pedram (2013) proposed that the definition of materialism is the belief that goods and money are the central path to happiness and social progress. However, Kwan (2013) considered materialism as a negative value that is extremely important for consumers to own material possessions in their life to reach joy, centrality, and success. Some other research states that materialism is a personality trait that shows envy, non-generosity, and possessiveness which are generally negative traits (Kwan, 2013).

Vandana and Lenka (2013) recognized materialism as an orientation that views material goods and money as important for personal happiness and social progress and it is also being viewed as an important determinant for life happiness and success. Srikant (2013) illuminated materialism from two different perspectives. From a socio-cultural perspective, materialism refers to cultures in which most people in the social value material objects highly and from an individual perspective, materialism refers to labelling a person who values material object higher. Sabeen, Syed, and Hasnu (2016) defined materialism from three angles: economists, sociologists, and marketers. According to the authors, economist sees materialism as the pursuit of one's own material well-being and sociologies thinks materialism refers to a personal value that has a concern with material goods, comparison with others about material things and the importance of making a profit, which is against the welfare of people or society (Sabeen, et. al., 2016). From the marketers' perspective, materialism refers to a system of values, or an individual set of minds about gaining material possessions in life (Sabeen, et. al., 2016).

Different researchers have different perspectives and views on this big topic of materialism, some focus on its meaning, and others might focus on its source, impact on society, relationship with consumer attitudes, and many other topics. Lysonski, Durvasula, and Rayner (2017) in

their work titled “The processing of advertising: does a consumer’s level of materialism make a difference”, determined four potential sources that might lead to the growth of materialistic value in consumers which includes interpersonal appeals, prestige and status appeals, achievement appeals and appearance-related appeals. Sirgy, Yu, Lee, Joshanloo, Bosnjak, Jia, Ekici, Atay, and Grzeskowiak (2019) proposed that materialism not just only resulted in a negative behavioural outcome but might also lead to a positive outcome as materialism is a multifaceted concept. The authors suggested that whether materialism will result in positive or negative outcomes is highly dependent on the culture, values, life satisfaction, and other external environmental factors. Fu and Liu (2019) explained the significance of materialism in individual life by saying that materialism has the role of control identity and keeping self-awareness of an individual, allowing an individual to feel a sense of uniqueness, belonging, and able to build confidence due to the perceived improvement on attraction. Kamal, Chu, and Pedram (2013) also supported that materialism is an important aspect in consumption related consumer value that has been positively linked to online advertisement consumption. It can be a crucial motivational factor in understanding consumer attitudes and behaviors towards internet purchase. Michael and Christie (2016) claim that individuals with strong materialism values have higher hopes and expectations of material possessions which might be due to unrealistic aspirations, making it harder to feel satisfied with their possessions than an individual with weaker materialism values. Chan, et. al. (2014) studied the relationship between materialism and consumers’ attitude toward online advertising and found a significant relationship between the two variables.

3. Research Methodology

It is a quantitative study and employed a non-probability sampling method. A total of six hundred fifty questionnaires were distributed to respondents through online due to pandemic. Five hundred and eighty-six sets of questionnaires were returned, equivalent to a response rate of 90.6%. However, nineteen sets of questionnaires received were rejected because the respondents' age was out of the range of Generation Y, which was between 23 to 39 years old. The formation of the questionnaire for this research was adapted from the following authors and found to be reliable and valid (See Table 1).

The analysis conducted through Smart-PLS. The measurement model was assessed using Cronbach’s Alpha, Composite Reliability, Average Variance Extracted (AVE), Cross Loading and Fornell-Larcker Criterion. The structural model was evaluated by the t-value, coefficient of determination, f^2 value and p-value.

Table 1: Summary of Questionnaire Design

Section	Variable	No. of Questions	Adoption/ Adaptation	Sources
Part A	Demographic Profile	6	-	-

Part B (Dependent Variable)	Purchase Decision	9	Adapted	(Tang & Chan, 2017)
Part C (Independent Variable)	Credibility	6	Adopted	(Chan, et. al., 2014; Crete & Senecal, 2016)
	Informativeness	6	Adopted	(Chan, et. al., 2014; Duygu, 2019)
	Hedonic	6	Adopted	(Chan, et. al., 2014; Duygu, 2019; Yaakop & Brown, 2013)
	Materialism	6	Adopted	(Chan, et. al., 2014; Duygu, 2019; Kwan, 2013)

4. Results

Table 2 summarized the result of the measurement model from Smart PLS, which includes Factor Loading, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE). Factor loadings represented the reliability of individual items, and the rule of thumb was that the loadings should be 0.70 or higher. However through factor loadings, there were few items lower than the threshold: B1, B2, B8, B9, M1, M2, M3, and M6. These items were re-evaluated and were removed from the scale to improve the composite reliability and AVE (see Figure 1 and Table 2). Cronbach's Alpha, Composite Reliability, and AVE value of the constructs were higher than the minimum acceptable level, which was higher than 0.7 for Cronbach's Alpha, higher than 0.7 for Composite Reliability, and higher than 0.5 for AVE.

Figure1: Measurement and Structural Model

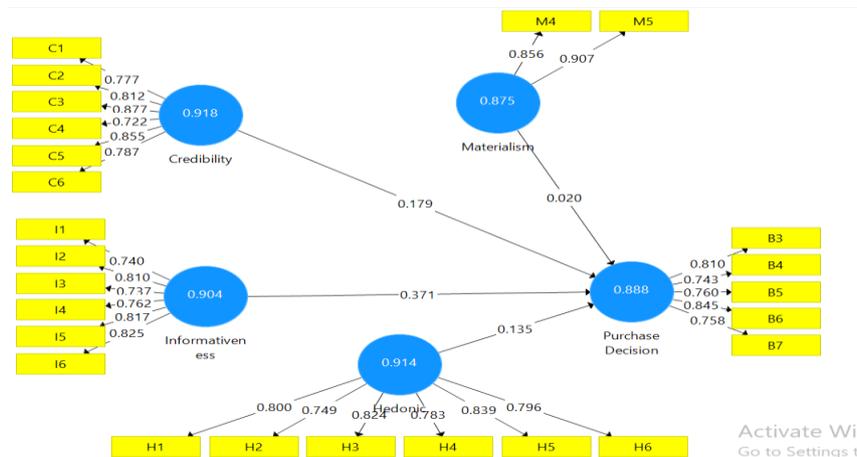


Table 2: Result of Measurement Model

Construct Category	Research construct	Factor Loading	Cronbach's Alpha	Composite Reliability	AVE Value
Purchase Decision	B3	0.810	0.844	0.888	0.615
	B4	0.743			
	B5	0.760			
	B6	0.834			
	B7	0.758			
Credibility	C1	0.777	0.893	0.918	0.651
	C2	0.812			
	C3	0.877			
	C4	0.722			
	C5	0.855			
	C6	0.787			
Informativeness	I1	0.740	0.873	0.904	0.612
	I2	0.810			
	I3	0.737			
	I4	0.762			
	I5	0.817			
	I6	0.825			
Hedonic	H1	0.800	0.887	0.914	0.638
	H2	0.749			
	H3	0.824			
	H4	0.783			
	H5	0.839			
	H6	0.796			
Materialism	M4	0.856	0.716	0.875	0.777
	M5	0.907			

Table 3 recorded the cross-loadings of each research construct. The outer loadings of the associated construct needed to be greater than its loading on all other constructs, to confirm that the construct was unique and captured phenomena not represented by other constructs in the model. Based on Table 3, all outer loadings were greater than the loading of other constructs, confirming that the model has no discriminant validity problem.

Table 3: Discriminate Validity using Cross Loading

Construct Category	Construct Category	Credibility	Hedonic	Informativeness	Materialism	Purchase Decision
Purchase Decision	B3	0.397	0.412	0.509	0.184	0.810
	B4	0.285	0.284	0.368	0.245	0.743
	B5	0.333	0.309	0.310	0.175	0.760
	B6	0.367	0.403	0.462	0.223	0.845
	B7	0.376	0.390	0.488	0.254	0.758
Credibility	C1	0.777	0.462	0.467	0.201	0.466
	C2	0.812	0.391	0.264	0.058	0.264
	C3	0.877	0.448	0.427	0.163	0.353
	C4	0.722	0.416	0.457	0.264	0.387
	C5	0.855	0.424	0.464	0.138	0.353
	C6	0.787	0.403	0.441	0.097	0.286
Hedonic	H1	0.396	0.800	0.502	0.341	0.361
	H2	0.378	0.749	0.422	0.281	0.342
	H3	0.444	0.824	0.472	0.364	0.426
	H4	0.432	0.783	0.501	0.381	0.378
	H5	0.515	0.839	0.546	0.474	0.356
	H6	0.389	0.796	0.480	0.458	0.365
Informativeness	I1	0.482	0.392	0.740	0.354	0.368
	I2	0.395	0.475	0.810	0.422	0.401
	I3	0.260	0.387	0.737	0.329	0.478
	I4	0.526	0.527	0.762	0.268	0.410
	I5	0.394	0.514	0.817	0.307	0.433
	I6	0.475	0.554	0.825	0.284	0.500
Materialism	M4	0.185	0.447	0.390	0.856	0.217
	M5	0.177	0.405	0.348	0.907	0.266

Table 4: Discriminate Validity using Fornell-Larcker Criterion

	Credibility	Hedonic	Informativeness	Materialism	Purchase Decision
Credibility	0.807				
Hedonic	0.533	0.799			
Informativeness	0.535	0.609	0.783		
Materialism	0.204	0.480	0.415	0.882	
Purchase Decision	0.454	0.467	0.558	0.276	0.784

Another method used to verify the discriminate validity of the model is Fornell-Larcker Criterion. It was confirmed that the square root of AVE (shown in diagonal) was greater than its correlation with another construct, showing that discriminant validity problem did not exist in this model (Refer to Table 4).

The Smart PLS bootstrapping analysis was conducted to evaluate the level of impact or the statistical significance of the path coefficients. The results were recorded in Table 5. The findings showed that H1, H2, H3 were accepted since their t-values were greater than 1.96 and the p-values were lower than 0.05. However, H4 was rejected since the t-value was 0.409 and the p-value is 0.682, outside the acceptance level.

Table 5: Result of Structural Equation Model Analysis

Hypothesis	Relationship	Original Sample (O)	T Statistics (O/STDEV)	P Values	Result
H1	Credibility -> Purchase Decision	0.179	4.545	0	Accepted
H2	Hedonic -> Purchase Decision	0.135	2.891	0.004	Accepted
H3	Informativeness -> Purchase Decision	0.371	8.670	0	Accepted
H4	Materialism -> Purchase Decision	0.020	0.409	0.682	Rejected

Note: T Statistic > 1.96 for 5%; p<0.05

The coefficient of determination (R2 value) determined the predictive accuracy of analysis and ranges from 0 to 1 in general. The result of bootstrapping analysis provided an R2 value of 0.371 as shown in Table 6, showing that this model explained 37.1% of the data variance.

Table 6: Result of R Square

	R square	R Square Adjusted
Purchase Decision	0.371	0.381

Table 7: Result of f^2

	Original Sample (O)
Credibility -> Purchase Decision	0.032
Hedonic -> Purchase Decision	0.014
Informativeness -> Purchase Decision	0.116
Materialism -> Purchase Decision	0

The strength of the relationship between the dependent variable and the independent variables was measured using a statistical concept called effect size (f^2). If the effect size was large if the f^2 value was above 0.35 and consider medium when the f^2 value was between 0.15 and 0.35. f^2 value fell within the range of 0.03 to 0.12 showed a small effect size and below 0.02 showed no effect. Based on Table 7, the relationship of all the independent and dependent variables was small in effect size, except the materialism and purchase decision which had no effect.

5. Discussions

H1) Credibility of online advertising has a significant relationship with purchase decision of Generation Y.

Credibility was the first independent variable identified and investigated in this research, with 6 related questions included in the online questionnaire distributed. The questions were aimed to investigate the relationship between the credibility of online advertisement and purchase decision of Generation Y in Malaysia.

Comparing with the literature found previously, the result of this research aligned with many of the past findings (Rahimi, et.al. 2019; Mishra and Mahalik, 2017; Chan, et. al., 2014). The result showed that credibility had a significant and positive influence on the purchase decision of generation Y. Credibility was not only important to physical goods or a business entity to attract consumers, but it could apply to non-physical services such as online advertisement as well. Therefore, industries and businesses should reduce fraud or unreliable information circulating the internet; avoid the trustworthiness of online advertisement being damage further, to keep it as an effective business tool to communicate with the consumers.

H2) Informativeness of online advertising has a significant relationship with purchase decision of Generation Y.

The second independent variable included in this research is the informativeness of online advertisements. Similarly, six questions were designed to determine the influence of informativeness towards purchase decisions of generation Y through an online questionnaire.

The result determined did synchronize with most of the literature recorded in the literature review, saying that proving correct and sufficient data in an online advertisement that consumers needed would positively influence the purchase decision making. However, the result of the research did contradict with literature published by Roberts (2018) that suggested that informativeness on the advertisement did not influence the purchase decision of middle-aged women in anti-aging products. Therefore, it was suggested that marketers carefully consider both the quality and quantity of information included in the advertisement, to ensure the effectiveness of online advertisement in generating sales.

H3) Hedonic of online advertising has a significant relationship with purchase decision of Generation Y.

Hedonic was the third independent variable being analysed following the goal of this research. A total of six questions were asked in the online questionnaire to determine the influence of hedonic towards purchase decision of generation Y in Malaysia. Literature such as Koshksaray and Nabizadeh (2017) and Brahim (2016) suggested that the hedonic of online advertisement had a significant relationship with the purchase decision. However, some literature like Islam, Kang, and Yang (2013) disagrees with the statement. The result of this research agreed with most of the research since it was decided that the hedonic of online advertisement significantly influenced the purchase decision of generation Y.

H4) Materialism of online advertising has a significant relationship with purchase decision of Generation Y.

Materialism was the last independent variable research in this study, with six questions included in the online questionnaire distributed. The aim of these questions was to decide the relationship between the materialism message in online advertisement and the purchase decision of Generation Y in Malaysia. During the literature review, almost equal numbers of research found showing materialism had a significant and not significant relationship with the purchase decision. However, this research supported that the materialism elements in the online advertisement had a positive relationship with the purchase decision of generation Y. Therefore, including materialism messages in the online advertisement would help grow the demand among consumers which leads to more purchases.

6. Implications& Contributions

The Theory of Reasoned Action (TRA) explained the interaction between attitudes and behaviours during decision making and action. Its major application was predicting how humans behaved on their pre-existing attitudes and behavioural intentions (Fishbein and Ajzen, 1975). The TRA suggested two factors that predict behavioural intent: our attitudes and subjective norms (CIOS, 2020). The attitude was an internal factor, sourced from our own beliefs and evaluation practices that occurred in an individual's mind (Hagger, 2019). On the other hand, the subjective norm was based on the normative belief of the society and the self-motivation to follow the general beliefs (Hagger, 2019). The focus of this research was the influence of online advertisement on the purchase decision, which was considered the actual

behaviour in TRA. The online advertisement was not a normative belief, but an external factor and all four independent variables had a significant relationship with the purchase decision. This might suggest another method that external factors could influence behavioural intention which TRA did not explain.

The Rational Choice Theory (RCT) was another theory applied in this research to relate the independent v and dependent variable of this research. RCT suggested that all human decisions were based on rational consideration based on information, probability, cost, and benefits to determine the best possible path. The result of this research showed that all four independent variables significantly influenced the purchase decision of consumers. Since the purchase decision was a type of human decision and the four independent variables were the characteristics of the information communicated to consumers, the results obtained from the research synchronized with the concept of RCT.

This research provided a reference to marketers on how to improve the performance of their online advertisement, by exploiting the independent variables investigated in this research. Since all independent variables were positively connected to purchase decisions, marketers and advertisement designers should consider adding more content related to the independent variables to boost online advertisement. Since, credibility and informativeness was important independent variables that could attract consumers, members in the industry need to cooperate to reduce the fake news and information, to maintain the trustworthiness of the online advertisement. Furthermore, marketers needed to include hedonic, entertain, and innovative elements into different façade of online advertising such as language, visual graphics, music selection, and communication skills to attract consumers' attention, which would potentially lead to potential sales. In addition, materialism was proven to have a positive relationship with purchase decisions, but its influence wasn't as significant as the other three independent variables based on the beta coefficient. Therefore, advertisement designers shouldn't prioritize materialism related content in advertisement over the other variables unless necessary.

7. Limitations of the study

The outcome of this research supported future academic research and other industry related to this research topic. However, certain limitations were found when executing the study and confined the results of this study to a certain extend. Therefore, several recommendations were outlined below to reference future researchers to produce better quality and meaningful research.

1. This study's population and sample size was limited by the timeframe and the Covid-19 pandemic currently shadowing the entire country. However, it was recommended to use a larger sample size to receive more reliable data for a better quality of output when collecting data.
2. This research applied a non-probability sampling method to collect data from participants, which essentially meant that the method was non-randomized and might involve judgment. The reason behind this was no other than time limitation and the current pandemic season. Therefore, it was always recommended to prioritize

probability sampling to exclude any source of bias for more reliability and concrete analysis.

8. Recommendation for Future Works

The result of this research provided a clear description between the relationship of cognitive factors of online advertisement and purchase decision of Generation Y. However, many research opportunities could be conducted in the future to compliment the result of this study and provided a more comprehensive insight for both academic and commercial perspective. Future research opportunities were decided below.

1. Another research opportunity in the future would be focusing on Generation Z as the context of the study. This was because most Generation Z was soon to enter the industry and some already have the purchasing power either from parents or early employment. Soon, insights on the purchase decision of Generation Z would be required by the industry to successfully capture their spending behavior.
2. There are many other data collection methods available for academic research purposes. The questionnaire used in this study can provide a large amount of data in a short period with minimal cost. However, the analysis is quantitative, without allowing the respondent to provide insights. Future research can be qualitative research that applies other data collection methods such as interview or focus group, to obtain a more in-depth answer with a smaller sample size.
3. The findings from Smart PLS suggested that there was no relationship between materialism and purchase decision. Therefore, it was suggested to position it as a dependent variable to test its relationship with other variables or replace it with other potential variables to decide an independent variable that relates more significantly than materialism.

9. Conclusion

The main objective of this research was to analyse the influence of online advertising on the purchase decision of Generation Y in Malaysia. Many possible elements within an online advertisement could potentially influence the purchase decision, and the focus of this research was the cognitive façade of online advertisement. Therefore, the four independent variables of this research were credibility, informativeness, hedonic, and materialism. After conducting the analysis, it was concluded that all four independent variables were determined to have a significant and positive relationship with the purchase decision of Generation Y in Malaysia.

In recent years, online advertisement grew rapidly and exceeded traditional advertisement in market share especially in developed countries. As Malaysia was working in the same direction, industries must understand how to use online advertisement to improve their strength and survive strong competition. This study provided an insight for businesses to understand how different elements of online advertisement such as credibility, informativeness, hedonic, and materialism influenced the purchase decision of their targeted consumers. Marketers

needed to make their online advertisement trustworthy, for consumers to accept the information displayed and make a purchase decision based on it. Besides, providing sufficient and proper information about the product and services would influence consumer preference. Furthermore, marketers needed to include hedonic and materialistic elements into the online advertisement to attract consumers and influence their decision-making process. The last part of the study explained the research limitation and proposed several recommendations to overcome it.

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