Online Advertising: A Study of Malaysian Consumers

Khong Kok Wei  
Nottingham University Business School  
Malaysia Campus  
Jalan Broga, 43500 Semenyih  
Selangor Darul Ehsan, Malaysia  
E-mail: khong.kokwei@nottingham.edu.my

Theresa Jerome  
Sunway University College  
Selangor, Malaysia

Leong Wai Shan  
Sunway University College  
Selangor, Malaysia

ABSTRACT

Online advertising is a new platform for marketers to create awareness and increase brand equity. The aim of this paper is to examine the impact of online advertising features on purchase intentions. Three features of online advertising are discussed and examined – Multimedia, Pictures, and Content – based on an empirical study involving a survey of 150 sample size. The dataset underwent a statistical analysis; i.e., structural equation modeling (SEM). Findings reveal that features of online advertising do generate positive influence on purchase intentions. Results further reveal that the Pictures feature generates the highest possibility of consumers’ purchase intentions. Marketers will find these results useful as they can be used to maximize the impact of advertising efforts to generate purchase intentions.

Keywords: online advertising, features of online advertising, purchase intention, structural equation modeling
1. **INTRODUCTION**

The rapid pace of information technology (IT) has transformed the Internet into the most popular channel of communication in the world today. The Internet’s high speed, user-friendliness, low cost, and wide accessibility have contributed to its commercialization in the form of online marketing – a new platform for generating attention and awareness among consumers through online advertising (Rowley, 2001).

Companies benefit by evaluating the effectiveness of online advertising and by assessing their investment in these advertisements. A great number of companies have spent huge amounts of money on online advertising. According to Nielson Media Research (2008), total online advertising spending in Malaysia was approximately USD460 million. Considering the huge sums spent, it is critical that companies ensure that online advertising is effective in generating reasonable returns. Furthermore, huge opportunities exist for the growth of online advertising in Malaysia, as indicated by the fact that Internet penetration increased dramatically from 15% in 2000 to 65.7% in 2009 (Internet World Stats, 2009). This increase suggests sustainable growth in the Internet population in Malaysia. Companies, therefore, need to create effective online advertising strategies to capitalize on this lucrative market segment and to incorporate effective features in their online advertising. It is also important to evaluate the effectiveness of online advertisements and how well consumers respond to them. The aim of this paper is to examine the causal relationship between the antecedents of online advertising and the purchase intentions of Malaysian consumers.

Online advertising is widely used by companies and advertisers to promote their products and services (Kaye and Medoff, 2001). It is crucial that online advertising be effective in order to generate favorable responses from consumers. Online advertising features, therefore, play a significant role (Armstrong, 2001; Adam, 2003; Baltas, 2003; Yoo et al., 2004; Quester et al., 2007; Kumar, 2008; Online Publishers Association, 2008; Taylor et al., 2008; Tsang and Tse, 2005; Wise et al., 2008). Since generating favorable consumer response is important, it is worthwhile to examine how effective online advertising is among consumers in Malaysia. The aim of this paper is to examine the impact of online advertising features on purchase intentions. This study uses structural equation modeling (SEM) to estimate hypothesized models in order to
test the relationships between the features of online advertising and purchase intentions.

2. LITERATURE REVIEW

This section contains an overview of literature on online advertising and the features of online advertising.

2.1. Overview of Online Advertising

The emergence of technology has made online advertising the major channel of commercial communication around the world. Advertising is defined as any paid form of non-personal communication of ideas and information about products in the media with the objective of creating brand image (Kotler and Armstrong, 2010). The objective of advertising is to create awareness of a company, a brand, a website, or an event in order to stimulate sales and increase profits. For a long time, television, radio, newspapers, and magazines have dominated the advertising media. Now, online advertising is becoming the driving force in many advertising initiatives and efforts (Kotler and Armstrong, 2010).

The Internet consists of globally interconnected computer networks that offer companies inexpensive and convenient tools for advertising and communicating with their customers. This is known as online advertising (Palumbo and Herbig, 1998; Kaye and Medoff, 2001). Various types of online advertisements are available on the Internet. According to Rodgers and Thorson (2000), online advertisements can be in the form of banner advertisements, pop-advertising, sponsorship, hyperlinks, and websites. Although online advertising is an effective tool to reach larger audiences, it is important that advertisers incorporate features to make it more effective. According to Tsang and Tse (2005), online advertising is effective if it is able to generate an immediate response from consumers. As indicated in Table 1, three features are used in online advertising, based on models proposed by Burke and Edell (1989) and Escalas and Rutgers (2003). These are: Multimedia, Pictures, and Content.
### Table 1
Description of the Features of Online Advertising

<table>
<thead>
<tr>
<th>Features</th>
<th>Description</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>PICTURES</td>
<td>Pictures and images can make online advertisements appear more attractive to consumers. Consumers are more attracted when advertisements are easily understood without involving large amount of text. Celebrities pictures can promote products or services and generate positive responses from consumers</td>
<td>Taylor et al. (2008) Kumar (2008) Quester et al. (2007)</td>
</tr>
<tr>
<td>CONTENT</td>
<td>Short and concise messages contribute to the effectiveness of banner advertisements. Consumers are attracted to click on advertisements that contain knowledgeable information about the products and services. Advertisers focusing on content will fail to attract a large consumer response rate.</td>
<td>Baltas (2003) Adam (2003) Armstrong (2001)</td>
</tr>
</tbody>
</table>
2.2. Features of Online Advertising

*Multimedia* is a form of expression describing elements of online content such as audio, video, and animation (Rosenkrans, 2007). According to Yoo, Kim, and Sout (2004), animation is one of the innovative features that improve the design and interactivity of online advertisements, particularly banner advertisements. Animation incorporates moving images and graphics to enhance the presentation of the content. It includes several technological developments involving plug-ins, JAVA script, Flash, and streaming media (Yoo et al., 2004). Tsang and Tse (2005) found that consumers respond favorably to animated colors, text, and graphics on websites. Companies, therefore, develop digital video advertisements to increase consumer involvement with their brands. Digital video can be in the form of streaming video, gaming, or music video (Rosenkrans, 2009). Glass (2007) suggested that consumers who are engaged in video games are more likely to develop favorable responses to in-game brands. This finding was supported by Wise et al. (2008), who found that companies that build thematic connections between the game and the product’s brand would invoke a positive influence on consumer attitude toward the brand.

*Pictures* is a second feature of online advertising that can be used to increase effectiveness. Pictures and images can make advertisements appear more attractive to potential customers (Taylor et al., 2008). In fact, Kumar (2008) found that pictures are more effective than content in capturing consumers’ attention in online advertising. The major drawback of incorporating pictures in online advertising is the time it takes to download them. Research has shown that the average person spends about 30 seconds on a webpage before clicking onto another site; hence, pictures that take more than 15 seconds to download may not reach their audience (Adam, 2003).

*Content* is the third feature of online advertising. It provides consumers with written information about products and services. According to Baltas (2003), short, concise messages lead to effective banner advertisements. Adam (2003) found that advertisers focus on delivering concise messages on banners in order to draw favorable consumer responses. Online advertising that focuses on content generally uses simple, static text because it loads faster than pictures and multimedia files (Moses, 2009). For example, Google focuses on content by using plain html format to maintain the basic ethos of its sites (Kotler and Armstrong, 2010; Adam, 2003). The company has managed to attract a wide
Online Advertising: A Study of Malaysian Consumers

range of consumers who perceive the published content as concise and accurate (Adam, 2003). Online Publishers Association (2008) found that 66% of online consumers do remember advertised messages on content websites and are likely to develop brand favorability and purchase intention. Nevertheless, it has been found that companies that focus solely on content may attract a smaller number of potential customers (Armstrong, 2001).

The study of consumer attitude is an integral part of advertising literature. Arens and Schaefer (2007) stressed that understanding consumers’ profile, behavior, and attitude are key in developing effective advertising strategy. Since different consumers exhibit different attitudes toward advertising, it is important to form theoretical frameworks or models to standardize the measurement of these attitudes (Edell and Burke, 1987). One of the most influential models to examine the relationship between consumer attitude and advertisement is the attitude-toward-the-ad model (Edell and Burke, 1987; Burke and Edell, 1989). According to Burke and Edell (1989), consumers form attitudes toward traditional means of advertising such as television and magazine. Such attitudes will then influence their attitude toward the brand. Figure 1 depicts the relationships of variables in the attitude-toward-the-ad model. The model is adapted in the context of research conducted by Escalas and Rutgers (2003).

Based on the attitude-toward-the-ad model in Figure 1, exposure to advertisement induces feelings and judgments from the consumer. Feelings are the affective components, and judgments are the cognitive components of consumer attitude. Consumers form feelings (happy, annoyed, or amused) and judgment (informative or factual) when they are exposed to advertisements. Perceptions formed from feelings and judgments will influence consumers’ attitude toward online advertisements. For example, consumers’ attitude toward the advertisement is ‘favorable’ when they read/click/play it or ‘unfavorable’ when they ignore it (Burke and Edell, 1989; Escalas and Rutgers, 2003). In short, favorable attitudes will have a positive impact on purchase decision (Edell and Burke, 1987; Escalas and Rutgers, 2003). From the path diagram in Figure 1, a list of variables is identified. These variables manifest the dimensions mentioned in the literature; i.e., Multimedia, Pictures, and Content features.
In order to analyze the hypothesized model, researchers first examine the impact of each of the three online advertising features – Multimedia, Pictures, and Content. Regression weights are used to test the strength of the relationships. After the results for the three models are obtained, a simultaneous test of the three models is deployed on the overall purchase intention. Three sets of hypotheses are formed to test the relationships of variables in the models. These variables are the three features of online advertising; i.e., Multimedia (H1), Pictures (H2), and Content (H3). For each of these features, an examination is made of Judgment (Variable A), Feelings (Variable B), Attitude toward online advertisements (Variable C), Attitude toward the brand (Variable D), and Purchase intention (Variable E). The hypotheses follow:
Online Advertising: A Study of Malaysian Consumers

~ Multimedia Feature
H1a: Variable A has a positive influence on Variable C
H1b: Variable B has a positive influence on Variable C.
H1c: Variable C has a positive influence on Variable D.
H1d: Variable D has a positive influence on Variable E.

~ Pictures Feature
H2a: Variable A has a positive influence on Variable C
H2b: Variable B has a positive influence on Variable C.
H2c: Variable C has a positive influence on Variable D.
H2d: Variable D has a positive influence on Variable E.

~ Content Feature
H3a: Variable A has a positive influence on Variable C
H3b: Variable B has a positive influence on Variable C.
H3c: Variable C has a positive influence on Variable D.
H3d: Variable D has a positive influence on Variable E.

Table 2, which presents the three sets of hypotheses in greater detail, depicts how Variables A are associated with Variables C, D, and E; how Variables B are associated with Variables C, D, and E; how Variables C are associated with Variables D and E; and how Variables D are associated with Variables E of Multimedia, Pictures, and Contents, respectively.

3. THE SURVEY
We conducted a survey to examine the impact of online advertising features on consumer purchase intentions. Our sampling frame was used among students in a university college in the Klang Valley. Students within the sampling frame were elements of an unbiased subset that represented the population of the university (Collis and Hussey, 2009). The students came from four departments; namely, Pre-University, Financial Programmes, School of Business and Law, and School of Computer Technology (Table 3). Of the 8,569 elements in the sampling frame, 150 (or 1.75%) constituted the targeted sample size. Of the 220 qualifying respondents approached, 150 completed the questionnaire (68% response rate), which is deemed sufficient for SEM analysis (Hair et al., 2006).
Table 2
Manifesting Variables of CSM

<table>
<thead>
<tr>
<th>Multimedia (H1)</th>
<th>Pictures (H2)</th>
<th>Contents (H3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Multimedia features in online advertisements give consumers a positive feeling toward the product or service.</td>
<td>A. Pictures in online advertisements give consumers a positive feeling toward the product or service.</td>
<td>A. Contents in online advertisements give consumers a positive feeling toward the product or service.</td>
</tr>
<tr>
<td>B. Multimedia features in online advertisements will stimulate consumers to learn more about the product or service.</td>
<td>B. Pictures in online advertisements will stimulate consumers to learn more about the product or service.</td>
<td>B. Contents in online advertisements will stimulate consumers to learn more about the product or service.</td>
</tr>
<tr>
<td>C. Multimedia features in online advertisements will persuade consumers to click on the advertisement.</td>
<td>C. Pictures in online advertisements will persuade consumers to click on the advertisement.</td>
<td>C. Contents in online advertisements will persuade consumers to click on the advertisement.</td>
</tr>
<tr>
<td>D. Multimedia features help generate favorable consumer response to the brand of the product or service.</td>
<td>D. Pictures help generate favorable consumer response to the brand of the product or service.</td>
<td>D. Contents help generate favorable consumer response to the brand of the product or service.</td>
</tr>
<tr>
<td>E. Consumers will consider purchasing the product or service based on the multimedia features in the online advertisement.</td>
<td>E. Consumers will consider purchasing the product or service based on the pictures in the online advertisement.</td>
<td>E. Consumers will consider purchasing the product or service based on the contents in the online advertisement.</td>
</tr>
</tbody>
</table>

Source: Burke and Edell (1989) and Escalas and Rutgers (2003)
As indicated in Table 3, there were 40 students from Pre-University, 30 from Financial Programmes, 76 from the School of Business and Law, and 4 from the School of Computer Technology. Female respondents outnumbered males by more than 67%. Respondents from the School of Business and Law represented approximately 50% of the sample size.

The selection of elements in the sampling frame was random in order to ensure that each element had an equal chance of being selected. A questionnaire was administered in which respondents were asked to indicate on the questionnaire how much they agree with the statements given in Table 2, using a 5-point interval-scale, where

5 = Strongly Agree
4 = Agree
3 = Neutral
2 = Disagree
1 = Strongly Disagree

Face-to-face contact with the respondents at the university cafeteria allowed them to effectively quell doubts when completing the survey instrument. This approach also increased the response rate.
4. DATA ANALYSIS AND FINDINGS

A reliability test was conducted to measure the internal consistency of the variables in a summated scale. The data in Table 4 indicate that the measures are consistent in values as each concept has a threshold value of 0.7 and above (Hair et al., 2006). These consistent values underline common responses toward how Feelings and Judgment can affect Attitude toward the ad.

Table 4
Reliability Test of the Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings</td>
<td>0.899</td>
</tr>
<tr>
<td>Judgment</td>
<td>0.922</td>
</tr>
<tr>
<td>Attitude toward the advertisement</td>
<td>0.884</td>
</tr>
<tr>
<td>Attitude toward the brand</td>
<td>0.908</td>
</tr>
<tr>
<td>Purchase intention</td>
<td>0.945</td>
</tr>
</tbody>
</table>

SEM was conducted to empirically examine the impact of online advertising features on purchase intentions. These tests were conducted via a statistical software package called SPSS Analysis of Moment Structures (AMOS). SEM is a test of dependence relationships among latent variables or constructs to estimate the causal relationships in the measurement model (Lattin, Corrall and Green, 2003, p. 353; Hair et al., 2006, p. 711). Therefore, SEM is an appropriate analysis to estimate the strength of causal (e.g., attitude toward the ad, attitude toward the brand) and effect (e.g., consumer purchase intention) relationships in the above-mentioned hypothesized model (Figure 1). Based on the figure, the two exogenous variables (Feelings and Judgment) are correlated with each other. These two exogenous variables form causal relationships with three endogenous variables (Attitude toward online advertisements, Attitude toward the brand, and Purchase intention).

4.1. Findings on Multimedia Feature

The first set of hypotheses (H1a, H1b, H1c, and H1d) examines the impact of the Multimedia feature on online advertising. Table 5 shows the results via SEM.
Table 5
Regression Weights in the Model (Multimedia Features)

<table>
<thead>
<tr>
<th></th>
<th>Path</th>
<th>P</th>
<th>Regression Weights (γ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Judgment → Attitude_ad</td>
<td>0.402</td>
<td>0.068</td>
</tr>
<tr>
<td>H1b</td>
<td>Feelings → Attitude_ad</td>
<td>***</td>
<td>0.360</td>
</tr>
<tr>
<td>H1c</td>
<td>Attitude_ad → Attitude_brand</td>
<td>***</td>
<td>0.530</td>
</tr>
<tr>
<td>H1d</td>
<td>Attitude_brand → Purchase intention</td>
<td>***</td>
<td>0.360</td>
</tr>
</tbody>
</table>

Note: Attitude_ad = Attitude toward online advertisements
Attitude_brand = Attitude toward the brand
*** denotes that tests are significant at α = 0.01

Based on the results in Table 5, there is strong evidence to assert H1b, H1c, and H1d. This indicates that respondents’ feelings about online advertisements have a significant influence on attitude toward online advertising. Attitude toward online advertisements has a significant influence on attitude toward the brand and attitude toward the brand has a significant influence on purchase intention. These tests were significant at α = 0.01. However, the relationship between judgment of online advertisements and attitude toward online advertisements is insignificant at α = 0.01 (p: H1a = 0.402; λ: H1a = 0.068; where λ is regression weight); therefore, H1a is rejected. There is inadequate information to suggest that judgment of online advertisements does influence attitude toward online advertisements. The strength of the relationship between variables is indicated by the values of regression weights (λ). Figure 2 depicts the path diagram as well as the λ on the hypothesized model for multimedia feature in the online advertisement.

4.2. Findings on Pictures Feature

The second set of hypotheses (H2a, H2b, H2c, H2d) examines the influence of the Pictures feature on online advertisements. Table 6 shows the results.
Figure 2. SEM Results in Path Diagrams for Multimedia, Pictures, and Content Features
Based on the results shown in Table 6, H2a, H2b, H2c, and H2d are significant at $\alpha = 0.01$. This finding provides strong evidence to assert H2a, H2b, H2c, and H2d. When *Pictures* features are used in online advertisements, *judgment* of online advertisements and *feelings* about online advertisements have a positive influence on *attitude toward online advertisements*. The latter also has a positive influence on *attitude toward the brand*. Subsequently, consumers with positive *attitude toward the brand* will generate *purchase intention*. Figure 2 depicts the results of the *Pictures* features in a path diagram.

### 4.3. Findings on Content Feature

The third set of hypotheses (H3a, H3b, H3c, H3d) examines the influence of *Content* in online advertising on the hypothesized model. The significance (p-value) and the $\lambda$ of relationship between variables are shown in Table 7.

According to the results shown in Table 7, there is evidence to assert H3a, H3b, H3c, and H3d as they are significant at $\alpha = 0.01$. When *Content* features are used in online advertisements, *judgement* of online advertisements and *feelings* about online advertisements have a positive influence on *attitude toward online advertisements*. The latter also has a positive influence on *attitude toward the brand*. Subsequently, *attitude toward the brand* will influence positively the *purchase intention* of consumers. When *Content* features are applied to online advertisements, respondents will have favorable *judgment* and *feelings* and subsequently form a positive attitude toward the advertisements and the brand.
These positive attitudes will then lead to purchase intention. Figure 2 (shown earlier) depicts the results of Content features in a path diagram.

### Table 7

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Weights (γ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3a Judgement</td>
<td>0.380 ***</td>
</tr>
<tr>
<td>H3b Feelings</td>
<td>0.262 ***</td>
</tr>
<tr>
<td>H3c Attitude_ad</td>
<td>0.472 ***</td>
</tr>
<tr>
<td>H3d Attitude_brand</td>
<td>0.399 ***</td>
</tr>
</tbody>
</table>

**Note:** Attitude_ad = Attitude toward online advertisements  
Attitude_brand = Attitude toward the brand  
*** denotes that the tests are significant at α = 0.01

#### 4.4. The Overall Model

The overall model combines the three hypothesized models of Multimedia, Pictures, and Content features to test their relationships simultaneously with regard to consumer purchase intention. The purpose of the overall model is to determine which of these features would generate the highest influence on purchase intention. Hence, a construct for purchase intention was formed manifested by variables in the hypothesized models; i.e., Multimedia purchase intention (P1), Pictures purchase intention (P2), and Contents purchase intention (P3). Results for the overall model are depicted in Table 8 and Figure 3.
Table 8
Results for the Overall Model
(Multimedia, Pictures, and Content Features)

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Weights (γ)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimedia_attitude_brand → Purchase_intention</td>
<td>0.58</td>
<td>0.053</td>
</tr>
<tr>
<td>Pictures_attitude_brand   → Purchase_intention</td>
<td>0.69</td>
<td>0.006</td>
</tr>
<tr>
<td>Content_attitude_brand    → Purchase_intention</td>
<td>0.51</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Note: Attitude_brand = Attitude toward the brand
*** denotes that significant at α = 0.01

Based on the results shown in Table 8, the relationships between attitude toward the brand of three different features (Multimedia, Pictures, and Contents) and purchase intention are significant at α = 0.05, where attitude toward the brand (Multimedia feature) p = 0.053 with γ = 0.20, attitude toward the brand (Pictures feature) p = 0.006 with γ = 0.30 and attitude toward the brand (Content feature) p = 0.043 with γ = 0.21. This finding indicates that using the Pictures feature on online advertisements generates the highest positive attitude toward the brand and subsequently creates the highest possibilities of purchase intention. Next comes the Content feature, with the Multimedia feature having the least influence on purchase intention (Figure 3).

To mathematically notate the overall model in Figure 3, let the general equation of the three hypothesized models be given as:

\[ Y_a = \Lambda_x X + \delta \ldots \]  
\[ Y_b = \Lambda_x X + \beta_a Y_a + \rho \ldots \]  

where \( Y_a \) is the endogenous variable attitude toward online advertisement, and \( Y_b \) is the endogenous variable attitude toward the brand. \( \delta \) and \( \rho \) are the measurement errors for variables \( Y_a \) and \( Y_b \) (note \( E(\delta) \) and \( E(\rho) = 0 \)) (Anderson and Fornell, 2000).
Figure 3. Path Diagram and Results for Overall Model

The corresponding equations for variable $Y_a$ and $Y_b$ could be written as:

$$
\begin{align*}
Y_{a1}^m &= \begin{pmatrix} \lambda_1 & 0 & 0 \end{pmatrix} \delta_1 \\
Y_{a2}^m &= \begin{pmatrix} \lambda_2 & 0 & 0 \end{pmatrix} \delta_2 \\
Y_{a3}^p &= \begin{pmatrix} 0 & \lambda_3 & 0 \end{pmatrix} X + \begin{pmatrix} \delta_3 \end{pmatrix} \\
Y_{a4}^p &= \begin{pmatrix} 0 & \lambda_4 & 0 \end{pmatrix} X + \begin{pmatrix} \delta_4 \end{pmatrix} \\
Y_{a5}^c &= \begin{pmatrix} 0 & 0 & \lambda_5 \end{pmatrix} \delta_5 \\
Y_{a6}^c &= \begin{pmatrix} 0 & 0 & \lambda_6 \end{pmatrix} \delta_6
\end{align*}
$$

(3)
\[
\begin{align*}
y_{b1}^m &= \begin{pmatrix} \lambda_1 & 0 & 0 \end{pmatrix} \\
y_{b2}^m &= \begin{pmatrix} \lambda_2 & 0 & 0 \end{pmatrix} \\
y_{b3}^p &= \begin{pmatrix} 0 & \lambda_3 & 0 \end{pmatrix} \\
y_{b4}^p &= \begin{pmatrix} 0 & \lambda_4 & 0 \end{pmatrix} \\
y_{b5}^c &= \begin{pmatrix} 0 & 0 & \lambda_5 \end{pmatrix} \\
y_{b6}^c &= \begin{pmatrix} 0 & 0 & \lambda_6 \end{pmatrix}
\end{align*}
\]

where \( \lambda \) is the regression weights of judgment of online advertisements and feelings about online advertisements, and \( y_a \) and \( y_b \) are the endogenous variables attitude toward to online advertisement (for Multimedia, Pictures, and Content features) and attitude toward the brand (for Multimedia, Pictures, and Content features), respectively. \( \beta \) is the regression weights of \( Y_a \), attitude toward to online advertisement.

Let the general equation of the overall model be given as:

\[
\begin{align*}
\eta &= \Lambda Y_b + \zeta \quad \ldots \\
\end{align*}
\]

where \( \eta \) is the criterion purchase intention and \( \zeta \) is the measurement error for the criterion (note \( \text{E}(\zeta) = 0 \)) (Anderson and Fornell, 2000). \( \Lambda \) is the regression weights of Multimedia, Pictures, and Content features manifesting the criterion.

Figure 3 (shown earlier) elucidates the overall model given the equations (1) and (5). Based on these equations, the structural model would be notated as:

\[
\begin{align*}
\eta &= \begin{pmatrix} y_m \\ y_p \\ y_c \end{pmatrix} \begin{pmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \end{pmatrix} \\
\end{align*}
\]

Using the standardized estimates from the results in Figure 3, the equation of the overall model can be simplified as:

\[
\eta = 0.20y_{b1}^m + 0.30y_{b2}^p + 0.21y_{b5}^c \quad \ldots
\]
5. DISCUSSION

Based on the findings, Table 9 summarizes the strength of relationship between variables in the overall model.

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Multimedia</th>
<th>Pictures</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judgment → Attitude_ad</td>
<td>Low</td>
<td>High</td>
<td>Average</td>
</tr>
<tr>
<td>Feelings → Attitude_ad</td>
<td>High</td>
<td>Average</td>
<td>High</td>
</tr>
<tr>
<td>Attitude_ad → Attitude_brand</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Attitude_brand → Purchase intention</td>
<td>Average</td>
<td>High</td>
<td>Average</td>
</tr>
</tbody>
</table>

Note: Attitude_ad = Attitude toward online advertisements
      Attitude_brand = Attitude toward the brand

As indicated, the Pictures feature generates favorable judgment toward online advertisements, and feelings about and judgment of online advertising will eventually generate high possibilities of purchase intention. Although Content and Multimedia features generate favorable feelings toward online advertisements, these features generate mediocre possibilities of purchase intention.

According to the literature, respondents with high exposure to familiar pictures in their past react positively to similar Pictures and Content features in online advertisements. This reaction helps generate favorable responses from consumers; e.g., attitude toward the advertisement and the brand. When responses are favorable, this experience normally leads to purchase intention. Nevertheless, Multimedia and Content features play little influence (compared with the Pictures feature) on consumer attitude toward the advertisements.

This finding implies that respondents are unlikely to form a favorable judgment when exposed to Multimedia features. However, there is evidence to suggest that respondents may form favorable feelings when exposed to Multimedia features. This may be due to the attractive nature of Multimedia animation, video, or games in online advertisements. For example, the statement
with *Multimedia* features (*Do you wish to lose 10 kgs in a week? Click here to find out how!*)) may appeal to overweight respondents as it relates to their desire to lose weight. In such a situation, their feelings would highly influence them when they read these statements.

Table 9 indicates that *Multimedia, Pictures*, and *Content* features will have a high influence on generating a favorable *attitude toward the brand*. In short, these features play a significant role in creating a positive attitude toward the brand of the product or service. When there is favorable attitude toward the brand, *purchase intention* is generated (see Figure 1). The *Pictures* feature generates the highest possibility for *purchase intention* whereas the influence of the *Content* and *Multimedia* features on *purchase intention* is average. There is reason to believe that features of online advertising portray the reality from the respondents’ point of view or the intended message ties well with the product or service; thus, the positive influence on *purchase intention*.

Similarly, studies show that online advertising does have an impact on *purchase intention* (Becerra and Korgaonkar, 2010; Chan et al., 2010; Sydow, 2010). Consumers are more likely to have a higher purchase intention if online advertising is customized to their needs with regard to *Content* and *Pictures* (Chatterjee and McGinnis, 2009). Repetitive use of, and increased exposure to, online advertising have a positive impact on *attitude toward the brand* and *purchase intention* (Bergkvist, 2010).

These studies show the relevance and consistency of the findings of this paper. These are significant indications that consumers, based on a sample in Malaysia, portray similar attitudes and behavioral patterns. It can be concluded, therefore, that this research will contribute to a better understanding of the effectiveness of online advertising on purchase intention in Malaysia.

6. **CONCLUSION**

Our findings show that features of online advertising do generate a significant influence on attitude toward the brand as well as purchase intention (see Table 9). This finding implies that advertisers can intelligently use these features to boost sales or to increase brand equity. Based on our findings, the *Pictures* feature in online ads has the strongest influence in forming a favourable attitude toward brand and purchase intention. This finding may encourage

*International Journal of Business and Information*
advertisers to increase their efforts regarding the Pictures feature in online advertisements.

The small sample size in our study was due to constraints on funding and resources. We chose a sample size of 150 to ensure that there was sufficient data for meaningful analysis (Hair et al., 2006). The data can be made more representative by extending the sampling frame to the Klang Valley in Malaysia. Another limitation of this study is the possibility of common bias in the survey instrument, where only the internal factors were considered.

In summary, this study focuses on consumer behavior (consumer attitude) from the individual’s aspect, and does not include the social group’s aspect into the analysis. These factors may affect the findings should they be taken into consideration. Resolving the above-mentioned limitations would be a fruitful endeavour for future research. Such an effort might involve a more representative sample of the population and include external factors that may influence consumers’ purchase intentions, such as psychological, marketing stimuli, and cultural factors. In conclusion, there is still room for improvement when examining the effectiveness of online advertising features.

REFERENCES


Sydow, G.V. 2010. Measuring effects of online branding is only the first step, New Media Age, 15.


ABOUT THE AUTHORS

Khong Kok Wei is an associate professor in the Nottingham Business School (NUBS), Malaysia. His research currently relates to the use of procedural covariance analysis in linear structures to estimate structural models in consumer behavior and service.

Theresa Jerome is a graduate researcher at Sunway University in Malaysia. She is currently employed at Multinational Banks in Malaysia as a management executive.

Leong Wai Shan is also a graduate researcher at Sunway University, now working as a management executive at Multinational Banks in Malaysia.