Consumer Attitudes towards Mobiles Advertising in Malaysia: A Case Study at University Teknologi Mara (UiTM), Kelantan, Malaysia

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Abstract: This study is aimed to conceptualized the validity of Ducoffe model and Brackett and Carr model to identify the relationship between factors Irritation (IR), Entertainment, (EN), Informativeness (INFO), Credibility (CR) and Personalization (PE) with Consumers Attitudes (AT) among students from Faculty of Business Management in Mara University of Technology, Kelantan. A survey has been conducted among 150 students from a total population of 2101 in Faculty of Business Management, Mara University of Technology, Kelantan. The data analysis process was done using Partial Least Square Path Modelling (PLS-SEM). The results of the study revealed INFO, EN and PE were found positive and statistically significant towards Consumers Attitudes (AT). PE was found to be the most significant factor among the four factors.

1 INTRODUCTION

According to The International Telecommunication Union there are almost 43.93 million Malaysia mobile phone subscribers in 2014. This fact was not surprising as because nowadays mobile phone has been considered as a vital communication tool and essential component in Malaysian society. According to Sheeren and Rozumah (2009), Malaysian people are increasingly using more mobile phone rather than fixed line in order to keep in touch with their family, friends, colleagues and business associates. This statement was supported with the facts from Malaysian Communications and Multimedia Commission (2013) that 86.3 percent of Malaysian citizens are mobile phone users. According to Zenith Optimedia mobile advertising is growing nine times faster than desktop internet advertising. Zenith also claims that mobile internet will increase by 39. 8 percent per a year estimation range in 20142017.Based on BuzzCity, a global mobile advertising company, in the second quarter in the year 2015, Malaysia's mobile advertising industry reported a positive growth of 21percent compared with 17percent in the first quarter (Q1) of this year. Malaysia also has shown positive mobile penetration because according to World Bank, the numbers of mobile penetration around 140 percent and this country has leading Indonesia, Thailand and even

United States. If we go through 'On Device research', it was stated that Malaysia's mobile landscape is performing better than most Southeast Asian countries, and even the United States. In Malaysia, high mobile phone penetration has allowed a new type of advertising to target a higher volume of potential prospect known as mobile advertising (madvertising). One of the most popular media of madvertising is Short Messaging Services (SMS) which is foundation of madvertising (Waldt, Rebello, and Brown, 2009). This statement is supported by the Universal McCann Malaysia (Rozana, 2009) which claimed that, Malaysia ranked fifth out of twenty one concerning Malaysian consumers' receptivity in the mobile advertising emerging market.

Studies of consumer attitudes toward mobile advertising were conducted in many countries, but there has been no similar research in public universities in East Coast Malaysia. Besides, Abdullah et al., (2013) stated that madvertising for the goods and services in Malaysia is still remain unclear, so it is needed to gain a well understanding about the underlying factors such as customers

attitudes. So, this study carried in order to determine and investigate the most possible factors that influencing consumer's attitudes towards mobiles advertising by adopting Bracket and Carr model (2001).

2 PREVIOUS STUDIES

Nowadays, is a must or needs to have mobile phones. This small gadget has considered a basic necessity of people's lives. Mobiles or cell phones have really changed the way of communication. Apart from only communication purposes, mobiles phones have a great tool of promoting products and services through potential clients. It is true that more consumers are relying on mobile devices not only for communication purposes, but also to engage in commerce. Consequently, industry experts foresee greater use of mobile messages sent to consumers for advertising and promotional purposes (Nasco& Bruner, 2008).

Tsang et al., (2004) have conducted a study about investigating consumer attitudes and usage behavior in respect to mobile advertising. This study investigated regarding consumer attitudes and usage behaviour to SMS advertisement through mobile devices. The findings of this study indicate that consumers generally have negative attitudes toward mobile advertising unless they have specifically consented to it, and there is a direct relationship between consumer attitudes and consumer behavior. It can conclude that it is not a good idea to send SMS advertisements to potential customers without prior permission. From the research done by Tsang et al., (2004), they found that entertainment, credibility, irritation and informativeness are the significant factors affecting respondent's attitudes towards mobile advertising. They use attitude as dependent variables and consider the antecedents of advertising value as factors of attitude.

In the other hand, Xu (2006) has also conducted the factors that will affect consumers' attitudes towards mobile advertising in China with particular emphasizes on personalization. The results of the study indicated that personalization is the most important factors that affecting consumer' attitudes towards mobile advertising, especially for female users and there is a direct relationship between consumer attitudes and consumer behavior.

Koo, W. (2010) has extended his research on mo-bile advertising by investigating Generation Y con-sumers` different value perceptions toward apparel mobile advertising according to cultures

(i.e., The United States vs. South Korea) and modalities (short message service vs. multimedia messaging service). The researcher has examining the determinants of at-titudes toward mobile advertising in an apparel con-text and subsequent impact on behavior intention and to investigate the effects of modality and culture on attitudes toward apparel mobile advertising.

2.1 Related Previous Studies

The first theoretical framework reviews for this study is Brackett and Carr (2001) research entitled cyberspace advertising vs. other media: Consumer vs. mature student attitudes. This BC model further extended from Ducoffe (1996) model to incorporate two more elements which are credibility and consumer demographic by Brackett and Carr (2001). The researchers found that both credibility and consumer demographic are linked to consumer attitude on advertising. However, relevant demographic is not used as one of the independent variable in this study because the demographic profile of the targeted respondents are varied compared to the targeted respondents in Brackett and Carr (2001) research.

Source: Brackett, L. K., &Carr, B. N. (2001). Cyberspace advertising vs. other media: Consumer vs. mature studentattitudes. Journal of advertising research; 41(5); 23-32.
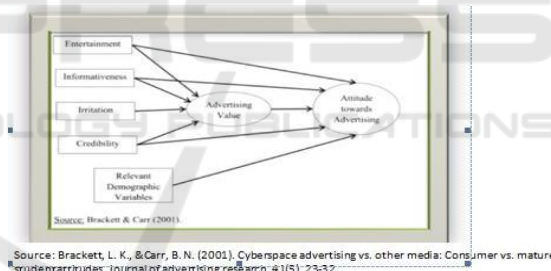
Figure 2.1 Theoretical Framework by Brackett & Carr (2001)

The second theoretical framework reviews for this study is from a study entitle Consumer attitudes toward mobile advertising: an empirical study by Melody M. Tsang, ShuChun Ho, and TingPeng Liang which was published in Electronic Journal of Electronic Commerce in 2004.

Based on the existing literature about attitudes toward advertising and consumer behaviour models, a research framework is constructed to illustrate the factors affecting consumer attitudes toward SMSbased advertisements and the relationships among attitudes, intention to view mobile ads, and users' actual behaviour. Attitude, intention, and behaviour are three major constructs in the theory of reasoned action (TRA) proposed by Fishbein and

Ajzen in the early 1970s (later extended to become the technology acceptance model in management information systems research). The model links individual beliefs, attitudes, intentions, and behavior to describe the psychological process that mediates the observed relations between attitudes and behavior.

The result of findings show, the respondents held negative attitudes about receiving mobile ads. This may have been because they found mobile adds irritating, given the personal, intimate nature of mobile phones. Their attitudes were favorable if advertisements were sent with permission. This implies that permission based advertising may become a major mechanism in the mobile environment in the future. Entertainment was the most significant of the factors affecting respondents' attitudes, followed by credibility and irritation. Attitude is positively related to the intention to receive mobile ads.

Intention is affected by the incentive associated with the ad. The respondents were more willing to accept incentive based mobile advertising. Finally, intention significantly affected how and when the respondents read the message. This is consistent with the TRA model and the literature on the subject.

The third theoretical framework reviews for this study is from a study entitled "The influence of personalization in affecting consumer attitudes toward mobile advertising in China by David JingjunXu in 2006. A total of 235 questionnaires have been distributed and 143 of them were returned among people in Guangdong Province, China. The results of the study indicated that personalization is the most important factors that affecting consumer' attitudes towards mobile advertising, especially for female users and there is a direct relationship between consumer attitudes and consumer behavior.

The fourth theoretical framework reviews for this study is from a study entitled "Attitudes towards mobile advertising – A research to determine the differences between the attitudes of youth and adults by Unal, S., Ercis, A., and Keser, E. (2011). The study was carried in a way to investigate the attitudes of youth and adults towards mobile advertising and whether there was a difference between their acceptance rejection behaviours regarding mobile advertising. A total of 400 questionnaires were admin interred to the youth and adults living in Erzurum/Turkey.

According to the results, consumers have positive attitude to the advertisements that being entertaining, informative, reliable and more

personalized, and the advertisements should being sent with permission to them by advertisers. The advertisements considered as irritating affect attitudes negatively. Similarly, advertisements

The fifth theoretical framework reviews for this study is from a study entitled "Attitudes towards mobile advertising: a study of mobile display and APP display advertising by Tri Dinh Le and BaoTran Ho Nguyen .This study was conducted by the researchers to provide deep understanding of mobile advertising in Vietnam country. For researchers, the increasing use of mobile devices to deliver advertisements for products and services especially using smart phones devices have create a need among researchers to have full understanding regarding factors that affecting consumers attitudes towards mobile advertising. The findings from this study can help the researchers to develop a successful mobile advertising for mobile advertisers. A survey of 206 participants was conducted in this study using the convenience sampling method. The findings of this study show that although many users do not have positive feelings toward advertising, they cannot ignore the importance of mobile advertising. If mobile advertisers can present credibility and entertainment in their advertisements, consumers are willing to view the ads and be influenced to buy products and services.

3 THEORETICAL FRAMEWORK

There are six total variables that make up this framework. It consists of five independent variables, and one dependent variable consists of one dimensions. These variables were identified and taken from previous study and theoretical reviews that have been done. In this section, all the variables in the framework will be defined in depth. The relationship between independent variables and dependent variable also will be examined.
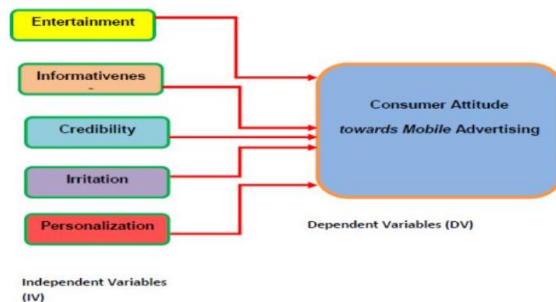

Figure 3.1: Theoretical Framework

4 METHODOLOGY

4.1 Data Collection and Sampling Method

The target population for this study is among the postgraduate and undergraduate students from the Faculty of Business Management, Mara University of Technology, Kelantan campus, Malaysia. The total number of population in this setting will be 1650 students from postgraduate and undergraduate level. The unit of analysis for this study will be individual as the researcher collects data from each and every one student that involved in this study. In other words, each student will be considered as one data resource. The selected population will be among postgraduate and undergraduate students at the Faculty of Business Management from various courses.

As stated in previous discussion earlier, the sampling frame of this study is among 1650 students from postgraduate and undergraduate from Faculty of Business Management, University Technology MARA. Clearly, the size of the population number is huge, the researcher may face difficulties and limitation to distribute questionnaire as a data collection instrument to all students within the population. Therefore, the researcher will collect data from specific target population (sample population) only that will be enough for representing the whole population.

A total of 150 out of 180 students participated in the study, resulting in an 83.33% response rate and start with the text after a return.

5 RESULT AND FINDINGS

The result of the Harman Single Factor showed the common method variance for this study which is 35.957%. It can be seen in the first row at the Total Variance Explained table. Thus, the result is less than 50% of acceptance; the result proposed that there was no Common Method Bias that can be found in the data set. (Refer to Table 1).

Table 5.1: Common Method Variance

Compone nt	Initial Eigenvalues			Extraction Sums of Squared Loading		
	Total	% of Varian ce	Cumulat ive %	Total	% of Variance	Cumulati ve %
1	8.543	35.597	35.597	8.543	35.597	35.957

It was found out that the majority of the respondents were female with (70.7%) compare to the male respondents (29.3%). In term of the respondents' age, most of them were between 2426 years old (79.7%) followed by the aged between 1719 years old (36.0) and aged between 2024 years old, between 2529 years old (4.0%) , between 334 years old (0.7%) and lastly the respondent aged above 35 years old were the minority (1.3%) of the survey. From the semester of study of the respondents aspect, it was found out that most of the respondents that involved in this survey were from diploma level with 79 students (52.7%), followed by respondents from bachelor degree with 49 students (43.3%), and lastly the 7 of respondents from prediploma with (4.0%). In terms of spending money for prepaid or postpaid purposes, most of respondents spent RM 50 and bellows consists of 81 students (54%), followed by RM 50 RM 100 with 52 students (34.7%) , RM 100RM 150 with 10 students (6.7%) and only 6 students from total out 150 students could spent RM 150 and above which carries (4.0%). From the survey, it was showed that 145 students (96.7%) having a mobiles phones while only 5 (3.3%) respondents stated they don't have own a mobiles phones.

For the purpose of this study, a Confirmatory Factor Analysis (CFA) is applied to determine the measurement model of the study. The Confirmatory Factor Analysis (CFA) for this study was defined by using the SmartPLS software. Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. The researcher uses knowledge of the theory, empirical research, or both, postulates the relationship pattern a priori and then tests the hypothesis statistically. In this study, CFA will be performed by using SmartPLS software. Individual items will be tested to examine whether their factor loadings is above 0.5 As according to Hair et al., (2011), any item with factor loading value of less than 0.5 should be dropped from the measurement model. As shown in figure 4.1 and the summary in the table 4.3, most of the factors loading of the items was defined as more than 0.5values that can be considered as an excellent result.
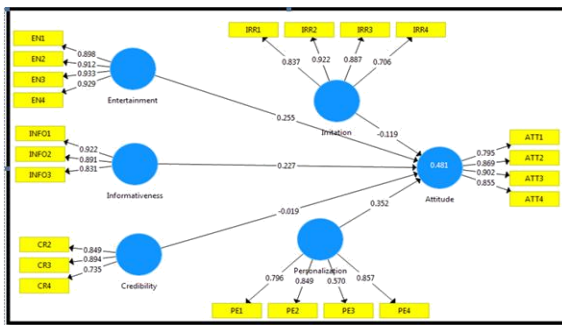
Figure 5.1: Analysis (CFA) using the PLs Model

For the purpose of this study, in order to determine the convergent validity, each of the construct from the Average Variance Extracted (AVE), composite reliability (CR) and the reliability need to be defined (Fornell and Larcker, 1981). Convergent validity is described as the level to which many items measuring the same concept are in agreement (Ramayah, Wai, and Boey, 2011). Hair et al, (2010) recommend that to assess convergence validity, the researcher can employ factor loadings, composite reliability and average variance extracted (AVE).

According to Fornell & Larcker (1981), that the value of each of the average variance extracted needs to exceed 50% of them item or more than 0.50 in order to make it is a relevant convergent validity. For this research, the convergent validity for each of the items was found out to be relevant as all of them exceeding the 0.5 level. The highest AVE result was from the Entertainment items with 0.843 meanwhile the lowest AVE result was from the Personalization item with 0.607 AVE.

In Confirmatory Factor Analysis (CFA), Hair et al., (2010) stated that a factor loading value is acceptable to be a good result if it is more than 0.5 for the Average Variance Extracted (AVE) and the Composite Reliability (CR) is 0.7 and above. For this study, it was found out that all the composite reliability values ranged from 0.856 to 0.955 , as shown in Table 2 , which depicts the degree to which construct indicators indicate the latent, and

construct ranged which exceeded the recommended value of 0.7 (Hair et al., 2010).

In this study, the AVE's ranged from 0.604 to 0.843, which were all within the suggested range. All the cronbach's alpha (CA) and composite realibility (CR) , of it also exceeded the recommended value of 0.80, indicating that the measurement scaler in this study had high internal consistency (Henseleret al. 2009, Sekaran and Bougie, 2010).

Table 5.2: The Summary of the AVE, CR and Cronbach'Alpha for this Study

	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha (a)
Attitude	0.733	0.916	0.878
Credibility	0.687	0.867	0.769
Entertainment	0.843	0.955	0.938
Informativeness	0.779	0.913	0.857
Irritation	0.709	0.906	0.861
Personalization	0.604	0.856	0.780

Discriminant validity is the extent to which a construct is different from others. According to Hair et al., (2011), the discrimant validity stipulates that each latent constructs AVE should be higher than the constructs' highest squared correlation with other latent construct (Fornell Lackers 1981) creation and the indicator's loadings should be greater than all its cross loadings. This study has assesses the validity of the measure through Fornell and Lacker's creation.

In this study, five exogenous variables (IV) were identified to be influenced the consumer's attitudes towards mobiles advertising. These five exogenous (irritation, credibility, entertainment, informativeness and personalization were hypnotized to influence the relationship with consumers attitudes. To determine these relationships, PLS algorithm and book strapping algorithm were conducted. Table 4 shows the results of hypotheses testing between variables that have direct impact on the conceptual model.

Table 5.3: Results (Summary) of Path Analysis Based on PLS Model

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (OSTDEV)	Path Significance (p-values)	Result
Entertainment > Attitude	0.255	0.255	0.08	3.184	0.02	H1: Supported
Informativeness > Attitude	0.227	0.214	0.082	2.779	0.006	H2: Supported
Credibility > Attitudes	-0.019	0.255	0.096	0.195	0.845	H3: Not Supported
Irritation > Attitudes	-0.0119	-0.125	0.069	1.74	0.0083	H4: Not Supported
Personalization > Attitudes	0.352	0.352	0.100	3.533	0.000	H5: Supported

Note: T>1.64, p-value=0.10, T>1.96,p-value=0.05,T>2.58,p-value=0.01

6 DISCUSSION AND CONCLUSION

It was found out that Personalization (PE) was identified as the most major factor in influencing consumer's attitudes towards mobile advertising among students from Faculty of Business Management in Mara University of Technology, Kelantan. This finding is significant with the findings and statements from other previous studies, stated that personalization is one of the major factors that may influence consumer's attitudes towards mobile advertising (Xu, 2007). Xu (2007) further clarified that personalization plays a very important roles in affecting people's perceptions towards mobiles advertising. It not only enhances people's favorable attitudes towards mobiles advertising, but also improves people's attitudes when they are originally less favorable. The statement aligned with the results showed by the survey, which indicate PE3 items scores the highest mean (M=3.007 SD=1.105.) compared with PE1, PE2 and PE3. The results showed that students have positive feelings and agree that mobiles advertising displays personalized message to them.

The second most contributing factors are Entertainment. The findings were in accordance with Le, T. D., & Nguyen, B. T. H (2014) which found that Credibility and Entertainment emerged as the significant predictors of attitudes toward mobile advertising. In that study, the result showed that even though most the respondents, mobile users hold moderate attitudes. Although users do not usually have positive emotions when seeing advertisements, most of them agreed that mobile advertising has helped them to collect information about products. It was true, because based on the verbally conversation with the majority of respondents, they have stated that they do not likes receiving advertising through their mobiles phones but they are agreed that some of the advertisement makes them informed or update their knowledge regarding new services, products offered by the company.

It was found that that the factor that has the least impact among all the factors is the Credibility (CE). The results showed that Credibility scores the lowest scores compared with the other factors (personalization, irritation, entertainment and informativeness) among students in Mara University of Technology, Kelantan campus regarding the consumer's attitudes towards mobiles advertising. It can simply state that, for the credibility variables, the score of three items above were below than 3.0 for Mean and Standard Deviation is lower than 1.06.

The highest score was CR4 –I use personalized mobile advertising as a reference for purchasing (M= 2.773 SD=1.059).In the other hands, the lowest score was CR2mobile advertising is believable (M= 2.52 SD=0.83). The results shows that respondents were disagreed that madvertisement are believable and less trustworthy. The results have contradicted with findings study by Chowdhury et al, (2010) regarding the factors affecting consumer attitudes toward SMSbased advertisements in Bangladesh. In this study, credibility has found to be the most significant of the factors affecting respondent's attitude toward mobile advertising.

Another finding that can discuss in this section is the descriptive analysis of the study that includes respondent's age, gender, monthly spending and ownership. Based on the results, it can show that, most of respondents that answering the distributed questionnaires are 70.7% are female while the rest is male students. The result was being expected because most of public universities including UiTM are dominated by female rather than male students. Majority of the phone or mobiles users in Mara University of Technology, Kelantan branch are from range 17 years old to 35 years old. As for the information, Mara University of Technology, Kelantan branch only offers pre diploma (MDAB), diploma and also bachelor degree. There are around 10 respondents with the ages above than 25 years old because most of students are considered Matured Student. Matured Student usually is students from peoples who are already working but further their studies for career improvement or some of the students extend their studies because of various factors.

For this study, all the respondents have been chosen from Faculty of Business Management with the total numbers of students are 2101 from pre diploma until bachelor degree. From the education level aspect, a good number of diploma students (52.7%) participated in the survey conducted. Most of the students were comes from Diploma of Banking and Diploma of Business study which contributed 66.86% of total population numbers of students for this faculty. For the degree students, it was contributed around 43.3 % while pre diploma only consists 6%.

In terms of spending money for top up phones (prepaid) or paying bill (postpaid), majority of students around (91.07%) prefer to spent or pay billing RM 100 and below. That was because most of them come from middle and low income family and depending on the PTPTN loan to support their studies. From the survey, it was noted from 150

questionnaires answered, 100% respondents admit they are having a phones. This is due and relate with the survey by Malaysian Communication and Multimedia Communication that conducted a survey in 2014 hand phone user surveys. From the survey, in terms of hand phone ownership in 2014, 66.8% of users carry only one hand phone. 28.9% of users carry two, 3.4% users use three hand phones while 0.8% require four or more. This survey only considers hand phones that were actively in usage at the time of the survey were counted.

Apart from that, the validity of Ducoffe model and Brackett and Carr model are proven to in this study as the previous studies are conducted in the past. This study will provide a valuable contribution to both models and a better understanding on the factors affecting consumer attitude towards madvertising in Malaysia.

Besides, this research further extended both models by adding one more variable which is personalization in determining consumer attitude towards Madvertising. This study proved that personalization via madvertising are another factor to affect consumer attitude. This study provides a foundation for future researcher in creating a new model in the field of marketing and advertising area.

In the final conclusion, it can be concluded that the aim of this study was achieved, the research objectives, research questions were answered alongside with the tested research hypotheses. The data analyses also were calculated in detail, alongside with related literature reviews. Hopefully, the outcome of the research provides a new knowledge both in the targeted population and the nation. Hopefully, this study will be the direction and guideline for future studies to develop more information and knowledge regarding the consumer's attitudes among mobiles advertising university and college student in Malaysia in a large-scale.

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