ATTITUDES TOWARD MOBILE ADVERTISING: A STUDY OF MOBILE WEB DISPLAY AND MOBILE APP DISPLAY ADVERTISING

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ABSTRACT

The rapid development of smartphones has resulted in the increasing use of mobile devices to deliver advertisements for products and services. Many firms in Vietnam have invested numerous resources in this field, and an in-depth understanding of mobile advertising is necessary to develop a successful mobile advertising strategy. Based on the existing literature regarding attitudes toward mobile advertising, a questionnaire was constructed to illustrate the factors affecting consumer attitudes toward advertisements on the mobile web and mobile applications. 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. Implications and suggestions for further studies are also provided in this study.

Keywords: mobile advertising, customer attitude, mobile marketing, Vietnam

INTRODUCTION

The development of high-tech devices has led to a change in consumers' habits over time. With the proliferation of tablets and smartphones, mobile devices have become the top channel for media. Vietnamese people spend 35% of their time (4.5 hours) daily on mobile devices, which is even more than on TV (25%) or desktop computers (18%). Mobile devices play an important role in consumer behaviour. Half of mobile web users are most impacted by mobile advertisements when making purchase decisions, and three-quarters of users feel comfortable with mobile advertising through TV or online ads (InMobi, 2012).

These statistics showed that mobile advertising is the advertising form of the future. To take advantage of this opportunity, marketers are giving more attention to mobile advertising. There are 2.1 billion adverts served on mobile devices (Kemp, 2012). Mobile advertising can cover a wide range of audiences of all ages, locations and occupations (Wilska, 2003). To fully take advantage of mobile advertising, a study on consumers' attitudes toward mobile advertising is necessary to attract target audiences and improve the effectiveness of advertisements (Bauer, Reichardt, Barnes, & Neumann, 2005).

Studies of consumer attitudes toward mobile advertising were conducted in many countries, but there has been no similar research in Vietnam. Additionally, because of rapid changes in technology, most of the research has focused on SMS advertising and does not include new types of mobile advertising such as mobile web banner or mobile application advertising (Carroll, Barnes, Scornavacca, & Fletcher, 2007; Moynihan, Kabadayi, & Kaiser, 2010). This study will cover recent popular types of mobile advertising: web banner and poster, in-app, pop-up, pop-under ads, etc. and can be applied for new mobile marketing strategies that catch up to the development of smart technology (Barnes & Scornavacca, 2008).

Focusing on the significance of mobile advertising to the marketing industry, the objectives of this research are as follows:

1. To evaluate the overall attitudes of mobile users toward mobile advertising.
2. To investigate the factors underlying consumers' attitudes.

The following questions will serve as a basis for addressing the primary research:

1. What are consumers' attitudes toward mobile advertising?
2. Which underlying factors of mobile advertising contribute to consumers' attitudes?

The findings of this study could be applied in many cases for many users: advertisers, marketers, mobile advertising networks, and website and mobile application developers (Tsang, Ho, & Liang, 2004). It can help advertisers and marketers to create better mobile marketing strategies and better advertising design. Mobile advertising networks can refer to this research to advise their clients and offer effective solutions.

Furthermore, the research on consumers' attitudes is the basic foundation for further research on consumer behaviour toward mobile advertising. Based on the results of this research, studies that determine other factors affecting attitudes can

be conducted to reveal more accurate insights into attitudes toward mobile advertising. Another related further research direction involves studies on consumer attitudes towards advertised brands on mobile advertising, consumers' behavioural intention, and actual behaviour (Ajzen & Fishbein, 1980).

LITERATURE REVIEW

Mobile Advertising

Mobile advertising communicates with the target audiences via a handset. There are many types of mobile advertising. The popularity of these forms has changed over time. According to Haghirian and Inoue (2007), the world's leading information technology research and advisory company, mobile web display, in-app display and search/maps are the three types of mobile advertising that have the highest revenue. In addition, Mobithinking (2013) predicts that the revenue of these types will continue to grow in the future. Due to a lack of time and resources, this study will only focus on advertising on mobile websites and in mobile applications, which are common types of recent mobile advertising (Tsang et al., 2004).

The mobile advertising ecosystem has many players: brands, advertising agencies, advertising networks, publishers and users (Bauer et al., 2005; Barnes & Scornavacca, 2008; Wilska, 2003). To attract more customers, brands suggest that the ad agencies design advertising campaigns. The mobile advertising network has a responsibility as a distributor and an intermediary to share the advertisement to audiences through mobile web sites or applications. Publishers will place advertisements on their web sites or apps and make money. The final destination of this ecosystem is mobile users that are the potential customers of brands (Bauer et al., 2005; Wilska, 2003). Their attitudes toward mobile advertising will be discussed in this study.

Consumers' Attitudes

Attitude is a lasting, general evaluation of people (including oneself), objects, advertisements or issues (Solomon, 2013), and it is a mental state used by individuals to structure the way they perceive their environment and guide the way they respond to such an environment (Tsang et al., 2004). The evaluation of people is more complex than whether they simply like or dislike an object. To have a comprehensive view of attitudes, the ABC Model of Attitudes was developed. This model divides attitudes into three components: Affect, Behaviour and Cognition, which are referred as the verbs "feel, do and think". Affect is the feeling of a consumer about an object. Behaviour refers the intention of the consumer to do something. Notice that the meaning of behaviour in this model is

the intention, not the actual behaviour. Cognition is what a consumer believes about an object. These three components have a close relationship with each other. Depending on the situation, the relative impact of these components, known as hierarchies of effects, are diversified (Solomon, 2013).

Similar to the ABC Model, Aaker, Kumar and Day (2000) break down an attitude into three components: cognitive and knowledge, affective or liking and intention or action components. Cognitive, or knowledge, represents a person's information about an object. The affective, or liking, component summarises a person's overall feelings toward an object, situation, or person. The intention, or action, component refer to a person's expectation of future behaviour toward an object (Aaker et al., 2000).

Attitudes toward Mobile Advertising

Attitude toward advertising is defined as a learned predisposition to respond in a consistently favourable or unfavourable manner toward advertising in general. Consumer attitudes toward advertising tend to affect their attitudes toward specific advertisements (MacKenzie & Lulz, 1989). Many researchers around the world have developed many models that point out determinants of attitudes toward advertising. Some of them are listed in Table 1.

Factors underlying consumers' attitudes differ among various forms of advertising and a variety of other factors. Because this study concerns mobile web displays ads and in-app ads, mobile advertising throughout the research is considered a part of internet advertising. In an article about advertising value and advertising on the web (Ducoffe, 1996), which is most appropriate and applicable to the context of the study, three perceptual antecedents (Informativeness, Entertainment and Irritation) influence how consumers assess the value of web advertising. Additionally, the findings of this research also noted that consumers' assessments of value have a significant impact on their overall attitudes. Therefore, Informativeness, Entertainment and Irritation are factors that should be considered when examining attitudes toward mobile advertising. Consequently, the hypothesised additional variable of Credibility was added to the Ducoffe model in an article, Cyberspace advertising vs. other media (Bracket & Carr, 2001), and tested to show that it strengthened this model. This research will focus on four hypothesised factors: Informativeness, Entertainment, Irritation and Credibility.

Table 1
Previous studies of attitudes toward advertising

Title of study	Factors affecting attitude toward advertising
Advertising value and advertising on the web (Ducoffe, 1996)	Informativeness, Entertainment, Irritation
The influence of personalisation in affecting consumer attitudes toward mobile advertising in China (Xu, 2007)	Entertainment, Credibility, Personalisation
Public attitudes toward advertising: More favourable than you might think (Shavitt, Lowrey, & Haefner, 1998)	Enjoyment and indignity, Trustworthiness or usefulness of ad content, Demographic Segments
The influence of consumer socialisation variables on attitude toward advertising: A comparison of African-American and Caucasians (Bush, Smith, & Martin, 1999)	Parental communication, Peer communication, Mass media, Gender, Race
Are we measuring the same attitude? Understanding media effects attitudes towards advertising (Tan & Chia, 2007)	Materialism, Good for economy

Informativeness

Informativeness is a condition of providing useful or interesting information (Ducoffe, 1996; Informative, n.d.). Informativeness includes a good source of product information, the ability to supply relevant product information and provide up-to-date information (Bracket & Carr, 2001). Previous research has proved the importance of informativeness in advertising. Including specific information in an ad increased its chances of being included in the consideration and calling sets as well as being the advertiser selected to call and visit first (Fermandez & Rosen, 2000).

Entertainment

Entertainment refers to the enjoyment of the message (Xu, 2007). In a survey of attitudes toward enjoyment, the majority of respondents agree that they like to look at most of the advertisements to which they are exposed. Practical situations have shown that entertainment like humour easily attracts consumers. With a variety of entertainment tools like music, games, and visuals, mobile advertising is a promising form for entertaining advertising. Therefore, entertainment may be a factor influencing attitudes toward mobile advertising. Research has found that

people's feelings of enjoyment associated with advertisements played the strongest role in accounting for their overall attitudes toward advertising (Shavitt, Lowrey, & Haefner, 1998).

Irritation

The meaning of Irritation is the state of feeling annoyed, impatient, or slightly angry (Ducoffe, 1996). The feeling of having your intelligence insulted, annoying messages and irritating stimuli are elements in irritation (Bracket & Carr, 2001). Internet advertising is considered to be less irritating than general advertising because the interactivity of internet advertising allows consumers to tailor the ad to meet their individual needs (Scholosser, Shavitt, & Kanfer, 1999). This assumption may hold true with mobile advertising.

Credibility

Advertising credibility is defined as consumers' perceptions of the truthfulness and believability of advertising in general (Xu, 2007). Advertising credibility is one of the perceptual dimensions underlying ad credibility and is the extent to which the consumer perceives claims made about the brand in the ad to be truthful and believable. Other dimensions include advertiser credibility and perceived ad claim discrepancy (MacKenzie & Lulz, 1989).

Research Framework and Hypotheses

The review of previous studies summarised factors affecting consumer attitude toward advertising. Thus, a proposed model of research has been developed in Figure 1.
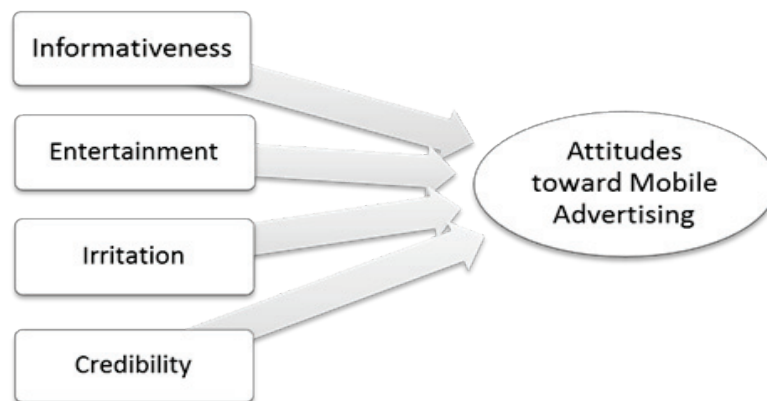

Figure 1. Proposed model of attitudes toward mobile advertising

Based on the relationship between underlying factors and attitudes toward mobile advertising described in the theoretical framework, the following hypotheses were developed:

H_1: Informativeness has a positive impact on attitudes toward mobile advertising.

H_2: Entertainment has a positive impact on attitudes toward mobile advertising.

H_3: Irritation has a negative impact on attitudes toward mobile advertising.

H_4: Credibility has a positive impact on attitudes toward mobile advertising.

METHODOLOGY

Data Collection and Sampling Method

The primary data in this research consists of data retrieved from a questionnaire, where knowledge about attitudes and behaviour was obtained. The target respondents of this study were mobile users, especially those who often interact with advertisements on mobile web sites and applications. That means they are quite familiar with internet resources like email and web sites (Couper, 2000). Hence, the chosen data collection method in this research was a web-based survey and mail survey. Online survey sites like Google Form also support the required questions, which reduces the probability of missed answers (Couper, 2000).

The questionnaires were provided on a variety of forums, social networks and different types of web sites: school and university forums, Facebook, Zing Me, forums about cellphones, technologies, women, and, in particular, websites that support mobile platforms. Zalo, a mobile application, was also a source of respondents. Moreover, paper-based questionnaires were also used to reach inactive mobile users. These are people who use mobile devices to read news or collect information and did not interact with the above survey; paper-based questionnaires were published in public places such as Public Park.

A total of 250 questionnaires were distributed, and 237, or 95% of them were returned by the respondents. However, 8 questionnaires were not input into the data set because the respondents did not meet the requirements of owning at least one mobile device or having seen at least one type of ad on mobile websites or mobile applications. Twenty-three of 229 remaining questionnaires were eliminated after filtering out the cases due to two reasons: missing values and

outliers. Therefore, only 206 valid questionnaires were used during data analysis. The response rate was 82%.

Measurement and Data Analysis

Based on research objectives, the information requirements were listed to navigate the questionnaires. All of them were revised again after additional secondary data collection and exploratory research. The questionnaire followed the basic guidelines for sequencing a questionnaire: from general to specific, from broad to narrow, from simple to complicated. It included screening questions, focused Likert scale questions and demographic questions.

The decision of data analysis techniques depends on the types of question and the objectives of the research. In this paper, each question was first analysed by tabulating the data. Next, the hypothesis was tested by various statistical techniques such as reliability test, factor analysis, correlation test and multiple linear regressions. These techniques will be discussed more detail in the research findings.

Internal Consistency Test: The Internal Consistency Test is one of the reliability tests in this study. Cronbach's alpha, which is a common measure of internal consistency, was applied in this research. This test was used to determine the level of support for each variable's inclusion in the analysis. When interpreting the result of Cronbach's alpha, the Cronbach's alpha equal to or over 0.7 is considered as acceptable. Items whose Cronbach's alpha coefficient increases appreciably will be considered for removal.

Factor Analysis: Common factor analysis is a common procedure of factor analysis. The purpose of this technique is to investigate the underlying meaning of items. Factor analysis transforms lists of items into new variables that are not correlated and emphasise the same meaning. The number of new variables is reduced as much as possible. To test the factor analysis again, a correlation test will be run after the factor analysis. Generated components are then rotated by Varimax rotation. To sum up, the number of components and items beyond the components will be established.

Multiple Regression Analysis: One of the main objectives of this thesis is to determine the predictor factors of attitudes toward mobile advertising, and multiple linear regressions is the chosen technique. Multiple Regressions—an extension of Simple Linear Regression—allows predicting dependent variables, which are attitudes toward mobile advertising based on independent variables resulting from the previous techniques. It also determines the percentages of

model fit, and total variance is explained. The measures of items are 5-likert scales and meet the requirement of scale for this analysis.

SAMPLE DESCRIPTION

Four demographic variables, gender, age, education and income, were measured in this survey. The summary of these demographic characteristics is described in Table 2. It can clearly be seen that most respondents are from 18 to 40 years old. Female respondents far outnumber male respondents. The majority of respondents are in college or graduate college and have an income less than 10 million Vietnam Dong (VND) per month (approximately 500 USD).

Table 2
Demographic characteristics of the sample

Variables		Frequency	Valid Percent
Gender	Male	78	37.8
	Female	128	62.2
Age	Under 18 years old	2	1.0
	18 to 23 years old	78	37.9
	24 to 30 years old	43	20.9
	31 to 40 years old	62	30.1
	Older than 40 years old	21	10.1
Education	Less than high school	4	1.9
	High school graduate	0	0
	College student	82	39.9
	College graduate	101	49.0
	Postgraduate	19	9.2
Income	Less than 2 million VND	35	17.0
	2 to 5 million VND	80	38.8
	5 to 10 million VND	62	30.1
	10 to 20 million VND	19	9.2
	More than 20 million VND	10	4.9
Owning a smartphone	No	57	27.7
	Yes	148	72.3
Owning a feature phone	No	130	63.1
	Yes	76	36.9
Owning a tablet	No	130	63.1
	Yes	76	36.9
Main purpose of using mobile devices	Phone calling	81	40.9
	Text messaging	38	19.2
	Surfing web	40	20.2
	Using apps	30	15.2
	Playing games	9	4.5

Additionally, characteristics relating to the using of mobile devices are identified. Almost all respondents own at least one mobile device. They spend most of their time using mobile devices for a variety of purposes, but phone calling and answering, which is the basic function of a mobile phone, seem to be the main reasons behind mobile device use. Other purposes, like web surfing and using mobile applications, also use a significant proportion of their time on mobile devices. Thus, it is meaningful to investigate attitudes toward advertising on websites and applications.

RESEARCH FINDINGS

Reliability Analysis

A reliability test is the first step in analysing data. The aim of this test is to check the correlation among the items and reduce the items beyond variables if they are not reliable. Cronbach's alpha analysis was used to test the reliability of the five variables: Attitudes toward Mobile Advertising, Informativeness, Entertainment, Irritation and Credibility.

Attitudes toward Mobile Advertising: Cronbach's alpha would be much greater (0.704) if the item "Mobile advertising generates legitimate income for publishers and developers" were not included. Therefore, this item was removed.

Informativeness: Although the Cronbach's alpha value of the five items underlying Informativeness is quite high, it would be greater if the fifth item, "Easy to Understand," was deleted.

Entertainment: For Entertainment, Cronbach's alpha value is solid (0.791). Moreover, removing any items would lead to a decrease in this value. Hence, all four items are accepted.

Irritation: If any item is deleted, the new Cronbach's alpha will equal or less than the current value (0.856). Thus, the scale of Irritation has a high level of internal consistency for four items: offended, annoying, irritating, and disturbing.

Credibility: The fifth item "Clear, not misled" has a stronger effect on Cronbach's alpha than others. For a better consistency, "Clear, not misled" was eliminated from this dimension.

To conclude the reliability test, Table 3 will summarise the items that are retained after the reliability test and the items will be used for later analysis.

Table 3
Testing measurement scales using Cronbach's alpha

Factors	Number of items	Cronbach's alpha
Attitudes toward mobile advertising	3	0.704
Informativeness	4	0.747
Entertainment	4	0.791
Irritation	4	0.856
Credibility	4	0.838

Descriptive Statistics of Attitudes toward Mobile Advertising

The remaining items of attitudes include 'Positive Emotions,' 'Receiving Product Information' and 'Use ad information to make purchasing decisions.' With 'Positive Emotions,' the neutral emotion is the score attained by most respondents (Mean = 2.52). There is a slight tendency favouring negative emotions over positive emotions. Because the number of respondents who strongly agree that mobile advertising brings them positive emotions is extremely small, the negative emotion responses constitute an appreciable percentage of the total answers, with the score being above four (out of 5). For the item 'Receiving Product Information,' respondents seem to agree that they have received product information from the advertisements they saw, with a mean of 3.19. This statement does not make participants strongly disagree or strongly agree. Most of the participants neither agree nor disagree with the opinion that they 'use ad information to make purchasing decisions.' The proof is in the mean of 2.81. However, their opinions slightly lean toward disagreement.

Factor Analysis and Correlation Results

As showed in the rotated factor matrix, three factors were revealed by factor analysis. When compared with the model applied in the questionnaire, three factors are consistent with three independent variables. Factor loadings of Credibility items are strong on the first factor, Irritation is strong on the second factor and Entertainment on the last factor. There is little change in items beyond each variable. E3 (Satisfied) and I4 (Products live up to promises of ads) do not satisfy the requirements of factor loadings and were removed. Tables 4 and 5 lists items and variables after factor analysis and the reliability test, and thus the hypothesis H1 "Informativeness has a positive impact on attitudes toward mobile advertising" is removed from analysis.

Table 4
Rotated factor matrix

		Factor 1	Factor 2	Factor 3
C2	True	.789		
C1	Providing appropriate evidence	.769		
C3	Believable	.670		
IR2R	Annoying reverse coded		.889	
IR3R	Irritating reverse coded		.841	
IR1R	Offended reverse coded		.636	
IR4R	Disturbing reverse coded		.622	
E4	Funny			.671
E2	Enjoyable			.628
E1	Entertaining			.619
E3	Satisfied			.536

Notes: Extraction Method: Principal Axis Factoring; Rotation Method: Varimax with Kaiser Normalisation; a. Rotation converged in 5 iterations.

Table 5
Pearson correlations among variables

	Attitude	Entertainment	Credibility
Entertainment	.412**		
Credibility	.531**	.488**	
Irritation	.307**	.326**	.429**

Note: ** Correlation is significant at the 0.01 level (2-tailed).

To test the relationship among variables, the Pearson correlation is the most suitable method. From these coefficients, the efficiency and significance of factor analysis will be checked and the results can be supported for multiple regression analysis. The statistical significance of the correlation coefficient is below 0.0005; therefore, all the variables have positive correlations between themselves.

Regression Analysis

The multiple correlation coefficient (R) can be presented as a measure of prediction quality. The higher the multiple correlation coefficient is, the better the independent variables will affect the dependent variable. A multiple correlation coefficient of 0.563 is not very high but is still better than the average. Some independent variables may not effectively predict for the dependent variable.

The R-square indicates the total explained variation and is also called the coefficient of determination. When the R-square is high, the percentage of variance in the dependent variable explained by independent variables is large. This model explains the 31.7% variance of the dependent variable. According to

the classification of effect size developed here, this statistic illustrates a small effect on the dependent variable.

From the correlation and regression analysis shown in Table 6, the proposed hypotheses H2 and H4 are accepted. Entertainment and Credibility have a positive impact on attitudes toward mobile advertising. Irritation has a significant value of 0.386, exceeding the critical significant value of 0.05. Therefore, Irritation does not affect attitudes.

Table 6
Coefficients for multiple regressions

Model		Unstandardised Coefficients		Standardised Coefficients	*t*	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.039	.200		5.205	.000		
	Entertainment	.211	.067	.212	3.169	.002	.762	1.312
	Credibility	.397	.070	.402	5.668	.000	.680	1.470
	Irritation	.056	.065	.056	.869	.386	.810	1.234

Notes: R = 0.563; R-square = 0.317; F = 30.961; Sig. = 0.000; a. Dependent Variable: Attitudes

DISCUSSION AND IMPLICATIONS

The results indicate that, generally speaking, 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. Feelings toward mobile advertising seem to be more favourable than the common perception of negative attitudes toward advertising would lead one to believe (Tsang et al., 2004). On the other hand, this result is in line with studies showing that the majority of people have neutral or positive attitudes (Shavitt et al., 1998).

The major finding was that Credibility and Entertainment emerged as the significant predictors of attitudes toward mobile advertising. Multiple regression analysis revealed that the other two factors in the proposed model, Informativeness and Irritation, do not predict attitudes toward advertising. These results conflict with previous research mentioned in the literature review. This may be because some advertisements do not transmit much information but are designed to catch the eye and made the viewer click on them for more details. Another possible reason is that the limited size of mobile advertisements constrain the information displayed in the advertisements, so the users were quite familiar with the lack of information. Credibility has been recognised as the most significant factor impacting mobile users' attitude toward mobile advertising. A

study in Bangladesh has also provided the same results (Chowdhury, Parvin, Weitenberner, & Becker, 2006). In the absence of evidence to the contrary, an explanation for this similarity is that cultural factors and the economic conditions of countries influenced mobile users' attitudes. These findings suggest several courses of action for mobile advertising.

Credibility

As mentioned in the results, credibility is identified as the most significant dimension underlying attitudes toward mobile advertising and should be one of the first elements considered in creating mobile advertisements. Building credibility means that those advertisements are believable to mobile users. To achieve credibility, honesty is very important. Many consumers do not believe in mobile advertising because the advertisements attempt to show perfection and do not provide truthful information. Additionally, according to many research studies, mobile advertising is perceived as less reliable than other types of advertising. Hence, the advertisement should be honest and show the best of the product, not a virtual perfection. Marketers and advertising creators need to pay attention to the implausibility of audiences. Tactics to deal with this problem need to be created.

Entertainment

Another important practical implication is entertainment. Though not as important as credibility, entertainment still gives a certain contribution to attitudes toward advertising. Fun, enjoyment and entertaining are elements of entertainment. The more entertaining they are, the more attractive the advertisements. In a life full of stress, entertainment becomes more important than ever before. When an advertisement appears, mobile users should not just see it, they should enjoy it like music or film. Some mobile advertisements have successfully brought entertainment into advertising, with many examples throughout the literature. Entertainment can be built on many foundations, such as humour, sympathy or love. Advertising developers can choose one or more of these options to attract the engagement of mobile users.

CONCLUSION AND RECOMMENDATIONS FOR FURTHER RESEARCH

This paper has given an account of attitudes toward mobile advertising and its underlying dimensions. The findings from this study provide additional evidence with respect to the importance of credibility, entertainment, and demographic characteristics in advertising. While this study does not confirm the contribution

of informativeness and irritation, it applied theory into practical market insight in Vietnam.

Moreover, this research has revealed many questions in need of further investigation. Further research may be undertaken in the following areas: exploration of underlying factors, impacts of cultural factors, determinants of credibility and entertainment in advertising, the influence of attitudes on behaviour toward mobile advertising, the different attitudes among types and forms of mobile advertising, or the investigation of advertising value and effectiveness of mobile advertising. An exploration of underlying factors may be conducted using qualitative methods or testing other factors in a variety of theories about advertising, like relatedness or interaction. Culture is one considerable factor influencing attitudes toward mobile advertising because, as shown in the original model, researchers over the world have produced different results. Gaining deep insight into the determinants of credibility and entertainment in mobile advertising is a potential future study development based on the results of this research (Tsang et al., 2004). More practically, the issues of how to transform attitudes into behaviours and how to develop the best forms of mobile advertising are intriguing ones that could be usefully examined in further research.

To provide a greater degree of accuracy in this research, improvements on a number of items, such as variables, methodology and demographic variables, should be considered. Future trials should be assessed by increasing the sample size, changing the data collection method to random sampling and using more advanced analytical tools. In this way, the study could be more generalised. Furthermore, qualitative research is highly recommended to gain further insight into the theoretical framework and to build the most appropriate questionnaire for Vietnamese people. Considerably more valid items beyond each variable will need to be added for a better evaluation of variables. If the debate is to be moved forward, a better insight into demographic variables such as location of residence and employment status need to be developed.

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